

## **APPENDIX D**

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Biological Resources

## **APPENDIX D1**

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Biological Resources Report, Sacramento Country Day School



# ***BIOLOGICAL RESOURCES REPORT***

## ***SACRAMENTO COUNTRY DAY SCHOOL***

***GIBSON & SKORDAL, LLC***  
***Wetland Consultants***  
***2277 Fair Oaks Blvd., Suite 395***  
***Sacramento, California 95825***

# ***BIOLOGICAL RESOURCES REPORT***

## ***SACRAMENTO COUNTRY DAY SCHOOL***

### ***SACRAMENTO COUNTY, CALIFORNIA***

***JUNE 2003***

***Prepared For:***

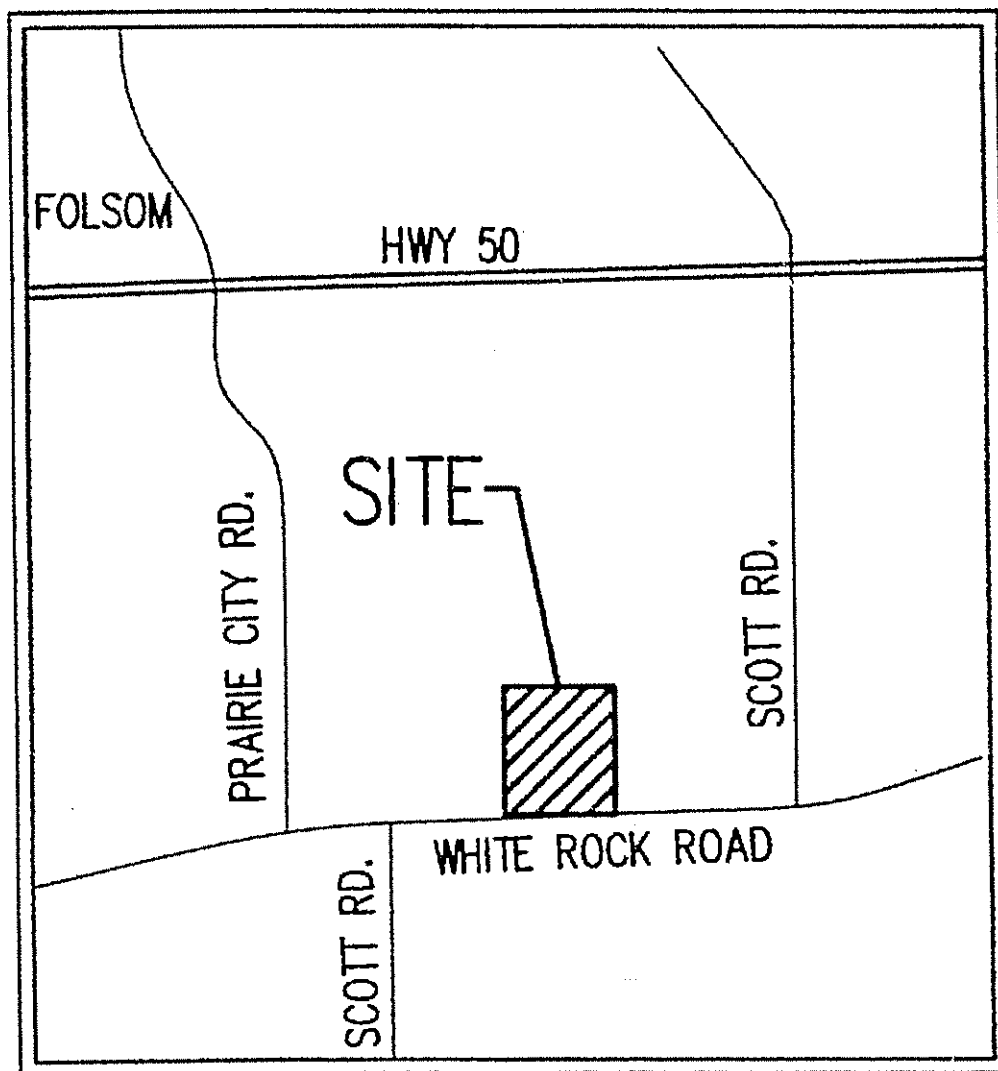
***THE FHK COMPANIES  
640 Watt Avenue, Suite 100  
Sacramento, California 95864***

***Prepared By:***

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Wetland Consultants  
2277 Fair Oaks Blvd., Suite 395  
Sacramento, California 95825***

FIGURE 1

VICINITY MAP



N.T.S.

The boundaries of all waters including wetlands were surveyed in the field using global positioning survey (GPS) technology accurate to less than one meter. The coordinate system used was U.S. State Plane 1983, California Zone 2, NAD 83 datum. Detailed observations on vegetation, soils, and hydrology characteristics were made in the field. Data sheets which document the basis for determining which areas are upland or wetland were completed for representative locations and are provided in Appendix A. Appendix B provides a partial list of plant species observed in the study area and their status as wetland indicator species

In addition to assessing habitat suitability, our field studies also involved species-specific surveys (e.g. burrowing owl, valley elderberry longhorn beetle), where not precluded by the time of year. Species-specific surveys were not conducted for several of the special status species potentially occurring within the study area because of the timing of the assessment (e.g. vernal pool fairy shrimp, vernal pool tadpole shrimp).

This evaluation of special status species included those species identified as being relatively scarce and/or having declining populations by the U. S. Fish and Wildlife Service (FWS) or the California Department of Fish and Game (CDFG). Special status species include those that are formally listed as threatened or endangered, those that are proposed for listing, those that are candidates for Federal listing and those that are considered to be Species of Concern by the FWS or Species of Special Concern by the CDFG. In addition to these, we also included those species that are considered to be "special animals" or "fully protected" by the CDFG and those plants that are considered to be rare, threatened or endangered by the California Native Plant Society (CNPS).

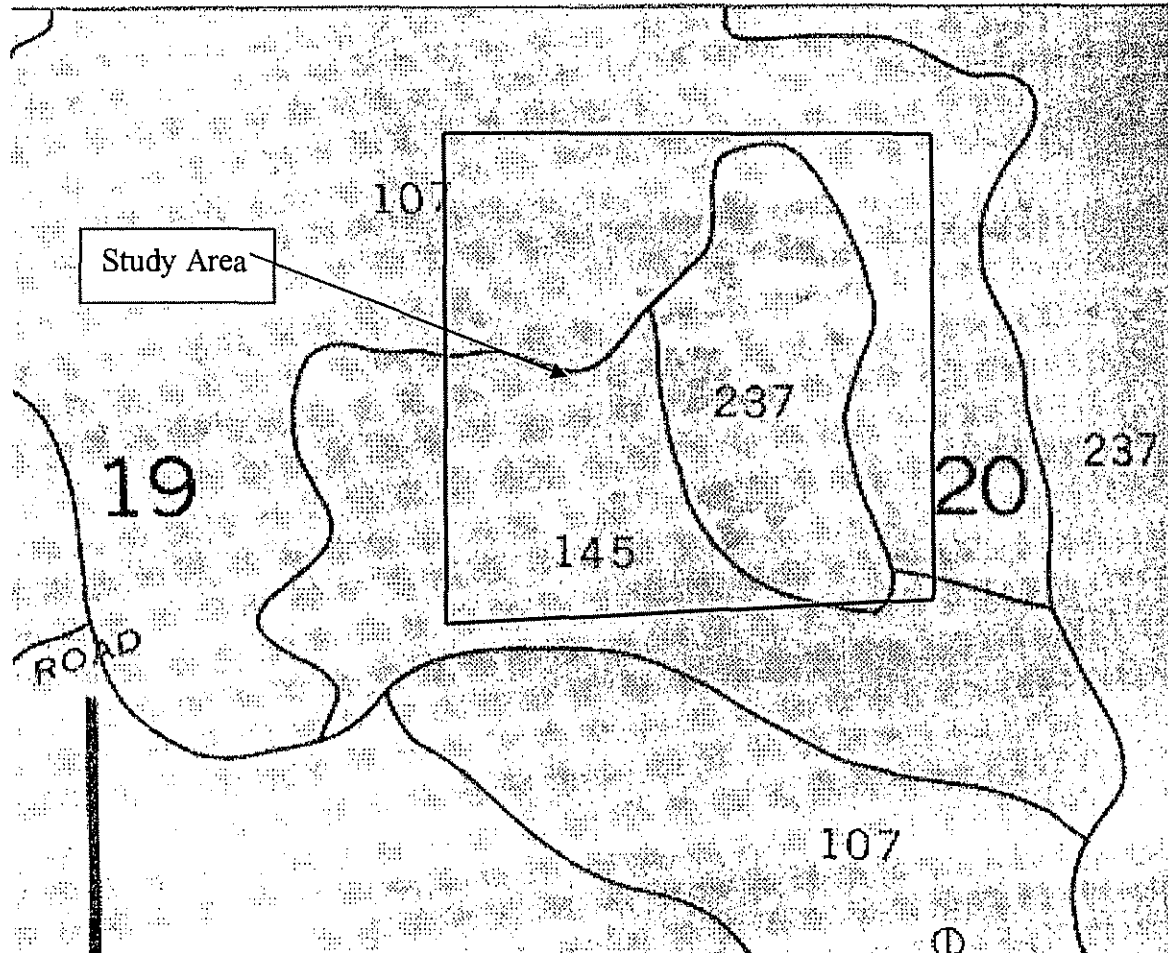
As part of our evaluation, we conducted a review of the State of California's Natural Diversity Database (NDDDB) to obtain records of sensitive species within the general vicinity of the study area. We obtained the records for the Buffalo Creek and Folsom SE USGS 7.5 minute topographic maps. In addition, we evaluated other special status species that may have potential for occurring within the study area based on their historic range and habitat preferences.

## **GENERAL SITE CONDITIONS**

The study area is characterized by rolling, gently to moderately sloping terrain. It ranges in elevation from a low of approximately 343 feet in the northeast corner to a high of approximately 405 feet near the northwest corner of the study area. The property drains to the

**FIGURE 2**

**SOIL MAPPING UNITS**



**Source:** Soil Survey of Sacramento County, California (SCS 1993)

<i>Number</i>	<i>Soil Name</i>	<i>Classification</i>
107	Argonaut-Auburn complex, 3 to 8 % slopes	Haploxeralf-Xerochrept
145	Fiddymment fine sandy loam, 1 to 8% slopes	Durixeralf
237	Whiterock loam, 3 to 30 % slopes	Xerorthent

clover (*Trifolium variegatum*).

### Special Status Species

As stated previously, we conducted a review of the State of California's Natural Diversity Database (NDDDB) to obtain records of sensitive species within the general vicinity of the study area. We obtained the records for the Buffalo Creek and Folsom SE USGS 7.5 minute topographic maps. Appendix D contains a copy of each of these records. We then evaluated the habitat existing within the study with respect to its suitability for each of the species recorded as occurring in the general area. Table 1 lists each of these species, the nature of their special status, a brief description of the preferred habitat and an indication whether that habitat occurs within the study area.

Of the twenty-two species in Table 1, sixteen are associated with habitat types that are found within the study area. Of these sixteen, five are listed as Federal and/or State threatened or endangered species. Those five species are Swainson's hawk, vernal pool fairy shrimp, vernal pool tadpole shrimp, Bogg's Lake hedge-hyssop and slender orcutt grass. These species are discussed in greater detail below.

Swainson's hawk is a raptor that is currently listed as threatened by State of California. Swainson's hawks typically nest in mature valley oaks, cottonwoods and willows associated with riparian corridors. There is no suitable nesting habitat for Swainson's hawks within the study area. We did observe several old raptor nests in several of the valley oaks. We presume that these were red-tailed hawk nests. Several red-tailed hawks were observed soaring and perching within the study area during our field surveys. Swainson's hawks typically forage in cropland, irrigated pastures and grasslands up to approximately 10 miles from nesting sites. They normally breed in the spring through early summer before migrating to Central and South America to winter. The NDDDB records lists several documented nest sites in the vicinity with the closest being located approximately 9.5 to the southeast near the Kiefer Boulevard crossing of Deer Creek.

Both vernal pool fairy shrimp and vernal pool tadpole shrimp are associated with vernal pools and similar depressional seasonal wetlands. There have been numerous observations of vernal pool fairy shrimp in the vicinity of the study area. The vernal pools occurring within the study area provide suitable habitat for both of these species as do the depressions within seasonal wetland swales. No surveys were conducted to confirm whether these species are actually

TABLE 1

## EVALUATION OF SPECIAL STATUS SPECIES HABITATS

	State Status	Federal Status	CNPS Listing (plants)	Habitat Association	Suitable Habitat In Study Area
<b>Birds</b>					
<i>Accipiter cooperi</i> (Cooper's hawk)	Species of Special Concern	None	N/A	Inhabits forested habitats, forest edge, and riparian habitat, may forage in adjacent grassland and fields.	Yes (foraging only)
<i>Agelaius tricolor</i> (tricolored blackbird)	Species of Special Concern	Species of Concern	N/A	Colonial nester in cattails, bullrush, or blackberries associated with marsh habitats.	Yes (foraging only)
<i>Ardea alba</i> (great egret)	CDFG-Special Animals	None	N/A	Rivers, streams, lakes, marsh and other aquatic habitats.	No
<i>Ardea herodias</i> (great blue heron)	CDFG-Special Animals	None	N/A	Rivers, streams, lakes, marsh and other aquatic habitats.	No
<i>Athene cunicularia</i> (burrowing owl)	Species of Special Concern	Species of Concern	N/A	Nests in abandoned ground squirrel burrows associated with open grassland habitats.	Yes, but not observed
<i>Buteo swainsoni</i> (Swainson's hawk)	Threatened	None	N/A	Nests in tall cottonwoods, valley oaks or willows. Forages in fields, cropland, irrigated pasture, and grassland near large riparian corridors.	Yes (foraging only)
<i>Circus cyaneus</i> (northern harrier)	Species of Special Concern	None	N/A	Forages in open grasslands, nests on ground in shrubby vegetation.	Yes (foraging only)
<i>Elanus leucurus</i> (white-tailed kite)	Species of Special Concern	None	N/A	Nests in riparian areas associated with rivers, streams, and wetlands. Forages in nearby grasslands or open fields.	Yes (foraging only)
<i>Eremophila alpestris actia</i> (California horned lark)	Species of Special Concern	None	N/A	Forages in open grasslands and fields.	Yes
<b>Amphibians &amp; Reptiles</b>					
<i>Ambystoma trigrinum californiense</i> (California tiger salamander)	Species of Special Concern	Candidate	N/A	Breeds in vernal pools, seasonal wetlands and associated swales. Forages and hibernates in adjacent grasslands.	Yes
<i>Clemmys marmorata</i> (western pond turtle)	Species of Special Concern	Species of Concern	N/A	Ponds, rivers, streams, wetlands, and irrigation ditches with associated marsh habitat.	No

TABLE 1

## EVALUATION OF SPECIAL STATUS SPECIES HABITATS

	State Status	Federal Status	CNPS Listing (plants)	Habitat Association	Potential Habitat In Study Area
<i>Thamnophis gigas</i> (giant garter snake)	Threatened	Threatened	N/A	Rivers, canals, irrigation ditches, rice fields, and other aquatic habitats with slow moving water and heavy emergent vegetation.	No
<b>Invertebrates</b>					
<i>Branchinecta lynchi</i> (vernal pool fairy shrimp)	None	Threatened	N/A	Vernal pools and depressional seasonal wetlands	Yes
<i>Branchinecta mesoallensis</i> (midvalley fairy shrimp)	None	None	N/A	Vernal pools and depressional seasonal wetlands	Yes
<i>Desmocerus californicus dimorphus</i> (valley elderberry longhorn beetle)	None	Threatened	N/A	Dependent upon elderberry plant ( <i>Sambucus mexicana</i> ) as primary host species	No
<i>Lepidurus packardii</i> (vernal pool tadpole shrimp)	None	Endangered	N/A	Vernal pools and depressional seasonal wetlands	Yes
<i>Lindneriella occidentalis</i> (California lindneriella)	None	None	N/A	Vernal pools and depressional seasonal wetlands	Yes
<b>Plants</b>					
<i>Downingia pusila</i> (dwarf downingia)	None	None	CNPS-2	Vernal pools	Yes
<i>Gratiola heterosepala</i> (Bogg's Lake hedge-hyssop)	Endangered	None	CNPS-1B	Vernal pools and margins of lakes/ponds	Yes
<i>Legenere limosa</i> (legenere)	None	Species of Concern	CNPS-1B	Vernal pools	Yes
<i>Orcuttia tenuis</i> (Slender orcutt grass)	Endangered	Threatened	CNPS-1B	Vernal pools	Yes
<i>Sagittaria sanfordii</i> (Sanford's arrowhead)	None	Species of Concern	CNPS-1B	Emergent marsh habitat, often associated with drainages, canals, or irrigation ditches.	No



present within the study area.

There are five species of special status plants normally associated with vernal pools and similar depressional seasonal wetlands. Bogg's Lake hedge-hyssop is listed as endangered by the State of California while slender orcutt grass is federally listed as endangered and State listed as threatened. We did not conduct specific surveys for these species because of the timing of our assessment. The vernal pools existing within the study area do provide suitable habitat for these plants.

# **APPENDIX A**

## **FIELD DATA SHEETS**

# ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: <u>Sacramento Country Day School</u>		Date: <u>3/24/03</u>
Applicant/Owner: <u>Fred Katz</u>		City/County: <u>Sacramento</u>
Investigator(s): <u>Tom Skordal</u>		State: <u>CA</u>
Do Normal Circumstances exist on the site?	<input checked="" type="radio"/> Yes <input type="radio"/> No	Community ID: <u>Seasonal Wetland Swale</u>
Is the site significantly disturbed (Atypical Situation)?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Transect ID: <u>1</u>
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes <input type="radio"/> No <input type="radio"/>	Data Point ID: <u>B</u>

## VEGETATION

Plant Species			Plant Species		
Dominant (D) - Associate (A)	Stratum	Indicator	Dominant (D) - Associated (A)	Stratum	Indicator
1. <u>Lolium perenne (D)</u>	<u>H</u>	<u>FAC</u>	9. _____	_____	_____
2. <u>Poa annua (D)</u>	<u>H</u>	<u>FACW-</u>	10. _____	_____	_____
3. <u>Plagiolophus stip. mic. (A)</u>	<u>H</u>	<u>OBL</u>	11. _____	_____	_____
4. <u>Leontodon lyseri (A)</u>	<u>H</u>	<u>-</u>	12. _____	_____	_____
5. <u>Trifolium variegatum (D)</u>	<u>H</u>	<u>FACW-</u>	13. _____	_____	_____
6. <u>Lupinus hyssopifolia (A)</u>	<u>H</u>	<u>FACW</u>	14. _____	_____	_____
7. <u>Holcus virgatus (A)</u>	<u>H</u>	<u>UPL</u>	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks:

## HYDROLOGY

<p>___ Recorded Data (Describe in Remarks):</p> <p>___ Streams, Lake, or Tide Gauge</p> <p>___ Aerial Photographs</p> <p>___ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>___ Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p>___ Water Marks</p> <p>___ Drift Lines</p> <p><input checked="" type="checkbox"/> Sediment Deposits/Organic Detritus</p> <p><input checked="" type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>___ Water-Stained Leaves</p> <p>___ Local Soil Survey Data</p> <p><input checked="" type="checkbox"/> FAC-Neutral Test</p> <p>___ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depths of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: <u>Surface</u> (in.)</p>	
Remarks:	

## SOILS

[illegible]

## WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Is this Data Point Within a Wetland?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Wetland Hydrology Present?	<input checked="" type="radio"/> Yes	<input type="radio"/> No			
Hydric Soils Present?	<input checked="" type="radio"/> Yes	<input type="radio"/> No			
Remarks:					

ROUTINE WETLAND DETERMINATION  
DATA FORM

Project/Site: <u>Sacramento Country Day School</u> Applicant Owner: <u>Fred Katz</u> Investigator(s): <u>Tom Skordal</u>	Date: <u>3/24/03</u> City/County: <u>Sacramento</u> State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input type="radio"/> No (If needed, explain on reverse.)	Community ID: <u>Upland Border to</u> Transect ID: <u>1</u> Data Point ID: <u>A</u>

VEGETATION

Plant Species	Stratum	Indicator	Plant Species	Stratum	Indicator
Dominant (D) - Associate (A)			Dominant (D) - Associated (A)		
1. <u>Jaenifluum caput-medusae (D)</u>	<u>H</u>	<u>UPL</u>	9. _____	_____	_____
2. <u>Holocarpha virgata (A)</u>	<u>H</u>	<u>UPL</u>	10. _____	_____	_____
3. <u>Erodium botrys (A)</u>	<u>H</u>	<u>UPL</u>	11. _____	_____	_____
4. <u>Leontodon lybri (D)</u>	<u>H</u>	<u>FACU</u>	12. _____	_____	_____
5. <u>Bromus mollis (A)</u>	<u>H</u>	<u>FACU</u>	13. _____	_____	_____
6. <u>Lolium perenne (A)</u>	<u>H</u>	<u>FAC</u>	14. _____	_____	_____
7. <u>Dichostema pulchre (A)</u>	<u>H</u>	<u>UPL</u>	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 090

Remarks:

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>___ Streams, Lake, or Tide Gauge</p> <p>___ Aerial Photographs</p> <p>___ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>___ Inundated</p> <p>___ Saturated in Upper 12 inches</p> <p>___ Water Marks</p> <p>___ Drift Lines</p> <p>___ Sediment Deposits/Organic Detritus</p> <p>___ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>___ Oxidized Root Channels in Upper 12 inches</p> <p>___ Water-Stained Leaves</p> <p>___ Local Soil Survey Data</p> <p>___ FAC-Neutral Test</p> <p>___ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depths of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	<p>Remarks: <u>Not saturated at 12", no wetland hydrology indicators.</u></p>

Map Unit Name

(Series and Phase): Agawant - Auburn Complex

Drainage Class: moderately well-drained

Field Observations

Taxonomy (Subgroup): Haploxeroll - Haploxeralf

Confirm Mapped Type?

☒ Yes ☐ No

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>8"</u>	<u>2.5Y 4/3</u>	<u>10YR 4/4</u>		<u>Loam</u>

Hydric Soil Indicators:

- |  |   |
|--|---|
| <input type="checkbox"/> Histosol                    | <input type="checkbox"/> Concretion in upper 3 inches                         |
| <input type="checkbox"/> Histic Epipedon             | <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils |
| <input type="checkbox"/> Sulfidic Odor               | <input type="checkbox"/> Organic Streaking in Sandy Soils                     |
| <input type="checkbox"/> Aquic Moisture Regime       | <input type="checkbox"/> Listed on Local Hydric Soils List                    |
| <input type="checkbox"/> Reducing Conditions         | <input type="checkbox"/> Listed on National Hydric Soils List                 |
| <input type="checkbox"/> Gleyed or Low-Chroma Colors | <input type="checkbox"/> Other (Explain in Remarks)                           |

Remarks:

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?

Yes

☒ No

Wetland Hydrology Present?

Yes

☒ No

Hydric Soils Present?

Yes

☒ No

Is this Data Point Within a Wetland?

Yes

☒ No

Remarks:

# ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: <u>Sacramento Country Day School</u> Applicant/Owner: <u>Fred Katz</u> Investigator(s): <u>Tom Skordal</u>	Date: <u>3/24/03</u> City/County: <u>Sacramento</u> State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? Yes <input type="radio"/> No <input checked="" type="radio"/> Is the area a potential Problem Area? Yes <input type="radio"/> No <input type="radio"/> (If needed, explain on reverse.)	Community ID: <u>Vernal Pool</u> Transect ID: <u>2</u> Data Point ID: <u>A</u>

## VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Species Dominant (D) - Associate (A)	Stratum	Indicator
1. <u>Psilocarphus brevissimus (D)</u>	<u>H</u>	<u>OBL</u>	9. _____	_____	_____
2. <u>Eryngium yaseyi (D)</u>	<u>H</u>	<u>FACW</u>	10. _____	_____	_____
3. <u>Lesqueria fremontii (D)</u>	<u>H</u>	<u>OBL</u>	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks:

## HYDROLOGY

<p>___ Recorded Data (Describe in Remarks):</p> <p>___ Streams, Lake, or Tide Gauge</p> <p>___ Aerial Photographs</p> <p>___ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input checked="" type="checkbox"/> Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p><input checked="" type="checkbox"/> Water Marks</p> <p>___ Drift Lines</p> <p>___ Sediment Deposits/Organic Detritus</p> <p><input checked="" type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>___ Oxidized Root Channels in Upper 12 inches</p> <p>___ Water-Stained Leaves</p> <p>___ Local Soil Survey Data</p> <p><input checked="" type="checkbox"/> FAC-Neutral Test</p> <p>___ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depths of Surface Water: <u>2</u> (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	<p>Remarks:</p>

Map Unit Name

(Series and Phase): Argonaut - Auburn ComplexDrainage Class: Mod. well-drained

Field Observations

Taxonomy (Subgroup): Haploxerol - HaploxeralfConfirm Mapped Type? Exchange Yes No

## Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>6"</u>	<u>2.5Y 4/3</u>	<u>10YR 1/4</u>		

## Hydric Soil Indicators:

- ☐ Histosol  
☐ Histic Epipedon  
☐ Sulfidic Odor  
☒ Aquic Moisture Regime  
☐ Reducing Conditions  
☐ Gleyed or Low-Chroma Colors

- ☐ Concretion in upper 3 inches  
☐ High Organic Content in Surface Layer in Sandy Soils  
☐ Organic Streaking in Sandy Soils  
☐ Listed on Local Hydric Soils List  
☐ Listed on National Hydric Soils List  
☐ Other (Explain in Remarks)

## Remarks:

## WETLAND DETERMINATION

Hydrophytic Vegetation Present?

Yes No

Wetland Hydrology Present?

Yes No

Hydric Soils Present?

Yes No

Is this Data Point Within a Wetland?

Yes No

## Remarks:



# ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: <u>Sacramento Country Day School</u>	Date: <u>3/24/03</u>
Applicant/Owner: <u>Fred Katz</u>	City/County: <u>Sacramento</u>
Investigator(s): <u>Tom Skordal</u>	State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No	Community ID: <u>Upland border to 2A</u>
Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No	Transect ID: <u>2</u>
Is the area a potential Problem Area? <input type="radio"/> Yes <input type="radio"/> No	Data Point ID: <u>13</u>
(If needed, explain on reverse.)	

## VEGETATION

Plant Species			Plant Species		
Dominant (D) - Associate (A)	Stratum	Indicator	Dominant (D) - Associate (A)	Stratum	Indicator
1. <u>Leontodon (ysseri) (D)</u>	<u>H</u>	<u>FACU</u>	9. _____	_____	_____
2. <u>Holocarpha virgata (D)</u>	_____	<u>UPL</u>	10. _____	_____	_____
3. <u>Erodium botrys</u>	_____	<u>UPL</u>	11. _____	_____	_____
4. <u>Orthocarpus erianthus</u>	_____	<u>UPL</u>	12. _____	_____	_____
5. <u>Taraxacum officinale</u>	_____	<u>UPL</u>	13. _____	_____	_____
6. <u>Bromus mollis</u>	_____	<u>FACU</u>	14. _____	_____	_____
7. <u>Dichlostermaa sp.</u>	_____	<u>UPL</u>	15. _____	_____	_____
8. <u>Fritschia variegata</u>	_____	<u>FACU</u>	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks:

## HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>Streams, Lake, or Tide Gauge</p> <p>Aerial Photographs</p> <p>Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>Inundated</p> <p>Saturated in Upper 12 inches</p> <p>Water Marks</p> <p>Drift Lines</p> <p>Sediment Deposits/Organic Detritus</p> <p>Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>Oxidized Root Channels in Upper 12 inches</p> <p>Water-Stained Leaves</p> <p>Local Soil Survey Data</p> <p>FAC-Neutral Test</p> <p>Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depths of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: <u>+ 1' higher than 2A. No wetland hydrology indicators.</u></p>	

Map Unit Name  
(Series and Phase): Argonaut - Auburn Complex

Drainage Class: Moderately Well-Drained  
Field Observations

Taxonomy (Subgroup): Haploxeroll-Haploxeralf

Confirm Mapped Type? ☒ Yes ☐ No

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
-------------------	---------------------------------	----------------------------------	------------------------------	--

8

2.5Y 4/2

10YR 4/4

loam

Hydric Soil Indicators:

- ☐ Histosol  
☐ Histic Epipedon  
☐ Sulfidic Odor  
☐ Aquic Moisture Regime  
☐ Reducing Conditions  
☒ Gleyed or Low-Chroma Colors

- ☐ Concretion in upper 3 inches  
☐ High Organic Content in Surface Layer in Sandy Soils  
☐ Organic Streaking in Sandy Soils  
☐ Listed on Local Hydric Soils List  
☐ Listed on National Hydric Soils List  
☐ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?

Yes

☒ No

Wetland Hydrology Present?

Yes

☒ No

Hydric Soils Present?

☒ Yes

No

Is this Data Point Within a Wetland?

Yes

☒ No

Remarks:

# ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: <u>Sacramento Country Day School</u>	Date: <u>3/24/03</u>
Applicant/Owner: <u>Fred Katz</u>	City/County: <u>Sacramento</u>
Investigator(s): <u>Tom Skordal</u>	State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No	Community ID: <u>Seasonal Wetland Swale</u>
Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No	Transect ID: <u>3</u>
Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No	Data Point ID: <u>A</u>
(If needed, explain on reverse.)	

## VEGETATION

Plant Species			Plant Species		
Dominant (D) - Associate (A)	Stratum	Indicator	Dominant (D) - Associated (A)	Stratum	Indicator
1. <u>Ipilium perenne (D)</u>	<u>H</u>	<u>FAC</u>	9. _____	_____	_____
2. <u>Psilocarphus brevissimus (D)</u>	<u>H</u>	<u>OBL</u>	10. _____	_____	_____
3. <u>Lythrum hyssopifolia (A)</u>	<u>H</u>	<u>FACW</u>	11. _____	_____	_____
4. <u>Chilidium verticatum (D)</u>	<u>H</u>	<u>FACW</u>	12. _____	_____	_____
5. <u>Eryngium yveseyi (A)</u>	<u>H</u>	<u>FACW</u>	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks:

## HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>Streams, Lake, or Tide Gauge _____</p> <p>Aerial Photographs _____</p> <p>Other _____</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input checked="" type="checkbox"/> Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p>Water Marks _____</p> <p>Drift Lines _____</p> <p>Sediment Deposits/Organic Detritus _____</p> <p><input checked="" type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p><input checked="" type="checkbox"/> FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depths of Surface Water: <u>1</u> (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
Remarks:	

Map Unit Name  
(Series and Phase): Argonaut - Auburn Complex Drainage Class: Mod. Well-Drained  
Taxonomy (Subgroup): Haploxeroll - Haploxeralf Field Observations  
Confirm Mapped Type? Inclusively Yes No

## Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
8"	2.5Y 4/2	10YR 4/4		low

## Hydric Soil Indicators:

☐ Histosol  
☐ Histic Epipedon  
☐ Sulfidic Odor  
☒ Aquic Moisture Regime  
☐ Reducing Conditions  
☒ Gleyed or Low-Chroma Colors

☐ Concretion in upper 3 inches  
☐ High Organic Content in Surface Layer in Sandy Soils  
☐ Organic Streaking in Sandy Soils  
☐ Listed on Local Hydric Soils List  
☐ Listed on National Hydric Soils List  
☐ Other (Explain in Remarks)

## Remarks:

## WETLAND DETERMINATION

Hydrophytic Vegetation Present?

Yes No

Wetland Hydrology Present?

Yes No

Hydric Soils Present?

Yes No

Is this Data Point Within a Wetland?

Yes No

## Remarks:

# ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: <u>Sacramento Country Day School</u>	Date: <u>3/24/03</u>
Applicant/Owner: <u>Fred Katz</u>	City/County: <u>Sacramento</u>
Investigator(s): <u>Tom Skordal</u>	State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No	Community ID: <u>Upland Border to 3A</u>
Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No	Transect ID: <u>3</u>
Is the area a potential Problem Area? (If needed, explain on reverse.) <input type="radio"/> Yes <input checked="" type="radio"/> No	Data Point ID: <u>B</u>

## VEGETATION

Plant Species			Plant Species		
Dominant (D) - Associate (A)	Stratum	Indicator	Dominant (D) - Associate (A)	Stratum	Indicator
1. <u>Orthocarpus erianthus (D)</u>	<u>H</u>	<u>UPL</u>	9. <u>Larix fremontii (A)</u>	<u>IF</u>	<u>UPL</u>
2. <u>Erodium cicutarium (D)</u>	<u>H</u>	<u>UPL</u>	10. <u>J</u>		
3. <u>Holopogon virgatus (D)</u>	<u>H</u>	<u>UPL</u>	11.		
4. <u>Trifolium depauperatum (D)</u>	<u>H</u>	<u>FACW</u>	12.		
5. <u>Dichostemum sp. (A)</u>	<u>IF</u>	<u>-</u>	13.		
6. <u>Isenchaetum capit-medusa (A)</u>	<u>H</u>	<u>UPL</u>	14.		
7. <u>Lepidium albidum (A)</u>	<u>H</u>	<u>UPL</u>	15.		
8. <u>Junonia butonensis (A)</u>	<u>IF</u>	<u>FACW</u>	16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 25%

Remarks:

## HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>Streams, Lake, or Tide Gauge</p> <p>Aerial Photographs</p> <p>Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>Inundated</p> <p>Saturated in Upper 12 inches</p> <p>Water Marks</p> <p>Drift Lines</p> <p>Sediment Deposits/Organic Detritus</p> <p>Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>Oxidized Root Channels in Upper 12 inches</p> <p>Water-Stained Leaves</p> <p>Local Soil Survey Data</p> <p>FAC-Neutral Test</p> <p>Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depths of Surface Water: <u>—</u> (in.)</p> <p>Depth to Free Water in Pit: <u>—</u> (in.)</p> <p>Depth to Saturated Soil: <u>—</u> (in.)</p>	
<p>Remarks: <u>No wetland hydrology indicators</u></p>	

Map Unit Name

(Series and Phase): Argonaut - Auburn ComplexDrainage Class: Mod. Well-Drained

Field Observations

Taxonomy (Subgroup):

Haploxeroll - Haploxerolt

Confirm Mapped Type?

Yes ☒ No

## Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>B</u>	<u>2.5Y 4/3</u>	<u>10YR 3/4</u>		<u>loam</u>

## Hydric Soil Indicators:

- ☐ Histosol  
☐ Histic Epipedon  
☐ Sulfidic Odor  
☐ Aquic Moisture Regime  
☐ Reducing Conditions  
☐ Gleyed or Low-Chroma Colors

- ☐ Concretion in upper 3 inches  
☐ High Organic Content in Surface Layer in Sandy Soils  
☐ Organic Streaking in Sandy Soils  
☐ Listed on Local Hydric Soils List  
☐ Listed on National Hydric Soils List  
☐ Other (Explain in Remarks)

## Remarks:

no hydric soil indicators

## WETLAND DETERMINATION

Hydrophytic Vegetation Present?

Yes

No ☒

Wetland Hydrology Present?

Yes

No ☒

Hydric Soils Present?

Yes

No ☒

Is this Data Point Within a Wetland?

Yes

No ☒

## Remarks:

# ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: <u>Sacramento Country Day School</u>	Date: <u>3/24/03</u>
Applicant/Owner: <u>Fred Katz</u>	City/County: <u>Sacramento</u>
Investigator(s): <u>Tom Skordal</u>	State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No	Community ID: <u>Vernal Pool</u>
Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No	Transect ID: <u>4</u>
Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No	Data Point ID: <u>A</u>
(If needed, explain on reverse.)	

## VEGETATION

Plant Species	Stratum	Indicator	Plant Species	Stratum	Indicator
Dominant (D) - Associate (A)			Dominant (D) - Associated (A)		
1. <u>Zinnia alveolata (D)</u>	<u>H</u>	<u>OBL</u>	9. _____	_____	_____
2. <u>Eriogonum roseum (D)</u>	<u>H</u>	<u>FACW</u>	10. _____	_____	_____
3. <u>Eleocharis macrostachya (D)</u>	<u>H</u>	<u>OBL</u>	11. _____	_____	_____
4. <u>Agrostis stip. mlt. (A)</u>	<u>H</u>	<u>OBL</u>	12. _____	_____	_____
5. <u>Lactuca biennis (A)</u>	<u>H</u>	<u>OBL</u>	13. _____	_____	_____
6. <u>Tribulus terrestris (A)</u>	<u>H</u>	<u>FACW</u>	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks:

## HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>Streams, Lake, or Tide Gauge</p> <p>Aerial Photographs</p> <p>Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input checked="" type="checkbox"/> Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p><input checked="" type="checkbox"/> Water Marks</p> <p><input checked="" type="checkbox"/> Drift Lines</p> <p><input checked="" type="checkbox"/> Sediment Deposits/Organic Detritus</p> <p><input checked="" type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p><input type="checkbox"/> Water-Stained Leaves</p> <p><input type="checkbox"/> Local Soil Survey Data</p> <p><input checked="" type="checkbox"/> FAC-Neutral Test</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depths of Surface Water: <u>4</u> (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
Remarks:	

Map Unit Name  
(Series and Phase): Whiterock loam

Drainage Class: Well-Drained

Taxonomy (Subgroup): Xerorthent

Field Observations  
Confirm Mapped Type? Included Yes No

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>4</u>	<u>10YR 4/1</u>	<u>10YR 3/6</u>		<u>loam</u>

Hydric Soil Indicators:

- |   |   |
|---|---|
| <input type="checkbox"/> Histosol                               | <input type="checkbox"/> Concretion in upper 3 inches                         |
| <input type="checkbox"/> Histic Epipedon                        | <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils |
| <input type="checkbox"/> Sulfidic Odor                          | <input type="checkbox"/> Organic Streaking in Sandy Soils                     |
| <input checked="" type="checkbox"/> Aquic Moisture Regime       | <input type="checkbox"/> Listed on Local Hydric Soils List                    |
| <input type="checkbox"/> Reducing Conditions                    | <input type="checkbox"/> Listed on National Hydric Soils List                 |
| <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors | <input type="checkbox"/> Other (Explain in Remarks)                           |

Remarks:

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?

Yes No  
Yes No  
Yes No

Wetland Hydrology Present?

Is this Data Point Within a Wetland?

Yes No

Hydric Soils Present?

Remarks:



# ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: <u>Sacramento Country Day School</u>	Date: <u>3/24/03</u>
Applicant/Owner: <u>Fred Katz</u>	City/County: <u>Sacramento</u>
Investigator(s): <u>Tom Skordal</u>	State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No	Community ID: <u>Upland Border to 4A</u>
Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No	Transect ID: <u>4B</u>
Is the area a potential Problem Area? (If needed, explain on reverse.) <input type="radio"/> Yes <input checked="" type="radio"/> No	Data Point ID: <u>B</u>

## VEGETATION

Plant Species			Plant Species		
Dominant (D) - Associate (A)	Stratum	Indicator	Dominant (D) - Associate (A)	Stratum	Indicator
1. <u>Isenatherum caput-medusae (D)</u>	<u>H</u>	<u>UPL</u>	9. _____	_____	_____
2. <u>Bromus mollis (D)</u>	<u>H</u>	<u>FACU-</u>	10. _____	_____	_____
3. <u>Leontodon lyseri (D)</u>	<u>H</u>	<u>FACU</u>	11. _____	_____	_____
4. <u>Erodium cicutarium (A)</u>	<u>H</u>	<u>UPL</u>	12. _____	_____	_____
5. <u>Orthocarpus erithalis (A)</u>	<u>H</u>	<u>UPL</u>	13. _____	_____	_____
6. <u>Chlorophytum virgatum (A)</u>	<u>H</u>	<u>UPL</u>	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 0%

Remarks:

## HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>Streams, Lake, or Tide Gauge</p> <p>Aerial Photographs</p> <p>Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>Inundated</p> <p>Saturated in Upper 12 inches</p> <p>Water Marks</p> <p>Drift Lines</p> <p>Sediment Deposits/Organic Detritus</p> <p>Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>Oxidized Root Channels in Upper 12 inches</p> <p>Water-Stained Leaves</p> <p>Local Soil Survey Data</p> <p>FAC-Neutral Test</p> <p>Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depths of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: <u>± 1' higher than 4A. No wetland hydrology indicators.</u></p>	

<b>Map Unit Name</b> (Series and Phase): <u>Whiterock loam</u>		<b>Drainage Class:</b> <u>Well-Drained</u>	
<b>Taxonomy (Subgroup):</b> <u>Xerorthent</u>		<b>Field Observations</b> <b>Confirm Mapped Type?</b> <input checked="" type="checkbox"/> Yes   No	

**Profile Description:**

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>8</u>	<u>2.5 3/2 or 3/3</u>	<u>10 YR 3/4</u>	<u>few, fine</u>	<u>Sandy loam</u>

**Hydric Soil Indicators:**

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors ( <u>warts</u> )	<input type="checkbox"/> Concretion in upper 3 inches <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)
---	---

**Remarks:**

---

Hydrophytic Vegetation Present?	Yes	<del>No</del>	Is this Data Point Within a Wetland?	Yes	<del>No</del>
Wetland Hydrology Present?	Yes	<del>No</del>			
Hydric Soils Present?	<i>weak</i> Yes	No			
Remarks:					

# APPENDIX B

## PLANT LIST

**PARTIAL LIST OF PLANTS OBSERVED ON THE SACRAMENTO COUNTRY  
DAY SCHOOL PROPERTY AND THEIR STATUS AS WETLAND INDICATOR SPECIES**

<u>Scientific Name</u>	<u>Common Name</u>	<u>Status</u> <sup>1&amp;2</sup>
<i>Achyrachaena mollis</i>	blow-wives	FAC*
<i>Aesculus californica</i>	California buckeye	UPL
<i>Aira caryophyllea</i>	silver hairgrass	UPL
<i>Alopecurus howellii</i>	Howell's foxtail	FACW+
<i>Avena fatua</i>	wild oats	UPL
<i>Briza minor</i>	little quaking grass	FACW-
<i>Brodiaea laxa</i>	blue-dicks	UPL
<i>Bromus diandrus</i> ( <i>B. rigidus</i> )	rip-gut grass	UPL
<i>Bromus mollis</i>	soft chess	FACU-
<i>Calandrina ciliata</i>	Red-maids	FACU*
<i>Callitriche marginata</i>	winged water-starwort	OBL
<i>Centaurea solstitialis</i>	yellow star-thistle	UPL
<i>Cynosurus echinatus</i>	dogtail	UPL
<i>Delphinium sp.</i>	larkspur	---
<i>Deschampsia danthonioides</i>	purple hairgrass	FACW
<i>Dichelostemma pulchella</i>	blue dicks	---
<i>Eleocharis macrostachya</i>	creeping spikerush	OBL
<i>Erodium botrys</i>	filaree	UPL
<i>Eryngium vaseyi</i>	coyote thistle	FACW
<i>Gastridium ventricosum</i>	nitgrass	FACU
<i>Geranium dissectum</i>	cut-leaf geranium	UPL
<i>Holocarpha virgata</i>	tarweed	UPL
<i>Hordeum hystris</i>	Mediterranean barley	FAC
<i>Hordeum leporinum</i>	barley	NI
<i>Hypochaeris glabra</i>	smooth cats tongue	UPL
<i>Juncus balticus</i>	baltic rush	OBL
<i>Juncus bufonius</i>	toad rush	FACW+
<i>Lactuca serriola</i>	prickly lettuce	FAC
<i>Lasthenia Californica</i>	California goldfields	FACU
<i>Lasthenia fremontii</i>	Fremont's goldfields	OBL
<i>Layia fremontii</i>	tidy-tips	UPL
<i>Leontodon leysseri</i>	hairy hawkbit	FACU
<i>Lepidium nitidum</i>	shining peppergrass	UPL
<i>Lolium perenne</i>	perennial ryegrass	FAC*
<i>Lupinus bicolor</i>	two-color lupine	UPL
<i>Lythrum 'hyssopifolia</i>	loosestrife	FACW

<sup>1</sup> Reed, P.B. 1988. National List of Plant Species That Occur in Wetlands: California (Region 0). Biological Report 88(26.10) May 1988. National Ecology Research Center, National Wetland Inventory, U.S. Fish and Wildlife Service, St. Petersburg, Fl.

<sup>2</sup> OBL = obligate; FACW = facultative wetland; FAC = facultative; FACU = facultative upland; UPL = upland; and NI = no indicator.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Status</u>
<i>Navarretia leucocephala</i>	white-headed Navarretia	OBL
<i>Orthocarpus erianthus</i>	butter and eggs	UPL
<i>Plagiobothrys nothofulvus</i>	rusty popcorn flower	FAC
<i>Plagiobothrys stipitatus</i>	slender popcorn flower	OBL
var. <i>micranthus</i>		
<i>Plantago bigelovii</i>	annual coast plantain	OBL
<i>Poa annua</i>	annual bluegrass	FACW-
<i>Psilocarphus brevissimus</i>	wooly marbles	OBL
<i>Quercus lobata</i>	valley oak	FAC*
<i>Ranunculus alveolatus</i>	Carter's buttercup	OBL
<i>Ranunculus muricatus</i>	spiney-fruited buttercup	FACW+
<i>Rumex crispus</i>	curly dock	FACW-
<i>Taeniatherum caput-medusae</i>	medusa-head	UPL
<i>Trifolium depauperatum</i>	dwarf sack clover	FAC-
<i>Trifolium variegatum</i>	white-tip clover	FACW-
<i>Veronica peregrina</i>	purslane speedwell	OBL
<i>Vulpia bromoides</i>	six-weeks brome	FACW
<i>Vulpia myuros</i>	rat-tail fescue	FACU
<i>Wyethia angustifolia</i>	narrow-leaf mule ears	FACU-

# APPENDIX C

## DELINEATION MAP

# APPENDIX D

## NDDDB RECORDS

California Department of Fish and Game  
Natural Diversity Data Base

Full Condensed Report - Multiple Records per Page

AGELAIUS TRICOLOR

TRICOLORED BLACKBIRD  
Element Code: ABPBXB0020

—List Status—	—NDDB Element Ranks—	—Other Lists—
Federal: None	Global: G3	CDFG Status: SC
State: None	State: S3	

—Habitat Associations—

General: (NESTING COLONY) HIGHLY COLONIAL SPECIES, MOST NUMEROUS IN CENTRAL VALLEY & VICINITY. LARGELY ENDEMIC TO CALIFORNIA.  
Micro: REQUIRES OPEN WATER, PROTECTED NESTING SUBSTRATE, & FORAGING AREA WITH INSECT PREY WITHIN A FEW KM OF THE COLONY.

\* SENSITIVE \*

Occurrence No. 180	Map Index:	—Dates Last Seen—	Lat/Long: /	Township:				
Occ Rank: Excellent		Element: 1994-06-XX	UTM:	Range:				
Origin: Natural/Native occurrence		Site: 1997-XX-XX	Precision:	Section: Qtr				
Presence: Presumed Extant			Symbol Type:	Meridian:				
Trend: Unknown			Radius:	Elevation:				
Main Source: MOHR, B. 1989 (OBS)								
Quad Summary: FOLSOM SE (3812151/511D)								
County Summary: SACRAMENTO								
SNA Summary:								
Location: *SENSITIVE*	Location information suppressed.							
—Comments—								
Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.								
Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES; SURROUNDING FORAGING HABITAT IS GRAZED GRASSLAND.								
Threat: THREATENED BY CONVERSION OF FORAGING HABITAT TO VINEYARDS (DEC 1997).								
General:								
Owner/Manager:								

\* SENSITIVE \*

Occurrence No. 236	Map Index:	—Dates Last Seen—	Lat/Long: /	Township:				
Occ Rank: Excellent		Element: 1993-04-22	UTM:	Range:				
Origin: Natural/Native occurrence		Site: 1993-04-22	Precision:	Section: Qtr				
Presence: Presumed Extant			Symbol Type:	Meridian:				
Trend: Unknown			Radius:	Elevation:				
Main Source: ROSCOE, T. 1993 (OBS)								
Quad Summary: FOLSOM SE (3812151/511D)								
County Summary: SACRAMENTO								
SNA Summary:								
Location: *SENSITIVE*	Location information suppressed.							
—Comments—								
Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.								
Ecological: NESTING SUBSTRATE CONSISTS OF TULE, LOCATED ON A 3-ACRE POND; SURROUNDED BY GRAZED AGRICULTURAL LAND.								
Threat:								
General:								
Owner/Manager:								



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CLEMMYS MARMORATA MARMORATA  
NORTHWESTERN POND TURTLE  
Element Code: ARAAD02031

—List Status—	NDDB Element Ranks	—Other Lists—
Federal: None	Global: G4T4	CDFG Status: SC
State: None	State: S3	

—Habitat Associations—

General: ASSOCIATED WITH PERMANENT OR NEARLY PERMANENT WATER IN A WIDE VARIETY OF HABITATS.  
Micro: REQUIRES BASKING SITES. NESTS SITES MAY BE FOUND UP TO 0.5 KM FROM WATER.

Occurrence No. 68	Map Index: 32844	—Dates Last Seen—	Lat/Long: 38°36'10" / 121°01'20"	Township: 09N
Occ Rank: Unknown		Element: 1988-08-16	UTM: Zone-10 N4274344 E672229	Range: 09E
Origin: Natural/Native occurrence		Site: 1988-08-16	Precision: NON-SPECIFIC	Section: 30 Qtr SE
Presence: Presumed Extant			Symbol Type: POINT	Meridian: M
Trend: Unknown			Radius: 1/5 mile	Elevation: 500 ft
Main Source: HOLLAND, D. 1988 (PERS)				
Quad Summary: FOLSOM SE (3812151/511D)				
County Summary: EL DORADO				
SNA Summary:				
Location: DEER CREEK AT LATROBE ROAD; APPROX. 3.8 MILES NORTHWEST OF LATROBE.				
—Comments—				
Distribution:				
Ecological:				
Threat:				
General: 2 CAPTURED AND RETAINED BY D.C. HOLLAND ON 16 AUGUST 1988.				
Owner/Manager: UNKNOWN				

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**BRANCHINECTA LYNCHI**

VERNAL POOL FAIRY SHRIMP  
Element Code: ICBRA03030

-----List Status-----  
Federal: Threatened  
State: None

-----NDDB Element Ranks-----  
Global: G2G3  
State: S2S3

-----Other Lists-----  
CDFG Status:

-----Habitat Associations-----

General: ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MINS, AND SOUTH COAST MINS, IN ASTATIC RAIN-FILLED POOLS.  
Micro: INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Occurrence No. 205      Map Index: 41017      ---Dates Last Seen---      Lat/Long: 38°30'28" / 121°07'26"      Township: 08N  
Occ Rank: Unknown      Element: 1999-02-16      UTM: Zone-10 N4263622 E663571      Range: 08E  
Origin: Natural/Native occurrence      Site: 1999-02-16      Precision: SPECIFIC      Section: 32 Qtr NW  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 180 ft  
Main Source: ECORP-SUGNET, 1999 (OBS)  
Quad Summary: FOLSOM SE (3812151/511D)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: 0.65 MILE SOUTH OF LATROBE ROAD AND 1.25 MILES WEST OF SCOTT ROAD, WEST OF RANCHO MURRIETA.  
-----Comments-----  
Distribution: ONE VERNAL POOL (#24) OF 35 SURVEYED CONTAINED FAIRY SHRIMP.  
Ecological: HABITAT CONSISTS OF VERNAL POOLS WITHIN NON-NATIVE GRASSLAND; SURROUNDED BY VINEYARDS.  
Threat:  
General: 100'S OBSERVED ON 28 JAN, 8 APR, AND 22 APR 1998, AND 10'S BY 20 MAY 1998; MANY FEMALES W/EGG CASES. 21 DEC 1998, A FEW IMMATURES OBSERVED; DURING 1 FEB AND 16 FEB 1999 SURVEYS, 1000'S OF INDIVIDUALS OBSERVED, MOSTLY FEMALES W/EGG CASES.  
Owner/Manager: PVT

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SCAPHIOPUS HAMMONDII  
WESTERN SPADEFOOT  
Element Code: AAABF01030

List Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G3?	CDFG Status: SC
State: None	State: S3?	

Habitat Associations

General: OCCURS PRIMARILY IN GRASSLAND HABITATS, BUT CAN BE FOUND IN VALLEY-FOOTHILL HARDWOOD WOODLANDS.  
Micro: VERNAL POOLS ARE ESSENTIAL FOR BREEDING AND EGG-LAYING.

Occurrence No. 56	Map Index: 32325	Dates Last Seen	Lat/Long: 38°31'51" / 121°12'50"	Township: 08N
Occ Rank: Excellent		Element: 1978-03-07	UTM: Zone-10 N4266031 E655695	Range: 07E
Origin: Natural/Native occurrence		Site: 1978-03-07	Precision: NON-SPECIFIC	Section: XX Qtr XX
Presence: Presumed Extant			Symbol Type: POLYGON	Meridian: M
Trend: Unknown			Area: 6,158.4 ac	Elevation: 150 ft
Main Source: MCCREADY, A. 1978 (PERS)				
Quad Summary: BUFFALO CREEK (3812152/511C)				
County Summary: SACRAMENTO				
SNA Summary:				
Location: ADJACENT TO (FORMER) MATHER AIR FORCE BASE. AREA BORDERED BY SUNRISE BLVD, STATE ROUTE 16, GRANT LINE RD & DOUGLAS RD.				

Comments

Distribution: MANY PONDS AND VERNAL POOLS WITHIN THE AREA.  
Ecological: VERNAL POOLS. MCCREADY HAS STUDIED THIS AREA SINCE 1967, HE CONSIDERS THESE TO BE SOME OF THE FINEST VERNAL POOLS IN CALIFORNIA.  
Threat:  
General: 65 MALES HEARD CALLING; TADPOLES OBS IN 25 DIFFERENT POOLS DURING SEVERAL LATER SPRING SURVEYS. SOME INDIVIDUAL PONDS OFF KEIFER BLVD & JAEGER RD HAD TADPOLES OF SPADEFOOT, WESTERN TOAD, & PACIFIC TREEFROG, WHICH IS AN UNUSUAL PHENOMENON.  
Owner/Manager: UNKNOWN

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**ELANUS LEUCURUS**

**WHITE-TAILED KITE**

Element Code: ABNKC06010

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: None Global: G5 CDFG Status:  
State: None State: S3

Habitat Associations

General: (NESTING) ROLLING FOOTHILLS/VALLEY MARGINS W/SCATTERED OAKS & RIVER BOTTOMLANDS OR MARSHES NEXT TO DECIDUOUS WOODLAND  
Micro: OPEN GRASSLANDS, MEADOWS, OR MARSHES FOR FORAGING CLOSE TO ISOLATED, DENSE-TOPPED TREES FOR NESTING AND PERCHING.

Occurrence No. 22 Map Index:24817 ---Dates Last Seen--- Lat/Long: 38°33'12" / 121°14'49" Township: 08N  
Occ Rank: Good Element: 1990-06-23 UTM: Zone-10 N4268465 E652767 Range: 07E  
Origin: Natural/Native occurrence Site: 1990-06-23 Precision: NON-SPECIFIC Section: 18 Qtr NE  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 1/5 mile Elevation: 160 ft  
Main Source: JOHNSON, D. 1990 (OBS)  
Quad Summary: BUFFALO CREEK (3812152/511C)\*, CARMICHAEL (3812153/512D)  
County Summary: SACRAMENTO  
SNA Summary: Wire Mountain  
Location: SE CORNER OF MATHER LAKE, MATHER AIR FORCE BASE.  
-----Comments-----  
Distribution: NEST IS LOCATED IN A TREE AT THE EDGE OF A FRESHWATER LAKE.  
Ecological:  
Threat: MAIN THREAT IS THE UNCERTAIN FUTURE OF MATHER AFB; IT IS UNKNOWN WHETHER MATHER LAKE WILL BE MAINTAINED.  
General: 2 ADULTS AND 2 JUVENILES OBSERVED IN 1990.  
Owner/Manager: DOD-MATHER AFB

Occurrence No. 23 Map Index:24818 ---Dates Last Seen--- Lat/Long: 38°31'26" / 121°12'22" Township: 08N  
Occ Rank: Fair Element: 1990-06-01 UTM: Zone-10 N4265260 E656389 Range: 07E  
Origin: Natural/Native occurrence Site: 1990-06-01 Precision: SPECIFIC Section: 28 Qtr NE  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 180 ft  
Main Source: JOHNSON, D. 1990 (OBS)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: N SIDE OF BLODGETT RESERVOIR, AT THE UPSTREAM END, JUST SOUTH OF KIEFER BLVD, 2 MILES NW OF SLOUGHHOUSE.  
-----Comments-----  
Distribution:  
Ecological: NEST TREE IS A LIVE OAK WITH ADJACENT EUCALYPTUS TREES.  
Threat:  
General: BLODGETT RESERVOIR IS A PRIVATE GUN/FISHING CLUB. 2 ADULTS AND 4 JUVENILES WERE OBSERVED IN 1990.  
Owner/Manager: PVT

Occurrence No. 24 Map Index:24819 ---Dates Last Seen--- Lat/Long: 38°36'03" / 121°07'53" Township: 09N  
Occ Rank: Good Element: 1989-06-XX UTM: Zone-10 N4273917 E6562715 Range: 08E  
Origin: Natural/Native occurrence Site: 1989-06-XX Precision: SPECIFIC Section: 29 Qtr SW  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 290 ft  
Main Source: MOHR, B. & D. JOHNSON 1989 (OBS)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary: Evans Point/Oak Lake  
Location: NORTH SIDE OF SCOTT ROAD, 0.5 MILE NORTH OF THE BRIDGE OVER COYOTE CREEK, 5 MILES SOUTH OF FOLSOM.  
-----Comments-----  
Distribution: NEST APPEARED TO BE LOCATED IN A CLUMP OF MISTLETOE.  
Ecological: NEST TREE IS A LIVE OAK; SURROUNDING FORAGING HABITAT CONSISTS OF OAK/GRASSLAND IN A ROLLING TERRAIN CONTAINING SMALL, SEASONAL CREEKS.  
Threat:  
General: 2 ADULTS OBSERVED FROM FEBRUARY-JUNE 1989; NESTING SUCCESS UNKNOWN.  
Owner/Manager: PVT

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ACCIPITER COOPERII

COOPER'S HAWK

Element Code: ABNKC12040

-----List Status-----

Federal: None

State: None

-----NDDB Element Ranks-----

Global: G5

State: S3

-----Other Lists-----

CDFG Status: SC

-----Habitat Associations-----

General: (NESTING) WOODLAND, CHIEFLY OF OPEN, INTERRUPTED OR MARGINAL TYPE.

Micro: NEST SITES MAINLY IN RIPARIAN GROWTHS OF DECIDUOUS TREES, AS IN CANYON BOTTOMS ON RIVER FLOOD-PLAINS; ALSO, LIVE OAKS.

Occurrence No. 53 Map Index:17186

Occ Rank: Fair

Origin: Natural/Native occurrence

Presence: Presumed Extant

Trend: Unknown

Main Source: JOHNSON, D. 1990 (OBS)

Quad Summary: BUFFALO CREEK (3812152/S11C)

County Summary: SACRAMENTO

SNA Summary:

Location: NORTH SIDE OF WHITE ROCK ROAD, APPROXIMATELY 1 MI WEST OF GRANT LINE ROAD, EAST OF SACRAMENTO.

Comments:

Distribution: ADULT OBSERVED SEVERAL TIMES IN THIS VICINITY; ONE TIME, CARRYING FOOD INTO COTTONWOOD TREES, ALTHOUGH NO NEST COULD BE OBSERVED.

Ecological: HABITAT IS DISTURBED AREA, CONSISTING OF GRAVEL PILES, COYOTE BUSH, AND SCATTERED COTTONWOOD TREES.

Threat:

General:

Owner/Manager: PVT-AEROJET GENERAL CORP

-----Dates Last Seen-----

Element: 1990-05-14

Site: 1990-05-14

Lat/Long: 38°35'41" / 121°11'51"

UTM: Zone-10 N4273133 E656989

Precision: SPECIFIC

Symbol Type: POINT

Radius: 80 meters

Township: 09N

Range: 07E

Section: XX Qtr XX

Meridian: M

Elevation: 200 ft

**BUTEO SWAINSONI**

SWAINSON'S HAWK

Element Code: ABNKC19070

-----List Status-----  
Federal: None  
State: Threatened

-----NDDB Element Ranks-----  
Global: G4  
State: S2

-----Other Lists-----  
CDFG Status:

-----Habitat Associations-----

General: (NESTING) BREEDS IN STANDS WITH FEW TREES IN JUNIPER-SAGE FLATS, RIPARIAN AREAS AND IN OAK SAVANNAH.

Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 193      Map Index: 11920      ---Dates Last Seen---      Lat/Long: 38°29'52" / 121°10'11"      Township: 08N  
Occ Rank: Unknown      Element: 1979-06-29      UTM: Zone-10 N4262427 E659611      Range: 07E  
Origin: Natural/Native occurrence      Site: 1982-06-28      Precision: NON-SPECIFIC      Section: 35 Qtr XX  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 1/5 mile      Elevation: 150 ft  
Main Source: DEPT. OF FISH & GAME 1984 (PERS)  
Quad Summary: SLOUGHHOUSE (3812142/495B)\*, BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: 1.5 MI EAST OF SLOUGHHOUSE ON N SIDE OF HWY 16.  
-----Comments-----  
Distribution:  
Ecological:  
Threat:  
General: DFG SWHA #SA003. 1 ADULT OBS IN 1979 BUT NO NEST FOUND. NO ADULTS OR NEST FOUND IN 1982.  
Owner/Manager: PVT

Occurrence No. 659      Map Index: 26343      ---Dates Last Seen---      Lat/Long: 38°30'22" / 121°09'28"      Township: 08N  
Occ Rank: Good      Element: 1993-06-17      UTM: Zone-10 N4263362 E660639      Range: 07E  
Origin: Natural/Native occurrence      Site: 1993-06-17      Precision: SPECIFIC      Section: 36 Qtr NE  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 100 ft  
Main Source: SCHMOLDT, D. 1993 (OBS)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: ALONG CREVIS CREEK, JUST EAST OF ITS CONFLUENCE WITH DEER CREEK, 0.5 MILE NE OF THE KIEFER BLVD CROSSING OVER DEER CREEK  
-----Comments-----  
Distribution: NEST STRUCTURE IS VISIBLE FROM KIEFER BLVD.  
Ecological: HABITAT CONSISTS OF VALLEY OAK RIPARIAN; ADJACENT HABITAT DOMINATED BY CULTIVATED FIELDS AND NON-NATIVE GRASSLAND.  
Threat:  
General: PAIR WAS FIRST OBSERVED IN THE AREA ON 13 APRIL 1993; NEST SITE WAS REVISITED ON 17 JUNE 1993 AND NEST SITE WAS STILL ACTIVE AT THAT TIME.  
Owner/Manager: PVT

Occurrence No. 660      Map Index: 26342      ---Dates Last Seen---      Lat/Long: 38°31'57" / 121°08'30"      Township: 08N  
Occ Rank: Good      Element: 1993-06-17      UTM: Zone-10 N4266331 E661990      Range: 08E  
Origin: Natural/Native occurrence      Site: 1993-06-17      Precision: SPECIFIC      Section: 19 Qtr XX  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 130 ft  
Main Source: SCHMOLDT, D. 1993 (OBS)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: ALONG DEER CREEK, JUST SOUTH OF ITS CONFLUENCE WITH CARSON CREEK, 3.5 MILES ENE OF BLODGETT RESERVOIR.  
-----Comments-----  
Distribution:  
Ecological: HABITAT CONSISTS OF VALLEY OAK RIPARIAN SURROUNDED BY NON-NATIVE GRASSLAND; GRASSLAND ON GENTLE TO MODERATELY SLOPING HILLS.  
Threat:  
General: PAIR OBSERVED COURTING/NEST-BUILDING ON 16 AND 17 JUNE 1993.  
Owner/Manager: PVT

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BUTEO SWAINSONI (cont.)

SWAINSON'S HAWK

Element Code: ABNKC19070

-----List Status-----  
Federal: None  
State: Threatened

-----NDDB Element Ranks-----  
Global: G4  
State: S2

-----Other Lists-----  
CDFG Status:

Occurrence No. 704      Map Index: 39165      ---Dates Last Seen---      Lat/Long: 38°30'10" / 121°10'28"      Township: 08N  
Occ Rank: Good      Element: 1998-07-01      UTM: Zone-10 N4262988 E659173      Range: 07E  
Origin: Natural/Native occurrence      Site: 1998-07-01      Precision: SPECIFIC      Section: 35 Qtr XX  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 100 ft  
Main Source: LINDSTRAND, L. 1998 (OBS)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: DEER CREEK, 0.7 MILE DOWNSTREAM FROM THE KIEFER BLVD CROSSING, NE OF SLOUGHHOUSE.  
-----Comments-----  
Distribution:  
Ecological: NEST TREE (SUSPECTED) IS A LARGE VALLEY OAK ALONG DEER CREEK, ADJACENT TO GRASSLAND. HABITAT CONSISTS OF A DENSE STRINGER OF VALLEY/FOOTHILL RIPARIAN VEGETATION; BORDERED BY ANNUAL GRASSLAND AND AGRICULTURAL LANDS (PASTURE AND CROPLAND).  
Threat:  
General: PAIR OF SWHA OBSERVED OCCUPYING/DEFENDING THE SITE ON 1 JUL 1998.  
Owner/Manager: SAC COUNTY

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ATHENE CUNICULARIA

BURROWING OWL

Element Code: ABNSB10010

-----List Status-----

Federal: None

State: None

-----NDDB Element Ranks-----

Global: G4

State: S2

-----Other Lists-----

CDFG Status: SC

-----Habitat Associations-----

General: (BURROW SITES) OPEN, DRY ANNUAL OR PERENNIAL GRASSLANDS, DESERTS & SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.  
Micro: SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.

Occurrence No. 91      Map Index: 17158      ---Dates Last Seen---      Lat/Long: 38°33'06" / 121°10'18"      Township: 08N  
Occ Rank: Good      Element: 1989-06-14      UTM: Zone-10 N4268419 E659324      Range: 07E  
Origin: Natural/Native occurrence      Site: 1989-06-14      Precision: SPECIFIC      Section: 14 Qtr NE  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Stable      Area: 10.5 ac      Elevation: 250 ft  
Main Source: JOHNSON, D. 1989 (OBS)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary: Grant Line Road Site  
Location: 200 YDS SOUTH OF GLORY LANE, 0.75 MI EAST OF GRANT LINE ROAD, ENE OF MATHER AFB, RANCHO CORDOVA.  
-----Comments-----  
Distribution: TWO BURROWS OCCUPIED BY TWO PAIRS OF OWLS.  
Ecological: HABITAT IS ROLLING GRASSLANDS WITH VERNAL POOLS.  
Threat: THE ONLY OBVIOUS THREAT IS ONGOING GRAZING.  
General: THE WESTERN-MOST PAIR HAD 3 YOUNG AT THE BURROW IN THE EVENING.  
Owner/Manager: PVT

Occurrence No. 307      Map Index: 40373      ---Dates Last Seen---      Lat/Long: 38°31'49" / 121°11'04"      Township: 08N  
Occ Rank: Unknown      Element: 1994-04-XX      UTM: Zone-10 N4266029 E658231      Range: 07E  
Origin: Natural/Native occurrence      Site: 1994-04-XX      Precision: SPECIFIC      Section: 23 Qtr XX  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 190 ft  
Main Source: COUNTY OF SACRAMENTO 1998 (LIT)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: 1.1 MILES NNW OF THE INTERSECTION OF KIEFER BLVD AND GRANT LINE RD.  
-----Comments-----  
Distribution: JUST NORTH OF THE KIEFER LANDFILL EXPANSION FOOTPRINT.  
Ecological: BURROW FOUND IN ANNUAL GRASSLANDS WITH VERNAL POOLS.  
Threat: PROPOSED LANDFILL EXPANSION  
General: ONE BURROW SHOWING SIGN OF RECENT OCCUPATION.  
Owner/Manager: SAC COUNTY

Occurrence No. 308      Map Index: 40374      ---Dates Last Seen---      Lat/Long: 38°31'14" / 121°11'29"      Township: 08N  
Occ Rank: Unknown      Element: 1994-04-XX      UTM: Zone-10 N4264925 E657671      Range: 07E  
Origin: Natural/Native occurrence      Site: 1994-04-XX      Precision: SPECIFIC      Section: 27 Qtr XX  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation:  
Main Source: COUNTY OF SACRAMENTO 1998 (LIT)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: KIEFER LANDFILL SITE. 0.5 MI EAST OF INTERSECTION OF KIEFER BLVD AND GRANT LINE RD.  
-----Comments-----  
Distribution: JUST OUTSIDE THE KIEFER LANDFILL EXPANSION FOOTPRINT.  
Ecological: BURROWS IN ANNUAL GRASSLANDS WITH VERNAL POOLS.  
Threat: PROPOSED LANDFILL EXPANSION  
General: THREE BURROWS WITH SIGNS OF RECENT OCCUPATION OBSERVED.  
Owner/Manager: SAC COUNTY



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AGELAIUS TRICOLOR

TRICOLORED BLACKBIRD

Element Code: ABPBXB0020

-----List Status-----

Federal: None

State: None

-----NDDB Element Ranks-----

Global: G3

State: S3

-----Other Lists-----

CDFG Status: SC

-----Habitat Associations-----

General: (NESTING COLONY) HIGHLY COLONIAL SPECIES, MOST NUMEROUS IN CENTRAL VALLEY & VICINITY. LARGELY ENDEMIC TO CALIFORNIA.  
Micro: REQUIRES OPEN WATER, PROTECTED NESTING SUBSTRATE, & FORAGING AREA WITH INSECT PREY WITHIN A FEW KM OF THE COLONY.

\* SENSITIVE \*

Occurrence No. 158 Map Index: -----Dates Last Seen----- Lat/Long: /  
Occ Rank: Unknown Element: XXXX-XX-XX UTM:  
Origin: Natural/Native occurrence Site: XXXX-XX-XX Precision:  
Presence: Presumed Extant Symbol Type: Qtr  
Trend: Unknown Radius: Elevation:  
Main Source: DEHAVEN, R. (OBS)  
Quad Summary: CARMICHAEL (3812153/512D)\*, ELK GROVE (3812143/496A), BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: \*SENSITIVE\* Location information suppressed.  
-----Comments-----  
Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
Ecological: NESTING IN CATTAILS.  
Threat:  
General:  
Owner/Manager:

\* SENSITIVE \*

Occurrence No. 178 Map Index: -----Dates Last Seen----- Lat/Long: /  
Occ Rank: Good Element: 1994-04-23 UTM:  
Origin: Natural/Native occurrence Site: 1994-04-23 Precision: Qtr  
Presence: Presumed Extant Symbol Type: Meridian:  
Trend: Unknown Radius: Elevation:  
Main Source: JOHNSON, D. 1990 (OBS)  
Quad Summary: BUFFALO CREEK (3812152/511C)\*, SLOUGHHOUSE (3812142/495B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: \*SENSITIVE\* Location information suppressed.  
-----Comments-----  
Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRY, WITH WILLOWS AND EUCALYPTUS ADJACENT, LOCATED AT THE BOTTOM OF A SWALE. FORAGING HABITAT CONSISTS OF OPEN FIELDS USED FOR GRAZING.  
Threat:  
General:  
Owner/Manager:

\* SENSITIVE \*

Occurrence No. 181 Map Index: -----Dates Last Seen----- Lat/Long: /  
Occ Rank: Excellent Element: 1997-06-XX UTM:  
Origin: Natural/Native occurrence Site: 1997-06-XX Precision: Qtr  
Presence: Presumed Extant Symbol Type: Meridian:  
Trend: Unknown Radius: Elevation:  
Main Source: MOHR, B. 1990 (OBS)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: \*SENSITIVE\* Location information suppressed.  
-----Comments-----  
Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
Ecological: NESTING SUBSTRATE CONSISTS OF TULE AND CATTAILS, IN A FRESHWATER MARSH. COLONY SUCCESS IS ALWAYS POOR DUE TO PREDATION.  
Threat: THREATS INCLUDE PREDATION AND CONVERSION OF SURROUNDING FORAGING HABITAT TO VINEYARDS.  
General:  
Owner/Manager:

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**THAMNOPHIS GIGAS**

GIANT GARTER SNAKE

Element Code: ARADB36150

-----List Status-----  
Federal: Threatened  
State: Threatened

-----NDBS Element Ranks-----  
Global: G2G3  
State: S2S3

-----Other Lists-----  
CDFG Status:

-----Habitat Associations-----

General: PREFERS FRESHWATER MARSH AND LOW GRADIENT STREAMS. HAS ADAPTED TO DRAINAGE CANALS & IRRIGATION DITCHES.  
Micro: THIS IS THE MOST AQUATIC OF THE GARTER SNAKES IN CALIFORNIA.

Occurrence No. 155      Map Index: 43191      ---Dates Last Seen---      Lat/Long: 38°33'36" / 121°14'36"      Township: 08N  
Occ Rank: Good      Element: 2000-06-23      UTM: Zone-10 N4269220 E653046      Range: 07E  
Origin: Natural/Native occurrence      Site: 2000-06-23      Precision: SPECIFIC      Section: 07 Qcr SE  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 140 ft  
Main Source: PITTMAN, B. 2000 (OBS)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: JUST NW OF THE INTERSECTION OF SUNRISE BOULEVARD AND DOUGLAS ROAD, JUST EAST OF MATHER AIR FORCE BASE.  
-----Comments-----  
Distribution: POND MAY BE PERENNIAL IN MOST YEARS AND IS WITHIN AN AREA OF CONCENTRATED VERNAL POOLS.  
Ecological: HABITAT CONSISTS OF A STOCK POND (20' X 60') CONSTRUCTED WITHIN MORRISON CREEK. UPLAND GRASSES CONSIST OF  
LOLIUM PERENNE (80%); POND IS 60% COVERED WITH DENSE ALGAL MATS. GAMBUSIA WERE THE ONLY OTHER SPECIES OBSERVED  
IN THE POND.  
Threat: THREATENED BY URBAN EXPANSION.  
General: 1 ADULT OBSERVED ON 23 JUN 2000.  
Owner/Manager: PVT

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NORTHERN HARDPAN VERNAL POOL

Element Code: CTT44110CA

—List Status—

Federal: None

State: None

—NDDB Element Ranks—

Global: G3

State: S3.1

—Other Lists—

—Habitat Associations—

General: None for this Element

Micro: None for this Element

Occurrence No. 27      Map Index: 11973      —Dates Last Seen—      Lat/Long: 38°36'09" / 121°08'14"      Township: 09N  
Occ Rank: Unknown      Element: 1983-XX-XX      UTM: Zone-10 N4274105 E662210      Range: 08E  
Origin: Natural/Native occurrence      Site: 1983-XX-XX      Precision: NON-SPECIFIC      Section: 30 Qtr SE  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 1/5 mile      Elevation: 350 ft  
Main Source: GRIGGS, T. 1980 (OBS)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: PRAIRIE CITY RD, SOUTH FROM HWY 50 TO WHITE ROCK RD, E TO SCOTT RD, THEN S.  
—Comments—  
Distribution: SMALL AREA DENSE POOLS SEEN IN 1983 AERIAL PHOTOGRAPHS.  
Ecological: UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.  
Threat: ADJ TO ORV PARK W/SUBURBAN DEVELOPMENT THREAT IN 1990.  
General: SITE NEEDS FIELD CHECK.  
Owner/Manager: UNKNOWN

Occurrence No. 32      Map Index: 11910      —Dates Last Seen—      Lat/Long: 38°32'31" / 121°11'02"      Township: 08N  
Occ Rank: Unknown      Element: 1984-06-XX      UTM: Zone-10 N4267304 E658270      Range: 07E  
Origin: Natural/Native occurrence      Site: 1984-06-XX      Precision: SPECIFIC      Section: 14 Qtr W  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 2,415.2 ac      Elevation: 250 ft  
Main Source: GRIGGS, T. 1980 (LIT)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary: Grant Line Road Site  
Location: ON E & SE SIDE OF GRANT LINE RD. BETW 1 & 6 MI N OF HWY 16 (JACKSON RD).  
—Comments—  
Distribution: TOPOGRAPHY LEVEL W/POOLS & SEVERAL LARGE VERNAL PONDS IN ANNUAL GRASSLAND W/MANY FLOWER SPP.  
Ecological: ON UPPER (OLDEST) EDGE OF HIGH TERRACE ON REDDING SOIL SERIES SOILS. DRAINAGE TO W. ORCUTTIA VISCIDA PRESENT.  
UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.  
Threat: CATTLE GRAZING LIGHT OVER PAST YEARS.  
General: SITE PARTIALLY ON LANDFILL LOCATION.  
Owner/Manager: PVT, SAC COUNTY

Occurrence No. 81      Map Index: 11831      —Dates Last Seen—      Lat/Long: 38°33'55" / 121°13'13"      Township: 08N  
Occ Rank: Unknown      Element: 1983-XX-XX      UTM: Zone-10 N4269843 E655060      Range: 07E  
Origin: Natural/Native occurrence      Site: 1983-XX-XX      Precision: SPECIFIC      Section: XX Qtr XX  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 515.9 ac      Elevation: 190 ft  
Main Source: HOLLAND & DAINS 1986 (MAP)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: NORTH OF DOUGLAS ROAD, EAST OF SUNRISE BLVD, WEST OF NIMBUS RD, SE OF RANCHO CORDOVA.  
—Comments—  
Distribution: AREA OF DENSE VERNAL POOLS SEEN IN 1983 AERIAL PHOTOS.  
Ecological: ON REDDING-CORNING ASSOCIATION SOILS. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.  
Threat:  
General:  
Owner/Manager: UNKNOWN

NORTHERN HARDPAN VERNAL POOL (cont.)

Element Code: CTT44110CA

-----List Status-----

Federal: None  
State: None

-----NDDB Element Ranks-----

Global: G3  
State: S3.1

-----Other Lists-----

Occurrence No. 82      Map Index:11801      ---Dates Last Seen---      Lat/Long: 38°32'12" / 121°13'35"      Township: 08N  
Occ Rank: Unknown      Element: 1983-XX-XX      UTM: Zone-10 N4266646 E654597      Range: 07E  
Origin: Natural/Native occurrence      Site: 1983-XX-XX      Precision: SPECIFIC      Section: 20 Qtr XX  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 870.2 ac      Elevation: 100 ft  
Main Source: HOLLAND & DAINS 1986 (MAP)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary: Kiefer Blvd. Vernal Pools  
Location: EAST OF SUNRISE BLVD, N OF KIEFER BLVD, E OF MATHER AIR FORCE BASE.  
Comments:  
Distribution: DENSE VERNAL POOLS SEEN IN 1983 AERIAL PHOTOS.  
Ecological: ON REDDING-CORNING ASSOCIATION SOILS. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP.INFO.  
Threat:  
General:  
Owner/Manager: UNKNOWN

Occurrence No. 83      Map Index:11793      ---Dates Last Seen---      Lat/Long: 38°29'52" / 121°13'55"      Township: 07N  
Occ Rank: Unknown      Element: 1983-XX-XX      UTM: Zone-10 N4262312 E654196      Range: 07E  
Origin: Natural/Native occurrence      Site: 1983-XX-XX      Precision: SPECIFIC      Section: 05 Qtr XX  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 515.0 ac      Elevation: 110 ft  
Main Source: HOLLAND & DAINS 1986 (MAPS)  
Quad Summary: SLOUGHHOUSE (3812142/495B)\*, BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: N OF GRANT LINE RD JUST EAST OF SUNRISE BLVD, ABOUT 2 MI WEST OF SLOUGHHOUSE.  
Comments:  
Distribution: TWO AREAS OF DENSE VERNAL POOLS CONNECTED BY AN AREA OF SPARSE POOLS.  
Ecological: N DENSE AREA ON REDDING-CORNING ASSOCIATION SOILS. S DENSE AREA ON SAN JOAQUIN ASSOCIATION SOILS. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.  
Threat:  
General:  
Owner/Manager: UNKNOWN

Occurrence No. 85      Map Index:11849      ---Dates Last Seen---      Lat/Long: 38°32'06" / 121°12'25"      Township: 08N  
Occ Rank: Unknown      Element: 1983-XX-XX      UTM: Zone-10 N4266493 E656284      Range: 07E  
Origin: Natural/Native occurrence      Site: 1983-XX-XX      Precision: NON-SPECIFIC      Section: 21 Qtr XX  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 1 mile      Elevation: 160 ft  
Main Source: HOLLAND, R. & V. DAINS 1986 (MAP)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: N OF BLODGETT RESERVOIR, EAST OF MATHER AIR FORCE BASE.  
Comments:  
Distribution: PATCHY SPARSE DISTRIBUTION OF VERNAL POOLS IN PORTIONS OF SECTIONS 8,10,15,16,17,21,22,29.  
Ecological: ON REDDING-CORNING AND SAN JOAQUIN ASSOCIATION SOILS. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.  
Threat:  
General:  
Owner/Manager: UNKNOWN

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NORTHERN HARDPAN VERNAL POOL (cont.)

Element Code: CTT44110CA

-----List Status-----  
Federal: None  
State: None

-----NDDB Element Ranks-----  
Global: G3  
State: S3.1

-----Other Lists-----

Occurrence No. 133      Map Index: 20270      ---Dates Last Seen---      Lat/Long: 38°16'52" / 121°09'41"      Township: 09N  
Occ Rank: Unknown      Element: 1988-04-18      UTM: Zone-10 N4275388 E660083      Range: 07E  
Origin: Natural/Native occurrence      Site: 1988-04-18      Precision: SPECIFIC      Section: 24 Qtr XX  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 375.6 ac      Elevation: 300 ft  
Main Source: WYMER, N. 1988 (OBS)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: EXTENDING 1/2 MILE NORTH OF THE INTERSECTION OF WHITE ROCK AND PRAIRIE CITY ROADS AND WSW ABOUT 1 MILE.  
-----Comments-----  
Distribution: NUMEROUS VERNAL POOLS SCATTERED OVER THE AEROJET SACRAMENTO PROPERTY.  
Ecological: SPECIES PRESENT INCLUDED GRATIOLA HETEROSEPALA, DOWNINGIA BICORNUTA, ELEOCHARIS PALUSTRIS, ERYNGIUM VASEYI  
VAR. VALLICOLA, GRATIOLA EBRACTEATA, LASTHENIA GLABERRIMUS, PLAGIOBOTHRYUS STIPITATUS VAR. MICRANTHUS,  
PSILOCARPHUS BREVISSIMUS.  
Threat: POSSIBLE SITE OF CLAY EXTRACTION BY AEROJET.  
General: MORE INFO IN WYM88R03. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.  
Owner/Manager: PVT-AEROJET GENERAL CORP

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BRANCHINECTA LYNCHI

VERNAL POOL FAIRY SHRIMP  
Element Code: ICSRA03030

—List Status—  
Federal: Threatened  
State: None

—NDDB Element Ranks—  
Global: G2G3  
State: S2S3

—Other Lists—  
CDFG Status:

—Habitat Associations—

General: ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MTS, AND SOUTH COAST MTS, IN ASTATIC RAIN-FILLED POOLS.  
Micro: INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Occurrence No. 31 Map Index: 33262 —Dates Last Seen— Lat/Long: 38°36'43" / 121°07'54" Township: 09N  
Occ Rank: Fair Element: 1995-03-24 UTM: Zone-10 N4275160 E662673 Range: 08E  
Origin: Natural/Native occurrence Site: 1995-03-24 Precision: SPECIFIC Section: 30 Qtr NE  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 350 ft  
Main Source: MARTINI, J. & D. MARTIN 1995 (OBS)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: 1 MILE EAST OF THE INTERSECTION OF PRAIRIE CITY ROAD AND WHITE ROCK ROAD, SACRAMENTO COUNTY.  
—Comments—  
Distribution:  
Ecological: HABITAT CONSISTS OF NORTHERN HARDPAN AND NORTHERN VOLCANIC MUDFLOW VERNAL POOLS IN NON-NATIVE GRASSLAND; POOL WATER FAIRLY TURBID. DOMINANT PLANTS INCLUDE CALITRICHE SP., RANUNCULUS SP., AND ERYNGIUM SP.  
Threat: POSSIBLE THREAT FROM OVERGRAZING (POOL SHOWS EVIDENCE OF USE BY CATTLE).  
General: 1 FEMALE COLLECTED FROM WETLAND NUMBER 24 ON 24 MARCH 1995 (IDENTIFIED BY D. BELK); DEPOSITED AT CAS.  
Owner/Manager: PVT-CAVITT RANCH

Occurrence No. 33 Map Index: 32441 —Dates Last Seen— Lat/Long: 38°30'10" / 121°14'49" Township: 08N  
Occ Rank: Unknown Element: 1995-02-01 UTM: Zone-10 N4262838 E652862 Range: 07E  
Origin: Natural/Native occurrence Site: 1995-02-01 Precision: NON-SPECIFIC Section: 31 Qtr SE  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 1/5 mile Elevation: 120 ft  
Main Source: SUGNET & ASSOC. 1995 (LIT)  
Quad Summary: BUFFALO CREEK (3812152/511C)\*, SLOUGHHOUSE (3812142/495B), CARMICHAEL (3812153/512D)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: ADJACENT TO MATHER AIR FORCE BASE; APPROX. 0.6 KM SOUTHWEST OF THE INTERSECTION BETWEEN SUNRISE BLVD AND JACKSON ROAD.  
—Comments—  
Distribution: GRECH PROPERTY (SURVEYED FOR SACRAMENTO AGGREGATES).  
Ecological: HARDPAN VERNAL POOL IN ANNUAL GRASSLAND.  
Threat: RURAL AGRICULTURAL USES.  
General: POOLS #41 & 42: <50 ADULTS OBSERVED; POOLS #47 & 48: 50+ ADULTS OBSERVED; 11 ADULTS COLLECTED AND DEPOSITED IN CAS.  
Owner/Manager: PVT

Occurrence No. 43 Map Index: 28976 —Dates Last Seen— Lat/Long: 38°32'33" / 121°13'57" Township: 08N  
Occ Rank: Unknown Element: 1996-02-06 UTM: Zone-10 N4267283 E654041 Range: 07E  
Origin: Natural/Native occurrence Site: 1996-03-22 Precision: NON-SPECIFIC Section: XX Qtr XX  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 1,492.9 ac Elevation: 160 ft  
Main Source: SUGNET & ASSOC. 1996 (LIT)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: BETWEEN DOUGLAS BLVD AND KEIFER BLVD; BETWEEN SUNRISE BLVD AND JAEGER ROAD; EAST OF MATHER AFB.  
—Comments—  
Distribution: SAMMIS DOUGLAS SUNRISE SITE. 1995: 386 WATERBODIES SAMPLED IN T08N, R07E, SEC 8, 17 & 20. 1996: 33 WATERBODIES SAMPLED IN PILOT WETLANDS IN T08N, R07E, SEC 20. 1993: 56 NATURAL SEASONAL WETLANDS & 27 MANMADE VERNAL POOLS INSPECTED IN SEC 20  
Ecological: HARDPAN VERNAL POOL IN ANNUAL GRASSLAND. ALSO, NATURAL SEASONAL WETLANDS & MANMADE VERNAL POOLS.  
Threat: AGRICULTURAL.  
General: 1995: DATA SUMMARIZED, ~60 POOLS HAD B. LYNCHI, NUMBERS VARIED FROM <10 TO 1000+, SAMPLES DEPOSITED IN CAS. 1996: 50+ OBS IN 3 POOLS (SB4, SB6 & SB11) IN SEC 20. 1993: OBS IN 4 OF 56 SEASONAL WETLANDS & 3 OF 27 MANMADE POOLS IN SEC 20.  
Owner/Manager: PVT-SARES REGIS GROUP

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BRANCHINECTA LYNCHI (cont.)  
VERNAL POOL FAIRY SHRIMP  
Element Code: ICBRA03030

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: Threatened Global: G2G3 CDFG Status:  
State: None State: S2S3

Occurrence No. 134 Map Index:34807 ---Dates Last Seen--- Lat/Long: 38°36'00" / 121°10'14" Township: 09N  
Occ Rank: Good Element: 1996-03-08 UTM: Zone-10 N4273766 E659303 Range: 07E  
Origin: Natural/Native occurrence Site: 1996-03-08 Precision: SPECIFIC Section: 35 Qtr NE  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 423.6 ac Elevation: 280 ft  
Main Source: MARTIN, D. 1996 (OBS)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: SOUTHEAST OF WHITE ROCK ROAD X GRANT LINE ROAD; SOUTH OF FOLSOM.  
-----Comments-----  
Distribution: GENCORP AEROJET OFFSITE GET B SITE; POOL #71, WATER DEPTH APPROX. 25 CM, TURBIDITY LIKE STRONG TEA.  
Ecological: OLD DREDGE PIT IN NON-NATIVE GRASSLAND.  
Threat: ADJACENT LAND USE: GRAZING PASTURELAND, STATE RECREATIONAL VEHICLE AREA.  
General: 1 BRANCHINECTA LYNCHI COLLECTED AND DEPOSITED IN CAS; LINDERIELLA OCCIDENTALIS ALSO PRESENT.  
Owner/Manager: PVT-GENCORP AEROJET

Occurrence No. 190 Map Index:36874 ---Dates Last Seen--- Lat/Long: 38°30'14" / 121°15'10" Township: 08N  
Occ Rank: Good Element: 2000-03-15 UTM: Zone-10 N4262974 E652346 Range: 07E  
Origin: Natural/Native occurrence Site: 2000-03-15 Precision: NON-SPECIFIC Section: 31 Qtr XX  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 587.8 ac Elevation: 125 ft  
Main Source: MUTH, D. 1996 (OBS)  
Quad Summary: CARMICHAEL (3812153/512D)\*, SLOUGHHOUSE (3812142/495B), ELK GROVE (3812143/496A), BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: VICINITY OF THE INTERSECTION OF EAGLES NEST ROAD AND HWY 16 (JACKSON ROAD), SOUTH OF MATHER AIR FORCE BASE.  
-----Comments-----  
Distribution:  
Ecological: HABITAT CONSISTS OF NORTHERN HARDPAN VERNAL POOLS, AS WELL AS SCRAPES, SWALES, DEPRESSIONS, AND STOCK PONDS;  
SURROUNDED BY NON-NATIVE GRASSLAND.  
Threat: THREATENED BY GRAVEL MINING.  
General: NUMEROUS FAIRY SHRIMP FOUND AT THIS SITE DURING SPRING 1996 AND 1997 SURVEYS. OBSERVED 10+ ADULTS MARCH 2000,  
IN WESTERN PORTION OF POLYGON.  
Owner/Manager: PVT

Occurrence No. 192 Map Index:37098 ---Dates Last Seen--- Lat/Long: 38°30'53" / 121°12'33" Township: 08N  
Occ Rank: Unknown Element: 1994-05-11 UTM: Zone-10 N4264242 E656140 Range: 07E  
Origin: Natural/Native occurrence Site: 1994-05-11 Precision: NON-SPECIFIC Section: 28 Qtr SE  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 159.9 ac Elevation: 150 ft  
Main Source: JONES & STOKES ASSOC. 1996 (LIT)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: SOUTH OF BLODGETT RESERVOIR (LAGUNA CREEK), NE OF THE INTERSECTION OF HWY 16 AND GRANT LINE ROAD, SE OF  
SACRAMENTO.  
-----Comments-----  
Distribution:  
Ecological: HABITAT CONSISTS OF NORTHERN HARDPAN VERNAL POOLS.  
Threat:  
General: "DUTRA" SITE. BRANCHINECTA LYNCHI, LEPIDURUS PACKARDI, LINDERIELLA OCCIDENTALIS, AND AN UNKNOWN BRANCHINECTA  
SPECIES WERE OBSERVED ON 11 MAY 1994.  
Owner/Manager: UNKNOWN

BRANCHINECTA LYNCHI (cont.)

VERNAL POOL FAIRY SHRIMP  
Element Code: ICBRA03030

-----List Status-----  
Federal: Threatened  
State: None

-----NDDB Element Ranks-----  
Global: G2G3  
State: S2S3

-----Other Lists-----  
CDFG Status:

Occurrence No. 199      Map Index: 40261      ---Dates Last Seen---      Lat/Long: 38°31'17" / 121°11'17"      Township: 08N  
Occ Rank: Unknown      Element: 1994-04-XX      UTM: Zone-10 N4265031 E657956      Range: 07E  
Origin: Natural/Native occurrence      Site: 1994-04-XX      Precision: SPECIFIC      Section: 27 Qtr XX  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 17.1 ac      Elevation: 220 ft  
Main Source: COUNTY OF SACRAMENTO 1998 (LIT)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: KIEFER LANDFILL, 0.7 MI E JCT OF GRANT LINE RD & KIEFER BLVD, 1.7 MILES NNE OF DEER CREEK CROSSING AT JACKSON HWY (16).  
-----Comments-----  
Distribution: INSIDE KIEFER LANDFILL EXPANSION FOOTPRINT REDUCTION AREA.  
Ecological: NORTHERN HARDPAN VERNAL POOL COMMUNITY.  
Threat: PROPOSED LANDFILL EXPANSION.  
General: B. LUNCHI FOUND IN 6 POOLS. LEPIDURUS PACKARDI ALSO FOUND HERE.  
Owner/Manager: SAC COUNTY

Occurrence No. 200      Map Index: 40263      ---Dates Last Seen---      Lat/Long: 38°31'51" / 121°11'07"      Township: 08N  
Occ Rank: Unknown      Element: 1994-04-XX      UTM: Zone-10 N4266090 E658174      Range: 07E  
Origin: Natural/Native occurrence      Site: 1994-04-XX      Precision: SPECIFIC      Section: 23 Qtr SW  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 230 ft  
Main Source: COUNTY OF SACRAMENTO 1998 (LIT)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: KIEFER LANDFILL, 1.1 MILES NE JCT OF GRANT LINE RD & KIEFER BLVD, 0.2 MILE S OF GRANT LINE RD AT BM 216.  
-----Comments-----  
Distribution: KIEFER LANDFILL EXPANSION FOOTPRINT AREA.  
Ecological: NORTHERN HARDPAN VERNAL POOL COMMUNITY.  
Threat: PROPOSED LANDFILL EXPANSION  
General: OBSERVED IN VERNAL POOL IN THE NORTHERN CORNER OF THE PROPERTY WITHIN THE PROPOSED LANDFILL FOOTPRINT.  
LEPIDURUS PACKARDI ALSO FOUND HERE.  
Owner/Manager: SAC COUNTY



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*LINDERIELLA OCCIDENTALIS*  
CALIFORNIA LINDERIELLA  
Element Code: ICBRA06010

—List Status—  
Federal: None  
State: None

—NDDB Element Ranks—  
Global: G2G3  
State: S2S3

—Other Lists—  
CDFG Status:

—Habitat Associations—

General: SEASONAL POOLS IN UNFLOWED GRASSLANDS WITH OLD ALLUVIAL SOILS UNDERLAIN BY HARDPAN OR IN SANDSTONE DEPRESSIONS.  
Micro: WATER IN THE POOLS HAS VERY LOW ALKALINITY, CONDUCTIVITY, AND TDS.

Occurrence No. 65      Map Index: 32519      —Dates Last Seen—      Lat/Long: 38°36'47" / 121°09'01"      Township: 09N  
Occ Rank: Unknown      Element: 1990-03-17      UTM: Zone-10 N4275259 E661056      Range: 07E  
Origin: Natural/Native occurrence      Site: 1990-03-17      Precision: NON-SPECIFIC      Section: 24 Qtr SE  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 2.2 ac      Elevation: 295 ft  
Main Source: SIMOVICH, M. A. 1990 (LIT)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: PRAIRIE CITY SVRA; 0.1 KM SSW OF PRAIRIE CITY ROAD X WHITE ROCK ROAD.  
—Comments—  
Distribution:  
Ecological: LARGE EPHEMERAL POND; VEGETATION THROUGHOUT AREA; CLEAR WATER ALONG EDGES, BUT MILKY IN CENTER; POND DRIED UP BY SUMMER.  
Threat: LIGHT OFF-HIGHWAY VEHICLES USAGE; POSSIBILITY OF OHV OIL SPILLS.  
General: POOL #D-L. OCCIDENTALIS OBSERVED IN EARLY SPRING, BUT FEW IN LATE SPRING; LEPIDURUS PACKARDI, LYNCEUS BRACHYURUS AND OTHER INVERTS WERE PRESENT. Hyla REGILLA HEARD CALLING IN EARLY SPRING AND TADPOLES PRESENT IN LATE SPRING.  
Owner/Manager: DPR-PRAIRIE CITY SVRA

Occurrence No. 66      Map Index: 32520      —Dates Last Seen—      Lat/Long: 38°36'10" / 121°08'18"      Township: 09N  
Occ Rank: Unknown      Element: 1990-03-17      UTM: Zone-10 N4274120 E662101      Range: 08E  
Origin: Natural/Native occurrence      Site: 1990-03-17      Precision: SPECIFIC      Section: 30 Qtr SE  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 330 ft  
Main Source: SIMOVICH, M. A. 1990 (LIT)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: PRAIRIE CITY SVRA; 1.6 KM SE OF PRAIRIE CITY ROAD X WHITE ROCK ROAD.  
—Comments—  
Distribution:  
Ecological: VERNAL POOL; VEGETATION IN AREAS WITH LOW OHV USAGE, BUT NO VEGETATION WITH HIGH OHV USAGE; POOL DRY BY SUMMER.  
Threat: OFF-HIGHWAY VEHICLE USAGE.  
General: POOL #D-MATURE AND ABUNDANT L. OCCIDENTALIS OBSERVED IN EARLY SPRING, BUT FEW IN LATE SPRING.  
Owner/Manager: DPR-PRAIRIE CITY SVRA

Occurrence No. 67      Map Index: 32521      —Dates Last Seen—      Lat/Long: 38°35'59" / 121°08'15"      Township: 09N  
Occ Rank: Unknown      Element: 1990-03-17      UTM: Zone-10 N4273806 E662203      Range: 08E  
Origin: Natural/Native occurrence      Site: 1990-03-17      Precision: NON-SPECIFIC      Section: 30 Qtr SE  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 8.3 ac      Elevation: 325 ft  
Main Source: SIMOVICH, M. A. 1990 (LIT)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: PRAIRIE CITY SVRA; 2.0 KM SE OF PRAIRIE CITY ROAD X WHITE ROCK ROAD.  
—Comments—  
Distribution:  
Ecological: VERNAL POOL PRESERVE; GRASSLAND WITH SCATTERED OAKS AND DISTINCTIVE VERNAL POOL VEGETATION; POOLS DRY BY SUMMER.  
Threat: PAST CATTLE GRAZING; MINIMAL IMPACT BY OFF-HIGHWAY VEHICLES USAGE.  
General: POOLS #A & B-L. OCCIDENTALIS OBSERVED IN EARLY SPRING, BUT FEW IN LATE SPRING.  
Owner/Manager: DPR-PRAIRIE CITY SVRA

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*LINDERIELLA OCCIDENTALIS* (cont.)

CALIFORNIA LINDERIELLA

Element Code: ICBRA06010

—List Status—

Federal: None

State: None

—NDDB Element Ranks—

Global: G2G3

State: S2S3

—Other Lists—

CDFG Status:

Occurrence No. 109 Map Index: 32730 —Dates Last Seen— Lat/Long: 38°33'29" / 121°14'52" Township: 08N  
Occ Rank: Fair Element: 1993-02-02 UTM: Zone-10 N4268997 E652682 Range: 07E  
Origin: Natural/Native occurrence Site: 1993-02-02 Precision: SPECIFIC Section: 07 Qtr SE  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 20.2 ac Elevation: 140 ft  
Main Source: CRANSTON, P. 1993 (OBS)  
Quad Summary: BUFFALO CREEK (3812152/511C)\*, CARMICHAEL (3812153/512D)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: FORMER MATHER AIR FORCE BASE; WESTERN PORTION OF TRIANGLE FORMED BY DOUGLAS RD, SUNRISE BOULEVARD & FOLSOM SOUTH CANAL.  
Comments:  
Distribution: LAND TO THE NORTH AND EAST IS PRIVATELY-OWNED FOR INDUSTRIAL/BUSINESS; EAST PARCEL IS UNDEVELOPED; THE FORMER MATHER AFB IS TO THE SOUTH AND WEST.  
Ecological: GRASSLAND.  
Threat: IDENTIFIED FOR EXCHANGE.  
General: MANY INDIVIDUALS FROM BOTH SPECIES, LINDERIELLA OCCIDENTALIS AND LEPIDURUS PACKARDI, OBSERVED; UNKNOWN NUMBERS COLLECTED.  
Owner/Manager: BLM

Occurrence No. 136 Map Index: 34807 —Dates Last Seen— Lat/Long: 38°36'00" / 121°10'14" Township: 09N  
Occ Rank: Unknown Element: 1996-03-23 UTM: Zone-10 N4273766 E659303 Range: 07E  
Origin: Natural/Native occurrence Site: 1996-03-23 Precision: SPECIFIC Section: 35 Qtr NE  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 423.6 ac Elevation: 280 ft  
Main Source: MARTIN, D. ET AL 1996 (PERS)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: SOUTHEAST OF WHITE ROCK ROAD X GRANT LINE ROAD; SOUTH OF FOLSOM.  
Comments:  
Distribution: GENCORP-AEROJET OFFSITE GET 9 SITE; 120 POOLS SAMPLED DURING SURVEY CONDUCTED FROM 2/10-3/23/1996; ADJACENT LAND USE: GRAZING PASTURELAND, STATE RECREATIONAL VEHICLE AREA.  
Ecological: HABITAT CONSISTS OF NON-NATIVE GRASSLAND, STOCKPONDS, SCRAPES, ARTIFICIAL PONDS, SWALES AND DREDGE PITS.  
Threat: STUDY WAS CONDUCTED FOR ROAD CONSTRUCTION FOR ACCESS TO GROUNDWATER CLEANUP WELLS.  
General: LINDERIELLA OBSERVED IN 48 POOLS, WITH 6 VOUCHER SPECIMENS SENT TO CAS; LEPIDURUS PACKARDI AND BRANCHINECTA LYNCHI (1 POOL) ALSO PRESENT.  
Owner/Manager: PVT-GENCDRP AEROJET

Occurrence No. 147 Map Index: 28976 —Dates Last Seen— Lat/Long: 38°32'33" / 121°13'57" Township: 08N  
Occ Rank: Unknown Element: 1996-03-22 UTM: Zone-10 N4267283 E654041 Range: 07E  
Origin: Natural/Native occurrence Site: 1996-03-22 Precision: NON-SPECIFIC Section: XX Qtr XX  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 1,492.9 ac Elevation: 160 ft  
Main Source: SUGNET & ASSOC. 1996 (LIT)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: BETWEEN DOUGLAS BLVD AND KEIFER BLVD; BETWEEN SUNRISE BLVD AND JAEGER ROAD; EAST OF MATHER AFB.  
Comments:  
Distribution: SAMMIS DOUGLAS SUNRISE PROJECT SITE. 1995: TOTAL OF 386 WATERBODIES SURVEYED OVER ENTIRE PROJECT SITE WITHIN T08N, R07E, SECTIONS 8, 17 & 20. 1996: 33 TOTAL WATERBODIES SURVEYED IN PILOT WETLANDS IN SEC 20 ONLY.  
Ecological: HARSPAN VERNAL POOL IN ANNUAL GRASSLAND.  
Threat: AGRICULTURAL.  
General: 1995: DATA SEVERELY SUMMARIZED, 780 POOLS HAD L. OCCIDENTALIS PRESENT, ABUNDANCES VARIED FROM <50 TO >50. 1996: >50 ADULTS OBSERVED IN 30 POOLS, 1 POOL (#SB19) OBSERVED <50 ADULTS ON 3/20/1996; ALL POOLS WITHIN SEC 20.  
Owner/Manager: PVT-SARES REGIS GROUP

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*LINDERIELLA OCCIDENTALIS* (cont.)

CALIFORNIA LINDERIELLA

Element Code: ICBRA06010

—List Status—

Federal: None

State: None

—NDDB Element Ranks—

Global: G2G3

State: S2S3

—Other Lists—

CDFG Status:

Occurrence No. 154 Map Index: 37098 —Dates Last Seen— Lat/Long: 38°30'53" / 121°12'33" Township: 08N  
Occ Rank: Unknown Element: 1994-05-11 UTM: Zone-10 N4264242 E656140 Range: 07E  
Origin: Natural/Native occurrence Site: 1994-05-11 Precision: NON-SPECIFIC Section: 28 Qtr SE  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 159.9 ac Elevation: 150 ft  
Main Source: JONES & STOKES ASSOC. 1996 (PERS)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: SOUTH OF BLODGETT RESERVOIR (LAGUNA CREEK), NE OF THE INTERSECTION OF HWY 16 AND GRANT LINE ROAD, SE OF SACRAMENTO.

—Comments—

Distribution:

Ecological: HABITAT CONSISTS OF NORTHERN HARDPAN VERNAL POOLS.

Threat:

General: "DUTRA" SITE. BRANCHINECTA LYNCHI, LEPIDURUS PACKARDI, LINDERIELLA OCCIDENTALIS, AND AN UNKNOWN BRANCHINECTA SPECIES WERE OBSERVED ON 11 MAY 1994.

Owner/Manager: UNKNOW

Occurrence No. 165 Map Index: 41024 —Dates Last Seen— Lat/Long: 38°31'37" / 121°15'18" Township: 08N  
Occ Rank: Unknown Element: 1997-01-XX UTM: Zone-10 N4265534 E652106 Range: 07E  
Origin: Natural/Native occurrence Site: 1997-01-XX Precision: SPECIFIC Section: 19 Qtr XX  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 10.6 ac Elevation: 125 ft  
Main Source: JONES & STOKES 1997 (LIT)  
Quad Summary: CARMICHAEL (3812153/512D)\*, BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: 0.1 MILE EAST OF JUNCTION OF KIEFER BLVD AND EAGLES NEST ROAD, MATHER REGIONAL PARK (6 FEATURES, ALONG KIEFER BLVD).

—Comments—

Distribution: MORRISON CREEK DRAINAGE AREA, IN THE OLD MATHER AIR FORCE BASE.

Ecological: 6 FEATURES THAT ARE EITHER, VERNAL POOLS, VERNAL SWALES, OR A BRANCH OF MORRISON CREEK.

Threat: IMPACTED BY HUMANS.

General: OBSERVED IN 1993 AND 1996-97 IN 5 OF THE 6 FEATURES MAPPED. ALSO LEPIDURUS PACKARDI OBSERVED.

Owner/Manager: SAC COUNTY

Occurrence No. 166 Map Index: 41027 —Dates Last Seen— Lat/Long: 38°31'42" / 121°14'47" Township: 08N  
Occ Rank: Unknown Element: 1997-01-XX UTM: Zone-10 N4265713 E652848 Range: 07E  
Origin: Natural/Native occurrence Site: 1997-01-XX Precision: SPECIFIC Section: 19 Qtr XX  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 150 ft  
Main Source: JONES & STOKES 1997 (LIT)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: 0.8 MILE EAST OF JUNCTION OF KIEFER BLVD AND EAGLES NEST ROAD, MATHER REGIONAL PARK.

—Comments—

Distribution: 1 VERNAL POOL IN THIS PORTION OF THE COMPLEX, WITH CALIFORNIA LINDERIELLA. PART OF THE OLD MATHER AIR FORCE BASE.

Ecological: DISTURBED VERNAL POOL.

Threat: IMPACTED BY HUMANS.

General: OBSERVED IN 1996-97. ALSO OBSERVED LEPIDURUS PACKARDI.

Owner/Manager: SAC COUNTY

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**LEPIDURUS PACKARDI**

VERNAL POOL TADPOLE SHRIMP  
Element Code: ICBRA10010

—List Status—	—NDDB Element Ranks—	—Other Lists—
Federal: Endangered	Global: G2G3	CDFG Status:
State: None	State: S2S3	

—Habitat Associations—

General: INHABITS VERNAL POOLS AND SWALES IN THE SACRAMENTO VALLEY CONTAINING CLEAR TO HIGHLY TURBID WATER.  
Micro: POOLS COMMONLY FOUND IN GRASS BOTTOMED SWALES OF UNPLOWED GRASSLANDS. SOME POOLS ARE MUD-BOTTOMED & HIGHLY TURBID.

Occurrence No. 12	Map Index: 32441	—Dates Last Seen—	Lat/Long: 38°30'10" / 121°14'49"	Township: 08N
Occ Rank: Unknown		Element: 1995-02-22	UTM: Zone-10 N4262838 E652862	Range: 07E
Origin: Natural/Native occurrence		Site: 1995-05-24	Precision: NON-SPECIFIC	Section: 31 Qtr SE
Presence: Presumed Extant			Symbol Type: POINT	Meridian: M
Trend: Unknown			Radius: 1/5 mile	Elevation: 120 ft
Main Source: SUGNET & ASSOC. 1995 (LIT)				
Quad Summary: BUFFALO CREEK (3812152/511C)*, SLOUGHHOUSE (3812142/495B), CARMICHAEL (3812153/512D)				
County Summary: SACRAMENTO				
SNA Summary:				
Location: ADJACENT TO MATHER AIR FORCE BASE; APPROX. 0.6 KM SOUTHWEST OF THE INTERSECTION BETWEEN SUNRISE BLVD AND JACKSON ROAD.				
—Comments—				
Distribution: GRECH PROPERTY (SURVEYED FOR SACRAMENTO AGGREGATES).				
Ecological: HARDPAN VERNAL POOL IN ANNUAL GRASSLAND				
Threat: RURAL AGRICULTURAL USES.				
General: POOLS #42, 70, 72, & 200: <50 ADULTS OBSERVED; POOL #44 (2/1/1995): 50+ ADULTS OBSERVED, (2/22/1995): <50 ADULTS OBSERVED; POOLS #41 & 83C: 50+ ADULTS OBSERVED; 6 ADULTS COLLECTED AND DEPOSITED IN CAS.				
Owner/Manager: PVT				

Occurrence No. 23	Map Index: 28975	—Dates Last Seen—	Lat/Long: 38°33'34" / 121°11'44"	Township: 08N
Occ Rank: Unknown		Element: 1996-03-22	UTM: Zone-10 N4269239 E657215	Range: 07E
Origin: Natural/Native occurrence		Site: 1996-03-22	Precision: NON-SPECIFIC	Section: XX Qtr XX
Presence: Presumed Extant			Symbol Type: POLYGON	Meridian: M
Trend: Unknown			Area: 6,066.4 ac	Elevation: 160 ft
Main Source: SUGNET & ASSOC. 1996 (LIT)				
Quad Summary: BUFFALO CREEK (3812152/511C)				
County Summary: SACRAMENTO				
SNA Summary:				
Location: AREA EAST OF SUNRISE BLVD, NORTH OF JACKSON RD & SOUTH OF WHITE ROCK ROAD.				
—Comments—				
Distribution: T09N, 07E, SECTIONS 25, 26, 35 & 36, AND T08N, R07E, SECTIONS 2, 3, 8, 10, 15, 17, 20, 21 & 29. INCLUDES THE SAMMIS SUNRISE DOUGLAS PROJECT SITE & THE GENCORP AEROJECT OFFSITE GET B SITE. FEATURES LOCATED SOMEWHERE WITHIN THESE SECTIONS.				
Ecological: ANNUAL GRASSLAND WITH HARDPAN VERNAL POOLS, NATURAL SEASONAL WETLANDS, SWALES, MANMADE VERNAL POOLS, STOCK PONDS, SCRAPES AND DREDGE PITS.				
Threat: AGRICULTURE, ROAD CONSTRUCTION.				
General: 1993: LEPIDURUS PACKARDI OBS IN ~126 OF 434 INSPECTED FEATURES THROUGHOUT THIS AREA. 1995: OBS IN ~130 OF 386 FEATURES IN T08N, R07E, SEC 8, 17, & 20. 1996: OBS IN ~45 OF 153 FEATURES IN T08N, R07E, SEC 20 & T09N, R07E, SEC 25, 26, 35 & 36.				
Owner/Manager: PVT, UNKNOWN				

Occurrence No. 31	Map Index: 32519	—Dates Last Seen—	Lat/Long: 38°36'47" / 121°09'01"	Township: 09N
Occ Rank: Unknown		Element: 1990-03-17	UTM: Zone-10 N4275259 E661056	Range: 07E
Origin: Natural/Native occurrence		Site: 1990-03-17	Precision: NON-SPECIFIC	Section: 24 Qtr SE
Presence: Presumed Extant			Symbol Type: POLYGON	Meridian: M
Trend: Unknown			Area: 2.2 ac	Elevation: 295 ft
Main Source: SIMOVICH, MARIE A. 1990 (LIT)				
Quad Summary: BUFFALO CREEK (3812152/511C)				
County Summary: SACRAMENTO				
SNA Summary:				
Location: PRAIRIE CITY SVRA; 0.1 KM SSW OF PRAIRIE CITY ROAD X WHITE ROCK ROAD.				
—Comments—				
Distribution:				
Ecological: LARGE, EPHEMERAL POND; VEGETATION THROUGHOUT; CLEAR WATER ALONG EDGES, BUT MILKY IN CENTER; POND DRY BY SUMMER.				
Threat: LIGHT OFF-HIGHWAY VEHICLES USAGE;				
General: POOL #D-L. PACKARDI OBSERVED IN EARLY AND LATE SPRING; L. OCCIDENTALIS, LYNCEUS BRACHYURUS AND OTHER INVERTS PRESENT; HYLIA REGILLA HEARD CALLING AND TADPOLES OBSERVED IN LATE SPRING.				
Owner/Manager: DPR-PRAIRIE CITY SVRA				

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<b>LEPIDURUS PACKARDI (cont.)</b> <b>VERNAL POOL TADPOLE SHRIMP</b> Element Code: ICBRA10010	List Status Federal: Endangered State: None	NDDB Element Ranks Global: G2G3 State: S2S3	Other Lists CDFG Status:
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Occurrence No. 54      Map Index: 32730      —Dates Last Seen—      Lat/Long: 38°33'29" / 121°14'52"      Township: 08N  
     Occ Rank: Fair      Element: 1993-02-02      UTM: Zone-10 N4268997 E652682      Range: 07E  
     Origin: Natural/Native occurrence      Site: 1993-02-02      Precision: SPECIFIC      Section: 07 Qtr SE  
     Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
     Trend: Unknown      Area: 20.2 ac      Elevation: 140 ft  
     Main Source: CRANSTON, P. 1993 (OBS)  
     Quad Summary: BUFFALO CREEK (3812152/511C)\*, CARMICHAEL (3812153/512D)  
     County Summary: SACRAMENTO  
     SNA Summary:  
     Location: FORMER MATHER AIR FORCE BASE; WESTERN PORTION OF TRIANGLE FORMED BY DOUGLAS RD, SUNRISE BOULEVARD & FOLSOM SOUTH CANAL.

—Comments—  
 Distribution: LAND TO THE NORTH AND EAST IS PRIVATELY-OWNED FOR INDUSTRIAL/BUSINESS; THE FORMER MATHER AFB IS TO THE SOUTH AND WEST; EAST PARCEL IS UNDEVELOPED.  
 Ecological: GRASSLANDS.  
 Threat: IDENTIFIED FOR EXCHANGE.  
 General: MANY INDIVIDUALS OF BOTH SPECIES, *LEPIDURUS PACKARDI* AND *LINDERIELLA OCCIDENTALIS*, OBSERVED; COLLECTION MADE.  
 Owner/Manager: BLM

Occurrence No. 95      Map Index: 20270      —Dates Last Seen—      Lat/Long: 38°36'52" / 121°09'41"      Township: 09N  
     Occ Rank: Unknown      Element: 1990-01-01      UTM: Zone-10 N4275388 E660083      Range: 07E  
     Origin: Natural/Native occurrence      Site: 1990-01-01      Precision: SPECIFIC      Section: 24 Qtr XX  
     Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
     Trend: Unknown      Area: 375.5 ac      Elevation: 300 ft  
     Main Source: SUGNET & ASSOC. 1993 (PERS)  
     Quad Summary: BUFFALO CREEK (3812152/511C)  
     County Summary: SACRAMENTO  
     SNA Summary:  
     Location: NORTHWEST OF THE INTERSECTION OF WHITE ROCK ROAD AND PRAIRIE CITY ROAD.

—Comments—  
 Distribution: A "NATURAL STOCK POND" SOMEWHERE IN SECTION 24.  
 Ecological: "NATURAL STOCK POND". NORTHERN HARDPAN VERNAL POOLS KNOWN FROM THIS SAME AREA. THIS OCCURRENCE WAS SNAPPED TO THE VERNAL POOL COMMUNITY OCCURRENCE.  
 Threat:  
 General: *LEPIDURUS PACKARDI* OBSERVED IN A "NATURAL STOCKPOND". SUGNET RECORD #180.  
 Owner/Manager: PVT, UNKNOWN

Occurrence No. 113      Map Index: 36874      —Dates Last Seen—      Lat/Long: 38°30'14" / 121°15'10"      Township: 08N  
     Occ Rank: Good      Element: 2000-03-15      UTM: Zone-10 N4262974 E652346      Range: 07E  
     Origin: Natural/Native occurrence      Site: 2000-03-15      Precision: NON-SPECIFIC      Section: 31 Qtr XX  
     Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
     Trend: Unknown      Area: 587.8 ac      Elevation: 125 ft  
     Main Source: MUTH, D. 1996 (OBS)  
     Quad Summary: CARMICHAEL (3812153/512D)\*, SLOUGHHOUSE (3812142/495B), ELK GROVE (3812143/496A), BUFFALO CREEK (3812152/511C)  
     County Summary: SACRAMENTO  
     SNA Summary:  
     Location: VICINITY OF THE INTERSECTION OF EAGLES NEST ROAD AND HWY 16 (JACKSON ROAD), SOUTH OF MATHER AIR FORCE BASE.

—Comments—  
 Distribution:  
 Ecological: HABITAT CONSISTS OF NORTHERN HARDPAN VERNAL POOLS, AS WELL AS SCRAPES, SWALES, DEPRESSIONS, AND STOCK PONDS; SURROUNDED BY NON-NATIVE GRASSLAND.  
 Threat: THREATENED BY GRAVEL MINING.  
 General: NUMEROUS FAIRY SHRIMP AND TADPOLE SHRIMP FOUND AT THIS SITE DURING SPRING 1996 SURVEYS. 10 PLUS ADULTS OBSERVED MARCH 2000 IN WESTERN PORTION OF POLYGON.  
 Owner/Manager: PVT

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LEPIDURUS PACKARDI (cont.)		List Status		NDDB Element Ranks		Other Lists	
VERNAL POOL TADPOLE SHRIMP		Federal: Endangered		Global: G2G3		CDFG Status:	
Element Code: ICBRA10010		State: None		State: S2S3			
Occurrence No. 116	Map Index:37098	—Dates Last Seen—		Lat/Long: 38°30'53" / 121°12'33"		Township: 08N	
Occ Rank: Unknown		Element: 1994-05-11		UTM: Zone-10 N4264242 E656140		Range: 07E	
Origin: Natural/Native occurrence		Site: 1994-05-11		Precision: NON-SPECIFIC		Section: 28 Qtr SE	
Presence: Presumed Extant				Symbol Type: POLYGON		Meridian: M	
Trend: Unknown				Area: 159.9 ac		Elevation: 150 ft	
Main Source: JONES & STOKES ASSOC. 1996 (LIT)							
Quad Summary: BUFFALO CREEK (3812152/511C)							
County Summary: SACRAMENTO							
SNA Summary:							
Location: SOUTH OF BLODGETT RESERVOIR (LAGUNA CREEK), NE OF THE INTERSECTION OF HWY 16 AND GRANT LINE ROAD, SE OF SACRAMENTO.							
—Comments—							
Distribution:							
Ecological: HABITAT CONSISTS OF NORTHERN HARDPAN VERNAL POOLS.							
Threat:							
General: "DUTRA" SITE. BRANCHINECTA LYNCHI, LEPIDURUS PACKARDI, LINDERIELLA OCCIDENTALIS, AND AN UNKNOWN BRANCHINECTA SPECIES WERE OBSERVED ON 11 MAY 1994.							
Owner/Manager: UNKNOWN							
Occurrence No. 124	Map Index:40261	—Dates Last Seen—		Lat/Long: 38°31'17" / 121°11'17"		Township: 08N	
Occ Rank: Unknown		Element: 1994-04-XX		UTM: Zone-10 N4265031 E657956		Range: 07E	
Origin: Natural/Native occurrence		Site: 1994-04-XX		Precision: SPECIFIC		Section: 27 Qtr XX	
Presence: Presumed Extant				Symbol Type: POLYGON		Meridian: M	
Trend: Unknown				Area: 17.1 ac		Elevation: 220 ft	
Main Source: COUNTY OF SACRAMENTO 1998 (LIT)							
Quad Summary: BUFFALO CREEK (3812152/511C)							
County Summary: SACRAMENTO							
SNA Summary:							
Location: KIEFER LANDFILL, 0.7 MI E JCT OF GRANT LINE RD & KIEFER BLVD, 1.7 MILES NNE OF DEER CREEK CROSSING AT JACKSON HWY (16).							
—Comments—							
Distribution: INSIDE KIEFER LANDFILL EXPANSION FOOTPRINT REDUCTION AREA.							
Ecological: NORTHERN HARDPAN VERNAL POOL COMMUNITY.							
Threat: PROPOSED LANDFILL EXPANSION.							
General: LEPIDURUS PACKARDI FOUND IN 13 POOLS. BRANCHINECTA LYNCHI ALSO FOUND HERE.							
Owner/Manager: SAC COUNTY							
Occurrence No. 125	Map Index:40263	—Dates Last Seen—		Lat/Long: 38°31'51" / 121°11'07"		Township: 08N	
Occ Rank: Unknown		Element: 1994-04-XX		UTM: Zone-10 N4266090 E658174		Range: 07E	
Origin: Natural/Native occurrence		Site: 1994-04-XX		Precision: SPECIFIC		Section: 23 Qtr SW	
Presence: Presumed Extant				Symbol Type: POINT		Meridian: M	
Trend: Unknown				Radius: 80 meters		Elevation: 230 ft	
Main Source: COUNTY OF SACRAMENTO 1998 (LIT)							
Quad Summary: BUFFALO CREEK (3812152/511C)							
County Summary: SACRAMENTO							
SNA Summary:							
Location: KIEFER LANDFILL, 1.1 MILES NE JCT OF GRANT LINE RD & KIEFER BLVD, 0.2 MILE S OF GRANT LINE RD AT BM 216.							
—Comments—							
Distribution: KIEFER LANDFILL EXPANSION FOOTPRINT AREA.							
Ecological: NORTHERN HARDPAN VERNAL POOL COMMUNITY.							
Threat: PROPOSED LANDFILL EXPANSION							
General: OBSERVED IN VERNAL POOL IN THE NORTHERN CORNER OF THE PROPERTY WITHIN THE PROPOSED LANDFILL FOOTPRINT. BRANCHINECTA LYNCHI ALSO FOUND HERE.							
Owner/Manager: SAC COUNTY							

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LEPIDURUS PACKARDI (cont.)  
VERNAL POOL TADPOLE SHRIMP  
Element Code: ICBRA10010

—List Status—  
Federal: Endangered  
State: None

—NDDB Element Ranks—  
Global: G2G3  
State: S2S3

—Other Lists—  
CDFG Status:

Occurrence No. 126      Map Index: 40367      —Dates Last Seen—      Lat/Long: 38°31'25" / 121°10'56"      Township: 08N  
Occ Rank: Unknown      Element: 1994-04-XX      UTM: Zone-10 N4265273 E658441      Range: 07E  
Origin: Natural/Native occurrence      Site: 1994-04-XX      Precision: NON-SPECIFIC      Section: 26 Qtr XX  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 43.1 ac      Elevation: 160 ft  
Main Source: COUNTY OF SACRAMENTO 1998 (LIT)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: KIEFER LANDFILL, 1.0 MILE EAST OF JUNCTION OF KIEFER BLVD AND GRANT LINE ROAD.  
—Comments—  
Distribution: KIEFER LANDFILL EXPANSION FOOTPRINT AREA.  
Ecological: NORTHERN HARDPAN VERNAL POOL COMMUNITY.  
Threat: PROPOSED LANDFILL EXPANSION  
General: LEPIDURUS PACKARDI FOUND IN 7 VERNAL POOLS. 6 OF THE POOLS ARE IN A SEASONAL DRAINAGE AND 1 OF THE POOLS HAS BEEN DAMMED TO HOLD MORE WATER.  
Owner/Manager: SAC COUNTY

Occurrence No. 127      Map Index: 40369      —Dates Last Seen—      Lat/Long: 38°31'09" / 121°11'19"      Township: 08N  
Occ Rank: Unknown      Element: 1994-04-XX      UTM: Zone-10 N4264790 E657898      Range: 07E  
Origin: Natural/Native occurrence      Site: 1994-04-XX      Precision: SPECIFIC      Section: 27 Qtr XX  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 220 ft  
Main Source: COUNTY OF SACRAMENTO 1998 (LIT)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: KIEFER LANDFILL, 0.6 MI ESE OF THE JUNCTION OF KIEFER BLVD AND GRANT LINE RD.  
—Comments—  
Distribution: KIEFER LANDFILL EXPANSION FOOTPRINT AREA.  
Ecological: NORTHERN HARDPAN VERNAL POOL COMMUNITY.  
Threat: PROPOSED LANDFILL EXPANSION  
General: FOUND IN 3 POOLS ON THE WEST SIDE OF THE LANDFILL EXPANSION BOUNDARY.  
Owner/Manager: SAC COUNTY

Occurrence No. 128      Map Index: 40372      —Dates Last Seen—      Lat/Long: 38°30'52" / 121°11'36"      Township: 08N  
Occ Rank: Unknown      Element: 1994-04-XX      UTM: Zone-10 N4264259 E657500      Range: 07E  
Origin: Natural/Native occurrence      Site: 1994-04-XX      Precision: SPECIFIC      Section: 27 Qtr XX  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 190 ft  
Main Source: COUNTY OF SACRAMENTO 1998 (LIT)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: JUST NORTH OF KIEFER BLVD, 0.6 MI FROM THE JUNCTION OF KIEFER BLVD AND GRANT LINE RD.  
—Comments—  
Distribution:  
Ecological: NORTHERN HARDPAN VERNAL POOL COMMUNITY.  
Threat: PROPOSED LANDFILL EXPANSION.  
General: OBSERVED IN A VERNAL POOL.  
Owner/Manager: SAC COUNTY

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**LEPIDURUS PACKARDI (cont.)**

VERNAL POOL TADPOLE SHRIMP  
Element Code: ICBRA10010

—List Status—  
Federal: Endangered  
State: None

—NDDB Element Ranks—  
Global: G2G3  
State: S2S3

—Other Lists—  
CDFG Status:

Occurrence No. 133 Map Index: 41024 —Dates Last Seen— Lat/Long: 38°31'37" / 121°15'18" Township: 08N  
Occ Rank: Unknown Element: 1997-01-XX UTM: Zone-10 N4265534 E652106 Range: 07E  
Origin: Natural/Native occurrence Site: 1997-01-XX Precision: SPECIFIC Section: 19 Qtr XX  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 10.6 ac Elevation: 125 ft  
Main Source: JONES & STOKES 1997 (LIT)  
Quad Summary: CARMICHAEL (3812153/512D)\*, BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: 0.1 MILE EAST OF JUNCTION OF KIEFER BLVD AND EAGLES NEST ROAD, MATHER REGIONAL PARK (6 FEATURES, ALONG KIEFER BLVD).

—Comments—  
Distribution: PART OF THE MORRISON CREEK DRAINAGE, IN THE OLD MATHER AIR FORCE BASE.  
Ecological: 6 FEATURES THAT ARE EITHER, VERNAL POOLS, VERNAL SWALES, OR A BRANCH OF MORRISON CREEK.  
Threat: IMPACTED BY HUMANS.  
General: OBSERVED IN 1993 AND 1996-97 IN 5 OF THE 6 FEATURES MAPPED. LINDERIELLA OCCIDENTALIS ALSO OBSERVED.  
Owner/Manager: SAC COUNTY

Occurrence No. 135 Map Index: 41026 —Dates Last Seen— Lat/Long: 38°32'00" / 121°14'45" Township: 08N  
Occ Rank: Unknown Element: 1997-01-XX UTM: Zone-10 N4266259 E652896 Range: 07E  
Origin: Natural/Native occurrence Site: 1997-01-XX Precision: SPECIFIC Section: 19 Qtr NE  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 150 ft  
Main Source: JONES & STOKES 1997 (LIT)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: 0.9 MILE ENE OF JUNCTION OF KIEFER BLVD AND EAGLES NEST ROAD, MATHER REGIONAL PARK.

—Comments—  
Distribution: 1 VERNAL POOL IN THIS PORTION OF THE COMPLEX, WITH VERNAL POOL TADPOLE SHRIMP (VPTS). PART OF THE OLD MATHER AIR FORCE BASE.  
Ecological: DISTURBED VERNAL POOL.  
Threat: IMPACTED BY HUMANS.  
General: OBSERVED IN 1996-97.  
Owner/Manager: SAC COUNTY

Occurrence No. 136 Map Index: 41027 —Dates Last Seen— Lat/Long: 38°31'42" / 121°14'47" Township: 08N  
Occ Rank: Unknown Element: 1997-01-XX UTM: Zone-10 N4265713 E652848 Range: 07E  
Origin: Natural/Native occurrence Site: 1997-01-XX Precision: SPECIFIC Section: 19 Qtr XX  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 150 ft  
Main Source: JONES & STOKES 1997 (LIT)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: 0.8 MILE EAST OF JUNCTION OF KIEFER BLVD AND EAGLES NEST ROAD, MATHER REGIONAL PARK.

—Comments—  
Distribution: 1 VERNAL POOL IN THIS PORTION OF THE COMPLEX, WITH VERNAL POOL TADPOLE SHRIMP (VPTS). PART OF THE OLD MATHER AIR FORCE BASE.  
Ecological: DISTURBED VERNAL POOL.  
Threat: IMPACTED BY HUMANS.  
General: OBSERVED IN 1996-97. ALSO LINDERIELLA OCCIDENTALIS OBSERVED.  
Owner/Manager: SAC COUNTY



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DESMOCERUS CALIFORNICUS DIMORPHUS  
VALLEY ELDERBERRY LONGHORN BEETLE  
Element Code: IICOL48011

—List Status—  
Federal: Threatened  
State: None

—NDDB Element Ranks—  
Global: G3T2  
State: S2

—Other Lists—  
CDFG Status:

—Habitat Associations—

General: OCCURS ONLY IN THE CENTRAL VALLEY OF CALIFORNIA, IN ASSOCIATION WITH BLUE ELDERBERRY (SAMBUCUS MEXICANA).  
Micro: PREFERS TO LAY EGGS IN ELDERBERRIES 2-8 INCHES IN DIAMETER; SOME PREFERENCE SHOWN FOR "STRESSED" ELDERBERRIES.

Occurrence No. 132      Map Index: 39257      —Dates Last Seen—      Lat/Long: 38°37'18" / 121°14'07"      Township: 09N  
Occ Rank: Poor      Element: 1995-04-21      UTM: Zone-10 N4276065 E653621      Range: 07E  
Origin: Natural/Native occurrence      Site: 1995-04-21      Precision: SPECIFIC      Section: 20 Qtr XX  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 130 ft  
Main Source: HOSEA, R. 1995 (OBS)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: BETWEEN FOLSOM BLVD AND HIGHWAY 50, 1.25 ROAD MILES SW OF HAZEL AVE AND FOLSOM BLVD, RANCHO CORDOVA.  
—Comments—  
Distribution: HIGHWAY FRONTAGE.  
Ecological: INTRODUCED WEEDS (OAT & FOXTAIL), ELDERBERRY PLANT, BLACK WALNUT.  
Threat: ROADSIDE MOWING, FIRE  
General: 1 ADULT OBSERVED.  
Owner/Manager: CALTRANS

Occurrence No. 188      Map Index: 45079      —Dates Last Seen—      Lat/Long: 38°37'07" / 121°14'52"      Township: 09N  
Occ Rank: Poor      Element: 2000-01-24      UTM: Zone-10 N4275711 E652546      Range: 07E  
Origin: Natural/Native occurrence      Site: 2000-01-24      Precision: SPECIFIC      Section: 19 Qtr SE  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 125 ft  
Main Source: OKAMURA-JOHNSON, S. 2000 (OBS)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: SOUTH SIDE OF BUFFALO CREEK DRAINAGE CANAL, ON THE NORTH SIDE OF HIGHWAY 50, EAST EDGE OF SACRAMENTO  
—Comments—  
Distribution: FOUND ALONG THE WEST EDGE OF THE RIGHT-OF-WAY FENCE.  
Ecological: HABITAT CONSISTS OF A RIPARIAN CORRIDOR ALONG BUFFALO CREEK. CREEK HAS A MUD SUBSTRATE, WITH EMERGENT VEGETATION AND SAND BAR WILLOW IN ISOLATED STANDS. SURROUNDING AREA HAS BEEN EXTENSIVELY MODIFIED BY HYDRAULIC MINING.  
Threat: THREATENED BY A PROPOSED RESIDENTIAL DEVELOPMENT.  
General: 3 OF 12 ELDERBERRY BUSHES FOUND TO CONTAIN EXIT HOLES ON 24 JAN 2000.  
Owner/Manager: PVT

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LEGENERE LIMOSA

LEGENERE

Element Code: PDCAM0C010

—List Status—

Federal: None

State: None

—NDDB Element Ranks—

Global: G2

State: S2.2

—Other Lists—

CNPS List: 1B

R-E-D Code: 2-3-3

—Habitat Associations—

General: VERNAL POOLS. MANY HISTORICAL OCCURRENCES ARE EXTIRPATED.

Micro: IN BEDS OF VERNAL POOLS. 1-880M.

Occurrence No. 12      Map Index: 11838      —Dates Last Seen—      Lat/Long: 38°34'07" / 121°12'53"      Township: 08N  
Occ Rank: Unknown      Element: 1983-05-31      UTM: Zone-10 N4270220 E655532      Range: 07E  
Origin: Natural/Native occurrence      Site: 1983-05-31      Precision: SPECIFIC      Section: XX Qtr XX  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 200 ft  
Main Source: DAINS, V. 1983 (OBS)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: APPROX. 0.8 MI NW OF JCT DOUGLAS ROAD AND NIMBUS ROAD, 1.6 MI NE OF JCT DOUGLAS RD AND SUNRISE BLVD.  
—Comments—  
Distribution: N SIDE OF CREEK.  
Ecological: VERNAL POOL. CORNING SOILS WITH ALAMO CLAY.  
Threat: AREA PLANNED FOR DEVELOPMENT AS INDUSTRIAL PARK.  
General: MORE THAN 1000 PLANTS IN LARGE VERNAL POOL (1-2 ACRES) IN 1983.  
Owner/Manager: PVT

Occurrence No. 13      Map Index: 11827      —Dates Last Seen—      Lat/Long: 38°33'56" / 121°13'17"      Township: 08N  
Occ Rank: Unknown      Element: 1983-05-31      UTM: Zone-10 N4269858 E654963      Range: 07E  
Origin: Natural/Native occurrence      Site: 1983-05-31      Precision: SPECIFIC      Section: XX Qtr XX  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 190 ft  
Main Source: DAINS, V. 1983 (OBS)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: 1.2 MI NE OF JCT DOUGLAS ROAD AND SUNRISE BLVD, IMMEDIATELY N OF MAN-MADE KNOLL.  
—Comments—  
Distribution: N SIDE OF CREEK.  
Ecological: VERNAL POOL ON CORNING SOILS WITH ALAMO CLAY.  
Threat: AREA PROPOSED AS AN INDUSTRIAL PARK.  
General: ABOUT 100 PLANTS IN 1983 IN 1000 SQUARE FOOT VERNAL POOL.  
Owner/Manager: PVT

Occurrence No. 47      Map Index: 41016      —Dates Last Seen—      Lat/Long: 38°31'34" / 121°15'01"      Township: 08N  
Occ Rank: Good      Element: 1993-XX-XX      UTM: Zone-10 N4265453 E652519      Range: 07E  
Origin: Natural/Native occurrence      Site: 1997-XX-XX      Precision: SPECIFIC      Section: 19 Qtr XX  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 2.5 ac      Elevation: 145 ft  
Main Source: JONES & STOKES ASSOC. 1997 (LIT)  
Quad Summary: CARMICHAEL (3812153/512D)\*, BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: MATHER FIELD, ABOUT 0.6 MILE EAST OF EAGLES NEST ROAD ALONG NORTH SIDE OF KIEFER BLVD, RANCHO CORDOVA.  
—Comments—  
Distribution: MAPPED IN 1 POOL IMMEDIATELY NORTH OF KIEFER BLVD. JSA POOL #1390.  
Ecological: GROWING WITHIN AN INTERCONNECTED VERNAL POOL AND SWALE SYSTEM. ASSOCIATED WITH ELEOCHARIS MACROSTACHYA, LASTHENIA GLABERRIMA, ERYNGIUM, GRATIOLA EBRACTEATA, DOWNINGIA SPP., ISOETES, AND PILULARIA AMERICANA.  
Threat:  
General: ABOUT 500 PLANTS OBSERVED IN 1993. AREA SEARCHED BUT NO PLANTS OBSERVED IN 1997.  
Owner/Manager: SAC COUNTY

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**GRATIOLA HETEROSEPALA**

BOGGS LAKE HEDGE-HYSSOP  
Element Code: PDSCR0R060

—List Status—  
Federal: None  
State: Endangered

—NDBS Element Ranks—  
Global: G3  
State: S3.1

—Other Lists—  
CNPS List: 1B  
R-E-D Code: 1-2-2

—Habitat Associations—

General: MARSHES AND SWAMPS (FRESHWATER), VERNAL POOLS.

Micro: CLAY SOILS; USUALLY IN VERNAL POOLS, SOMETIMES ON LAKE MARGINS. 5-2400M.

Occurrence No. 18 Map Index: 12991 —Dates Last Seen— Lat/Long: 38°31'24" / 121°11'35" Township: 08N  
Occ Rank: Good Element: 1991-04-XX UTM: Zone-10 N4265225 E657511 Range: 07E  
Origin: Natural/Native occurrence Site: 1991-04-XX Precision: SPECIFIC Section: 27 Qtr N  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 9.7 ac Elevation: 220 ft  
Main Source: SACRAMENTO CO. 1998 (LIT)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary: Grant Line Road Site  
Location: NEAR KIEFER LANDFILL, ABOUT 0.2-0.5 MILE ENE OF KIEFER BLVD AT GRANT LINE ROAD, SOUTHEAST OF RANCHO CORDOVA.  
—Comments—  
Distribution: PLANTS OBSERVED IN SEVEN POOLS. MAPPED AT CNDBS AS FIVE POLYGONS: SOUTHERN TWO POLYGONS WITH THREE POOLS IS LOCATED ABOUT 0.25 MI DUE EAST OF INTERSECTION OF ROADS; NORTHERN 3 POLYGONS W/4 POOLS IS LOCATED ABOUT 0.45 MI ENE OF INTERSECTION.  
Ecological: VERNAL POOLS SURROUNDED BY ANNUAL GRASSLAND. ASSOCIATED VEGETATION INCLUDES PLAGIOBOTHRYX STIPITATUS, ERYNGIUM VASEYI, PSILOCARPHUS BREVISSIMUS, DOWNINGIA BICORNUTA, AND ORCUTTIA VISCIDA.  
Threat: CATTLE GRAZING, BUT POPULATION APPEARS STABLE UNDER CURRENT REGIME. INDIRECT IMPACTS FROM PROPOSED LANDFILL EXPANSION.  
General: 10,000+ PLANTS OBSERVED IN ONE POOL IN 1988 (D. STONE), UNKNOWN NUMBER OF PLANTS OBSERVED IN 6 ADDITIONAL POOLS IN 1990-1991 BY JONES AND STOKES ASSOC. (SACRAMENTO CO. 1998).  
Owner/Manager: SAC COUNTY

Occurrence No. 48 Map Index: 24906 —Dates Last Seen— Lat/Long: 38°37'14" / 121°09'07" Township: 09N  
Occ Rank: Excellent Element: 1989-06-02 UTM: Zone-10 N4276084 E660883 Range: 07E  
Origin: Natural/Native occurrence Site: 1989-06-02 Precision: SPECIFIC Section: 24 Qtr XX  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 3.4 ac Elevation: 290 ft  
Main Source: WYMER, N. 1989 (OBS)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: NW OF INTERSECTION OF PRAIRIE CITY RD AND WHITE ROCK RD. AEROJET PROPERTY.  
—Comments—  
Distribution:  
Ecological: IN PONDS WITH DOWNINGIA BICORNUTA, ELEOCHARIS PALUSTRIS, GRATIOLA EBRACTEATA, LASTHENIA GLABERRIMA, PLAGIOBOTHRYX STIPITATA MICRANTHA, AND PSILOCARPHUS BREVISSIMUS.  
Threat: POSSIBLE SITE OF CLAY EXTRACTION BY AEROJET.  
General: PLANTS NOT COUNTED IN 1988 OR 1989. MAPPED AS 3 SMALL POLYGONS.  
Owner/Manager: PVT-AEROJET GENERAL CORP

Occurrence No. 57 Map Index: 28976 —Dates Last Seen— Lat/Long: 38°32'33" / 121°13'57" Township: 08N  
Occ Rank: Unknown Element: 1993-06-18 UTM: Zone-10 N4267283 E654041 Range: 07E  
Origin: Natural/Native occurrence Site: 1993-06-18 Precision: NON-SPECIFIC Section: XX Qtr XX  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 1,492.9 ac Elevation: 160 ft  
Main Source: TAYLOR, D. 1993 (PERS)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: BETWEEN DOUGLAS RD AND KIEFER BLVD, E OF SUNRISE BLVD AND MATHER AFB.  
—Comments—  
Distribution: MAPPED AS NON-SPECIFIC POLYGON PER SECTIONS GIVEN ON LIST (8, 17, & 20).  
Ecological:  
Threat:  
General: ONLY INFO IS LIST FROM D. TAYLOR GIVING TRS (AS REPORTED BY SUGNET & ASSOC). EXACT LOCATION UNKNOWN. BETTER INFO NEEDED.  
Owner/Manager: UNKNOWN

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GRATIOLA HETEROSEPALA (cont.)

BOGGS LAKE HEDGE-HYSSOP

Element Code: PDSCR0R060

-----List Status-----  
Federal: None  
State: Endangered

-----NDDB Element Ranks-----  
Global: G3  
State: S3.1

-----Other Lists-----  
CNPS List: 1B  
R-E-D Code: 1-2-2

Occurrence No. 82      Map Index: 40095      ---Dates Last Seen---      Lat/Long: 38°31'50" / 121°11'24"  
Occ Rank: Unknown      Element: 1991-04-XX      UTM: Zone-10 N4266049 E657759      Township: 08N  
Origin: Natural/Native occurrence      Site: 1991-04-XX      Precision: SPECIFIC      Range: 07E  
Presence: Presumed Extant      Symbol Type: POINT      Section: 22 Qtr SE  
Trend: Unknown      Radius: 80 meters      Meridian: M  
Main Source: SACRAMENTO CO. 1998 (LIT)      Elevation: 227 ft  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: NEAR KIEFER LANDFILL, EAST SIDE OF GRANT LINE ROAD ABOUT 0.9 MILE NE OF KIEFER BLVD, SOUTHEAST OF RANCHO CORDOVA.

-----Comments-----  
Distribution: PLANTS OBSERVED IN ONE POOL. MAPPED IN DRAINAGE ON EAST SIDE OF ROAD ABOUT 200 METERS NE OF 227' BENCHMARK.  
Ecological: VERNAL POOL.  
Threat: INDIRECT IMPACTS FROM PROPOSED LANDFILL EXPANSION.  
General: UNKNOWN NUMBER OF PLANTS OBSERVED IN 1990-1991 BY JONES AND STOKES ASSOC. (SACRAMENTO CO. 1998).  
Owner/Manager: SAC COUNTY

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JUNCUS LEIOSPERMUS VAR AHARTII  
AHART'S DWARF RUSH  
Element Code: PMJUN011L1

-----List Status-----	NDDB Element Ranks-----	Other Lists-----
Federal: None	Global: G2T1	CNPS List: 1B
State: None	State: S1.2	R-E-D Code: 3-2-3

-----Habitat Associations-----

General: VERNAL POOLS.

Micro: RESTRICTED TO THE EDGES OF VERNAL POOLS. 30-100M.

Occurrences No. 7	Map Index: 43632	-----Dates Last Seen-----	Lat/Long: 38°31'26" / 121°14'22"	Township: 08N
Occ Rank: None		Element: XXXX-XX-XX	UTM: Zone-10 N4265212 E653466	Range: 07E
Origin: Natural/Native occurrence		Site: XXXX-XX-XX	Precision: NON-SPECIFIC	Section: 29 Qtr NW
Presence: Possibly Extirpated			Symbol Type: POINT	Meridian: M
Trend: Unknown			Radius: 1/5 mile	Elevation: 150 ft
Main Source: BITTMAN, R. 1999 (PERS)				
Quad Summary: BUFFALO CREEK (3812152/511C)				
County Summary: SACRAMENTO				
SNA Summary:				
Location: SOUTHEAST CORNER OF KIEFER BOULEVARD AND SUNRISE BOULEVARD, WEST OF BLODGETT RESERVOIR, SOUTHEAST OF RANCHO CORDOVA.				

-----Comments-----

Distribution: PROPOSED SHALAKO GOLF COURSE.

Ecological:

Threat: PROPOSED GOLF COURSE.

General: 4 PLANTS OBSERVED. NEEDS FIELDWORK.

Owner/Manager: UNKNOWN

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ORCUTTIA TENUIS

SLENDER ORCUTT GRASS

Element Code: PMPOA4G050

—List Status—  
Federal: Threatened  
State: Endangered

—NDDB Element Ranks—  
Global: G3  
State: S3.1

—Other Lists—  
CNPS List: 1B  
R-E-D Code: 2-3-3

—Habitat Associations—

General: VERNAL POOLS.

Micro: 30-1735M.

Occurrence No. 71 Map Index: 34526

Occ Rank: Good

Origin: Natural/Native occurrence

Presence: Presumed Extant

Trend: Unknown

Main Source: WHITNEY, K. 1993 (OBS)

Quad Summary: BUFFALO CREEK (3812152/511C)

County Summary: SACRAMENTO

SNA Summary:

Location: EAST OF MATHER AIR FORCE BASE; 0.85 MI SE OF JCT SUNRISE BLVD AND DOUGLAS ROAD.

Comments:

Distribution: ON BORDER OF SECTION LINE BETWEEN SECTION 17 AND 8.

Ecological: ASSOCIATED WITH ELEOCHARIS MACROSTACHYA, ERYNGIUM VASEYI, & NAVARRETIA LEUCOCEPHALA.

Threat:

General: 500 PLANTS ESTIMATED IN 1993.

Owner/Manager: PVT

—Dates Last Seen—

Element: 1993-05-20

Site: 1993-05-20

Lat/Long: 38°33'16" / 121°13'42"

UTM: Zone-10 N4268602 E654384

Precision: SPECIFIC

Symbol Type: POINT

Radius: 80 meters

Township: 08N

Range: 07E

Section: 17 Qtr NE

Meridian: M

Elevation: 175 ft

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**ORCUTTIA VISCIDA**

SACRAMENTO ORCUTT GRASS  
Element Code: PMPOA4G070

—List Status—	—NDBB Element Ranks—	—Other Lists—
Federal: Endangered	Global: G1	CNPS List: 1B
State: Endangered	State: S1.1	R-E-D Code: 3-3-3

—Habitat Associations—

General: VERNAL POOLS. ENDEMIC TO SACRAMENTO COUNTY.  
Micro: 30-100M.

Occurrence No. 1	Map Index: 40832	—Dates Last Seen—	Lat/Long: 38°31'53" / 121°11'14"	Township: 08N
Occ Rank: Good		Element: 1998-07-28	UTM: Zone-10 N4266149 E657989	Range: 07E
Origin: Natural/Native occurrence		Site: 1998-07-28	Precision: SPECIFIC	Section: 22 Qtr SE
Presence: Presumed Extant			Symbol Type: POLYGON	Meridian: M
Trend: Unknown			Area: 5.1 ac	Elevation: 220 ft
Main Source: PRESTON, R. 1998 (OBS)				
Quad Summary: BUFFALO CREEK (3812152/511C)				
County Summary: SACRAMENTO				
SNA Summary:				
Location: GRANT LINE ROAD ABOUT 2.9 MILES NORTH OF JACKSON HIGHWAY (HWY 16), NORTH OF SLOUGHHOUSE.				
—Comments—				
Distribution: MAPPED IN LARGE POOL ALONG EAST SIDE OF ROAD, ABOUT 1 MILE NORTHEAST OF KIEFER ROAD AND JUST SW OF BEND IN GRANTLINE ROAD.				
Ecological: DEEP VERNAL POOL WITH ISOETES HOWELLII, ERYNGIUM VASEYI, PSILOCARPHUS BREVISSIMUS, LILAEA SCILLOIDES, PLAGIOBOTHRYIS STIPITATUS MICRANTHUS, AND ELEOCHARIS MACROSTACHYA.				
Threat: GRAZING (THREAT?), COMPETITION WITH ELEOCHARIS MACROSTACHYA AND EXOTIC GLYCERIA DECLINATA.				
General: TYPE LOCALITY. ABUNDANT IN 1986 AND 1987, ABOUT 400,000 IN 1995, AND 138,000 IN 1998. NUMERDUS COLLECTIONS MADE BY B. CRAMPTON AT THIS SITE. THIS SITE FORMERLY INCLUDED WITH NEARBY OCCURRENCE #6.				
Owner/Manager: SAC COUNTY, PVT				

Occurrence No. 6	Map Index: 11881	—Dates Last Seen—	Lat/Long: 38°31'23" / 121°11'35"	Township: 08N
Occ Rank: Excellent		Element: 1998-07-27	UTM: Zone-10 N4265216 E657512	Range: 07E
Origin: Natural/Native occurrence		Site: 1998-07-27	Precision: SPECIFIC	Section: 27 Qtr SE
Presence: Presumed Extant			Symbol Type: POLYGON	Meridian: M
Trend: Unknown			Area: 40.2 ac	Elevation: 220 ft
Main Source: JONES & STOKES ASSOC. 1990 (OBS)				
Quad Summary: BUFFALO CREEK (3812152/511C)				
County Summary: SACRAMENTO				
SNA Summary: Grant Line Road Site				
Location: NEAR KIEFER LANDFILL, EAST SIDE OF GRANT LINE RD, NORTH AND SOUTH OF KIEFER BLVD, SOUTHEAST OF RANCHO CORDOVA.				
—Comments—				
Distribution: SEEN IN SEVERAL POOLS N OF KIEFER BLVD; SEARCHED FOR BUT NOT FOUND S OF KIEFER FOR SEVERAL YRS; MAY BE EXTIRPATED FROM THERE DUE TO AGRICULTURE AND USE AS PERMANENT LIVESTOCK PONDS. TADPOLE SHRIMP FOUND IN POOLS WITH O. VISCIDA IN 1995.				
Ecological: VERNAL POOL SURROUNDED BY ANNUAL GRASSLAND. REDDING GRAVELLY LOAM SOIL. ASSOCIATED WITH ELEOCHARIS MACROSTACHYA, ERYNGIUM VASEYI, ALLOCARYA STIPITATA, PSILOCARPHUS BREVISSIMUS, LILAEA SCILLOIDES, MARSILEA VESTITA, & DOWNINGIA BICORNUTA.				
Threat: LANDFILL EXPANSION MAY DESTROY SOME POOLS; REVISED EIR DUE OUT IN 1996.				
General: 1000'S OF PLANTS IN 1990, 1,000,000+ IN 1995, 129,000+ IN 1998. INCLUDES FORMER OCC #'S 3,7,9,10,12, AND 14. MAPPED AS PER JONES & STOKES REPORT, 1990.				
Owner/Manager: SAC COUNTY, PVT				

Occurrence No. 17	Map Index: 11785	—Dates Last Seen—	Lat/Long: 38°31'44" / 121°14'28"	Township: 08N
Occ Rank: Good		Element: 1995-07-12	UTM: Zone-10 N4265767 E653329	Range: 07E
Origin: Natural/Native occurrence		Site: 1995-07-12	Precision: SPECIFIC	Section: 20 Qtr SW
Presence: Presumed Extant			Symbol Type: POINT	Meridian: M
Trend: Unknown			Radius: 80 meters	Elevation: 150 ft
Main Source: STONE, D. 1987 (OBS)				
Quad Summary: BUFFALO CREEK (3812152/511C)				
County Summary: SACRAMENTO				
SNA Summary: Kiefer Blvd. Vernal Pools				
Location: EAST SIDE OF SUNRISE BLVD, APPROX. 0.2 MI NORTH OF ITS INTERSECTION WITH KIEFER BLVD.				
—Comments—				
Distribution: SITE OF PROPOSED INDUSTRIAL PARK DEVELOPMENT; POPULATION TO BE WITHIN PRESERVE/MITIGATION AREA.				
Ecological: Y-SHAPED VERNAL POOL SURROUNDED BY ANNUAL GRASSLAND. W/ERYNGIUM VASEYI, ELEOCHARIS MACROSTACHYA, ALLOCARYA STIPITATA, PSILOCARPHUS, GRATIOLA EBRACATEATA AND NAVARRETTIA LEUCOCEPHALA.				
Threat: MODERATE-INTENSIVE GRAZING. THE INVASIVE GLYCERIA DECLINATA AND WIDENING OF SUNRISE BLVD MAY ALSO THREATEN.				
General: GREATER THAN 10,000 PLANTS IN 1987 IN 1995. ANNUAL DURATION OF INUNDATION HAS BEEN ARTIFICIALLY INCREASED BY ELEVATED GRADE OF SUNRISE BLVD.				
Owner/Manager: PVT				

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ORCUTTIA VISCIDA (cont.)

SACRAMENTO ORCUTT GRASS

Element Code: PMPOA4G070

-----List Status-----  
Federal: Endangered  
State: Endangered

-----NDDB Element Ranks-----  
Global: G1  
State: S1.1

-----Other Lists-----  
CNPS List: 1B  
R-E-D Code: 3-3-3

Occurrence No. 18      Map Index:11805      ---Dates Last Seen---      Lat/Long: 38°32'05" / 121°13'43"      Township: 08N  
Occ Rank: Fair      Element: 1987-10-19      UTM: Zone-10 N4266415 E654394      Range: 07E  
Origin: Natural/Native occurrence      Site: 1987-10-19      Precision: SPECIFIC      Section: 20 Qtr NE  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 165 ft  
Main Source: STONE, D. 1987 (OBS)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary: Kiefer Blvd. Vernal Pools  
Location: APPROX. 0.9 MILE NORTHEAST OF INTERSECTION OF KIEFER BLVD & SUNRISE BLVD, BENEATH TRANSMISSION LINES.  
-----Comments-----  
Distribution:  
Ecological: VERNAL POOL SURROUNDED BY ANNUAL GRASSLAND. WITH ELEOCHARIS MACROSTACHYA, ERYNGIUM VASEYI, PSILOCARPHUS  
BREVISSIMUS, ALLOCARYA STIPITATA, NAVARRETIA LEUCOCEPHALA, DOWNINGIA BICORNUTA, ETC.  
Threat: GRAZING, COMPETITION FROM ELEOCHARIS, & ACTIVITIES ASSOCIATED WITH TRANSMISSION LINE MAINTENANCE & DEVELOPMENT  
THREATEN.  
General: 1000 PLANTS ESTIMATED IN 1987.  
Owner/Manager: PVT

Occurrence No. 19      Map Index:26036      ---Dates Last Seen---      Lat/Long: 38°33'11" / 121°10'23"      Township: 08N  
Occ Rank: Good      Element: 1995-08-17      UTM: Zone-10 N4268551 E659208      Range: 07E  
Origin: Natural/Native occurrence      Site: 1995-08-17      Precision: SPECIFIC      Section: 14 Qtr NE  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 5.7 ac      Elevation: 250 ft  
Main Source: WITHAM, C. 1995 (OBS)  
Quad Summary: BUFFALO CREEK (3812152/511C)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: ENE OF MATHER AFB. 4 POOLS; 75-500 YARDS S OF GLORY LANE, 0.75-0.9 MI E OF GRANT LINE RD.  
-----Comments-----  
Distribution: NE 1/4 OF NE 1/4 OF SECTION 14.  
Ecological: POOLS WITHIN GRASSLAND IN RED BLUFF/REDDING SOILS. WITH ERYNGIUM VASEYI, NAVARRETIA LEUCOCEPHALA, DOWNINGIA  
BICORNUTA.  
Threat: POOLS MODERATELY TRAMPLED BY CATTLE. POSSIBLY WITHIN SACRAMENTO COUNTY'S URBAN LIMIT.  
General: HUNDREDS OF PLANTS IN 1994, 1.2 MILLION ESTIMATED IN 1995.  
Owner/Manager: PVT



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**BUTEO SWAINSONI**

**SWAINSON'S HAWK**

Element Code: ABNKC19070

-----List Status-----

Federal: None

State: Threatened

-----NDDB Element Ranks-----

Global: G4

State: S2

-----Other Lists-----

CDFG Status:

-----Habitat Associations-----

General: (NESTING) BREEDS IN STANDS WITH FEW TREES IN JUNIPER-SAGE FLATS, RIPARIAN AREAS AND IN OAK SAVANNAH.

Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 200      Map Index:12012      ---Dates Last Seen---      Lat/Long: 38°37'17" / 121°06'52"      Township: 09N  
Occ Rank: Unknown      Element: 1982-06-28      UTM: Zone-10 N4276242 E664150      Range: 08E  
Origin: Natural/Native occurrence      Site: 1982-06-28      Precision: NON-SPECIFIC      Section: 20 Qtr NW  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 1/5 mile      Elevation: 400 ft  
Main Source: DEPT. OF FISH & GAME 1984 (PERS)  
Quad Summary: FOLSOM SE (3812151/511D)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: INTERSECTION OF WHITE ROCK AND SCOTT RDS, ABOUT 1.5 MI S OF HWY 50.  
-----Comments-----  
Distribution:  
Ecological:  
Threat:  
General: DFG SWHA #SA001. 1 ADULT OBS IN AREA BOTH 1979 AND 1982. NO NESTS FOUND.  
Owner/Manager: PVT

## **APPENDIX D2**

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Biological Resources Assessment 130-acre Folsom 138 Property

# Biological Resources Assessment

±130-Acre Folsom 138 Property  
Sacramento County, California

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Prepared for: Woodside Homes

September 24, 2004

Submitted by:

 **FOOTHILL ASSOCIATES**

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## 1.0 EXECUTIVE SUMMARY

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Foothill Associates' biologists conducted a biological resources assessment in August 2004 on the Folsom 138 property (site) that occurs within the northeastern portion Sacramento County. The purpose of this document is to summarize the general biological resources on the site, to assess the suitability of the site to support special-status species and sensitive habitat types, and to provide recommendations for regulatory permitting or further analysis required.

The proposed site consists of  $\pm 130$  acres of annual grassland used for cattle and horse grazing. Land uses surrounding the site include rural residential and agricultural cropland and rangeland. Known or potential biological constraints on the site include:

- Potential habitat for special-status plant species, Bogg's lake hedge-hyssop and legenerie;
- Potential habitat for special-status vernal pool fairy shrimp and vernal pool tadpole shrimp;
- Potential habitat for northwestern pond turtle;
- Potential habitat for western Spadefoot toad;
- Potential foraging habitat for Swainson's hawk;
- Potential habitat for burrowing owl;
- Potential nesting and foraging habitat for raptors and migratory birds;
- Potential jurisdictional waters of the U.S. including: marsh, seep, seasonal wetland, vernal pool, and ephemeral drainage; and
- Protected Trees.

## 2.0 INTRODUCTION

---

This report summarizes the findings of a biological resources assessment completed for the ±130-acre Folsom 138 site. The site is located within Sacramento County south of Highway 50, approximately one mile south of the City of Folsom city limits. This document addresses the on-site physical features as well as plant communities present and the common plant and wildlife species occurring, or potentially occurring on the site. The suitability of habitats to support special-status species and sensitive habitats are analyzed and followed by recommendations for any regulatory permitting or further analysis required prior to development activities on the site. In addition, a detailed biological constraints map depicts potential waters of the U.S. found within the site as well as potential habitat for special-status species (**Figure 4**).

### **3.0 REGULATORY FRAMEWORK**

---

The following describes federal, state, and Sacramento County's environmental laws and policies that are relevant to the California Environmental Quality Act (CEQA) review process. The CEQA significance criteria are also included in this section.

#### **3.1 Federal Endangered Species Act**

The United States Congress passed the Federal Endangered Species Act (FESA) in 1973 to protect those species that are endangered or threatened with extinction. The FESA is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend.

The FESA prohibits the "take" of endangered or threatened wildlife species. "Take" is defined to include harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct (FESA Section 3 [(3)(19)]). Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns (50 CFR §17.3). Harass is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns (50 CFR §17.3). Actions that result in take can result in civil or criminal penalties.

The FESA and Clean Water Act (CWA) Section 404 guidelines prohibit the issuance of wetland permits for projects that jeopardize the continued existence of any endangered or threatened species, or result in the destruction or adverse modification of habitat of such species. The U.S. Army Corps of Engineers (Corps) must consult with the U.S. Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service (NMFS) when threatened or endangered species under their jurisdiction may be affected by a proposed project. In the context of the proposed project, FESA would be initiated if development resulted in take of a threatened or endangered species or if issuance of a Section 404 permit or other federal agency action could result in take of an endangered species or adversely modify critical habitat of such a species.

#### **3.2 Migratory Bird Treaty Act**

Raptors (birds of prey), migratory birds, and other avian species are protected by a number of state and federal laws. The federal Migratory Bird Treaty Act (MBTA) prohibits the killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of Interior. Section 3503.5 of the California Fish and Game Code states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto."

#### **3.3 California Endangered Species Act**

The State of California enacted the California Endangered Species Act (CESA) in 1984. CESA is similar to the FESA but pertains to state-listed endangered and threatened species. CESA requires state agencies to consult with the California Department of Fish and Game (CDFG)



when preparing CEQA documents. The purpose is to ensure that the state lead agency actions do not jeopardize the continued existence of a listed species or result in the destruction, or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available (Fish and Game Code §2080). The CESA directs agencies to consult with CDFG on projects or actions that could affect listed species, directs CDFG to determine whether jeopardy would occur and allows CDFG to identify “reasonable and prudent alternatives” to the project consistent with conserving the species. CESA allows CDFG to authorize exceptions to the state’s prohibition against take of a listed species if the “take” of a listed species is incidental to carrying out an otherwise lawful project that has been approved under CEQA (Fish & Game Code §2081).

### **3.4 CDFG Species of Concern**

In addition to formal listing under the FESA and the CESA, species receive additional consideration by CDFG and local lead agencies during the CEQA process. Species that may be considered for review are included on a list of “Species of Special Concern,” developed by the CDFG. It tracks species in California whose numbers, reproductive success, or habitat may be threatened.

### **3.5 California Native Plant Society**

The California Native Plant Society (CNPS) maintains a list of plant species native to California that has low population numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. Potential impacts to populations of CNPS-listed plants receive consideration under CEQA review. The following identifies the definitions of the CNPS listings:

- List 1A: Plants presumed Extinct in California
- List 1B: Plants Rare, Threatened, or Endangered in California and elsewhere
- List 2: Plants Rare, Threatened, or Endangered in California, but more numerous elsewhere
- List 3: Plants about which we need more information – A Review List
- List 4: Plants of limited distribution – A Watch List

### **3.6 Jurisdictional Waters of the United States**

#### **3.6.1 Federal Jurisdiction**

The Corps regulates discharge of dredged or fill material into waters of the United States under Section 404 of the CWA. “Discharges of fill material” is defined as the addition of fill material into waters of the U.S., including, but not limited to the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; fill for intake and outfall pipes and subaqueous utility lines [33 C.F.R. §328.2(f)]. In addition, Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a federal license or permit to conduct any activity that may

result in a discharge of a pollutant into waters of the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Waters of the U.S. include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, and wet meadows. Boundaries between jurisdictional waters and uplands are determined in a variety of ways depending on which type of waters is present. Methods for delineating wetlands and non-tidal waters are described below:

- Wetlands are defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” [33 C.F.R. §328.3(b)]. Presently, to be a wetland, a site must exhibit three wetland criteria: hydrophytic vegetation, hydric soils, and wetland hydrology existing under the “normal circumstances” for the site.
- The lateral extent of non-tidal waters is determined by delineating the ordinary high water mark (OHWM) [33 C.F.R. §328.4(c)(1)]. The OHWM is defined by the Corps as “that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” [33 C.F.R. §328.3(e)].

### **3.6.2 State Jurisdiction**

The CDFG is a trustee agency that has jurisdiction under Section 1600 *et seq.* of the California Fish and Game Code. Under Section 1603, a private party must notify the CDFG if a proposed project will “substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds...except when the department has been notified pursuant to Section 1601.” If an existing fish or wildlife resource may be substantially adversely affected by the activity, the CDFG may propose reasonable measures that will allow protection of those resources. If these measures are agreeable to the party, they may enter into an agreement with the CDFG identifying the approved activities and associated mitigation measures.

### **3.7 Wildlife Migration Corridors**

Wildlife migration corridors are important for the movement of migratory wildlife populations. Corridors provide foraging opportunities and shelter during migration. Generally, wildlife migration corridors are established migration routes for many species of wildlife. In wooded areas, these corridors often occur in open meadow or riverine habitats and provide a clear route for migration in addition to supporting ample food and water sources during movement.

### **3.8 CEQA Significance Criteria**

Section 15064.7 of the CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by

the expanded Initial Study checklist contained in Appendix G of the CEQA Guidelines. Appendix G provides examples of impacts that would normally be considered significant. Based on these examples, impacts to biological resources would normally be considered significant if the project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFG or USFWS;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional or state habitat conservation plan; and
- An evaluation of whether or not an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant according to CEQA. The reason for this is that although the impacts would result in an adverse alteration of existing conditions, they would not substantially diminish, or result in the permanent loss of, an important resource on a population-wide or region-wide basis.

### **3.9 County of Sacramento General Plan**

In addition to federal and state regulations, the County of Sacramento General Plan (1993) identifies goals, objectives, and policies to provide further protection to biological resources within the County's limits.

#### **Open Space Preservation**

##### **Guiding Policies: General**

OS-1      Permanently protect, as open space, areas of natural resource value, including wetlands preserves, riparian corridors, woodlands, and floodplains.

- OS-2 Maintain open space and natural areas that are interconnected and of sufficient size to protect biodiversity, accommodate wildlife movement and sustain ecosystems.

### **Implementing Policies: Acquisition**

#### **Open Space Easements**

- OS-8 Open space easements obtained and offered as mitigation shall be dedicated to the County of Sacramento or an open space agency designated by the County to protect and manage the open space. Fee title of land may be dedicated to the County or the open space agency provided it is acceptable to the appropriate department or agency.
- OS-11 Permit development clustering in rural areas where grouping units at a higher density would create an open space buffer protecting intensive farming activities, provided that:
- a. Clustered residential lots are adjacent to and comparable in lot size to existing agricultural areas.
  - b. Septic disposal systems are not concentrated in a manner which increases the potential for groundwater contamination.
  - c. General Plan policies pertaining to floodplain or natural preserves would not preclude development of the proposed use in the area to be protected as open space.
  - d. The project complies with any applicable development credits transfer ordinance relating to density bonuses.
  - e. Development rights for the open space area are permanently dedicated and appropriate long-term management is provided for by either a public agency, private homeowners association, or other appropriate entity.
  - f. The overall average density of the project is comparable to the average lot sizes in the area.

### **Conservation**

#### **Vegetation and Wildlife: Marsh and Riparian Areas**

- CO-60 Marshland and riparian areas of special significance shall be designated as natural preserves on the General Plan.
- CO-61 Natural Preserves shall not include adjacent irrigated pasture or cropland. However, they may include up to 200 feet of adjoining grassland or grazing area, or up to one-fourth mile of grassland between parallel riparian or marsh areas.
- CO-62 Ensure no net loss of marsh and riparian woodland acreage, values or functions.

- CO-63 Community Plans and specific plans shall include a complete inventory of seasonal and permanent marshland, riparian habitat, and riparian woodland.
- CO-65 In any cases where complete or selective removal of riparian woodland or scrub habitat is necessary for channel maintenance, public safety, or installation of infrastructure, it will be planned and carried out, or mitigated, so as to minimize unavoidable impacts upon biological resources.
- CO-66 Encroachments within the designated floodway of Sacramento waterways shall be consistent with policies to protect marsh and riparian areas.
- CO-67 Parcels shall not be created wherein much of the parcel area would comprise marsh or riparian habitat rendering the parcel unbuildable except when within a floodplain corridor or to be dedicated to and maintained by the County for flood control, drainage, and wetland maintenance.
- CO-68 Consistent with overall land use policies, the County shall support and facilitate the creation and biological enhancement of large natural preserves or wildlife refuges by other government entities or by private individuals or organizations. Such areas may, but need not necessarily, function as mitigation banks for other impacts upon biological resources due to development.

#### **Vegetation and Wildlife: Marsh and Riparian Areas - Habitat Restoration**

- CO-69 Review projects for potential to restore marsh/riparian woodlands, considering effects on vernal pools, ground water, flooding, and proposed fill or removal of marsh and riparian habitat.
- CO-70 Public or private projects involving filling or removal of marsh/riparian habitat shall be mitigated outside of natural preserves where on-site mitigation is not desirable or appropriate shall be mitigated through the purchase of mitigation credits for restored wetlands/riparian areas at no net loss.
- CO-71 Community and Specific Plans shall identify potential areas, if any, where marsh or riparian habitat restoration/creation can be undertaken.
- CO-72 New or restored marsh/riparian woodlands shall be under ownership of a public agency or subject to a permanent conservation easement.
- CO-73 Specific restoration/creation areas identified in Community Plans in accordance with Policy CO-71 shall be adequate in characteristics and acreage to accommodate mitigation for likely wetland impacts resulting from development as designated in the respective Community Plans.

#### **Vegetation and Wildlife: Vernal Pools and Ephemeral Wetlands – Vernal Pool Preserves**

- OS-78 Focus vernal pool preservation in permanent open space areas beyond the Urban Area.

- OS-79 Strive to link preserves in the County system and create a network that encompasses all vernal pool types.
- CO-80 Select vernal pool preserves based on the following evaluation criteria: representativeness, habitat quality, watershed integrity, defensibility, buffer, preserve size, plant species variety, and presence of special status species.
- CO-81 Ensure that vernal pool preserves are large enough to protect vernal pool watersheds, provide an adequate buffer, have sufficient number and extent of pools to support adequate species populations and a range of vernal pool classes.
- CO-82 Establish criteria and guidelines addressing the need for siting and management of natural preserves. At a minimum, the following should be considered:
- resource(s) to be lost, restored and/or replaced,
  - functional values,
  - mitigation alternatives, including mitigation banks.

**Vegetation and Wildlife: Vernal Pools and Ephemeral Wetlands – Development and Vernal Pools**

- OS-83 Ensure no net loss of vernal pool acreage, and/or values and functions, and mitigate any loss in relation to the values of quality of habitat.
- OS-84 Evaluate feasible on-site alternatives in the environmental review process that reduce impacts on vernal pools and provide effective on-site preservation in terms of minimum management requirements, effective size, and evaluation criteria identified in the report “Sacramento County Vernal Pools” (1990).
- CO-85 Require in-kind compensation for the type and functional values of vernal pools eliminated by development.
- CO-86 When on-site preservation or mitigation is infeasible or undesirable, require off-site mitigation at County-approved mitigation banks within Sacramento County.
- CO-87 Mitigation for vernal pool loss shall be considered in the environmental review process, and mitigation shall be required based on information contained within the environmental documents on the quality of those resources and their ability to be sustained within an urban setting.

**Vegetation and Wildlife: Vernal Pools and Ephemeral Wetlands – Mitigation Banking Program**

- OS-88 Foster competitive pricing for mitigation bank credits by allowing government agencies, non-profit organizations, and private landowners to establish vernal pool preserves, designate mitigation areas, create and restore vernal pools, and sell credits to developers for off-site mitigation.

- OS-89 Proposed mitigation banks shall be consistent with evaluation and size criteria for vernal pool preserves identified in the report "Sacramento County Vernal Pools" (1990), unless compelling circumstances justify otherwise.
- CO-90 Prioritize creation of mitigation banks in areas where sites suitable for creating new vernal pools exist in close proximity to existing vernal pools.
- CO-91 The determination of mitigation bank credits shall be based on the ecological values of the area and distinguish between the type of vernal pool. Mitigation bank credits shall also distinguish between the type of mitigation: preservation, restoration, or creation.
- CO-92 Mitigation credits for vernal pool creation or restoration shall not be offered for sale by landowners until monitoring of new or restored areas determines that pre-established criteria in the management plan for species diversity, health and stability are met.
- CO-93 The landowner shall dedicate development rights to the County for the land area applicable to the sale of mitigation credits at the time of the credit sale.
- CO-94 Mitigation bank property owners shall be eligible for tax incentives and/or compensation for income reduction attributable to vernal pool preserve management provided that they:
- a) enter into a Williamson Act Contract
  - b) prepare and implement a County approved management plan, and
  - c) document income reduction attributable to vernal pool protection efforts.
- Those portions of the mitigation bank for which mitigation credits have been sold shall not be eligible for tax incentives or operation loss compensation.
- CO-95 Until such time as mitigation credits consistent with the above policies are available, development entitlements involving filling or removal of vernal pools may be granted provided that the project applicant:
- 1) Purchase and dedicate the development rights for a vernal pool preserve, the extent of which shall not be less than the acreage of vernal pool and upland watershed necessary to sustain the viability of the pools that are proposed to be developed, and, which, in conjunction with adjoining planned vernal pool preserves, will provide long-term, ecologically viable preserve.
  - 2) Prepare a mitigation and management plan for the preserve area consistent with policies of this section.
  - 3) Enter into a long-term agreement with an agency or organization qualified to create, manage and monitor vernal pools.
  - 4) Post bond guaranteeing the management funding for a minimum of 50 years.

- 5) Obtains permission from the U.S. Army Corps of Engineers.
  - 6) Demonstrate that no rare, threatened or endangered species occur on the site.
- CO-96 Prior to the adoption of the mitigation banking ordinance, utilize on a count-wide basis, the adopted interim wetland mitigation/compensation policy: All wetland acreage proposed to be disturbed by an project over which the Board of Supervisors has discretionary approval shall be mitigated/compensated for by either one or a combination of the following methods:
- 1) Preserve or create wetlands sufficient to result in no net loss of wetland acreage, and protect their required watershed as is necessary for the continued function of wetlands on the project site. The appropriate hearing body shall determine that project design, configuration, and wetland management plan, provide reasonable assurances that the wetlands will be protected and their long-term ecological health maintained.
  - 2) Where a Section 404 Permit has been issued by the Corps of Engineers, or an application has been made to obtain a Section 404 Permit, the Mitigation and Management Plan required by that permit or proposed to satisfy the requirements of the Corps for granting a permit may be submitted for purposes of satisfying paragraph 1, provided a no net loss of wetlands is achieved and, provided, further, that such mitigation and management plan shall be subject to the independent, discretionary approval of the Board of Supervisors.

#### **Vegetation and Wildlife: Vernal Pools and Ephemeral Wetlands – Vernal Pool Management**

- CO-97 Limit land uses within established preserves to activities deemed compatible with maintenance of the vernal pool resource, which may include ranching, grazing, passive recreation, scientific study and education.
- CO-98 Preserves shall be planned and managed so as to protect adjacent agricultural activities and avoid conflicts.
- CO-99 Ensure that minimum management requirements for vernal pool preserves and mitigation banks include protection in perpetuity through acquisition of fee title or a permanent conservation easement; a funding source for long-term operation, maintenance, and management; preparation and implementation of a management plan; and establishment of an interagency oversight committee.
- CO-100 The price of mitigation credits offered for sale to compensate for vernal pool losses shall incorporate estimated management costs for a minimum of 50 years.
- CO-101 The agency responsible for overseeing the mitigation bank program shall license private individuals or organizations prior to their assuming vernal pool creation and management responsibilities, and establish appropriate license fees to fund periodic monitoring of mitigation bank management.



### **Vegetation and Wildlife: Vernal Pools and Ephemeral Wetlands – Wetlands Regulation Coordination**

- CO-102 The County will provide information to applicants with projects in potential wetland areas and provide coordination assistance with the Army Corps of Engineers in order to facilitate the development review and Section 404.

### **Vegetation and Wildlife: Tree Resources – Oak Revegetation**

- CO-128 Allow firewood harvesting of oak woodlands only on a sustained yield basis.
- CO-129 Protect oak woodlands from adverse effects of grazing.

### **Vegetation and Wildlife: Tree Resources – Native and Landmark Tree Protection**

- CO-130 Make every effort to protect and preserve non-oak native, excluding cottonwoods, and landmark trees and protect and preserve native oak trees measuring 6 inches in diameter at 4.5 feet above ground in urban and rural areas, excluding parcels zoned exclusively for agriculture.
- CO-131 Native trees other than oaks, which cannot be protected shall be replaced with in-kind species in accordance with established tree planting specifications, the combined diameter of which shall equal the combined diameter of the trees removed. In addition, with respect to oaks, a provision for a comparable on-site area for the propagation of oak trees may substitute for replacement tree planting requirements at the discretion of the County Tree Coordinator when removal of a mature oak tree is necessary in accordance with consistent policy.
- CO-132 If the project site is not capable of supporting all the required replacement trees a sum equivalent to the replacement cost of the number of trees that cannot be accommodated shall be paid to the County's Tree Preservation Fund. The replacement cost of trees shall be established in accordance with the Council of Tree and Landscape Appraiser's standards for appraising trees.
- CO-133 For discretionary projects involving native oaks, ensure no net loss of canopy area by (1) preserving the main, central portions of consolidated and isolated groves constituting the existing healthy and unhealthy native oak canopy and (2) provide an area on-site to mitigate any canopy lost. Native oak mitigation area must be a contiguous area on-site which is equal to the size of canopy area lost and shall be adjacent to existing oak canopy to ensure opportunities for regeneration. If on-site mitigation area is not available due to area limitations, developer shall provide off-site mitigation consistent with policy proposed in CO-136.
- CO-134 Mitigate for loss of trees for road expansion and development consistent with County Tree Ordinance and General Plan policies.

- CO-135 In 15 years the native oak canopy within on-site mitigation areas shall be 50 percent canopy coverage for valley oak and 30 percent canopy coverage for blue oak and other native oaks.
- CO-136 If on-site mitigation is not possible given site limitation, off-site mitigation may be considered. Such a mitigation area must meet all of the following criteria to preserve, enhance, and maintain a natural woodland habitat in perpetuity, preferably by transfer of title to an appropriate public entity. Protected woodland habitat could be used as a suitable site for replacement tree plantings required by ordinances or other mitigations.
- a) Equal or greater in area to the total area that is included within a radius of 30 feet of the dripline of all trees to be removed;
  - b) Adjacent to protected stream corridor or other preserved natural areas;
  - c) Supports a significant number of native broadleaf trees; and
  - d) Offers good potential for continued regeneration of an integrated woodland community.

#### **Vegetation and Wildlife: New Urban Trees**

- CO-137 Increase the number of trees planted within residential lots and within new and existing parking lots.
- CO-138 Support private foundations with local funds for their tree planting efforts.

#### **Vegetation and Wildlife: Urban Tree Management**

- CO-139 Provide funds for education, programs, and materials emphasizing the value and importance of trees.
- CO-140 Work cooperatively with local utilities to assure that new trees are planted in locations that will maximize energy conservation and air quality benefits.

#### **Vegetation and Wildlife: Rare and Endangered Species – Management of Rare and Endangered Species Habitat**

- CO-141 Manage vegetation on public lands with special status species to encourage native species and discourage nonindigenous invasive species.
- CO-142 Public land shall be maintained to the extent feasible in a manner that avoids conflicts with privately owned lands and agricultural operations.
- CO-143 Control human access to critical habitat areas on public lands to minimize impact upon and disturbance of threatened and endangered species.

- CO-144 Protect critical habitat areas on public lands from pesticide and other similar chemical residues.
- CO-145 The County shall work with the mosquito abatement district to ensure that mosquito control measures having the least effect on non-target species are implemented in preserved wetlands throughout the county.
- CO-146 The proximity of diverse habitat types shall be considered in identifying nondevelopment areas in Community Plans and in identifying potential or preferred natural preserves and mitigation banks.

**Vegetation and Wildlife: Rare and Endangered Species – Protection of Rare and Endangered Species Habitat**

- CO-147 Identify suitable habitat for threatened and endangered species through the Community and Specific Plan process.
- CO-148 Habitat conservation plans shall be adopted by the county for any listed species that are year-round inhabitants of the county, are subject to significant cumulative impacts from development, and are not otherwise adequately protected by designated systems of riparian corridors, vernal pool and wetland preserves and mitigation banks, or other nature preservers or wildlife refuges.
- CO-149 Acquisition programs for acquiring open space located within natural areas shall, wherever possible, review the significance of obtaining areas known to contain threatened, endangered, and special status species.
- CO-150 To the extent feasible, plans for urban development and flood control projects shall incorporate habitat corridors connecting on-site or adjoining areas (if any) not designated for alteration.

**Vegetation and Wildlife: Fisheries – Water Flows**

- CO-151 Provide unobstructed water flows throughout the network of natural waterways by prohibiting blockage, tunneling, or obstruction of contiguous stream channels.
- CO-152 Protect and preserve migratory route for anadromous species.
- CO-153 Reduce mortality of migrating fish by requiring screens or similar bypass apparatus on diversion pumps.

**Vegetation and Wildlife: Resource Conservation Areas**

- CO-154 Voluntary cooperative agreements shall involve those lands within Resource Conservation Areas that contain moderate to high value habitat, exhibit likely habitat restoration potential, or provide foraging opportunities

## 4.0 METHODS

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Available information pertaining to the natural resources of the region was reviewed. All references reviewed for this assessment are listed in the References section. Site-specific information was reviewed including:

- Aerial photograph, August 13, 2004. Geoimagery, Auburn California;
- California Department of Fish and Game (CDFG). *California Natural Diversity Data Base* (query for U.S. Geological Survey Clarksville, Rocklin, Pilot Hill, Coloma, Folsom, Folsom SE, Buffalo Creek, Latrobe, and Shingle Springs 7.5-minute quadrangles). Sacramento, CA. September 2, 2004;
- Natural Resource Conservation Service (NRCS). 1993. *Soil Survey of Sacramento County, California*. U.S. Department of Agriculture;
- U.S. Fish and Wildlife. 2004. Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the Clarksville U.S. Geological Survey Clarksville, California. 7.5-minute series topographic quadrangle: August 11, 2004;
- U.S. Geological Survey. 1967. Photorevised 1980. Clarksville, California. 7.5-minute series topographic quadrangle. United States Department of Interior; and
- U.S. Geological Survey. 1992. Folsom SE, California. 7.5-minute series topographic quadrangle. United States Department of Interior.

Foothill Associates' biologists reviewed aerial photographs as well as topographic and soils maps before conducting field surveys on August 19<sup>th</sup> and September 1<sup>st</sup> of 2004. The site was systematically surveyed on foot to ensure total search coverage. Special attention was given to identifying those portions of the site with the potential for supporting special-status species and sensitive habitats. During the field surveys biologists recorded plant and animal species observed, as well as characterized biological communities and delineated wetland boundaries on the site.

## 5.0 RESULTS

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### 5.1 Site Location and Description

The site occurs to the northeast of the intersection of White Rock Road and Placerville Road in northeastern Sacramento County. Furthermore, the site is located within Township 9 north, Range 8 east, southwest ¼ of Section 15 of the USGS 7.5-minute series Clarksville, California quadrangle (**Figure 1**). The majority of the site is covered by annual grassland with rock outcroppings. There is a stand of trees located in the southeast portion of the site with shrubs boarding the east fence line. The site is currently used as rangeland for cattle and horse grazing. Land uses surrounding the site include rural residential, agricultural cropland, and rangeland.

### 5.2 Physical Features

#### 5.2.1 Topography and Drainage

Compared to the relatively flatland to the west, the site consists of tall hills with steep concave slopes. There is a 200-foot change in elevation on the site from approximately 700 feet above mean sea level (MSL) in the northeast to 500 feet above MSL in the southwest. The hydrologic regime on the site is dominated by seasonal storm water run-off and precipitation. Water flow on the site is primarily directed off the site from northeast to southwest by way of two drainageways. There are no natural drainageways mapped as blue line features on the USGS 7.5-minute series Clarksville, California, quadrangle within the site. However, the drainages continue southwest off the site by way of culverts under Placerville Road, contributing to the head waters of Alder Creek. Consequently, during periods of high water flow, the drainages on the site would be tributary to Alder Creek.

#### 5.2.2 Soils

The Natural Resources Conservation Service (NRCS), previously known as the Soil Conservation Service, has mapped two soil types on the site (**Figure 2**). The soil units that occur on the site include: Auburn-Argonaut-Rock outcrop complex with 8 to 30 percent slopes and Argonaut-Auburn complex with 3 to 8 percent slopes. General characteristics associated with these soils types are described below.

- **Auburn-Argonaut-Rock outcrop complex, 8 to 30 percent slopes:** The Auburn-Argonaut-Rock outcrop complex is found in the foothills at elevations of 150 to 830 feet above MSL. This soil type is made up of 40 percent Auburn soil, 35 percent of Argonaut soil, and 10 percent Rock outcrop. Slopes in areas of the Auburn soils are complex while slopes in most areas of the Argonaut soil are concave. The Rock outcrop is commonly on summits or on slopes of 15 to 30 percent. Permeability is moderate in the Auburn soil with medium to rapid water runoff. Argonaut soil is moderately deep and well drained. Permeability is very slow in Argonaut soil and water tends to perch above the claypan for short periods after heavy rainfall in winter and early spring.
- **Argonaut-Auburn complex, 3 to 8 percent slopes:** The Argonaut-Auburn complex is found in the foothills at elevations of 160 to 660 feet above MSL. This soil type is made

up of 45 percent Argonaut soil and 35 percent Auburn soil. Slopes in most areas of the Argonaut soil are concave. Those in areas of Auburn soil are complex. This unit is used for rangeland. The characteristic plant community associated with these soil types is soft chess, wild oats, and filaree.

### 5.3 Biological Communities

Annual grassland and wetland are the two biological communities that occur on the site. The type of wetlands on the site include: marsh, seep, seasonal wetland, vernal pool, and ephemeral drainage (**Figure 4**). These biological communities provide foraging opportunities and nesting habitat to a number of common species of wildlife and may provide habitat for special-status species. Each of the biological communities including associated common plant and wildlife species observed, or that are expected to occur within these communities are described below.

#### 5.3.1 Annual Grassland

The biological community covering the majority of the site is annual grassland. This type of habitat generally occupies what was once a native grassland dominated by native perennial bunch grasses. However, annual grassland habitats today are composed largely of non-native annuals which have effectively displaced the native perennial species. The dominant herbaceous species observed on the site consists of soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), wild oat (*Avena barbata*), medusa head grass (*Taeniatherum caput-medusae*), bindweed (*Convolvulus arvensis*), tarplant (*Hemizonia fitchii*), tarweed (*Holocarpha virgata*), vinegar weed (*Trichostema lanceolatum*), lotus (*Lotus purshidianus*), and clover (*Trifolium* sp.). Common dominant herbaceous non-natives include: yellow star thistle (*Centaurea solstitialis*) and Italian thistle (*Carduus pycnocephalus*). Trees and shrubs within the southeast corner of the site consist of valley oak (*Quercus lobata*), willow (*Salix* sp.), olive tree, and non-native Himalayan blackberry (*Rubus discolor*).

Annual grassland typically supports breeding, foraging, and shelter habitat for several species of wildlife from insects to small mammals and birds. Annual grassland is especially important to raptors and migratory birds for feeding, resting, and often times nesting sites. Species observed during site surveys include: western kingbird (*Tyrannus verticalis*), European starling (*Sturnus vulgaris*), Brewer's blackbird (*Euphagus cyanocephalus*), western meadowlark (*Sturnella neglecta*), American kestrel (*Falco sparverius*), turkey vulture (*Cathartes aura*), and black-tailed jackrabbit (*Lepus californicus*). Other species expected to occur in this habitat include: ground squirrel, raccoon, and various species of snakes and other rodents such as mice and moles.

#### 5.3.2 Marsh

Both seasonal and perennial marsh habitat exist within the site. Seasonal marshes are those wetlands that are seasonally inundated or saturated, but inundation/saturation persists for some period into the warm season. The seasonal marsh occurs within topographic folds between two hillsides located in the northern portion of the site forming a riverine feature (**Figure 4**). Dominant plant species found within the riverine seasonal marsh include: dallis grass (*Paspalum*

sp.), nutsedge (*Cyperus eragrostis*), spikerush (*Eleocharis macrostachya*), rabbitsfoot grass (*Polypogon monspeliensis*), smartweed (*Polygonum persicaria*), centaury (*Centaureum* sp.), dock (*Rumex* sp.), and hedge-nettle (*stachys* sp.).

Perennial marshes are those wetlands that typically remain inundated or saturated throughout the year. The perennial marsh habitat occurs within a large open pit along the southern boundary in the east portion of the site forming a depressional feature. Dominant plant species found with the depressional perennial marsh include: cattail (*Typha* sp.), pennyroyal (*Mentha pulegium*), and smartweed.

Marsh habitat supports a number of wildlife species and is especially important to migratory birds as feeding and resting sites during migration. The wildlife species observed during the site visit include: red-winged blackbird (*Agelaius phoeniceus*) and Brewer's blackbird. Species expected to use marsh habitat include: great blue heron (*Ardea herodias*), great egret (*Ardea alba*), Pacific treefrog (*Hyla regilla*), and aquatic insects and various other small mammals, birds, reptiles, and amphibians.

### 5.3.3 Seep

Seeps are characterized as areas where groundwater intersects with the soil surface. Typically, flow from seeps continue for some period after the rainy season and may continue all year. The seep habitat on the site occurs as discrete patches of wetland vegetation on hillsides. In some areas, the seeps serve as headwaters to the drainages on the site. The vegetation in the seeps includes species similar to the seasonal marsh. Species observed during the site visit include: pennyroyal, spikerush, dock, Bermuda grass (*Cynodon dactylon*), toad rush (*Juncus bufonius*), and dallis grass.

Seeps can offer foraging opportunities to wildlife throughout the year by providing warm season grasses and perennial vegetation that are not typically found in the surrounding dryer annual grassland. Wildlife species expected to use seep for habitat are similar to those addressed under annual grassland.

### 5.3.4 Seasonal Wetland

Riverine, depressional, and sloped seasonal wetlands exist on the site. Seasonal wetland habitat is typically associated with shallow drainages and swales (riverine features) or depressions, that inundate long enough to support hydric soils and hydrophytic vegetation. Riverine seasonal wetlands are characterized by the seasonal flow of water induced by the onset of the rainy season and are typically vegetated with hydrophytic species. These features are often supported by ground water and surface water sources, and therefore, are typically more expansive than other seasonal wetlands, often flowing linearly across the landscape. A depressional seasonal wetland is characterized by shallow land depressions that are inundated or saturated by water often enough to support hydrophytic plant species. Sloped seasonal wetlands are similar to seep habitat. Unlike seeps, sloped seasonal wetlands do not remain saturated throughout the dry season.

Plant species observed within the seasonal wetlands throughout the site differed from the surrounding upland annual grassland. Dominant plant species observed within the seasonal wetland habitat on the site include: Italian ryegrass (*Lolium multiflorum*), Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), rabbitsfoot grass, manna grass (*Glyceria* sp.), toad rush, and dock.

Seasonal wetlands are commonly used by resident and migratory animal species as breeding and foraging habitat. Additionally, the site is considered to be located within the pacific flyway, a migratory route for waterfowl species extending from Alaska to South America. Seasonal wetlands within the pacific flyway are particularly important to migrating waterfowl for foraging and resting during migration.

### **5.3.5 Vernal Pools**

Vernal pool communities are characterized as shallow depressions underlain by an impermeable layer causing them to inundate with water seasonally and are dominated by annual herbs and grasses adapted to these unique conditions. The vernal pool habitat on the site occurs along fence lines and topographic depressions within the landscape. Dominant plant species observed within the seasonal wetland habitat include: manna grass, hyssop loosestrife (*Lythrum hyssopifolium*), Mediterranean barley, rabbitsfoot grass, Bermuda grass, and toad rush.

Vernal pool habitat supports breeding and foraging habitat for several aquatic insects such as mayflies, dragon flies, vernal pool branchiopods, as well as providing feeding areas and resting sites for migratory birds.

### **5.3.6 Ephemeral Drainage**

Typically, ephemeral drainages are features with very little to no vegetation which convey water and exhibit an “ordinary high water mark”. Ephemeral drainages are fed primarily by direct precipitation and storm water run off. The ephemeral drainages on the site convey flows during and immediately after storm events but appear to stop flowing or begin to dry between storm events. The ephemeral drainages on the site exhibit bed and banks of approximately 2-5 feet in width and of 1-3 feet in height.

Similar to vernal pools, ephemeral drainage habitat can provide breeding and foraging habitat for several aquatic insects such as mayflies, dragon flies, as well as providing feeding areas for migratory birds.

## **5.4 Special-Status Species**

Special-status species are plant and animal species that have been afforded special recognition by federal, state, or local resource agencies or organizations. Listed and special-status species are of relatively limited distribution and may require specialized habitat conditions. Listed and special-status species are defined as:

- Listed or proposed for listing under the state or Federal Endangered Species acts;
- Protected under other regulations (e.g. Migratory Bird Treaty Act);



- CDFG Species of Special Concern;
- Listed as species of concern by CNPS or USFWS; or
- Receive consideration during environmental review under CEQA.

Special-status species considered for this analysis are based on field survey results, review of the CNDDDB occurrence records of species, review of the USFWS lists for special-status species occurring in the region, and CNPS literature (**Table 1**). The locations of special-status species occurrences in the project vicinity are shown in **Figure 3**, which is from a search of the CNDDDB. **Table 1** includes, the common name and scientific name for each species, regulatory status (federal, state, local, CNPS), habitat descriptions, and potential for occurrence on the site. The following set of criteria has been used to determine each species potential for occurrence on the site:

- **Present:** Species known to occur on the site, based on CNDDDB records, and/or was observed to occur on the site during the field survey(s).
- **High:** Species known to occur on or near the site (based on CNDDDB records within 8 km or 5 mi, and/or based on professional expertise specific to the site or species) and there is suitable habitat on the site.
- **Low:** Species known to occur in the vicinity of the site, and there is marginal habitat on the site.-**OR-**Species are not known to occur in the vicinity of the site, however, there is suitable habitat on the site.
- **No:** Species are not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.-**OR-**Species were surveyed for during the appropriate season with negative results for the species occurrence on site.

Only those species that are known to be present or that have a high or low potential for occurrence will be discussed further following **Table 1**.

**TABLE 1 – LISTED AND SPECIAL-STATUS SPECIES POTENTIALLY OCCURRING  
ON THE SITE OR IN THE VICINITY**

Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
<b>Plants</b>			
Bisbee Peak rush-rose <i>Helianthemum suffrutescens</i>	--;--;--;3	Rocky hillsides in chaparral areas. Often associated with gabbro soil types.	<b>No</b> ; there was no potential habitat observed on the site.
El Dorado bedstraw <i>Galium californicum ssp. sierrae</i>	FE; --; --; 1B	Chaparral, western sierra woodlands, and lower montane coniferous forests at elevations of 330 – 2000 feet above MSL.	<b>No</b> ; there was no potential habitat observed on the site.
El Dorado mule-ears <i>Wyethia reticulate</i>	FSC;--;--;1B	Wooded slopes and chaparral between 1000 – 1500 feet above mean sea level. Usually associated with gabbro soils.	<b>No</b> ; the site is not located within the known elevational range of this species and there was no potential habitat observed on the site.
Layne's butterweed <i>Senecio layneae</i>	FT; --; --; 1B	Chaparral, western sierra woodland on serpentinite or gabbroic rocky soils at elevations of 650 – 3,200 feet above MSL.	<b>No</b> ; there was no potential habitat observed on the site.
Pine hill ceanothus <i>Ceanothus roderickii</i>	FE; --; --; 1B	Chaparral, western sierra woodlands with serpentinite or gabbroic soils at elevations of 850 – 2000 feet above MSL.	<b>No</b> ; the site is not located within the known elevational range of this species and there was no potential habitat observed on the site.
Pine hill flannelbush <i>Fremontodendron californicum ssp. decumbens</i>	FE; --; --; 1B	Chaparral, western sierra woodlands at elevations of 1,400 – 2,500 feet above MSL.	<b>No</b> ; the site is not located within the known elevational range of this species and there was no potential habitat observed on the site.
Red Hills soaproot <i>Chlorogalum grandiflorum</i>	FSC;--;--;1B	Open hillsides in chaparral communities. Usually associated with gabbro or serpentine soils.	<b>No</b> ; there was no potential habitat observed on the site.
San Joaquin spearscale <i>Atriplex joaquiniana</i>	FSC; --; --; 1B	Found within alkaline valley and foothill grassland within chenopod scrub, meadows, seeps, and playas at elevations of 0 – 1,000 feet above MSL.	<b>No</b> ; there was no potential habitat observed on the site.

Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Ahart's dwarf rush <i>Juncus leiospermus</i> var. <i>ahartii</i>	--; --; --; 1B	This plant species will be found in vernal pools and seasonal wetlands of the Valley and foothill grasslands in elevations of 98 – 330 feet above mean sea level. Blooming period occurs between March – May.	<b>No</b> ; though vernal pools do occur, the site is outside of the known elevational range for this species.
Boggs Lake hedge-hyssop <i>Gratiola heterosepala</i>	--; SE; --; 1B	This plant species will occur in marshes, lake margins, and vernal pools in clay soils. It's known to occur in elevation of 30 – 7750 feet above mean sea level. Blooming period occurs between Aprils – August.	<b>Low</b>
Legenere <i>Legenere limosa</i>	--; --; --; 1B	This plant species will occur in vernal pools at elevation of 3 – 3,000 feet above mean sea level. This annual herb, blooms during April – June.	<b>Low</b>
Sacramento Orcutt grass <i>Orcuttia viscida</i>	FE; CE; --; 1B	Known to occur in relatively large, deep vernal pools within Sacramento county. This species will occur in elevations of 100 – 330 feet above mean sea level and blooms in April – July.	<b>No</b> ; there was no potential habitat observed on the site.
Slender Orcutt grass <i>Orcuttia tenuis</i>	FT; CE; --; 1B	This plant species will occur in vernal pools and the margins of stock ponds in elevations of 115 – 5,700 feet above mean sea level. Blooming period is May – October.	<b>No</b> ; there was no potential habitat observed on the site.
<b>Wildlife</b>			
<b>Invertebrates</b>			
Midvalley fairy shrimp <i>Branchinecta mesoallensis</i>	FSC; --; --; --	Vernal pools, swales, and other ephemeral freshwater habitats.	<b>No</b> ; the site is not located within the known range for this species.
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT; --; --; --	Associated with its host plant, elderberry shrubs ( <i>Sambucus</i> sp.).	<b>No</b> ; there were no elderberry shrubs observed on the site.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT; --; --; --	Vernal pools, swales, and ephemeral freshwater habitat.	<b>High</b>
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>	FE; --; --; --	Vernal pools, swales, and other ephemeral freshwater habitat.	<b>High</b>

Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
<b>Amphibians/Reptiles</b>			
California red-legged frog <i>Rana aurara draytonii</i>	FT; CSC; --; --	Requires a permanent water source and is typically found along quiet slow moving streams, ponds, or marsh communities with emergent vegetation.	<b>No</b> ; the site is not located within the known range of this species and there is no suitable habitat observed on the site.
California horned lizard <i>Phrynosoma coronatum frontale</i>	FSC; CSC; --; --	Occurs in valley-foothill hardwood, conifer and riparian habitats, as well as in pine-cypress, juniper and annual grass habitats.	<b>No</b> ; there is no known occurrence of California horned lizard within five miles of the site. Additionally, suitable habitat for this species was not observed on the site.
California tiger salamander <i>Ambystoma californiense</i>	PT; --; --; --	Found in annual grass habitat and in the grassy understory of valley-foothill hardwood habitats. Breeding habits restrict California tiger salamander to large vernal pools, vernal playas and large sag ponds that remain inundated for long periods time.	<b>No</b> ; there is no known occurrence of California tiger salamander within five miles of the site. Additionally, the site is not located within the known range of California tiger salamander.
Giant garter snake <i>Thamnophis gigas</i>	FT; CT; --; --	Agricultural wetlands and other wetlands such as irrigation and drainage canals, low gradient streams, marshes, ponds, sloughs, small lakes, and their associated uplands.	<b>No</b> ; there are no perennial waters connected to off the site habitat known to support this species.
Northwestern pond turtle <i>Clemmys marmorata marmorata</i>	FSC; CSC; --; --	Associated with permanent or nearly permanent water in a wide variety of habitat types.	<b>Low</b>
Western spadefoot toad <i>Spea hammondi</i>	FSC; CSC; --; --	Found in grassland habitats associated with long-lasting rain pools including, large vernal pools, or seasonal wetlands. These habitats are essential for breeding and laying eggs.	<b>Low</b>
<b>Fish</b>			
Central Valley fall/late fall-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	FC; CSC; --; --	Sacramento and San Joaquin Rivers and their tributaries.	<b>No</b> ; there is no habitat on the site for this species.
Central Valley winter run Chinook salmon <i>Oncorhynchus tshawytscha</i>	FE;CE;--;--	Sacramento and San Joaquin Rivers and their tributaries.	<b>No</b> ; there is no habitat on the site for this species.

Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Central Valley steelhead <i>Oncorhynchus mykiss</i>	FT;--;--;	Sacramento and San Joaquin Rivers and their tributaries.	<b>No</b> ; there is no habitat on the site for this species.
Delta smelt <i>Hypomesus transpacificus</i>	FT;CT;--;--	Sacramento and San Joaquin Rivers and their tributaries.	<b>No</b> ; there is no habitat on the site for this species.
Green sturgeon <i>Acipenser medirostris</i>	--;CSC;--;--	Sacramento and San Joaquin Rivers and their tributaries.	<b>No</b> ; there is no habitat on the site for this species.
Longfin smelt <i>Spirinchus thaleichthys</i>	FSC;CSC;--;--	Sacramento and San Joaquin Rivers and their tributaries.	<b>No</b> ; there is no habitat on the site for this species.
Sacramento spittail <i>Pogonichthys macrolepidotus</i>	FSC;CSC;--;--	Sacramento and San Joaquin Rivers and their tributaries.	<b>No</b> ; there is no habitat on the site for this species.
<b>Birds</b>			
Aleutian Canada goose <i>Branta Canadensis leucopareia</i>	FD (FSC); CSC; -- (Wintering)	Winter resident of agricultural lands and open water habitat.	<b>Low</b>
Bald eagle <i>Haliaeetus leucocephalus</i>	FPD (FT); SE; --; -- (Nesting & Wintering)	Winter resident coastal lands, annual grassland, agricultural land, and foothill woodlands near large bodies of water for foraging.	<b>No</b> ; there is no suitable foraging habitat for the site to be considered wintering or nesting habitat.
Bank swallow <i>Riparia riparia</i>	--; CT; --; -- (Nesting)	Nests in large colonies, excavating nest burrows in steep riverbank cliffs, gravel pits, and highway cuts.	<b>No</b> ; there is no suitable nesting habitat for this species on the site.
Black swift <i>Cypseloides niger</i>	FSC; --; --; -- (Nesting)	Typically nests in moist crevices or caves on sea cliffs and in association to deep canyon waterfalls.	<b>No</b> ; there is not suitable nesting habitat on the site for this species.
California thrasher <i>Toxostoma redivivum</i>	FSC; --; --; --	Moderate to dense chaparral habitats, occasionally inhabits thickets in young or open valley foothill riparian habitat.	<b>No</b> ; there is no chaparral or valley foothill riparian habitats present on the site. Therefore, there is no suitable habitat for this species.
Ferruginous hawk <i>Buteo regalis</i>	FSC; --; --; -- (Wintering)	A winter resident common to open grassland habitats in California, but also found in various woodlands and brushy forests.	<b>High</b>

Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Great blue heron <i>Ardea herodias</i>	--; (Sensitive); --; -- (Rookery)	Colonial nester in tall trees, cliff sides and sequestered spots on marshes. Rookery sites in close proximity to foraging habitats such as marches, lake margins, tidalflats, rivers, streams, and wet meadows.	<b>No</b> ; there is no suitable rookery habitat present on the site.
Great egret <i>Ardea alba</i>	--; (Sensitive); --; -- (Rookery)	Colonial nester in large trees. Rookery sites generally located near marshes, tidalflats, irrigated pastures, and margins of rivers, streams, and lakes.	<b>No</b> ; there is no suitable rookery habitat present on the site.
Greater sandhill crane <i>Grus canadensis tabida</i>	--; CT(Fully Protected); --; -- (Nesting & Wintering)	Nests in wet meadows interspersed with emergent marsh habitat. Winters in agricultural croplands and irrigated pastures.	<b>No</b> ; the site is not located within the known winter or summer range for this species (CDFG, 1990). Additionally, there is no suitable rookery habitat within the site.
Lawrence's goldfinch <i>Carduelis lawrencei</i>	FSC; --; --; -- (Nesting)	Occurs in open oak or other arid woodland and chaparral habitats near water.	<b>Low</b>
Lewis's woodpecker <i>Melanerpes lewis</i>	FSC; --; --; -- (Nesting)	Open habitats with scattered trees and snags with cavities.	<b>No</b> ; the site does not support acorn producing trees or snags. Therefore, no suitable nesting habitat or foraging opportunities occur on the site for this species.
Loggerhead shrike <i>Lanius ludovicianus</i>	FSC; CSC; --; -- (Nesting)	Uncommon in the foothills of the Central Valley. Breeds in open oak or other woodland and chaparral habitats near water.	<b>No</b> ; the site does not support oak or other woodland chaparral habitat. Therefore, no suitable nesting habitat occurs on the site.
Long-billed curlew <i>Numenius americanus</i>	FSC; CSC; --; -- (Nesting)	Frequent wet meadow habitats, large coastal estuaries, and upland herbaceous areas including croplands. Nest built in grass-lined depressions on open ground.	<b>No</b> ; there was no potential nesting habitat observed on the site.
Mountain plover <i>Charadrius mantanus</i>	FSC; CSC; --; -- (Wintering)	Open and flat valley grasslands and short-grass prairies.	<b>Low</b>

Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Nuttall's woodpecker <i>Picoides nuttallii</i>	--; --; SLC; --	Permanent resident of low elevation riparian deciduous and oak woodland habitats.	<b>No</b> ; woodland habitats do not occur on the site. Therefore, no suitable nesting habitat or foraging opportunities occur on the site for this species.
Oak titmouse <i>Baeolophus inornatus</i>	--; --; SLC; --	Resident of oak and pine-oak woodland, chaparral, and oak-riparian habitats.	<b>No</b> ; woodland habitats do occur on the site. Therefore, no suitable nesting or foraging opportunities occur on the site.
Rufous hummingbird <i>Salasphorus rufus</i>	FSC; --; --; -- (Nesting)	Occurs in hardwood, hardwood-conifer, meadow, riparian, and chaparral habitats. Nesting within berry tangles, shrubs and conifers in these habitats.	<b>No</b> ; there is no hardwood woodlands on the site. Therefore, there is no suitable nesting habitat on the site for this species.
Swainson's hawk <i>Buteo Swainsoni</i>	FSC; CT; --; -- (Nesting)	Nests in isolated trees or riparian woodlands adjacent to suitable foraging habitat (agricultural fields, grasslands, etc.).	<b>High</b>
Tricolored blackbird <i>Agelaius tricolor</i>	FSC; CSC; --; -- (Nesting colony)	Nests in dense thickets of blackberry, cattails, willow, or wild rose within emergent wetland habitats within the Central Valley and surrounding foothills.	<b>Low</b>
Vaux's swift <i>Chaetura vauxi</i>	FSC; CSC; --; -- (Nesting)	Nests within large hollow cavities in live trees or snags in conifer habitats.	<b>No</b> ; there is not suitable nesting habitat on the site for this species.
Western burrowing owl <i>Athene cunicularia hypugaea</i>	FSC; CSC; --; -- (Burrow sites)	Open low-growing grasslands with suitable burrow sites.	<b>High</b>
White-faced ibis <i>Plegadis chihi</i>	FSC; CSC; --; -- (Rookery site)	Inhabits large freshwater emergent wetlands. The nesting colony typically occurs hidden within dense stands of vegetation such as reeds or willows.	<b>No</b> ; the site is not within the known range for this species.
White-tailed kite <i>Elanus leucurus</i>	FSC; (Fully Protected); --; -- (Nesting)	Yearlong resident in valley and coastal lowlands and is rarely found away from agricultural areas.	<b>High</b>

Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Other Raptors (Hawks, Owls and Vultures) and Migratory Birds	MBTA and §3503.5 Department of Fish and Game Code	Nests in a variety of communities including western sierra woodland, mixed coniferous forest, chaparral, montane meadow, riparian, and urban communities.	<b>High</b>
<b>Mammals</b>			
Fringed myotis bat <i>Myotis thysanodes</i>	FSC; --; --; --	Inhabits valley foothill hardwood and hardwood-conifer, roosts in caves, mines, buildings, and crevices.	<b>No</b> ; the site is not located within the known range of this species
Greater western mastiff-bat <i>Eumops perotis californicus</i>	FSC; CSC; --; --	Semi-arid to arid habitat in southeastern San Joaquin south to southern California.	<b>No</b> ; there is no suitable roosting habitat on the site.
Long-eared myotis bat <i>Myotis evotis</i>	FSC; --; --; --	Occurs in all types of brush, woodland, and forest habitats, roosts in buildings, crevices, spaces under bark, and snags.	<b>No</b> ; the site is not located within the known range of this species.
Long-legged myotis bat <i>Myotis volans</i>	FSC; --; --; --	Woodland and forest communities above approximately 4,000 feet above MSL. Roosts in rock crevices, buildings, under tree bark, in snags, mines, and caves.	<b>No</b> ; the site is no located within the known range of this species.
Pacific western big-eared bat <i>Corynorhinus townsendii townsendii</i>	FSC; CSC; --; --	Typically occurs in mesic habitats, and requires caves, crevices, mines, tunnels, buildings or structures for roosting.	<b>No</b> ; there is no suitable roosting habitat on the site.
San Joaquin pocket mouse <i>Perognathus inornatus</i>	FSC; --; --; --	Only known population exists in riparian forests, along the Stanislaus River in Caswell State Memorial Park.	<b>No</b> ; the site is not located within the known range of this species
Small-footed myotis bat <i>Myotis ciliolabrum</i>	FSC; --; --; --	Occurs in a wide variety of habitats. Primarily found in relatively arid wooded and brushy uplands near a water source and roosts in caves, buildings, mines and rock crevices.	<b>No</b> ; there is no suitable roosting habitat on the site.
Spotted bat <i>Euderma maculatum</i>	FSC; CSC; --; --	Typically found in grassland communities through mixed conifer forests, and roost in rock crevices on cliffs.	<b>No</b> ; the site is not located within the known range of this species.



Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Yuma myotis bat <i>Myotis yumanensis</i>	FSC; CSC; --; --	Reside in open forests and woodland habitats with sources of water over which to feed. Roost in buildings, mines, caves, and crevices.	No; there is no suitable roosting habitat on the site.
<p><b>Federally Listed Species:</b>  FE = federal endangered  FT = federal threatened  FSC = federal species of concern</p> <p><b>California State Listed Species:</b>  CE = California state endangered  CT = California state threatened  CR = California state rare  CSC = California Species of Special Concern</p> <p><b>CNPS* List Categories:</b>  1A = plants presumed extinct in California  1B = plants rare, threatened, or endangered in California and elsewhere  2 = plants rare, threatened, or endangered in California, but common elsewhere  3 = plants about which we need more information  4 = plants of limited distribution</p> <p><b>Other Special-status Listing:</b>  SLC = species of local or regional concern or conservation significance</p> <p><i>Source: Foothill Associates</i></p>			

#### 5.4.1 Listed and Special-Status Plants

Based on a records search of the CNDDDB and the USFWS list, suitable habitat for special-status plant species occur on the site. Based on field observations, literature review specific to the special-status plants listed in **Table 1**, the potential for occurrence has been determined for each species. Due to the elevation and biological communities observed on the site, many of the special-status plant species considered in **Table 1** have no potential to occur. The species that are considered to have low potential to occur on the site are Bogg's lake hedge-hyssop (*Gratiola heterosepala*) and legenere (*Legenere limosa*).

##### **Bogg's Lake Hedge-Hyssop**

Bogg's Lake hedge-hyssop is a small, semi-aquatic, herbaceous annual which occurs in marsh and vernal pool habitats primarily on saturated clay soils. Less frequently, this species has been found on loam and loamy sand soils. In small vernal pools, it inhabits barren, muddy areas on extremely shallow soils. It has also been found in deep vernal pools and has occurred as a volunteer species in created vernal pools in Sacramento County. The blooming period for this plant species is between April and June, while the vernal pools are still inundated (CNPS, 2001). There is one record of this species occurring within five miles of the site (CNDDDB 2004). Based on observations made in the field and the location of the known occurrence relative to the site (**Figure 3**), the potential for Bogg's lake hedge-hyssop to occur within the vernal pools on the site is low.

##### **Legenere**

Legenere grows in a variety of wetland habitats including vernal pools, vernal marshes, artificial ponds and floodplains of intermittent streams (USFWS 2004). Occupied vernal pool types include Northern Basalt Flow, northern claypan, northern hardpan, northern volcanic ash-flow and Northern Volcanic Mudflow. Among the forty-two occurrences presumed to be extant, twenty are in Sacramento County (USFWS 2004). The blooming period for this plant species is between April and June. There are no records of this species occurring on the site (CNDDDB, 2004). However, the vernal pools on the site would be considered suitable habitat and based on observations made in the field, the potential for legenere to occur within the vernal pool habitat is low.

#### 5.4.2 Listed and Special-Status Animals

Based on a records search of the CNDDDB and the USFWS list, suitable habitat for special-status animal species occurs on the site. Based on field observations, literature review specific to the special-status animals listed in **Table 1**, the potential for occurrence has been determined for each species. Species that are known to be present or that are considered to have a high potential to occur on the site include: vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardii*), ferruginous hawk (*Buteo regalis*), Swainson's hawk (*Buteo swainsoni*), white-tailed kite (*Elanus leucurus*), and other raptors and migratory birds.

The species that are considered to have a low potential on the site include: giant garter snake (*Thamnophis gigas*), northwestern pond turtle (*Clemmys marmorata marmorata*), western

spadefoot toad (*Spea hammondi*), Aleutian Canada goose (*Branta canadensis leucopareia*), Lawrence's goldfinch (*Carduelis lawrencei*), mountain plover (*Charadrius montanus*), tricolored blackbird (*Agelaius tricolor*), and western burrowing owl (*Athene cunicularia hypugaea*).

### **Vernal Pool Invertebrates**

Two special-status species of vernal pool invertebrates, vernal pool fairy shrimp, and vernal pool tadpole shrimp, have a high potential to occur within the seasonal wetland and vernal pool habitats on the site. Typical habitat for special-status vernal pool crustaceans in California include vernal pools, seasonally ponded areas within vernal swales, rock outcrop ephemeral pools, playas and alkali flats freshwater. There are known CNDDDB occurrences recorded within five miles of the site (**Figure 3**). The depressional seasonal wetland and vernal pool habitat within the site would be considered potential habitat for these species. Based on field observations of suitable habitat and the known occurrences within five miles, these species have a high potential to occur on the site.

### **Ferruginous Hawk**

Ferruginous hawk is a known winter resident and migrant of California. Ferruginous hawks migrate to California in September and return to their breeding grounds that extends from Oregon into southern Canada, by mid-April (Zeiner *et. al.*, 1990b). Rabbits (*Lepus* sp.), ground squirrels (*Spermophilus beecheyi*), and mice are the primary prey consumed by ferruginous hawks. There are no CNDDDB records of ferruginous hawk within five miles of the site (CNDDDB 2003). Although this species was not observed during the assessment, there is suitable wintering habitat for ferruginous hawk in the annual grassland. Consequently, this species has a low potential to occur on the site. This species would only be expected to occur during the rainy season. Therefore, no significant impacts to this species are expected since initial grading would not be expected to occur during the rainy season. Therefore, no impacts to this species are expected and no additional mitigation is expected to be necessary.

### **Swainson's Hawk**

Swainson's hawk migrates from their wintering grounds in the La Pampas Region in Argentina to their breeding ground in east-central Alaska, southwest Canada, eastern Washington and Oregon, and the Central Valley of California from early March through early April (Bloom and De Water 1994). On breeding grounds, Swainson's hawk prefer open habitats including mixed and short grass grasslands, with scattered trees or shrubs for perching; dry grasslands; irrigated meadows, and edges between two habitat types. Breeding occurs from late March to late August, peaking in late May through July (Zeiner *et. al* 1990a). In the Central Valley of California, Swainson's hawk typically nest in stands with few trees in juniper-sage flats, riparian woodlands and oak woodlands. This species is also known to nest in close proximity to suitable foraging habitat. Swainson's hawk leaves its breeding ground to return to their wintering grounds in late August or early September (Bloom and De Water 1994). Swainson's hawk is recorded in the CNDDDB within five miles of the site (CNDDDB, 2004) (**Figure 3**). The annual grassland is considered suitable foraging habitat for Swainson's hawk. Therefore, this species has a high potential to occur on the site.

### **White-Tailed Kite, Other Raptors, and Migratory Bird Species**

Raptor and migratory bird species forage and nest in a variety of habitats throughout Sacramento County. Raptor and migratory bird nests are protected under the MBTA and Section 3503.5 of the California Fish and Game Code, which makes it illegal to destroy any active nest. The stand of trees within the southeast portion of the site is considered suitable nesting habitat for raptors and migratory birds. In addition, the annual grassland habitat throughout the site provides optimal foraging habitat. During the site visit, several raptors were observed flying over the site and perching on near by power lines. Due to the variety of prey the annual grassland habitat supports and the potential nesting habitat, raptors and other migratory birds have a high potential to occur on the site.

### **Northwestern Pond Turtle**

Northwestern pond turtle can be found in aquatic habitat throughout California, west of the Sierra-Cascade crest. Basking sites such as partially submerged logs, rocks, mats of floating vegetation, or open mud banks are essential for this species. Turtles will slip from basking sites to underwater retreats at the approach of humans or potential predators. This species normally associate with permanent ponds, lakes, streams, irrigation ditches or permanent pools along intermittent streams (Zeiner, 1988). There are three records of northwestern pond turtle within five miles of the site (CNDDDB, 2004). However, based on field observations the perennial marsh habitat on the site is marginal. Therefore, the potential for this species to occur on the site is low.

### **Western Spadefoot Toad**

Western spadefoot toads are amphibians in the family Pelobatidae. Spadefoot toads are distinguished from true toads by their cat-like eyes and single black sharp-edged "spades" on their hind feet. Western spadefoot toads are known to breed from January to May in temporary pools. Historically, the western spadefoot ranged from Redding to northwestern Baja California. In California, the species is found throughout the Central Valley. Known threats for this species are cattle grazing, road ways, and earth-moving activities (USFWS 2004). There are no records of western spadefoot toad within five miles of the site (CNDDDB 2004). Based on field observations and the current use of the site (cattle and horse grazing) it is unlikely that western spadefoot toad would occur. Therefore, the potential for western spadefoot toad to occur on the site is low.

### **Aleutian Canada Goose**

The Aleutian Canada goose is a small, inland nesting subspecies of the Canada goose. On wintering grounds in California, potential habitat for this species occurs in croplands, irrigated cattle pastures, and freshly planted pastures. Aleutian Canada geese leave California to return to their island breeding grounds in March and April. There are no CNDDDB records for this species within five miles of the site (CNDDDB 2003) and the species was not observed on the site during the biological resource assessment. However, the seasonal wetlands and marsh habitats on the site provide potential wintering habitat for this species. Consequently, there is a low potential for this species to winter on the site. This species would only be expected to occur during the rainy season. Because grading typically occurs during the dry season, no significant impacts to this

species is expected to occur due to grading activities and no additional mitigation would be necessary.

### **Mountain Plover**

Mountain plover is a known winter resident of California, occurring from September through March. This species wintering distribution including the Central Valley from Sutter and Yuba Counties south, foothill valleys west of the San Joaquin Valley, and Imperial Valley (Zeiner *et. al.*, 1990b). Wintering habitat in Central Valley includes short grasslands and plowed fields. Mountain plover consume large insects such as grasshoppers, crickets, and flies. There are no CNDDDB records of mountain plover within five miles of the site (CNDDDB 2004) and this species was not observed during site surveys. However, based on the existence of potential foraging habitat in the annual grassland and some marginal nesting habitat in the trees and shrubs within the southeast portion of the site, there is a low potential for this species to occur. This species would only be expected to occur during the rainy season. Therefore, no significant impacts to this species are expected since initial grading would not be expected to occur during the rainy season. Therefore, no impacts to this species are expected and no additional mitigation is expected to be necessary.

### **Tricolored Blackbird**

The tricolored blackbird is a colonial species that occurs in pastures, dry seasonal pools, and agricultural fields throughout the Central Valley and surrounding foothills during March through June. The most favored sites for nesting colonies are heavy growths of cattails and tule. An increasing percentage of Tricolor colonies in the 1980s and 1990s were reported in non-native Himalayan blackberries (Zeiner *et. al* 1990b). There is potential nesting habitat for this species within the non-native Himalayan blackberry thickets and the cattails in the perennial marsh habitat within the southeastern portion of the site (**Figure 4**). Though there are no CNDDDB records for the tricolored blackbird occurring within five miles of the site, there is the potential for this species to nest within the blackberry thickets or cattails. Therefore, this species is considered to have a low potential to occur on the site.

### **Western Burrowing Owl**

Burrowing owls forage in open grasslands and shrublands and typically nest in enlarged ground squirrel burrows. Nest burrows are very distinctive because the owls often line the entrance with material such as cow manure, insect parts, and feathers. Other evidence of nest burrows can be excrement (whitewash) near the entrance of burrows and sometimes pellets or castings may be found. Pellets look similar to the scats of certain carnivores but they are a dry, compact casting, containing purely feathers, fur and bones. No western burrowing owls were observed during the biological assessment. Additionally, very few potential burrow sites that could be utilized by western burrowing owl were observed during the field surveys. However, the annual grassland on the site does provide suitable habitat for this species to occur. The frequent disturbance of the agricultural areas reduces the potential for this species to occur. Consequently, this species has a low potential to occur on the site.

## 5.5 Sensitive Habitats

Sensitive habitats include those that are of special concern to resource agencies or those that are protected under CEQA, Section 1600 of the California Fish and Game Code, or Section 404 of the Clean Water Act. Additionally, sensitive habitats are protected under the specific policies outlined in the Sacramento County General Plan. Sensitive habitats within the site include potential jurisdictional waters of the U.S., which include: marsh, seep, seasonal wetland, vernal pool, and ephemeral drainage. In addition, the valley oak tree located within the southeastern portion of the site may be protected under the Native and Landmark Tree Protection policy in the Sacramento County General Plan (**Figure 4**).

### 5.5.1 Potential Jurisdictional Waters of the U.S.

Jurisdictional Waters of the U.S. include jurisdictional wetlands as well as all other waters of the U.S. such as creeks, ponds, and intermittent drainages. Wetlands are defined as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (Corps 1987). The majority of jurisdictional wetlands in the United States meet three wetland assessment criteria: hydrophilic vegetation, hydric soils, and wetland hydrology. Jurisdictional waters of the U.S. can also be defined by exhibiting a defined bed and bank and ordinary high water mark (OHWM).

Potential jurisdictional waters of the U.S. within the site consist of marsh, seep, seasonal wetland, vernal pool, and ephemeral drainage (**Figure 4**). To date, the potential wetland areas within the site have been formally delineated, however, the Corps has not verified these acreages.

### 5.5.2 Protected Trees

Although native trees such as oaks are not afforded special protection under state or federal law, loss of these species is a concern of the CDFG and CNPS because of their continued depletion throughout California. In addition, the Sacramento County Department of Environmental Review and Assessment regulates all projects with the potential to affect any protected trees. Protected trees are defined as all native oaks, California black walnuts and California sycamores with a diameter at breast height (DBH) of four inches and greater as well as all other trees with a 19-inch DBH and greater. A valley oak that would meet the protection criteria, was observed during the field surveys is located within the southeastern portion of the site (**Figure 4**).

## 6.0 DISCUSSION AND RECOMMENDATIONS

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As discussed, the site consists of  $\pm 130$  acres of land that supports primarily annual grassland. Known or potential biological constraints as shown in **Figure 4** include:

- Potential habitat for special-status plant species, Bogg's lake hedge-hyssop and legener;
- Potential habitat for special-status vernal pool fairy shrimp and vernal pool tadpole shrimp;
- Potential habitat for northwestern pond turtle;
- Potential habitat for western Spadefoot toad;
- Potential foraging habitat for Swainson's hawk;
- Potential habitat for burrowing owl;
- Potential nesting sites and foraging habitat for raptors and migratory birds;
- Potential jurisdictional waters of the U.S. including: marsh, seep, seasonal wetland, vernal pool, and ephemeral drainage; and
- Protected Trees

### 6.1 Special-Status Plants

As discussed, the marsh and vernal pool habitats on the site represent potential habitat for sensitive aquatic plant species including Bogg's lake hedge-hyssop and legener. Based on this, a focused special-status plant survey for these species is recommended between late March through early June to insure detection and to determine the current presence or absence. If these special-status plants are found, then a mitigation plan conceived from consultation with CDFG, the State's lead agency for "Species of Special Concern", should be prepared. The plan should detail the various mitigation approaches to ensure no net loss of rare plants. Examples of mitigation include avoidance of the resource, acquisition of credits at an approved mitigation bank, or acquisition and preservation of property that supports legener.

### 6.2 Vernal Pool Invertebrates

As discussed, vernal pools on the site represent potential habitat for special-status invertebrate species. The USFWS typically requires a 250-foot setback from the edge of vernal pools to be avoided. If impacts to invertebrate habitat cannot be avoided, the USFWS in coordination with the Corps, requires a 3:1 mitigation combination ratio (2:1 preservation and 1:1 creation) of vernal pools that potentially, or are known to support listed invertebrates. Mitigation can be implemented at an approved mitigation bank that sells credits or through completion and implementation of wetland mitigation and monitoring plan that includes creation/preservation of the vernal pools on suitable land.

### 6.3 Northwestern Pond Turtle

As previously discussed, the perennial marsh on the site provides marginal habitat for northwest pond turtle. During the breeding season the turtles nest in grasslands, adjacent to aquatic features. Because the status of this species is of concern to federal and state resource agencies, a

survey for this species should be conducted where there will be disturbance (if any) to this species habitat. This survey is recommended to determine their presence or absence on the site. This survey should be conducted by a qualified biologist. If northwestern pond turtle is found on the site, then coordination with USFWS and CDFG would be required and a mitigation plan should be prepared.

#### **6.4 Western Spadefoot Toad**

The western spadefoot toad may occur within the annual grassland habitat on site, and use the vernal pools and depressional seasonal wetlands for breeding. The western spadefoot toad is a species of concern to both federal and state resource agencies. Surveys within these habitats are recommended during the appropriate time of year (October to April), to determine the presence or absence of these species.

Surveys for western spadefoot toad should be conducted by a qualified biologist. If this species is found, a detailed mitigation plan should be prepared, in coordination with USFWS, which includes measures to minimize adverse effects of construction, the species, and associated habitats. The mitigation plan should include a monitoring plan for these species during the period of construction. If no western spadefoot toads are located on the site, then no further studies or mitigation would be necessary.

#### **6.5 Swainson's Hawk**

Although no Swainson's hawks were observed on the property, the site may be considered potential foraging habitat for this species since they are known to nest within five miles of the site. Currently, the CDFG recommends that impacts to suitable Swainson's hawk foraging habitat within 10 miles of an active nest should be mitigated by securing a conservation easement or fee title on suitable Swainson's hawk foraging habitat in the region. Currently, this translates to the following: (1) for projects within a one-mile radius of an active nest site, the project proponent should preserve 1.0 acre of similar habitat for each acre lost within a ten-mile radius of the site, (2) for projects within a one to five-mile radius of an active nest site, the project proponent should preserve 0.75 acre of similar habitat for each acre lost within a ten-mile radius of the site, and (3) for projects within a five to ten-mile radius of an active nest site, the project proponent should preserve 0.5 acre of similar habitat for each acre lost within a ten-mile radius of the site.

The lead agency under CEQA will determine appropriate mitigation for any special-status species, including Swainson's hawk. In the case of a conservation easement, the applicant should prepare and implement a Swainson's hawk mitigation plan to the satisfaction of CDFG that includes the preservation of Swainson's hawk foraging habitat on the appropriate amount of foraging acreage.

#### **6.6 Burrowing Owl**

Although burrowing owls were not observed during the biological assessment, the site contains annual grassland habitat that is potentially suitable habitat for burrowing owl. For this reason, it is recommended that a burrowing owl survey be conducted no more than 30 days prior to the onset of construction. Burrowing owls can be present during all times of the year in California,



so this survey is recommended regardless of the time construction activities occur. If active owl burrows are located during the preconstruction survey, it is recommended that a 250-foot buffer zone be established around each burrow with an active nest until the young have fledged and are able to exit the burrow. In the case of occupied burrows without active nesting, active burrows after the young have fledged, or if development commences after the breeding season (typically February-August), passive relocation of the birds should be performed. Passive relocation involves installing a one-way door at the burrow entrance, which encourages the owls to move from the occupied burrow. CDFG should be consulted for current guidelines and methods for passive relocation of any owls found on the site. Mitigation for project impacts that result in relocation of burrowing owls and loss of burrows and/or foraging habitat may be required for CEQA projects (CDFG recommends 6.5 acres of foraging habitat for burrowing owl be preserved for each active burrow that would be impacted by project activities. The lead agency under CEQA, in coordination with CDFG, is responsible for prescribing appropriate mitigation for any project-related impacts to burrowing owls. These mitigation measures would only apply in the event that burrowing owls were encountered during the preconstruction survey.

## **6.7 Raptors and Migratory Birds**

As discussed earlier, several species of raptors and migratory birds forage and may nest on the site. There is a stand of trees and blackberry thickets within southeastern portion of the site that could provide potential nesting sites for raptor species as well as migratory birds. Active raptor nests are protected by the California Fish and Game code Section 3503.5 as well as the MBTA. For this reason, if construction is expected to occur during the nesting season (February-August), a pre-construction raptor survey is recommended to determine if active raptor nests are present on the site. The survey should be conducted by a qualified biologist no more than 30 days prior to the onset of construction. If active nests are found, construction activities should not occur within 500 feet of the nests until the young have fledged or a qualified biologist has determined that a nest is no longer active. If construction activities are proposed to occur during non-breeding season (August-January), a survey is not required and no further studies are necessary.

## **6.8 Sensitive Habitats**

A total of 2.60 acres of potentially jurisdictional waters and other waters of the U.S. were delineated and mapped on the site. Of these 2.60 acres, 0.05 acre is perennial marsh, 0.10 acre is vernal pool, 0.66 acre is depressional seasonal wetland, 0.26 acre is riverine seasonal wetland, 1.05 acres are seasonal marsh, 0.13 acre is sloped seasonal wetland, 0.21 acre is seep, and 0.14 acre is ephemeral drainage (**Figure 4**). These areas could be regulated by the Corps and CDFG. Consequently, it is recommended that prior to the issuance of a grading permit, the jurisdictional assessment for the site should be submitted to the Corps and the appropriate Section 404 permit should be acquired. Any waters of the U.S. that would be lost or disturbed should be replaced or rehabilitated on a “no-net-loss” basis in accordance with the Corps’ mitigation guidelines. Habitat restoration, rehabilitation, and/or replacement should be at a location and by methods agreeable to the Corps.

In addition, Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters

of the United States to obtain a certification from the Regional Water Quality Control Board that the discharge will comply with the applicable effluent limitations and water quality standards.

The CDFG may also require a Streambed Alteration Agreement prior to the issuance of a grading permit, pursuant to Section 1600 of the CDFG Code, for each “stream crossing” (ephemeral drainage) and any other activities affecting the bed, bank or associated riparian vegetation of the ephemeral drainage on the site. If required, the project applicant should coordinate with CDFG in developing appropriate mitigation, and should abide by the conditions of any executed permits.

As previously discussed, the Sacramento County General Plan provides guidelines and policies for mitigation of wetlands and Landmark Tree Protection. Additionally, wetland credits may be purchased through organizations such as Wildlands, Inc. or County-approved mitigation banks within Sacramento County.

## 7.0 REFERENCES

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- California Department of Fish and Game (CDFG). *California Natural Diversity Data Base* (CNDDDB). 2004. Sacramento, CA;
- California Department of Fish and Game (CDFG). 1988. *A Guide to Wildlife Habitats of California*. Sacramento, CA;
- California Native Plant Society (CNPS). 2001. *Inventory of Rare and Endangered Plants of California* (sixth edition). Sacramento, CA;
- Hickman, James C. 1993. *The Jepson Manual: Higher Plants of California*. University of California Press, Berkeley, CA;
- Nakamura, Gary and Julie Kierstead Nelson. 2001. *Illustrated Field Guide to Selected Rare Plants of Northern California*, University of California, Agriculture and Natural Resources, Publication 3395. Oakland, CA;
- Sawyer, John O. and Todd Keeler-Wolf. 1995. *A Manual of California Vegetation*. California Native Plant Society (CNPS), Sacramento, CA;
- Soil Conservation Service. 1993. *Soil Survey of Sacramento County, California*. U.S. Department of Agriculture;
- Soil Conservation Service. March 1992. *Official List of Hydric Soil Map Units for Sacramento County*. California. U.S. Department of Agriculture;
- U.S. Geological Survey. 1967. Photorevised 1980. Carmichael, California. 7.5-minute series topographic quadrangle. United States Department of Interior;
- Zeiner, D.C., W.R. Laudenslayer Jr., K.E. Mayer, and M. White, eds. 1988. *California's Wildlife Volume I: Amphibians and Reptiles*, State of California: The Resource Agency, Department of Fish and Game, Sacramento, CA;
- Zeiner, D.C., W.R. Laudenslayer Jr., K.E. Mayer, and M. White, eds. 1990b. *California's Wildlife Volume II: Birds*, State of California: The Resource Agency, Department of Fish and Game, Sacramento, CA; and
- Zeiner, D.C., W.R. Laudenslayer Jr., K.E. Mayer, and M. White, eds. 1990a. *California's Wildlife Volume III: Mammals*, State of California: The Resource Agency, Department of Fish and Game, Sacramento, CA.

**Figure 1 – Site and Vicinity**

**Figure 2 – Soils**

**Figure 3 – CNDDDB**

## Figure 4 – Biological Constraints

## **APPENDIX D3**

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Special-status Plant and Wildlife Report, Sacramento Day School



**SPECIAL-STATUS PLANT AND WILDLIFE REPORT  
SACRAMENTO DAY SCHOOL  
WHITE ROCK ROAD  
SACRAMENTO COUNTY, CALIFORNIA**

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*June 27, 2005*

## INTRODUCTION

The Sacramento Country Day School facility planned for an approximate 80-acre parcel in rural eastern Sacramento County is located on the north side of White Rock Road approximately one mile east of its junction with Prairie City Road. The proposed project involves replacement of existing annual grassland and oak woodland habitats with school facilities including roads and parking lots, walkways, buildings, sports fields, and associated landscaping. Some vernal pool grassland will be set aside in open space.

The project site is found at 400 feet in elevation along the border of the Sacramento Valley grassland and foothill woodland natural communities. The property lies on a watershed divide between the Cosumnes and American River watersheds. The southern portion of the property drains southward into Coyote Creek that becomes a tributary to Carson Creek then Deer Creek and eventually joins the Cosumnes River near Highway 99. The northern half of the property drains north through an intermittent channel to Alder Creek which is a tributary of the American River at Lake Natoma.

Low-lying portions of the property are underlain with alluvial soils of the Fiddymont series (USDA 1993). These soils have well developed profiles with partially cemented subsoil horizons that impede the percolation of water. Ponding on the surface of the soil gives rise to vernal pool plant communities that can support special status plants. The central mounded topography supporting oak woodlands is mapped as Argonaut-Auburn complex or Whiterock series soils that are derived from metamorphic bedrock of the Sierran foothills. Shallow rocky outcrops in these communities can also support unique plant assemblages and rare species.

The property is currently part of a larger dryland pasture that is grazed by cattle. A firebreak along White Rock Road has been scraped free of vegetation. Livestock handling corrals, a power/telephone line, open rock-lined well, and excavations and ditchwork possibly a result of historic placer mining activities are present on the property. There are no dwellings or structures present.

This special-status plant and wildlife report has been prepared to evaluate vegetation and habitats known to support special status species from the region and report on detailed field studies conducted over the spring of 2005 to determine the presence or absence of these species. This report is focused exclusively on special status species and does not address direct, indirect, or cumulative impacts of the project to oak woodlands, wetlands, or other sensitive habitat types.

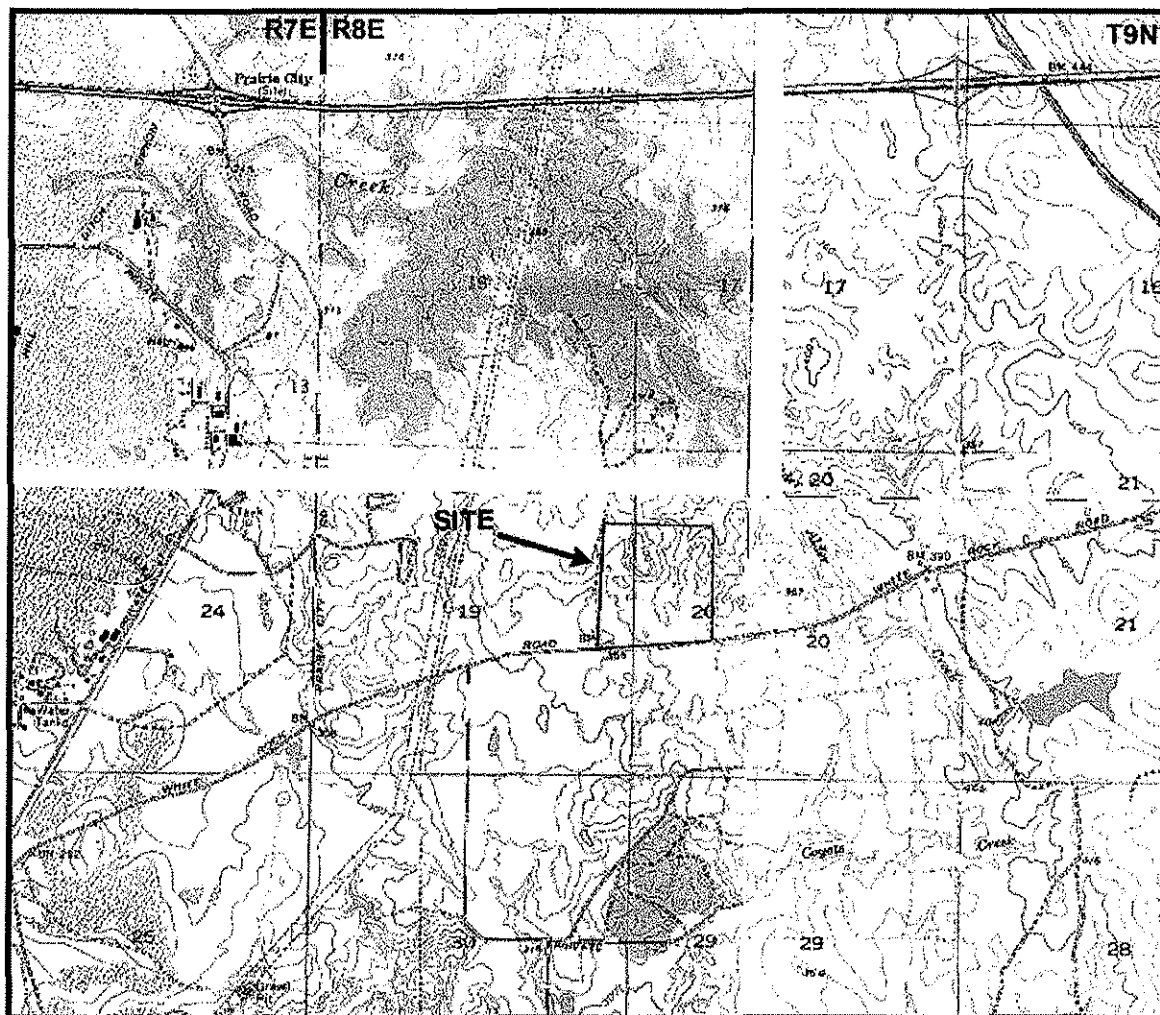


Figure 1 Location of the Sacramento Country Day School project site on White Rock Road, Sacramento County, CA. (base from portions of Buffalo Creek, Clarksville Folsom SE, and Folsom USGS topographic quadrangles, scale 1:24,000)

## **STUDY METHODOLOGY**

### ***Background Review***

A list of special status plant and animal species potentially found on the site was compiled from known locations tracked by the California Department of Fish and Game's Natural Diversity Data Base (Folsom SE and Buffalo Creek quadrangles, 2005). Wetland mapping on the site was reviewed to help locate potential vernal pool habitats (Gibson and Skordal 2005). The Sacramento County soil survey (USDA 1993) was consulted to aid in interpretation of landscape and geologic settings as it relates to rare plant habitat.

### ***Survey Dates and Survey Personnel***

Field surveys were timed during the spring of 2005 starting in March and continuing through June and encompassed the entire flowering period. Surveys were completed when all vernal pools had dried and summer annual grassland plant species were identifiable. Specific survey dates were March 11, April 12, and May 24 for special status plants and May 24 for wildlife. Virginia Dains, a plant ecologist with over 20 years experience in grassland habitats was responsible for conducting special status plant surveys. Dr. Susan Sanders, wildlife biologist, assessed the potential for special status wildlife at the project site. A separate study focusing on wetland impacts and vernal pool fairy shrimp has been also been conducted (Gibson & Skordal 2005).

All habitats found on the White Rock Road site were surveyed. Detailed attention was given to vernal pools and wetland swale habitats. These kinds of habitats are known to support special status plants in the vicinity of the project. A list of plant and wildlife species observed within the project area was compiled during field surveys and is included as Appendix A.

### ***Definitions***

Several terms used in this report have specific meanings related to environmental laws and regulations. These terms are defined below:

#### **Special Status Species include:**

- wildlife and plant species that are listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (50 CFR 17.11 for wildlife, 50 CFR 17.12 for plants; various notices in the Federal Register for proposed species);
- species that are listed, or proposed for listing by the state of California as threatened or

endangered under the California Endangered Species Act (California Administrative Code, Title 14, Section 670.5);

- wildlife species identified by the California Department of Fish and Game (CDFG) as species of concern (wildlife species that do not have state or federal threatened or endangered status but may still be threatened with extinction) (Remsen 1978, Williams 1986, Jennings et al. 1994);
- wildlife species that are designated as fully protected by CDFG (California Administrative Code, Title 14, Section 670.5);
- plants considered by the California Native Plant Society (CNPS) to be rare, threatened, or endangered in California and elsewhere (Skinner and Pavlik 1994); and
- plant species that meet the definition of rare or endangered under the California Environmental Quality Act (1970).

### **Plant Communities**

Plant communities are assemblages of plant species living in area under the same or similar biological and environmental factors.

### **Common Plant Communities**

Common plant communities are native or naturalized vegetation types that are locally and regionally abundant and therefore are not vulnerable to immediate elimination.

### **Sensitive Plant Communities**

Sensitive plant communities support unique or biologically important plant or wildlife species, or perform important ecological functions (e.g., bank stabilization or water filtration). These communities are usually locally and regionally scarce and therefore vulnerable to elimination. Sensitive plant communities include Waters of the United States (of which wetlands are a subset), riparian, and other habitats that are of particular concern to local, state, and federal agencies.

### **Impact Assessment Criteria**

Thresholds of significance of the project on special status species include substantial affects to local and statewide population and/or the habitat which the species is dependent.

### **Project Compliance with Laws, Ordinances, and Regulations that Affect Biological Resources**

Table 1 provides a summary of local, state, and federal laws, ordinances, and regulations that affect biological resources in addition to and including special status species. This special status species report addresses the requirements of the California Endangered Species Act of 1984, The Native Plant Protection Act (NPPA), California Fish & Game Code prohibiting the taking or possessing of the nests or eggs of birds, California Fish & Game Code prohibiting the taking of birds, reptiles, or amphibians listed as fully protected, State Fish and Game Code Adoption of Migratory Bird Treaty Act, State Fish and Game Code requiring the Protection of

Raptors, the Federal Endangered Species Act of 1973, and the Federal Migratory Bird Treaty Act.

**Table 1. Project Compliance with Laws, Ordinances, and Regulations that Affect Biological Resources**

Jurisdiction	Administering Agency	Authority	Requirements/Compliance
Local	Sacramento County	<p>The Sacramento County Tree Preservation Ordinance applies to any living native oak tree having at least one trunk of six inches or more in diameter measured four and one-half feet above the ground, or a multi-trunked native oak tree having an aggregate diameter of ten inches or more, measured four and one-half feet above the ground. Any of the following shall be included:</p> <ul style="list-style-type: none"> <li>• Valley Oak - <i>Quercus lobata</i></li> <li>• Interior Live Oak – <i>Quercus wislizenii</i></li> <li>• Blue Oak – <i>Quercus douglasii</i></li> <li>• Oracle Oak – <i>Quercus morehus</i>.</li> </ul>	<p>Standard Replacement Measures require inch for inch replacement on the project site or off-site at locations that are authorized by the approved City department. Replacement conditions are as follows:</p> <ul style="list-style-type: none"> <li>• One 15-gallon oak = 1 in dbh</li> <li>• One 24-inch box oak = 2 in dbh</li> <li>• One 36-inch box oak = 3 in dbh</li> </ul> <p>No replacement oak tree shall be planted within 15 feet of the driplines of existing oak trees or landmark size trees that are retained on-site, or within 15 feet of a building foundation or swimming pool excavation.</p>
Local	Sacramento County, as lead agency under CEQA	<p>Public Resources Code Section 21083.4: Oak Woodland Mitigation. Counties determine if project could result in significant conversion of oak woodlands. Mitigation options include, but are not limited to:</p> <ol style="list-style-type: none"> <li>1. conserving oaks through conservation easements</li> <li>2. planting and maintaining an appropriate number of trees (either on-site or by restoring former oak woodlands); tree planting limited to half the mitigation requirement</li> <li>3. contribute funds to Oak Woodland Conservation Fund for purpose of purchasing conservation easement.</li> </ol>	
State	CDFG	<p>State California Endangered Species Act of 1984; California Fish &amp; Game Code §§ 2050 - 2098. Requires consultation with CDFG for projects that could affect a state listed threatened or endangered species. Section 2080 of CESA prohibits “take” of any of these species. The take of state listed species incidental to otherwise lawful activities requires a permit, pursuant to §2081(b) of CESA.</p>	<p>No state listed plants or animals occur in the project area.</p>

Jurisdiction	Administering Agency	Authority	Requirements/Compliance
State	CDFG	Native Plant Protection Act of 1977; California Fish & Game Code §§ 1900 et seq. The Native Plant Protection Act (NPPA) directs CDFG to carry out the Legislature's intent to "preserve, protect and enhance rare and endangered plants in the State." The NPPA gave the California Fish and Game Commission the power to designate native plants as endangered or rare, and to require permits for collecting, transporting, or selling such plants.	No rare or endangered plants occur in project area
State	CDFG	California Fish & Game Code § 3503, § 3513, and § 355 – 357. CDFG No taking or possessing of the nests or eggs of birds	If removal of trees occurs during the nesting season (February 1 – July 31) pre-construction surveys needed to verify absence of nesting birds
State	CDFG	California Fish & Game Code § 3511 and § 5050. CDFG No taking of birds, reptiles, or amphibians listed as fully protected	White-tailed kites, a fully protected species, could be affected by the project
State	CDFG	California Fish & Game Code § 1600 – 1616. Section 1602 of the Fish and Game Code requires any project that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of a stream or use materials from a streambed to notify CDFG before beginning the project.	Impacts to seasonal stream on site will require a 1602 permit from CDFG
State	CDFG	State Fish and Game Code §3513 - Adoption of Migratory Bird Treaty Act. Adopts the federal Migratory Bird Treaty Act's provisions, so that it is unlawful to take or possess any migratory non-game bird as designated in the Migratory Bird Treaty Act ; as with Migratory Bird Treaty Act, this state code offers no mechanism for obtaining an incidental take permit for the loss of nongame, migratory birds.	If removal of trees occurs during the nesting season (February 1 – July 31) pre-construction surveys needed to verify absence of nesting migratory birds.
State	CDFG	State Fish and Game Code §3503.5 - Protection of Raptors. unlawful to take, possess, or destroy any birds-of-prey in the orders Falconiformes (hawks) or Strigiformes (owls). This statute does not provide for the issuance of any type of incidental take permit.	If removal of trees occurs during the nesting season (February 1 – July 31) pre-construction surveys needed to verify absence of nesting raptors (e.g., Cooper's hawks, red-tailed hawks, red-shouldered hawks, great horned owls).
State	RWQCB	Clean Water Act of 1977; Section 401 Water Quality Certification. Requires state certification from Regional Water Quality Control Board that federal permits allowing discharge of dredged or fill material into waters of the United States will not violate federal and state water quality standards.	No stream crossings currently proposed; if culvert installation or a stream crossing is required, then a 401 permit from CVRWQCB would be needed



Jurisdiction	Administering Agency	Authority	Requirements/Compliance
Federal	USFWS	Federal Endangered Species Act of 1973; 16 USC § 1531 et seq.; 50 CFR Parts 17 and 222.. Section 9 of the FESA and federal regulations prohibit the “take” of federally listed species, which is defined as killing, harming, or harassment of such species. Take can also include habitat modification or degradation that affect essential behavioral patterns such as breeding, feeding, or sheltering, and therefore indirectly cause injury or death to the listed species	Tiger salamanders and California red-legged frogs are unlikely to occur in the project area, but USFWS may require protocol surveys to demonstrate their absence. Federally listed vernal pool fairy shrimp and tadpole shrimp could occur in vernal pools at the project site.
Federal	USFWS	Migratory Bird Treaty Act; 16 USC §§ 703 - 711; 50 CFR Subchapter B. USFWS Protection of migratory birds. The Migratory Bird Treaty Act makes it unlawful to pursue, take, or kill any migratory bird, or any part, nest, or egg of any such bird.	If removal of trees occurs during the nesting season (February 1 – July 31) pre-construction surveys needed to verify absence of nesting migratory birds
Federal	USACOE	Clean Water Act of 1977; 33 USC § 1251 – 1376, 30 CFR § 330.5(a)(26). Protection of wetlands and waters of the United States. Section 404 of the Clean Water Act requires a permit prior to any activity that involves any discharge of dredged or fill material into “Waters of the United States”. Nearly all surface waters and wetlands in California meet the criteria for Waters of the United States, including intermittent streams and seasonal lakes and wetlands. Activities that require a permit under Section 404 include placing fill or riprap, grading, mechanized land clearing, and dredging. Any activity that results in the deposit of fill material within the “Ordinary High Water Mark” of Waters of the United States usually requires a permit, even if the area is dry at the time the activity takes place.	A 404 permit from USACOE will be needed for impacts to jurisdictional wetlands and other waters.

## PLANT AND ANIMAL COMMUNITIES

### ***Vegetation and Wildlife Habitat***

#### ANNUAL GRASSLAND

An annual grassland community is dominant on the site. This common plant community has been shaped by ongoing grazing practices to support introduced grasses dominated by soft chess (*Bromus hordeaceus*) and medusahead (*Taeniathrum caput-medusae*). Shallower soils are marked by rattail fescue (*Vulpia myuros*), little quaking grass (*Brizsa minor*) and rough cat's ear (*Hypochaeris radicata*). Native bulbs such as yellow mariposa lily (*Calochortus luteus*) and white brodiaea (*Tritelia hyacinthina*) were found in abundance in the clayey Fiddymment soil uplands. Other native perennials including narrow leafed mule-ears (*Wyethia angustifolia*), frying pan poppy (*Eschscholzia lobbiai*) and California poppy (*Eschscholzia californica*), and a small stand of native perennial needlegrass (*Nasella pulchra*) can be found among the introduced grasses and herb species.

The annual grassland in the project area provides habitat for species such as western meadowlark (*Sturnella neglecta*), western bluebird (*Sialia mexicana*), western kingbird (*Tyrannus verticalis*), lark sparrows (*Chondestes grammacus*), savannah sparrows (*Passerculus sandwichensis*), and lesser goldfinches (*Carduelis psaltria*). California ground squirrels (*Spermophilus beecheyi*), California voles (*Microtus californicus*), California deer mice (*Peromyscus maniculatus*), and pocket gophers (*Thomomys bottae*), are likely to occur at the site, and attract predators such as coyotes (*Canis latrans*), gray fox (*Urocyon cinereoargenteus*), red-tailed hawks and red-shouldered hawks. The value of the annual grassland at the project site is enhanced by the proximity of the adjacent seasonal wetlands and oak woodlands.

#### VERNAL POOLS / SEASONAL WETLANDS

Vernal pools are sensitive plant communities found within the grassland and along wetland swales. Most of the pools are shallow and dominated by vernal pool goldfields (*Lasthenia fremontii*), coyote thistle (*Eryngium castrense*), and mats of vernal pool buttercup (*Ranunculus bonariensis trisepalus*). Many other native vernal pool species were found on the site including wooly marbles (*Psiolocarphus brevissimus*), white-headed navarettia (*Navarretia leucocephala*), downingia (*Downingia bicornuta*), pillwort (*Pillularia americana*), and annual hairgrass (*Deschampsia danthonioides*). Seasonally wet shallow drainages were vegetated with

variegated clover (*Trifolium variagatum*), perennial ryegrass (*Lolium perenne*), and Mediterranean barley (*Hordeum marinum*).

Vernal pools at the project site have potential to support special status wildlife species such as fairy shrimp (*Branchinecta* spp.) and tadpole shrimp (*Lepidurus packardii*). Pacific chorus frogs (*Pseudacris regilla*) were observed in some of the seasonal wetlands at the site, and in winter are likely to attract shorebirds such as black-necked stilts (*Himantopus mexicanus*), greater yellowlegs (*Tringa melanoleuca*), common snipe (*Gallinago gallinago*), and killdeer (*Charadrius vociferus*). The water and vegetation of these wetlands produce abundant insects, attracting cliff swallows (*Hirundo pyrrhonota*), violet-green swallows (*Tachycineta thalassina*), black phoebes (*Sayornis nigricans*), western kingbirds and other insect-eating species.

## OAK SAVANNAH

Interior live oaks (*Quercus wislizenii*) and blue oaks (*Quercus douglasii*) comprise a very open oak woodland in the central portion of the property. Groupings of two or three trees dot the northern and western slopes of the hillock. Individual other trees are introduced horticultural species including black locust (*Robinia pseudoacacia*) and English walnut (*Juglans regia*). These may remain from historical occupation of the site. The open oak woodland community is transitional to the foothill pine and oak woodlands that blanket higher elevations. Though common, the interior live oak and blue oak woodlands throughout the state are highly disturbed by grazing and residential development.

The oak woodland community is found on well drained soils that support an open understory grassland consisting of wild oat (*Avena barbata*) and foxtail (*Hordeum murinum leporinum*). The shaded understory near the oaks is dominated by unpalatable disturbance related species such as Italian thistle (*Carduus pycnocephalus*), and milk thistle (*Silybum marianum*). Shrubs in this community are limited to poison oak bushes (*Toxicodendron diversilobum*) that are protected from grazing by fallen oaks.

The oak woodland at the project site offers important wildlife habitat for migratory and resident animals at the site. More than 300 vertebrate species are known to use oak-dominated woodlands in California for reproduction, and additional species use oak woodlands as wintering grounds or during migration (Block et al., 1990). The blue oaks there provide food, cover, roosting, and breeding sites for many wildlife species. Oak acorns are important food items for western gray squirrel (*Sciurus griseus*), mule deer (*Odocoileus hemionus*), wild turkeys (*Melleagris gallopavo*), and other species. Acorn woodpeckers (*Melanerpes formicivorus*), northern flickers (*Colaptes auratus*), western scrub jays (*Aphelocoma californica*), and raccoons (*Procyon lotor*) also rely on oak acorns. Oak foliage and bark insects attract birds such as bushtits (*Psaltiriparus minimus*), ash-throated flycatchers (*Myiarchus cinerascens*), white-breasted nuthatches (*Sitta canadensis*), and western kingbirds. Oak trees also offer shade, shelter, and breeding substrate for many animals. Woodpeckers excavate nest holes in snags or in dead oak

limbs. Other hole-nesting birds such as western bluebirds and American kestrels (*Falco sparverius*) subsequently use these cavities. All of these animals are likely inhabitants of oaks at the project site all or part of the year.

The proximity of open annual grassland to the oak woodlands at the project site enhances their wildlife value. Species that forage in annual grassland but that nest in trees (e.g., red-shouldered or red-tailed hawks, western bluebirds, ash-throated flycatchers) are more likely to nest in oaks that have adjacent grassland feeding grounds.

margins of the swales and pools may not be appropriate habitat for this plant.

### **Special-Status Wildlife**

Special status wildlife species recorded in the vicinity of the project area include vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardii*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), California tiger salamander (*Ambystoma californiense*), western spadefoot (*Scaphiopus hammondi*), northwestern pond turtle (*Clemmys marmorata marmorata*), giant garter snake (*Thamnophis gigas*), Cooper's hawk (*Accipiter cooperi*), Swainson's hawk (*Buteo swainsonii*), burrowing owl (*Athene cunicularia*), loggerhead shrike (*Lanius ludovicianus*), and tricolored blackbird (*Agelaius tricolor*).

Although the project area is within the range of all of these species, not all are expected to occur there because of the absence of suitable habitat. Other species are expected to occur infrequently because certain habitat requirements (i.e. suitable nesting sites) do not occur within the project area.

The remaining species are discussed in further detail below because their habitat could be adversely affected by the proposed project, and these species are of concern to state or federal agencies.

#### ***Vernal Pool Fairy Shrimp (Branchinecta lynchi)***

Fairy shrimp are small crustaceans adapted to the annual flooding and drying of vernal pools. When pools fill with winter rains, the shrimp grow for about two weeks, breed, then produce eggs that are dropped to the silty bottom of the pool. As the pool dries, the adults die, and the eggs are protected as cysts with external coverings that protect them from cold, heat and desiccation.

The vernal pool fairy shrimp occurs from Stillwater Plain in Shasta County through most of the length of the Central Valley to Pixley in Tulare County, and along the Central coast range from northern Solano County to Pinnacles in San Benito County. Several disjunct populations also occur in San Luis Obispo County, in northern Santa Barbara County, and Riverside County (USFWS 1994). This species has been recorded near the project area, approximately one mile east of the intersection of White Rock and Prairie City Road (CNDDB 2005). This species should be considered present in vernal pools and seasonal wetlands of the project area unless protocol surveys (USFWS 1996) demonstrate their absence.

#### ***Vernal Pool Tadpole Shrimp (Lepidurus packardii)***

The vernal pool tadpole shrimp is known throughout the Central Valley, ranging from east of Redding in Shasta County south through the Central Valley to the San Luis National Wildlife Refuge in Merced County, and from a single vernal pool complex in Fremont, Alameda County (USFWS 1994). This species inhabits vernal pools containing clear to highly turbid

their nesting colonies are generally located in close proximity to foraging grounds. The tricolored blackbird breeding season is from April to August.

No nesting habitat is available for tricolored blackbirds at the project site, but they historically nested within five miles of the project area in blackberry thickets in the vicinity of Scott and White Rock roads (CNDDDB 2005, Beedy et al. 1991). The seasonal wetlands of the project area could provide foraging habitat for this species.

### ***Burrowing Owls (Athene cunicularia)***

The burrowing owl is a ground-dwelling bird of prey that lives in arid, open habitats throughout the western hemisphere (Grinnell and Miller 1944). Contrary to its name, this species relies on other animals to create the underground burrows in which it nests and roosts and on which it depends for survival. In the Sacramento area, burrowing owls mainly live in tunnels created by California ground squirrels. Where the number and availability of natural burrows is limited (for example, due to burrow destruction or squirrel eradication), owls will occupy drainage culverts, caves under piles of rubble, discarded pipe, and other artificial tunnel-like structures, as well as burrows excavated by other fossorial mammals.

Burrowing owls have not been recorded within five miles of the project area, and the annual grassland at the site is currently too dense and tall to attract this species. However, ground squirrels occurred at the site, providing potential nest sites. This species cannot be considered absent at the site without additional surveys.

### ***Swainson's Hawk (Buteo swainsonii)***

In the Central Valley this species typically nests in oaks or cottonwoods in or near riparian habitats (Schlorff and Bloom 1984). Swainson's hawks prefer nesting areas that provide nearby foraging grounds of grasslands, irrigated pasture, alfalfa, hay, and wheat crops (Bloom 1980). The nesting season of the Swainson's hawk extends from late March through mid-July. In California Swainson's hawks have become almost entirely dependent on annual grassland and crops such as alfalfa for foraging habitat. Agriculture and urbanization have eliminated most of the native grasslands that formerly provided foraging habitat for this species.

In the Central Valley, Swainson's hawks (*Buteo swainsoni*) typically nest in oaks or cottonwoods in or near riparian habitats (Schlorff and Bloom 1984). Swainson's hawks, which are only summer residents in California, prefer nesting areas that provide nearby foraging grounds of grasslands, irrigated pasture, alfalfa, hay, and wheat crops (Bloom 1980).

Swainson's hawks arrive from their South American wintering grounds in early March. Courtship and nest construction occur from mid-March through mid-April and eggs are usually laid between April and May. Nestlings first appear in mid-May and the nestling stage typically lasts from the middle of May to early July. Fledging generally occurs from the end of June through early August.

A Swainson's hawk was recorded at the intersection of White Rock and Scott roads in 1982, although no nest was detected (CNDDDB 2005). The annual grassland of the project site provide suitable foraging habitat for Swainson's hawks, and some large trees are available for nesting habitat. Most of the nesting records for Swainson's hawks in the region are near the Sloughouse Area, approximately 12 miles to the southwest. While no nests have been recorded in the immediate vicinity of the project area, this species could breed in the oaks at the project site.

### ***White-Tailed Kite (Elanus leucurus)***

White-tailed kites inhabit open cultivated and marshy bottomlands with scattered tall trees, savannah, and grassy foothill slopes interspersed with oaks (Small 1994). They are rarely found above the foothill grasslands of the Sierra Nevada (Beedy and Granholm 1985).

This species breeds from February to October, with a peak from May to August. Nesting usually occurs in lowland groves of oaks, willows, or sycamores, often near small streams. (Beedy and Granholm 1985; Zeiner et al. 1990). Their nest typically consists of loosely piled sticks and twigs lined with grass, straw, or rootlets. The nest is usually placed near the top of dense oak, willow, or other tree stand, usually about 20 to 100 feet above the ground (Zeiner et al. 1990). White-tailed kites typically nest near foraging areas of open grassland and meadow, where they can feed on voles and other small mammals. This species typically incubates their eggs about 30 days, and nestlings remain in the nest about 40 days (Harrison 1978). Young birds often remain in the vicinity of the nest after they fledge while they are learning to hunt.

White-tailed kites were not observed during the field survey, but they could nest and forage in the oak woodlands at the project site.

### ***Cooper's Hawk (Accipiter cooperii)***

Cooper's hawks breed in dense-canopied trees from foothill pine-oak woodlands up to the ponderosa pine forest (Verner and Boss 1980). This species hunts in broken woodland and habitat edges, where they catch small birds in the air. They prefer nesting sites in riparian growths of deciduous trees, as in canyon bottoms and on river flood-plains, although live oaks are often used (Grinnell and Miller 1944). They breed from early April to late August, with a peak from early June to early August (Verner and Boss 1980). Cooper's hawk nests are often made in deciduous trees in crotches between 20 and 50 feet above the ground (Zeiner et al. 1990). The nest is a stick platform lined with bark. Cooper's Hawk incubate their eggs for about 35 days, then fledge young between 35 and 40 days (Harrison 1978). Young birds often remain in the vicinity of the nest after they fledge while they are learning to hunt.

Cooper's hawks were not observed during the field survey, but they could nest and forage in the oak woodlands at the project site.

### ***Western Pond Turtle (Clemmys marmorata)***

Western pond turtles (*Clemmys marmorata marmorata* and *Clemmys marmorata pallida*), California's only native aquatic turtle, occur throughout California west of the Cascade-Sierra crest (Stebbins 1985). Pond turtles are associated with ponds and waterways in grassland, oak woodland, and coniferous forest. They require some slack-or slow-water aquatic habitat, and they also need aerial and aquatic basking sites (Jennings and Hayes 1994). For successful reproduction they need shallow water habitat with relatively dense subemergent or short emergent vegetation in which to forage, as well as an upland oviposition site with suitable thermal and hydric environments for incubation of eggs (Jennings and Hayes 1994). The seasonal wetlands and ephemeral drainages at the project site do not provide sufficient foraging habitat or cover.

### ***Giant Garter Snake (Thamnophis couchi gigas)***

The giant garter snake (*Thamnophis gigas*) frequents areas of permanent (usually) fresh water, particularly sloughs and marshes overgrown with tules and willows. It will also inhabit temporary water sources such as sloughs, irrigation canals, drainage ditches, and flooded rice fields. Giant garter snake habitat typically lacks a dense tree canopy, and usually includes instream vegetation of tule and cattail with blackberry and grasses on the bank. Giant garter snakes can be found basking in sunny locations from March through October. These basking sites might include streamside vegetation, algal mats, rip-rap, rubble, logs, or debris. The diurnal habits and shallow water habitat of this snake make it vulnerable to predators like egrets, herons, and northern harriers. Consequently, it is a wary, secretive snake (Fitch 1940).

Giant garter snakes have not been recorded within five miles of the project site, and the seasonal wetlands and ephemeral drainage do not provide sufficient cover or suitable foraging habitat for this species.

### ***Special Status Bat Species***

The project area is within the ranges of a variety of bat species of special concern to the USFWS, including the pale Townsend's big-eared bat (*Plecotus townsendii pallescens*), fringed myotis bat (*Myotis thysanodes*), Yuma myotis bat (*Myotis yumanensis*), and the small-footed myotis bat (*Myotis ciliolabrum*). Habitat requirements, range and distribution of bat species in Sacramento County and elsewhere in the state are generally poorly known, so we have little information on their potential occurrence in the project area. However, it is known that oak woodlands can provide roosting and breeding habitat for bat species such as fringed myotis, Yuma myotis, and small-footed myotis.



**Table 1 SPECIAL STATUS PLANTS**

<b>SPECIAL STATUS PLANTS</b>				
<b>Scientific Name Common Name</b>	<b>Legal Status State/Fed/CNPS</b>	<b>Survey Time</b>	<b>Habitat Requirements</b>	<b>Occurrence on Sacramento Country Day School Site</b>
<i>Downingia pusilla</i> Dwarf Downingia	/ / 2	Mar-May	Valley grassland (mesic), Vernal pools	Not present, potential habitat is limited.
<i>Eryngium pinnatisectum</i> Tuolumne button-celery	-/-1B	June-August	Vernal pools in the lower coniferous forest, oak woodland	Not present, most likely out of range for this species.
<i>Gratiola heterosepala</i> Boggs Lake Hedge Hyssop	E/ / 1B	Apr-Jun	Marsh (lake margins), Vernal pools	Not present, potential habitat is limited
<i>Juncus leiostermus</i> var. <i>ahartii</i> Ahart's dwarf rush	/ / 1B	Apr-May	Margins of vernal pools	Not present, potential habitat is limited
<i>Legenere limosa</i> Green's legenere	/ SC/ 1B	April-May	Vernal Pools, commonly associated with spikerush, smooth goldfields, deeper, long duration pools, and stockpools. May be transported by waterfowl.	Not present, potential habitat is present in the single large vernal pool in the oak woodland, associated species present and evidence of waterfowl use.
<i>Orcuttia tenuis</i> Slender orcutt grass	E/T/1B	May-October	Vernal Pools, Sacramento County southern end of the range	Not present, vernal pool habitat shallow and short duration ponding may be inappropriate for the species.
<i>Orcuttia viscida</i> Sacramento orcutt grass	E/E/1B	April-July	Vernal pools, local populations along Keifer road, Mather Park.	Not present, vernal pool habitat shallow and short duration ponding may be inappropriate for the species.

SPECIAL STATUS PLANTS				
Scientific Name Common Name	Legal Status State/Fed/CNPS	Survey Time	Habitat Requirements	Occurrence on Sacramento Country Day School Site
<i>Navarretia myersii</i> ssp. <i>myersii</i> Pincushion navarretia	-/-1B	May	Vernal pools, known from 6 locations, nearest population in Fair Oaks.	Not present, soil conditions do not match known habitats, within the larger range of the species, but no local populations known.
<i>Navarretia eriocephala</i> Hoary navaretia	-/ -/ 4	May-June	Oak woodland, valley grassland, often seasonally wet	Not present, potential habitat is present.

<sup>a</sup> Status definitions:

**Federal**

E = listed as Endangered under the federal Endangered Species Act.

T = listed as Threatened under the federal Endangered Species Act.

SC = species of concern; species for which existing information indicates it may warrant listing but for which substantial biological information to support a proposed rule is lacking.

-- = no listing.

**State**

E = listed as endangered under the California Endangered Species Act.

T = listed as threatened under the California Endangered Species Act.

-- = no listing.

**CALIFORNIA NATIVE PLANT SOCIETY**

List 1B = Plants rare, threatened, or endangered in California and elsewhere.

List 2 = Plants rare, threatened or endangered in California but more common elsewhere.

List 4 = Plants of limited distribution: A watch list.

***Published References:***

California Native Plant Society. 2000. CNPS Inventory- 6<sup>th</sup> Edition. California Native Plant Society. Sacramento, CA. August, 2001.

California Native Plant Society. 2001. Electronic Inventory of Rare and Endangered Vascular Plants of California. Database search for Nevada, Sierra, Placer, and Yuba Counties.

Hickman, J. C. (ed.). 1993. The Jepson Manual: Higher Plants of California. University of California Press. Berkeley, CA.

Munz, P.A. 1959. A California Flora. University of California Press. Berkeley and Los Angeles, CA.

**Table 2. Special Status Wildlife Species in the Vicinity in the Sacramento Day School, White Rock Road, Sacramento County**

Species	Status Fed/State	Preferred Habitat	Potential for Occurrence at Site
<b>BIRDS</b>			
Bald eagle <i>Haliaeetus leucocephalus</i>	T/E	Ocean shorelines, lake margins and river courses	No suitable nesting or foraging habitat at the project site.
Mountain plover <i>Charadrius montanus</i>	PT/CSC	Occupies open plains or rolling hills with short grasses or sparse vegetation; also uses newly plowed fields	Potential wintering habitat
White-faced ibis <i>Plegadis chihi</i>	SC/SSC	Prefers freshwater marshes with tules, cattails, and rushes, may nest in trees and forage in flooded agricultural fields	Not present; no suitable marsh habitat
Tricolored Blackbird <i>Agelaius tricolor</i>	SC/CSC	Nests in emergent marsh and other wetlands; forages in wetlands, ag fields, pastures	No suitable marsh or emergent wetlands for nesting, but could provide foraging habitat
Cooper's hawk <i>Accipiter cooperii</i>	--/CSC	Nests in oak woodland and riparian forests	Possible as a nesting and foraging species in project area oak woodland
Ferruginous hawk <i>Buteo regalis</i>	SC/--	Forages in open terrain in plains and foothills where ground squirrels and other prey are available	Potential winter resident
Swainson's hawk <i>Buteo swainsoni</i>	-/T	Nests in oaks or cottonwoods near riparian areas, forages in grassland, irrigated pasture and agricultural fields	Annual grassland provides potential foraging habitat; large trees are potential nest sites, although no nesting records within 5 miles of project site
Bank swallow <i>Riparian riparia</i>	--/T	Nests in bluffs or banks, usually adjacent to water, where sandy soil allows digging	Not present; no suitable habitat
Little willow flycatcher <i>Empidonax traillii</i>	SC/E	Breeds in large, wet mountain meadows with scattered willow thickets; uses riparian woodland in lowlands during migration	Not present, no breeding or migratory riparian habitat
Western burrowing owl <i>Athene cunicularia hypugea</i>	SC/CSC	Nests in burrows in sparse grassland, especially old ground squirrel burrows	No records within 10 miles of project area, but potential presence cannot be ruled out;
<b>MAMMALS</b>			

Pacific western big-eared bat <i>Corynorhinus (=Plecotus) townsendii townsendii</i>	SC/CSC	Roosts in caves, tunnels, mines, and dark attics of abandoned buildings	Potential habitat in project area, no historical or current records in region
Greater western mastiff-bat <i>Eumops perotis californicus</i>	SC/CSC	Roosts and breeds in deep narrow rock crevices; forages in semi-arid habitats	Potential habitat in project area, no historical or current records in region
Small-footed myotis bat <i>Myotis ciliolabrum</i>	SC/-	Open stands in forests and woodlands, as well as shrublands	Project area does not provide suitable habitat

**Table 2. Special Status Wildlife Species in the Vicinity in the Sacramento Day School, White Rock Road, Sacramento County (Continued)**

Species	Status Fed/State	Preferred Habitat	Potential for Occurrence at Site
<b>MAMMALS (Continued)</b>			
Long-eared myotis bat <i>Myotis evotis</i>	SC/-	Coniferous forests, woodlands; sometimes inhabit sheds, cabins and bark beneath trees	Potential habitat in project area, no historical or current records in region
Fringed myotis bat <i>Myotis thysanodes</i>	SC/-	Oak, pinon, and juniper and desert scrub of the southwest	Potential habitat in project area, no historical or current records in region
Yuma myotis bat <i>Myotis yumanensis</i>	SC/-	Selects habitats with open water nearby	Potential habitat in project area
Long-legged myotis bat <i>Myotis volans</i>	SC/-	Most common in woodlands and forests above 4,000 ft; maternity colonies form in buildings, rock crevices and trees	Project area does not provide suitable habitat
<b>REPTILES AND AMPHIBIANS</b>			
California red-legged frog <i>Rana aurora draytonii</i>	T/CSC	Marshes, slow-moving water; prefers areas with good plant cover	No records within 5 miles, no perennial water sources on project site to provide breeding habitat
Foothill Yellow-legged Frog <i>Rana boylei</i>	SC/SSC	Creeks or rivers in woodland or forests with rock and gravel substrate and low overhanging vegetation up to 6000 ft; usually found near riffles with rocks and sunny banks nearby	Ephemeral stream and seasonal wetlands on project site do not provide suitable aquatic habitat
California tiger salamander <i>Ambystoma californiense</i>	T/CSC	Vernal pools, seasonal ponds in annual grasslands and foothill hardwood habitat	No records within 5 miles seasonal wetlands unlikely to pool for sufficiently long periods of time to support larval development
Western spadefoot toad <i>Scaphiopus hammondi</i>	SC/SSC	Shallow streams with riffles and seasonal wetlands such as vernal pools in annual grasslands and oak woodlands	Seasonal wetlands in project area provide marginal habitat for this species
Giant garter snake <i>Thamnophis gigas</i>	T/T	Sloughs, canals, and other waterways; requires grassy banks and emergent vegetation, and areas of high ground protected from winter flooding	No records within five miles of project area, no suitable habitat at project site
Northwestern pond turtle <i>Clemmys marmorata</i> <i>Marmorata</i>	SC/CSC	Ponds, marshes, streams, irrigation canals with aquatic vegetation, cover, and basking sites	Seasonal wetlands on site do not provide suitable habitat

**Table 2. Special Status Wildlife Species in the Vicinity in the Sacramento Day School, White Rock Road, Sacramento County (Concluded)**

Species	Status <i>Fed/State</i>	Preferred Habitat	Potential for Occurrence at Site
<b>FISH</b>			
Delta smelt <i>Hypomesus transpacificus</i>	T/T	Estuarine waters of the San Joaquin-Sacramento Delta	No suitable habitat in project area.
Central valley steelhead <i>Onchorhynchus mykiss</i>	T/CSC	Spawn in small streams where cool, well-oxygenated water is available year round	No suitable habitat in project area
Winter-run Chinook salmon <i>Onchorhynchus tshawytscha</i>	E/E	Adults first appear in the Sacramento River near Red Bluff in December and continue to pass Red Bluff through May; typically spend a relatively long time holding in the river before spawning, spawns on upper Sacramento River, between river mile 284 and 298	No suitable habitat in project area
Central Valley fall/late fall-run chinook salmon <i>Oncorhynchus tshawytscha</i>	C/CSC	Adults immigrate into the river system from mid-October through mid-April; begin spawning in January and continue to spawn through mid-April. Embryo incubation occurs from January through June, rearing and emigration of fry and smolts from April through mid-October	No suitable habitat in project area
Central Valley spring-run chinook salmon <i>Oncorhynchus tshawytscha</i>	T/T	Spawns on tributaries of Sacramento River, Deer and Mill Creeks; generally ascend to natal streams during spring snowmelt run-off and spend the summer in deep pools with suitable water quality	No suitable habitat in project area
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	PT/CSC-	Slow-moving stretches of Delta and Central Valley rivers	No suitable habitat in project area.
Longfin smelt <i>Spirinchus thaleichthys</i>	SC/CSC	Occur in salt and brackish water of estuaries	No suitable habitat in project area.
<b>INVERTEBRATES</b>			

Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	T/-	Riparian and oak savanna habitats with elderberry shrubs	No elderberry shrubs on project site
California linderiella <i>Linderiella occidentalis</i>	SC	Vernal pools, ephemeral ponds	Presumed present in vernal pools of the project area*
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>	E/-	Vernal pools, shallow pools	Presumed present in vernal pools of the project area*
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	T/-	Vernal pools and other seasonal freshwater wetlands	Presumed present in vernal pools of the project area*

**KEY: FEDERAL**

E = Endangered	Listed in the Federal Register as being in danger of extinction
T = Threatened	Listed likely to become endangered within the foreseeable future
P= Proposed	Officially proposed (in the Federal Register) for listing as endangered or threatened
C = Candidate	Candidate to become a proposed species
D= Delisted	Delisted. Status to be monitored for five years.
SC = Species of Concern	May be endangered or threatened. Not enough biological information has been gathered to support listing at this time
PE = Proposed endangered	
* =	Possibly extirpated from this quad

**STATE**

E = Endangered	Listed as endangered under the California Endangered Species Act
T = Threatened	Listed as threatened under the California Endangered Species Act
CSC =	California Species of Special Concern

\* Gibson and Skordahl 2005





## PROJECT IMPACTS AND MITIGATION FOR SPECIAL STATUS SPECIES

### Special Status Wildlife

#### *Swainson's Hawk*

The absence of Swainson's hawks breeding records near the site suggests that this species is unlikely to nest in the project area, but their presence cannot be ruled out without further surveys. If Swainson's hawks nested in or near the project work site, construction during the breeding season could disturb nesting activities, possibly resulting in loss of young, reduced health and vigor of eggs and/or nestlings. Removal of an active nest or otherwise injuring, pursuing, or killing a Swainson's hawk or their young or eggs is prohibited under the California Endangered Species Act. CEQA requires a mandatory finding of significance if a project is likely to impact a threatened or endangered species. Loss of foraging habitat (annual grassland) is another impact that should be addressed in the final environmental documents, although this loss is likely to be less than significant because the loss of foraging habitat will be small and temporary.

Pre-construction nest surveys should be conducted in the project area in the breeding season before construction. If an active Swainson's hawk nest is discovered nesting in trees within 0.25 miles of the project area, the following mitigation measures are likely to be required (based on CDFG Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California (November 1, 1994):

- No intensive new disturbances (e.g., heavy equipment operation associated with construction, use of cranes or draglines, new rock crushing activities) or other project related activities which may cause nest abandonment or forced fledging, would be allowed within 1/4 mile (buffer zone) of an active nest between March 1 and September 15 or earlier if a Management Authorization or Biological Opinion is obtained for the project from the CDFG; and
- Nest trees would not be removed unless there is no feasible way of avoiding it. If a nest tree must be removed, a Management Authorization (including conditions to offset the loss of the nest tree) must be obtained with the tree removal period specified in the Management Authorization generally between October 1 and February 1. If construction or other project related activities which may cause nest abandonment or forced fledging are necessary within the buffer zone, monitoring of the nest site (funded by the project sponsor) by a qualified biologist (to determine if the nest is abandoned) would be required. If it is abandoned and if the nestlings are still alive, the project sponsor must fund the recovery and hacking (controlled release of captive reared young) of the nestling (s). Routine disturbances such as agricultural activities, commuter traffic, and routine facility maintenance activities within 1/4 mile of an active nest would not be prohibited.

## **Burrowing Owls**

While burrowing owls are unlikely to occur at the site, given the absence of nearby records, further surveys are needed to verify their absence. Preconstruction surveys for burrowing owls should be conducted before disturbing the annual grassland of the project area.

If the surveys reveal the presence of burrowing owls in or near the construction area, CDFG recommends the following mitigation measures (from CDFG Staff Report on Burrowing Owl Mitigation, October 17, 1995):

- Occupied burrows should not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFG verifies through non-invasive methods that either: (1) the birds have not begun egg-laying and incubation; or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival;
- To offset the loss of foraging and burrow habitat on the project site, a minimum of 6.5 acres of foraging habitat (calculated on 300 feet foraging radius around the burrow) per pair or unpaired resident bird, should be acquired and permanently protected. The protected lands should be adjacent to occupied burrowing owl habitat and at a location acceptable to CDFG. Protection of additional habitat acreage per pair or unpaired resident bird may be applicable in some instances. Mitigation guidelines developed by the California Burrowing Owl Consortium (CBOC 1993) may also be incorporated into the mitigation requirements;
- When destruction of occupied burrows is unavoidable, existing unsuitable burrows should be enhanced (enlarged or cleared of debris) or new burrows created (by installing artificial burrows) at a ratio of 2:1 on the protected lands site;
- If owls must be moved away for the disturbance area, passive relocation techniques should be used rather than trapping. At least one or more weeks will be necessary to accomplish this and allow the owls to acclimate to alternate burrows; and
- The project sponsor should provide funding for long-term management and monitoring of the protected lands. The monitoring plan should include success criteria, remedial measures, and an annual report to CDFG.

## ***White-tailed Kites/Cooper's Hawks***

White-tailed kites, Cooper's hawks, and some of the other raptors potentially nesting on the project site are not protected by state or federal Endangered Species Acts. The Cooper's hawk is on the California Department of Fish and Game's (CDFG) list of Species of Special Concern, Third Priority (Remsen 1978). Third priority species are those which are not in any present danger

of extirpation, but because of their small populations in California they are vulnerable to extirpation should a threat materialize (Remsen 1978). White-tailed kites are considered a Fully Protected Species by the CDFG, which means that these birds or parts of these birds (e.g., feathers or eggs) may not be taken at any time.

While these species are not protected under the Endangered Species Act, CDFG codes do protect them from harassment or harm, and also protect their eggs and nestlings. Removing a nest tree while the birds were nesting or causing nest abandonment because of nearby disturbance and harassment would be considered a violation of CDFG Code Section 3503.5. Federal law also protects raptors and their nests. The federal Migratory Bird Treaty Act (15 USC 703-711), 50 CFR Part 21, and 50 CFR Part 10, prohibits killing, possessing or trading in migratory birds. Executive Order 13186 (January 11, 2001) also requires that any project with federal involvement address impacts of federal actions on migratory birds.

To avoid impacts to white-tailed kites, Cooper's hawks, and other nesting raptors, the following mitigation measures should be implemented:

If tree removal is proposed during the nesting season, potential impacts to nesting migratory birds can be avoided by delaying tree removal until the end of the nesting season (February 1- July 31). Alternatively, pre-construction surveys could be conducted to verify that the construction zone does not support nesting migratory birds.

- a) Tree removal should be avoided during the breeding season (February 1 – July 31).
- b) If tree removal must occur during the nesting season, surveys for nesting raptors and migratory birds are required prior to any construction-related activities or other site disturbances initiated during the breeding season (February 1 - July 31).
- c) An additional survey may be required if periods of construction inactivity (e.g., gaps of activity during grading, tree removal, road building, or structure assembly) exceed a period of three weeks, an interval during which bird species, in the absence of human or construction-related disturbances, may establish a nesting territory and initiate egg laying and incubation.
- d) Surveys shall be conducted no sooner than two weeks prior to the initiation of construction activities or other site disturbances.
- e) Should any active nests or breeding areas be discovered, a buffer zone (protected area surrounding the nest) and monitoring plan, if needed, shall be developed. Nest locations shall be mapped and submitted, along with a report stating the survey results, to the Planning Department within one week of survey completion.

A qualified wildlife biologist shall monitor the progression of reproductive stages of any active nests until a determination is made that nestlings have fledged and that a sufficient

time for fledgling dispersal has elapsed; construction activities shall be prohibited within the buffer zone until such determination is made.

### ***Fairy Shrimp***

USFWS considers most seasonal wetlands in the region as well as non-jurisdictional bodies of standing water as habitat for vernal pool fairy shrimp (federal threatened), and tadpole shrimp (federal endangered). Fairy shrimp have been recorded near the project area, and the USFWS will presume vernal pools on the project site support this species. Avoidance of impacts to the pools and avoidance of indirect impacts (e.g., changing nearby hydrology or water quality) is the chief recommendation of the USFWS. If avoidance is not possible, on site mitigation can be implemented by creating and preserving habitat.

Preservation component. For every acre of habitat directly or indirectly impacted, at least two vernal pool credits will be dedicated within a USFWS-approved ecosystem preservation bank, or, based on USFWS evaluation of site specific conservation values, three acres of vernal pool habitat may be preserved in the project site.

Creation component. For every acre of habitat directly impacted, at least one vernal pool creation credit will be dedicated within a USFWS-approved habitat mitigation bank, or, based on USFWS evaluation of site-specific conservation values, two acres of vernal pool habitat will be created and monitored on the project site as approved by the USFWS

### **Fairy Shrimp Vernal Pool Mitigation Ratios**

	Off-site	On-site
Preservation	2:1	3:1
Creation	1:1	2:1

Vernal pool habitat and associated upland habitat used as on-site mitigation will be protected from adverse impacts and managed in perpetuity or until the Corps, the applicant, and the USFWS agree on a process to exchange such areas for credits within a Service approved mitigation banking system.

## REFERENCES

- Barry, S., and H.B. Shaffer 1994 The status of the California tiger salamander (*Ambystoma californiense*) at Lagunita: a 50-year update. *Journal of Herpetology* 28: 159-164.
- Beedy, E. C., and S. L. Granholm Discovering Sierra Birds - - Western Slope. Yosemite Natural History Association and Sequoia Natural History Association. San Francisco, California.
- Beedy, E. C., S. D. Sanders, and D. Bloom. 1991. Breeding status, distribution, and habitat associations of the tricolored blackbird (*Agelaius tricolor*) 1850-1989. Prepared by Jones & Stokes Associates for U. S. Fish and Wildlife Service, Sacramento, CA.
- Block, W. M., M. L. Morrison, and J. Verner. 1990. "Wildlife and Oak-Woodland Interdependency." *Fremontia* 18 (3): 72-76
- Bloom, P.H. 1980. The status of the Swainson's hawk in California, 1979. Non-game Wildlife Investigation, Project W-54-R-12, Job II - 8.0. California Department of Fish and Game. Sacramento, California.
- California Natural Diversity Data Base. 2005. California Natural Diversity Data Base Report for Buffalo Creek and surrounding USGS quadrangles. California Department of Fish and Game, Sacramento, CA.
- CNDDDB 1998. California Department of Fish and Game Natural Diversity Data Base search of the Folsom SE and Buffalo Creek USGS 7 1/2 minute Quadrangles, February 25, 2005
- CNPS 2001. *Inventory of Rare and Endangered Plants of California* (Sixth Edition). Rare Plant Scientific Advisory Committee, David P. Tibor, Convening Editor. California Native Plant Society. Sacramento, Ca. x+388pp.
- Gibson and Skordal 2003. Jurisdictional Delineation Map, Sacramento Country Day School. May 2003. large format map accompanying consultants report.
- Gibson and Skordal 2005 Wetland Preservation and Mitigation Plan, Sacramento Country Day School Sacramento County Ca April 2005. GIBSON & SKORDAL, LLC, Wetland Consultants, 2277 Fair Oaks Blvd., Suite 105, Sacramento, California 95825
- Grinnell, J., and A. H. Miller. 1944. The Distribution of the Birds of California. Cooper Ornithological Club. Berkeley, California.
- Harrison, C. A Field Guide to the Nests, Eggs, and Nestlings of North American Birds. The Stephen Greene Press, Brattleboro, Vermont.
- Hickman, J.C. 1993. The Jepson Manual - Higher Plants of California. University of California Press, Berkeley, CA.
- Jennings, M. R. and M. P. Hayes 1994 Amphibian and Reptile Species of Special Concern in California. Final Report Submitted to The California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, CA.
- Neff, J. A. 1937. Nesting distribution of the Tri-colored Red-wing. *Condor* 39:61-81.
- Remsen, J. V., Jr., 1978. Bird Species of Special Concern in California. Calif. Dept. of Fish and Game, Nongame Invest. Report 78-1, Sacramento, California.
- Schlorff, R.W., and P.H. Bloom. 1984 Importance of riparian systems to nesting Swainson's hawks in the Central Valley in California. Pp. 605-611 in R.E. Warner and K.M. Hendrix (eds.), *California riparian systems: ecology, conservation, and productive management*. University of California Press. Berkeley, California.
- Small, A. 1994 *California Birds: Their Status and Distribution*. Ibis Publishing Company, Vista,

APPENDIX A. SPECIES OBSERVED AT THE PROJECT SITE

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Plant Species Observed at the Sacramento Country Day School project site on White Rock Road, March-June, 2005 (Compiled by Virginia Dains)

Family	Scientific Name	Common Name
<b>Anacardiaceae</b>		
	Toxicodendron diversilobum	poison oak
<b>Apiaceae</b>		
	Eryngium castrense	Great Valley button-celery
	Sanicula bipinnata	poison sanicle
<b>Asteraceae</b>		
	Cirsium vulgare	bull thistle
	Filago californica	California herba impia
	Grindelia camporum	Great Valley gumweed
	Holocarpha virgata	narrow tarplant
	Hypochaeris radicata	rough cat's ear
	Lasthenia californica	common goldfields
	Lasthenia fremontii	vernal pool goldfields
	Lasthenia glaberrima	smooth goldfields
	Layia fremontii	Fremont's tidy-tips
	Matricaria globifera	clustered chamomille
	Microseris acuminata	Sierra foothills microseris
	Psilocarphus brevissimus	woolly marbles
	Silybum marianum	milk thistle
	Soliva sessilis	common soliva
	Wyethia angustifolia	narrow-leaved mule-ears
<b>Boraginaceae</b>		
	Amsinckia menziesii var. intermedia	orange-flowered Menzies' fiddleneck
	Plagiobothrys bracteatus	bracted popcorn flower
	Plagiobothrys greenei	Greene's allocarya
	Plagiobothrys nothofulvus	rusty-haired popcorn flower
	Plagiobothrys stipitatus var. micranthus	common vernal pool allocarya
<b>Brassicaceae</b>		
	Brassica nigra	black mustard
	Lepidium dictyotum	net pepper-grass

Family	Scientific Name	Common Name
	<i>Lepidium nitidum</i>	stinging pepper-grass
<b>Callitrichaceae</b>		
	<i>Callitriche heterophylla</i>	varied-leaved water-starwort
	<i>Callitriche marginata</i>	winged water-starwort
<b>Campanulaceae</b>		
	<i>Downingia bicornuta</i>	bristled downingia
<b>Caryophyllaceae</b>		
	<i>Cerastium arvense</i>	field chickweed
	<i>Cerastium glomeratum</i>	mouse-ear chickweed
	<i>Petrorhagia dubia</i>	pink grass
	<i>Silene gallica</i>	windmill pink
<b>Crassulaceae</b>		
	<i>Crassula aquatica</i>	aquatic pygmy-weed
	<i>Crassula tillaea</i>	Mediterranean pygmy-weed
<b>Cuscutaceae</b>		
	<i>Cuscuta howelliana</i>	Boggs Lake dodder
<b>Cyperaceae</b>		
	<i>Eleocharis acicularis</i>	needle spikerush
	<i>Eleocharis macrostachya</i>	common spikerush
<b>Fabaceae</b>		
	<i>Lathyrus angulatus</i>	angled pea-vine
	<i>Lotus micranthus</i>	small-flowered lotus
	<i>Lupinus bicolor</i>	miniature lupine
	<i>Robinia pseudoacacia</i>	black locust
	<i>Trifolium campestre</i>	hop clover
	<i>Trifolium depauperatum</i> var. <i>depauperatum</i>	dwarf sack clover
	<i>Trifolium dubium</i>	shamrock
	<i>Trifolium hirtum</i>	rose clover
	<i>Trifolium variegatum</i>	variegated clover
<b>Fagaceae</b>		
	<i>Quercus douglasii</i>	blue oak
	<i>Quercus wislizenii</i>	interior live oak
<b>Gentianaceae</b>		



Family	Scientific Name	Common Name
	<i>Gerardia quadrangula</i>	common milkweed
<b>Geraniaceae</b>		
	<i>Erodium botrys</i>	long-beaked filaree
	<i>Erodium cicutarium</i>	red-stemmed filaree
	<i>Geranium dissectum</i>	cut-leaved geranium
<b>Isoetaceae</b>		
	<i>Isoetes nuttallii</i>	Nuttall's quillwort
<b>Juglandaceae</b>		
	<i>Juglans regia</i>	English walnut
<b>Juncaceae</b>		
	<i>Juncus bufonius</i>	toad rush
	<i>Juncus capitatus</i>	leafy bracted dwarf rush
	<i>Juncus tenuis</i>	poverty rush
	<i>Juncus uncialis</i>	inch-high dwarf rush
<b>Juncaginaceae</b>		
	<i>Lilaea scilloides</i>	flowering quillwort
<b>Lamiaceae</b>		
	<i>Pogogyne zizyphoroides</i>	Sacramento mint
	<i>Trichostema lanceolatum</i>	vinegarweed
<b>Liliaceae</b>		
	<i>Brodiaea elegans</i>	harvest brodiaea
	<i>Brodiaea minor</i>	low brodiaea
	<i>Calochortus luteus</i>	yellow mariposa
	<i>Chlorogalum angustifolium</i>	narrow-leaved soaproot
	<i>Chlorogalum pomeridianum</i>	soaproot
	<i>Dichelostemma capitatum</i>	blue dicks
	<i>Triteleia hyacinthina</i>	white brodiaea
	<i>Triteleia laxa</i>	lithurriel's spear
<b>Lythraceae</b>		
	<i>Lythrum hyssopifolium</i>	hyssop loosestrife
<b>Marsileaceae</b>		
	<i>Pilularia americana</i>	pillwort
<b>Papaveraceae</b>		

Family	Scientific Name	Common Name
	Eschscholzia californica	California poppy
	Eschscholzia lobbii	frying pans
<b>Plantaginaceae</b>		
	Plantago erecta	California plantain
	Plantago truncata ssp. firma	Chilean plantain
<b>Poaceae</b>		
	Aira caryophyllea	silver hairgrass
	Alopecurus saccatus	foxtail
	Avena barbata	slender wild oats
	Briza minor	little quaking grass
	Bromus hordeaceus	soft chess
	Deschampsia danthonioides	annual hairgrass
	Gastridium ventricosum	nit grass
	Glyceria occidentalis	western mannagrass
	Hordeum marinum ssp. gussoneanum	Mediterranean barley
	Hordeum murinum ssp. leporinum	foxtail barley
	Nassella pulchra	purple needlegrass
	Poa annua	annual blue grass
	Taeniatherum caput-medusae	Medusa-head
	Vulpia bromoides	brome fescue
	Vulpia myuros	rattail fescue
<b>Polemoniaceae</b>		
	Navarretia intertexta	interwoven navarretia
	Navarretia leucocephala	white-headed navarretia
<b>Polygonaceae</b>		
	Eriogonum nudum	naked buckwheat
	Rumex acetosella	common sheep sorrel
	Rumex crispus	curly dock
	Rumex pulcher	fiddle dock
<b>Portulacaceae</b>		
	Montia fontana	water chickweed
<b>Ranunculaceae</b>		
	Ranunculus aquatilis	whitewater crowfoot

Family	Scientific Name	Common Name
	Ranunculus bonariensis var. trisepalus	vernal pool buttercup
	Ranunculus muricatus	spiny buttercup
<b>Rosaceae</b>		
	Aphanes occidentalis	ladie's mantle
<b>Scrophulariaceae</b>		
	Castilleja attenuata	valley tassels
	Gratiola ebracteata	common hedge-hyssop
	Triphysaria eriantha	butter 'n' eggs
	Triphysaria pusilla	little owl's clover
	Veronica peregrina ssp. xalapensis	hairy purslane speedwell
<b>Typhaceae</b>		
	Typha angustifolia	narrow-leaf cattail

Wildlife Species Observed at the Sacramento Country Day School project site on White Rock Road, April 5, 2005  
(Compiled by Susan Sanders)

## **BIRDS**

Acorn woodpecker	<i>Melanerpes formicivorus</i>
Ash-throated flycatcher	<i>Myiarchus cinerascens</i>
Bullock's oriole	<i>Icterus bullockii</i>
European starling	<i>Sturnus vulgaris</i>

Lewis' woodpecker

*Melanerpes lewis*

Mourning dove

*Zenaida macroura*

Northern harrier

*Circus cyaneus*

Northern mockingbird

*Mimus polyglottos*

Red-tailed hawk

*Buteo jamaicensis*

Red-winged blackbird

*Agelaius phoeniceus*

Savannah sparrow

*Passerculus sandwichensis*

Tree swallow

*Tachycineta bicolor*

Turkey vulture

*Cathartes aura*

Western kingbird

*Tyrannus verticalis*

Western meadowlark

*Sturnella neglecta*

Yellow billed magpie

*Pica nutalli*

## **AMPHIBIANS**

Pacific chorus frog

*Pseudacris regilla*

Bullfrog

*Rana catesbeiana*

## **MAMMALS**

California ground squirrel

*Spermophilus beecheyi*

## **APPENDIX D4**

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Results of a Focused Plant Survey on the Folsom South Site



June 22, 2006

Mike McDougall  
MJM Properties  
1037 Suncastr Lane, Suite 111  
El Dorado Hills, CA 95762

**Subject: Results of a Focused Plant Survey on the Folsom South Site, Located in Sacramento County, California**

Dear Mr. McDougall:

This report summarizes the results of a focused survey for special-status plants on the Folsom South site located in eastern Sacramento County, California. Special-status plants surveyed for on the site include Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*), Boggs Lake hedge-hyssop (*Gratiola heterosepala*), dwarf downingia (*Downingia pusilla*), legenere (*Legenere limosa*), pincushion navarretia (*Navarretia myersii* ssp. *myersii*), Sacramento Orcutt grass (*Orcuttia viscida*), slender Orcutt grass (*Orcuttia tenuis*), and Tuolumne button-celery (*Eryngium pinnatisectum*).

## Site Location and Description

The site is located within eastern Sacramento County and consists primarily of annual grassland and oak woodland habitats with various wetland communities contained within these two primary vegetation communities. The site is located within Township 9 North, Range 8 East, in Sections 9, 10, 15, 16, 17, 20, 21, and 22 of the USGS 7.5-minute series Folsom, Folsom SE, Clarksville, and Buffalo Creek topographic quadrangles (**Figure 1**).

## Special-Status Plants

All special-status plant species surveyed for on the Folsom South site occur in seasonal wetland habitat such as vernal pools and depressional seasonal wetlands or on the margins of more perennial features such as marshes.

### **Ahart's Dwarf Rush**

Ahart's dwarf rush, a CNPS List 4 species (plants of limited distribution), is an annual grass-like herb. It is a member of the rush family (Juncaceae). It occurs on the margins of vernal pools in grassland areas. Generally, this species occurs in valley and foothill grasslands in mesic areas. It is known only from six occurrences and is threatened by development (CNPS 2001). The identification period for this species is April through May. There are no CNDDB records for this species occurring within five miles of the site (CNDDB 2006).

This is a CNPS List 1B.2 species

### **Boggs Lake Hedge-Hyssop**

Boggs lake hedge-hyssop is a California endangered species (SE) and a CNPS list 1B species (Plants Rare, Threatened, or Endangered in California and Elsewhere). It is a member of the figwort family (Scrophulariaceae). It is an annual herb that is found in shallow, freshwater conditions and usually occurs in vernal pool habitats. The typical identification period is from April through August (CNPS 2001). The flowers of this species are yellow with white on the lower 3 lobes. There is one CNDDDB record for this species within five miles of the site (CNDDDB 2006).

### **Dwarf downingia**

Dwarf downingia is a CNPS list 2 species (Plants Rare, Threatened, or Endangered in California, but more numerous elsewhere). It is a member of the bellflower family (Campanulaceae). It is an annual herbaceous species that blooms from April through June (CNPS 2001). The flower of this species is 3-lobed with yellow spots near the throat and the lobes of the flower are white or blue. This species requires shallow, freshwater conditions and usually occurs in vernal pool habitat. There are no records in the CNDDDB for this species within five miles of the site (CNDDDB 2006).

### **Legenere**

Legenere is a CNPS 1B species. It is a member of the bellflower family. It is an annual herbaceous species. This species can be emergent or terrestrial. Legenere typically occurs in vernal pool habitat types. The typical identification period is May through June (CNPS 2002). The flowers of this species are typically white with triangular leaves. There are no records in the CNDDDB for this species within five miles of the site (CNDDDB 2006).

### **Pincushion Navarretia**

Pincushion navarretia is a CNPS 1B species. It is a member of the phlox family (Polemoniaceae). It is small annual herb. The typical identification period for this species is in May. It is found along the margins of vernal pools. The known distribution for this species is small with only four known locations of this species in Amador, Merced, and Sacramento counties. The flowers are tubular and white in color. The bracts on the inflorescence are long and extend well beyond the flower head. There is one record in the CNDDDB for this species within five miles of the site (CNDDDB 2006).

### **Sacramento Orcutt Grass**

Sacramento Orcutt grass, a federally endangered (FE) and CNPS 1B species, is a small, densely tufted annual member of the grass family (Poaceae). It grows 1 to 4 inches in height. The plant is covered with small glandular hairs and is sticky even when young and more so at maturity. It has few to many slender stems and a spike-like inflorescence which is congested at the apex. This plant species typically blooms later into the growing season and will not produce flowers often until July. The blooming period is considered April through July. There are three records in the CNDDDB for this species within five miles of the site (CNDDDB 2006). This species is highly threatened by competition with non-native grasses, urban development, and overgrazing.



### **Slender Orcutt Grass**

Slender Orcutt grass, a FE and CNPS 1B species, is an annual herb that blooms from May through October and is known from fewer than 20 occurrences (CNPS 2001). It is a member of the grass family. This grass occurs in the bottom of vernal pools associated with valley grassland, blue oak woodland, and lower montane coniferous forest. Orcutt grasses require large pools that hold standing water for long periods of time; therefore, shallow, early-drying pools can be eliminated as possible sites for the occurrence of plants in this genus (Crampton 1959). Orcutt grasses germinate and grow submerged under water for several weeks to three months (USFWS 2003). There are no records in the CNDDDB for this species within five miles of the site (CNDDDB 2006).

### **Tuolumne Button-celery**

Tuolumne button-celery, a CNPS 1B species, is an annual herb found in vernal pools of the foothills of the Sierra Nevada Range. It is a member of the carrot family (Apiaceae). This species is known to occur in Sacramento, Amador, Calaveras, and Tuolumne counties in cismontane woodland, lower montane coniferous forests, and other mesic areas. The typical identification period is June through August. There are no CNDDDB records for this species within five miles of the site (CNDDDB 2006).

### **Methods**

Prior to conducting the survey, a California Natural Diversity Database records search for the target species was reviewed (**Figure 3**), and soil units mapped by NRCS were reviewed (**Figure 2**). In accordance with the CNPS Botanical Survey Guidelines, the survey was conducted by personnel with experience with conducting floristic surveys; knowledge of plant taxonomy and plant community ecology and classification; familiarity with the plants of the area, including special-status and locally significant plants; familiarity with the appropriate state and federal statutes related to plants and plant collecting; and experience with analyzing impacts of project activities on native plants and plant communities.

The entire site was examined to determine whether suitable habitat was present in any given area for the special-status plant species in question. Those areas of the site that did not contain suitable habitat for the species in question were not surveyed. Greater emphasis was given to examining those areas of the site that were mapped as containing seasonal wetland or vernal pool habitat. The survey was divided into two survey windows to include both early and late-blooming species that could occur on the site. Plant surveys were conducted on the site on May 5, May 18, June 7, and June 20, 2006. While conducting the survey, Foothill Associates' biologists composed a comprehensive botanical survey species list of all plant species observed on the site (**Appendix A**).

## **References**

The following available information pertaining to the natural resources of the region was reviewed for the survey and preparation of this report.

- California Department of Fish and Game (CDFG). 2005b. Habitat Conservation Planning Branch. *Species Account for Sacramento Orcutt Grass*. Available at: [http://www.fws.gov/sacramento/es/plant\\_spp\\_accts/sacramento\\_orcutt\\_grass.htm](http://www.fws.gov/sacramento/es/plant_spp_accts/sacramento_orcutt_grass.htm)
- CDFG. 2006. *California Natural Diversity Database*. Sacramento, CA.
- Crampton, B. 1959. *The grass genera Orcuttia and Neostapfia: A study in habitat and morphological specialization*. Madrono 15:97-110.
- Hickman, James C. (Ed). *The Jepson Manual: Higher Plants of California*. 1993. University of California Press, Berkeley, CA.
- <http://www.dfg.ca.gov>
- Mason, Herbert L. 1957. *A Flora of the Marshes of California*. University of California Press, Berkeley, CA.
- Munz, Philip, A. 1968. *A California Flora and Supplement*. University of California Press, Berkeley, CA.
- Nakamura, G. and Nelson, J. Eds. 2001. *Selected Rare Plants of Northern California*. University of California Agricultural and Natural Resources, Oakland, CA.
- Sawyer, J. and Todd Keeler-Wolf. 1995. *A Manual of California Vegetation*. California Native Plant Society, Sacramento, CA.
- U.S. Fish and Wildlife Service. 2005. Sacramento Fish and Wildlife Office Species Account. Sacramento Orcutt Grass. Last updated May 5, 2005.
- U.S. Geological Survey. 1953. Photorevised 1980. *Clarksville, California 7.5 minute series topographic quadrangle*. United States Department of the Interior.
- U.S. Geological Survey. 1954. Photorevised 1980. *Folsom SE, California 7.5 minute series topographic quadrangle*. United States Department of the Interior.
- U.S. Geological Survey. 1967. Photorevised 1980. *Buffalo Creek, California 7.5 minute series topographic quadrangle*. United States Department of the Interior.
- U.S. Geological Survey. 1967. Photorevised 1980. *Folsom, California 7.5 minute series topographic quadrangle*. United States Department of the Interior.

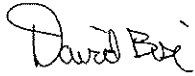


**Results**

None of the special-status plants included in this survey were found on the Folsom South site.

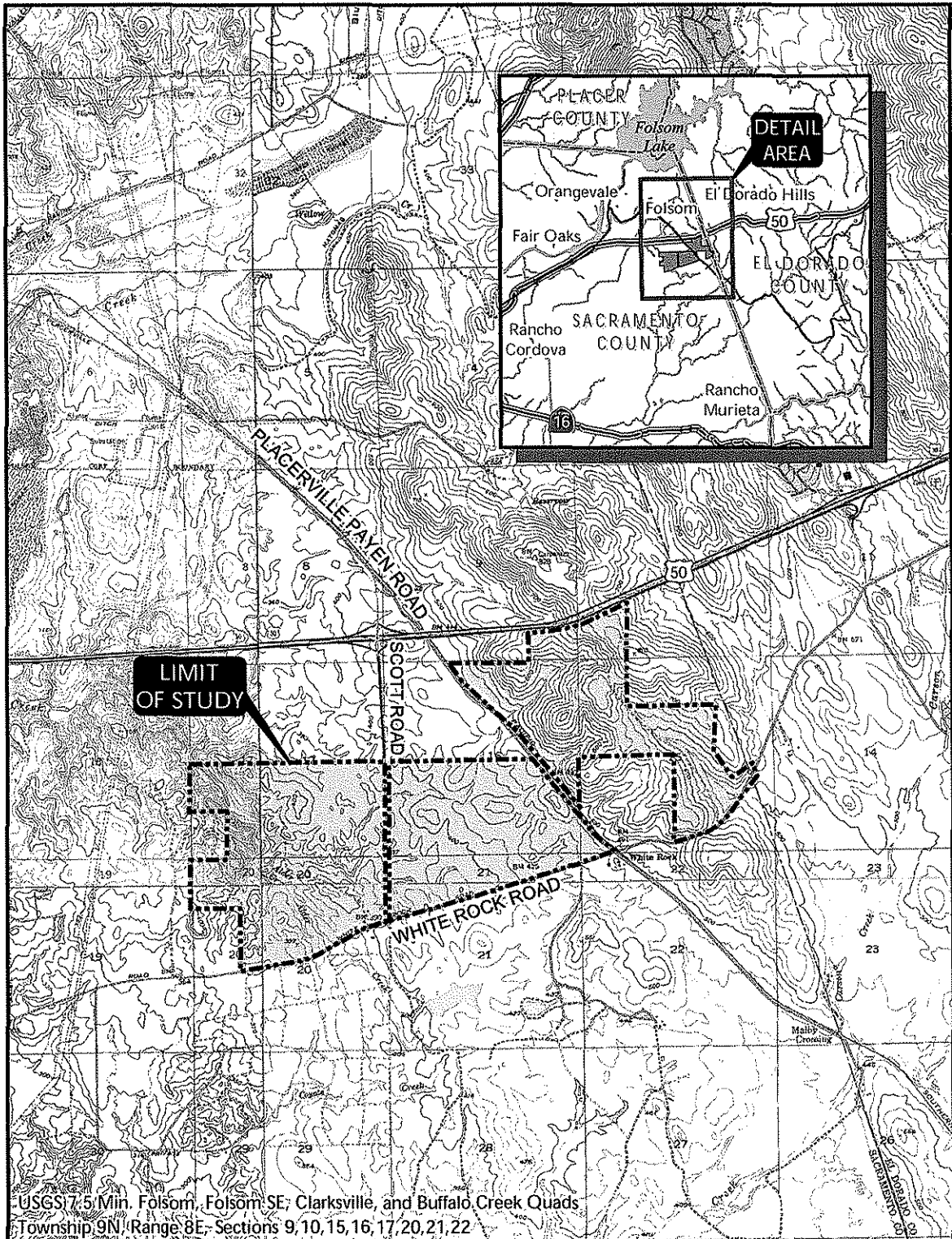
If you have any questions, please feel free to contact me.

Sincerely,



David Bise  
Biologist

DRAFT



USGS 7.5 Min. Folsom, Folsom SE, Clarksville, and Buffalo Creek Quads  
 Township 9N, Range 8E, Sections 9, 10, 15, 16, 17, 20, 21, 22

## SITE AND VICINITY



**FOOTHILL ASSOCIATES**  
 ENVIRONMENTAL CONSULTING • PLANNING  
 LANDSCAPE ARCHITECTURE



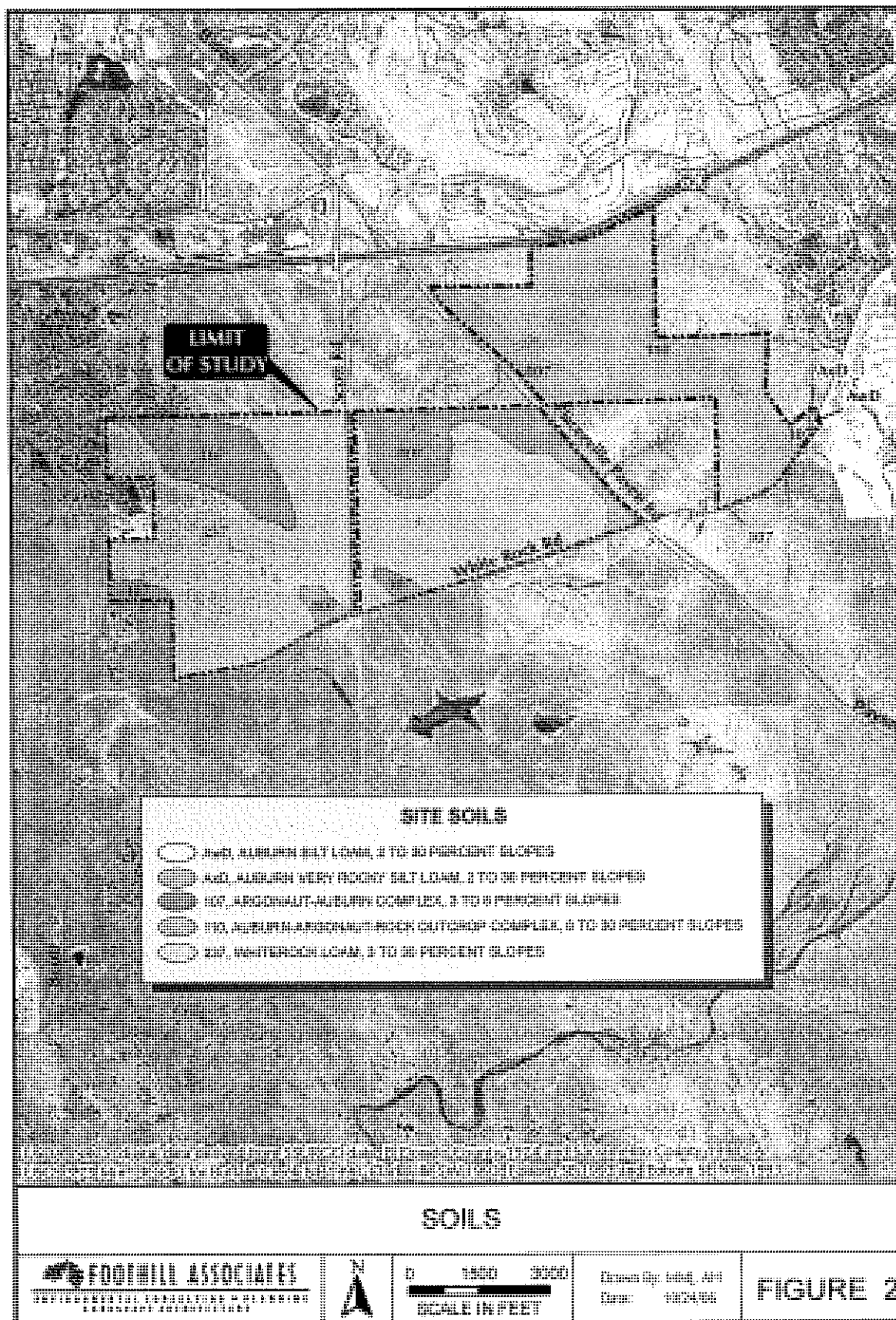
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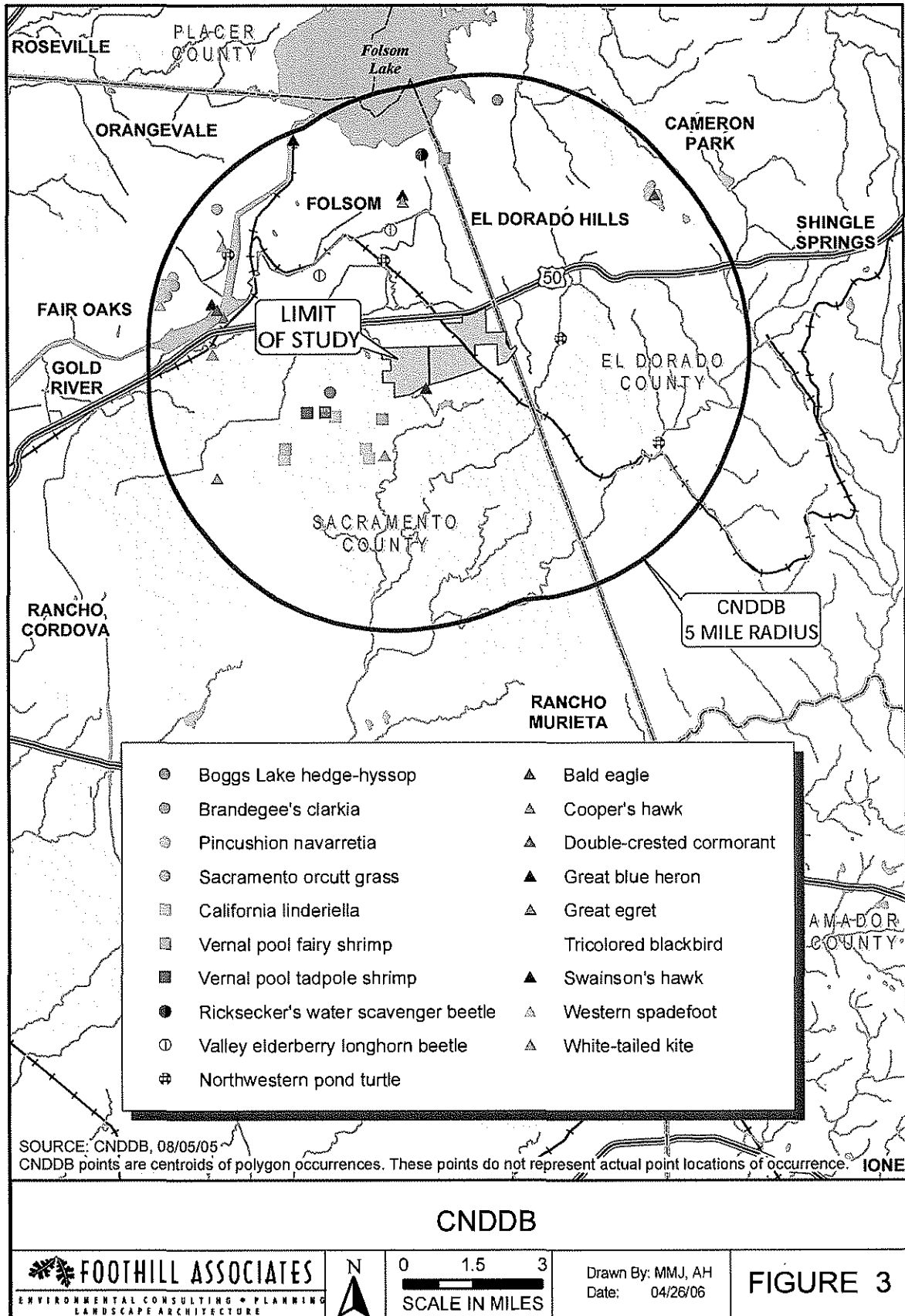
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**FIGURE 1**

FOLSOM SOUTH

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## Appendix A — Botanical Survey Species List

Scientific Name	Common Name
<i>Achillea millefolium</i>	Common yarrow
<i>Agoseris heterophylla</i>	Annual false dandelion
<i>Aira caryophylla</i>	Silver hairgrass
<i>Alopecurus saccatus</i>	Foxtail
<i>Amsinkia menziesii</i> var. <i>intermedia</i>	fiddleneck
<i>Anagallis arvensis</i>	Scarlet pimpernel
<i>Avena</i> sp.	Wild oats
<i>Briza minor</i>	Rattlesnake grass
<i>Bromus diandrus</i>	Ripgut brome
<i>Bromus hordeaceus</i>	Soft chess
<i>Callitriche marginata</i>	Water starwort
<i>Carduus pycnocephalus</i>	Italian thistle
<i>Castilleja attenuata</i>	Valley tassels
<i>Centaurea solstitialis</i>	Yellow star-thistle
<i>Chamomilla suaveolens</i>	Pineapple weed
<i>Claytonia parviflora</i>	Streambank springbeauty
<i>Convolvulus arvensis</i>	Bindweed
<i>Cynodon dactylon</i>	Bermudagrass
<i>Deschampsia danthonioides</i>	Annual hairgrass
<i>Dichelostemma capitatum</i>	Blue dicks
<i>Digitaria ischaemum</i>	Smooth crabgrass
<i>Downingia ornatissima</i>	Downingia
<i>Eleocharis macrostachya</i>	Spikerush
<i>Epilobium angustifolium</i>	Fireweed
<i>Erodium botrys</i>	Filaree
<i>Erodium cicutarium</i>	Filaree
<i>Eryngium vaseyi</i>	Coyote thistle
<i>Galium</i> sp.	Bedstraw
<i>Geranium dissectum</i>	Cutleaf geranium
<i>Geranium molle</i>	Dove's foot geranium
<i>Glyceria occidentalis</i>	Western mannagrass
<i>Gratiola ebracteata</i>	Hedge-hyssop
<i>Hemizonia fitchii</i>	Fitch's tarplant
<i>Hordeum marinum</i> ssp. <i>gussoneanum</i>	Mediterranean barley
<i>Hordeum murinum</i>	Barley
<i>Hypochaeris radicata</i>	Rough cat's-ear
<i>Juncus balticus</i>	Baltic rush
<i>Juncus bufonius</i>	Common toad rush
<i>Juncus mexicanus</i>	Mexican spikerush



Scientific Name	Common Name
<i>Juncus xiphioides</i>	Iris-leaved rush
<i>Lasthenia fremontii</i>	Goldfields
<i>Lasthenia glaberrima</i>	Smooth goldfields
<i>Layia</i> sp.	Layia
<i>Lepidium nitidum</i>	Shining peppergrass
<i>Limnanthes</i> sp.	Meadowfoam
<i>Linaria vulgaris</i>	Butter-and-eggs
<i>Lolium perenne</i>	Italian ryegrass
<i>Ludwigia peploides</i>	Water primrose
<i>Lupinus</i> sp.	Lupine
<i>Lythrum hyssopifolia</i>	Loosestrife
<i>Marsilea vestita</i> ssp. <i>vestita</i>	Hairy pepperwort
<i>Medicago lupulina</i>	Black medic
<i>Micropus californicus</i> var. <i>californicus</i>	Slender cottonweed
<i>Medicago polymorpha</i>	California burclover
<i>Mimulus guttatus</i>	Monkeyflower
<i>Navarretia leucocephala</i>	Navarretia
<i>Poa annua</i>	Annual bluegrass
<i>Petrorhagia dubia</i>	Hairy pink
<i>Plagiobothrys stipitatus</i>	Popcornflower
<i>Plagiobothrys fulvus</i>	Fulvous popcornflower
<i>Plantago lanceolata</i>	English plantain
<i>Pogogyne zizyphoroides</i>	Sacramento mesamint
<i>Populus fremontii</i>	Fremont's cottonwood
<i>Psilocarphus brevissimus</i>	Woolly marbles
<i>Quercus douglasii</i>	Blue oak
<i>Quercus lobata</i>	Valley oak
<i>Quercus wislizeni</i>	Interior live oak
<i>Ranunculus bonariensis</i>	Buttercup
<i>Ranunculus muricatus</i>	Spiny-fruit buttercup
<i>Raphanus sativus</i>	Field mustard
<i>Rumex crispus</i>	Curly dock
<i>Rumex pulcher</i>	Fiddle dock
<i>Salix lasiolepis</i>	Arroyo willow
<i>Stellaria media</i>	Chickweed
<i>Taraxacum officinalis</i>	Common dandelion
<i>Torilis arvensis</i>	Field hedge-parsley
<i>Trifolium hirtum</i>	Rose clover
<i>Trifolium depauperatum</i>	Cowbag clover
<i>Triphysaria eriantha</i>	Johnnytuck
<i>Triteleia hyacinthina</i>	White broadiaea
<i>Triteleia laxa</i>	Ithuriel's spear



Scientific Name	Common Name
<i>Typha</i> sp.	Cattail
<i>Vulpia myruros</i>	Foxtail fescue

**sp.** = species

**ssp.** = sub species

DRAFT

## **APPENDIX D5**

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Biological Resources Assessment, Folsom South 1,400-acre Site

# Biological Resources Assessment

Folsom South ±1,400-acre Site  
Sacramento County, California

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DRAFT

Prepared for: MJM Properties

January 3, 2006

Submitted by:

 **FOOTHILL ASSOCIATES**

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# Biological Resources Assessment

Folsom South  $\pm$ 1,400-acre Site  
Sacramento County, California

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DRAFT

Prepared for: MJM Properties

January 3, 2006

Submitted by:



FOOTHILL ASSOCIATES

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## 1.0 EXECUTIVE SUMMARY

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Foothill Associates biologists conducted a biological resources assessment in November and December, 2005 on the Folsom South ±1,400-acre site that occurs within Sacramento County, immediately south of Highway 50 and north of White Rock Road. The purpose of this document is to summarize the general biological resources on the site, to assess the suitability of the site to support special-status species and sensitive habitat types, and to provide recommendations for regulatory permitting or further analysis that may be required prior to development activities occurring on the site.

Vegetation communities on the site include annual grassland and blue oak woodland. The surrounding land use and vegetation communities include annual grassland and Highway 50 to the north; annual grassland and single-family residential areas to the east; White Rock Road and annual grassland to the south; and oak woodland and annual grassland to the west. Known or potential biological constraints on the site include the following:

- Potential habitat for special-status plant species;
- Potential habitat for vernal pool invertebrates;
- Potential foraging and nesting habitat for Swainson's hawk, a state-listed species;
- Potential habitat for western burrowing owl;
- Potential nesting sites and foraging habitat for other raptor species;
- Potential habitat for valley elderberry longhorn beetle;
- Potential habitat for western pond turtle;
- Potential habitat for western spadefoot toad; and
- Sensitive habitats (potential waters of the U.S. subject to Section 404 of CWA; stream courses subject to Section 1602 of California Fish and Game Code; and protected trees and oak woodland habitat).

## 2.0 INTRODUCTION

---

This report summarizes the findings of a biological resources assessment completed for the ±1,400-acre Folsom South property located within Sacramento County. This document addresses the onsite physical features, as well as plant communities present and the common plant and wildlife species occurring, or potentially occurring on the site. Furthermore, the suitability of habitats to support special-status species and sensitive habitats are analyzed and recommendations for any regulatory permitting or further analysis that may be required prior to development activities occurring on the site are provided.



### 3.0 REGULATORY FRAMEWORK

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The following describes federal, state, and local environmental laws and policies that are relevant to the California Environmental Quality Act (CEQA) review process. The CEQA significance criteria are also included in this section.

#### 3.1 Federal Endangered Species Act

The United States Congress passed the Federal Endangered Species Act (FESA) in 1973 to protect those species that are endangered or threatened with extinction. FESA is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend.

FESA prohibits the "take" of endangered or threatened wildlife species. "Take" is defined to include harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct (FESA Section 3 [(3)(19)]). Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns (50 CFR §17.3). Harassment is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns (50 CFR §17.3). Actions that result in take can result in civil or criminal penalties.

FESA and Clean Water Act (CWA) Section 404 guidelines prohibit the issuance of wetland permits for projects that jeopardize the continued existence of any endangered or threatened species or results in the destruction or adverse modification of habitat of such species. The U.S. Army Corps of Engineers (Corps) must consult with the U.S. Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service (NMFS) when threatened or endangered species under their jurisdiction may be affected by a proposed project. In the context of the proposed project, FESA would be initiated if development resulted in take of a threatened or endangered species or if issuance of a Section 404 permit or other federal agency action could result in take of an endangered species or adversely modify critical habitat of such a species.

#### 3.2 Migratory Bird Treaty Act

Raptors (birds of prey), migratory birds, and other avian species are protected by a number of state and federal laws. The federal Migratory Bird Treaty Act (MBTA) prohibits the killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of Interior. Section 3503.5 of the California Fish and Game Code states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto."

### 3.3 California Endangered Species Act

The State of California enacted the California Endangered Species Act (CESA) in 1984. CESA is similar to FESA but pertains to state-listed endangered and threatened species. CESA requires state agencies to consult with the California Department of Fish and Game (CDFG) when preparing CEQA documents. The purpose is to ensure that the lead agency's actions do not jeopardize the continued existence of a listed species or result in the destruction, or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available (Fish and Game Code §2080). CESA directs agencies to consult with CDFG on projects or actions that could affect listed species, directs CDFG to determine whether jeopardy would occur and allows CDFG to identify "reasonable and prudent alternatives" to the project consistent with conserving the species. CESA allows CDFG to authorize exceptions to the state's prohibition against take of a listed species if the "take" of a listed species is incidental to carrying out an otherwise lawful project that has been approved under CEQA (Fish & Game Code § 2081).

### 3.4 CDFG Species of Concern

In addition to formal listing under FESA and CESA, species receive additional consideration by CDFG and local lead agencies during the CEQA process. Species that may be considered for review are included on a list of "Species of Special Concern," developed by CDFG. It tracks species in California whose numbers, reproductive success, or habitat may be threatened.

### 3.5 California Native Plant Society

The California Native Plant Society (CNPS) maintains a list of plant species native to California that have low population numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the *Inventory of Rare and Endangered Plants of California* (CNPS 2001). Potential impacts to populations of CNPS-listed plants receive consideration under CEQA review. The following identifies the definitions of the CNPS listings:

- List 1A: Plants presumed Extinct in California
- List 1B: Plants Rare, Threatened, or Endangered in California and elsewhere
- List 2: Plants Rare, Threatened, or Endangered in California, but more numerous elsewhere
- List 3: Plants about which we need more information – A Review List
- List 4: Plants of limited distribution – A Watch List

### 3.6 Jurisdictional Waters of the United States

#### 3.6.1 Federal Jurisdiction

The Corps regulates discharge of dredged or fill material into waters of the United States under Section 404 of the CWA. "Discharges of fill material" are defined as the addition

of fill material into waters of the U.S., including, but not limited to the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes and sub-aqueous utility lines [33 C.F.R. §328.2(f)]. In addition, Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Waters of the U.S. include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, and wet meadows. Boundaries between jurisdictional waters and uplands are determined in a variety of ways depending on which type of waters is present. Methods for delineating wetlands and non-tidal waters are described below.

- Wetlands are defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” [33 C.F.R. §328.3(b)]. Presently, to be a wetland, a site must exhibit three wetland criteria: hydrophytic vegetation, hydric soils, and wetland hydrology existing under the “normal circumstances” for the site.
- The lateral extent of non-tidal waters is determined by delineating the ordinary high water mark (OHWM) [33 C.F.R. §328.4(c)(1)]. The OHWM is defined by the Corps as “that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” [33 C.F.R. §328.3(e)].

### **3.6.2 State Jurisdiction**

CDFG is a trustee agency that has jurisdiction under Section 1600 *et seq.* of the California Fish and Game Code. Under Section 1602, a private party must notify CDFG if a proposed project will “substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds...except when the department has been notified pursuant to Section 1601.” If an existing fish or wildlife resource may be substantially adversely affected by the activity, CDFG may propose reasonable measures that will allow protection of those resources. If these measures are agreeable to the parties involved, they may enter into an agreement with CDFG identifying the approved activities and associated mitigation measures.

### **3.7 Wildlife Migration Corridors**

Wildlife migration corridors are important for the movement of migratory wildlife populations. Corridors provide foraging opportunities and shelter during migration. Generally, wildlife migration corridors are established migration routes for many species

of wildlife. In wooded areas, these corridors often occur in open meadow or riverine habitats and provide a clear route for migration in addition to supporting ample food and water sources during movement.

### 3.8 CEQA Significance Criteria

Section 15064.7 of the CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study checklist contained in Appendix G of the CEQA Guidelines. Appendix G provides examples of impacts that would normally be considered significant. Based on these examples, impacts to biological resources would normally be considered significant if the project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFG or USFWS;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and
- Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional or state habitat conservation plan.

An evaluation of whether or not an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant according to CEQA. The reason for this is that although the impacts would result in an adverse alteration of existing conditions, the impacts would not substantially diminish, or result in the permanent loss of, an important resource on a population-wide or region-wide basis.

#### 4.0 METHODS

---

Available information pertaining to the natural resources of the region was reviewed. All references reviewed for this assessment are listed in Section 7.0, References. Site-specific information was reviewed including the following:

- California Department of Fish and Game (CDFG). 2005. *California Natural Diversity Data Base*. (CNDDDB: Folsom, Folsom SE, Clarksville, and Buffalo Creek topographic quadrangles) Sacramento, California;
- Natural Resource Conservation Service (NRCS). 1980. *Soil Survey of Sacramento County, California*. U.S. Department of Agriculture;
- Natural Resource Conservation Service (NRCS). 1992. *Hydric Soils List of Sacramento County, California*. U.S. Department of Agriculture;
- U.S. Fish and Wildlife Service. 2005. *Federal Endangered and Threatened Species that may be affected by Projects in the Folsom, Folsom SE, Clarksville, and Buffalo Creek 7.5-minute Series Topographic Quadrangles*; USFWS, Sacramento, California;
- U.S. Geological Survey. 1953 (Photorevised 1980). *Clarksville, California*. 7.5-minute series topographic quadrangle. United States Department of Interior;
- U.S. Geological Survey. 1954 (Photorevised 1980). *Folsom SE, California*. 7.5-minute series topographic quadrangle. United States Department of Interior;
- U.S. Geological Survey. 1967 (Photorevised 1980). *Folsom, California*. 7.5-minute series topographic quadrangle. United States Department of Interior; and
- U.S. Geological Survey. 1967 (Photorevised 1980). *Buffalo Creek, California*. 7.5-minute series topographic quadrangle. United States Department of Interior.

Foothill Associates' biologists conducted field surveys on the site in November and December, 2005. The site was systematically surveyed on foot to ensure total search coverage, with special attention given to identifying those portions of the site with the potential for supporting special-status species and sensitive habitats. During the site survey, plant and wildlife species observed were recorded and biological communities on the site were classified.

As part of this assessment, Foothill Associates conducted a formal wetland delineation for all potentially jurisdictional wetland features or waters of the U.S following the Corps' three-parameter methodology (Environmental Laboratories 1987). The boundaries of these features were recorded with a submeter GeoXT global positioning system (GPS). The detailed results of the wetland delineation are provided under separate cover. The estimated acreages and general descriptions of wetland features found on the site are summarized in this biological resource assessment.

- **Auburn very rocky silt loam, 2 to 30 percent slopes:** These soils occur on more prominent steep to very steep foothills and slopes descending into creek channels and drainage ways, typically located between 500 to 1,800 feet above MSL. Bedrock outcroppings occur on the surface of this soil type at a frequency of five to 25 percent. The Auburn series consists of well-drained soils underlain by hard metamorphic rocks at a depth of 10 to 26 inches. Permeability is moderate and available water capacity is very low. Auburn soils are primarily used for rangeland and irrigated pasture. Occasionally, crops such as hay or grain or irrigated pasture are grown. Vegetation typically consists of annual grasses and herbaceous species. Areas of oaks, grey pine, and shrub-dominated vegetation communities also occur. The Sacramento County hydric soils list does not identify any hydric soil inclusions or components occurring within this soil type.
- **Argonaut-Auburn complex, 3 to 8 percent slopes:** These soils are found on foothills, typically occurring between 160 to 660 feet above MSL. It formed in material weathered from metabasic and metasedimentary rocks. This map unit is comprised of approximately 45 percent Argonaut soil and 35 percent Auburn soil. The Argonaut soil is moderately deep, well-drained and underlain by rock at a depth of 20 to 40 inches. Permeability is slow in the Argonaut soil and available water capacity is low. The Auburn soil is shallow or moderately deep, well-drained and underlain by rock at a depth of approximately 14 inches. Permeability is moderate in the Auburn soil and available water capacity is very low or low. This map unit is primarily used for rangeland. Vegetation typically consists of annual grasses and herbaceous species. The hydric soils list for Sacramento County does not identify any hydric soil inclusions or components occurring within this map unit.
- **Auburn-Argonaut-Rock outcrop complex, 8 to 30 percent slopes:** These soils occur on foothills, typically located between 150 to 830 feet above MSL. It formed in material derived from metaandesite and metamorphic rocks. This map unit is comprised of approximately 40 percent Auburn soil, 35 percent Argonaut soil, and 10 percent rock outcrop. The Auburn soil is shallow or moderately deep, well-drained and underlain by rock at approximately 14 inches. Permeability is moderate in the Auburn soil and available water capacity is very low or low. The Argonaut soil is moderately deep, well-drained and underlain by rock at a depth of approximately 29 inches. Permeability is very slow in the Argonaut soil and available water capacity is low. This map unit is primarily used for rangeland. Vegetation typically consists of annual grasses and herbaceous species. The hydric soils list for Sacramento County does not identify any hydric soil inclusions or components occurring within this map unit.
- **Whiterock loam, 3 to 30 percent slopes:** These soils occur on foothills between 160 to 530 feet above MSL. This soil is shallow to very shallow and moderately drained. It is underlain by highly fractured and nearly vertically tilted metasedimentary rock, from which it formed. Permeability is moderate and available water capacity is very low. This map unit is primarily used for rangeland. Overstory vegetation is typically moderate to dense blue oak (*Quercus douglasii*). Understory vegetation typically consists of annual grasses and

herbaceous species. The hydric soils list for Sacramento County does not identify any hydric soil inclusions or components occurring within this map unit.

### 5.3 Biological Communities

Where possible and unless otherwise noted, the vegetation classifications herein follow the *Manual of California Vegetation* (Sawyer and Keeler-Wolf 1995) (MCV). Two major biological communities, annual grassland and blue oak woodland, occur within the site. Within these communities are various wetland types or waters of the U.S. These communities provide habitat to a number of common species of wildlife and may provide potentially suitable habitat for special-status species. Each of the biological communities including associated common plant and wildlife species observed or that are expected to occur in within these communities are described below.

#### 5.3.1 Annual Grassland

Annual grassland covers the majority of the site; this community is characterized primarily by an assemblage of non-native grasses and forbs. Much of the vegetation in this community is common to the Central Valley. Dominant grass species identified onsite include soft chess (*Bromus hordeaceus*), narrow tarplant (*Holocarpha virgata*), Mediterranean barley (*Hordeum marinum*), and wild oat (*Avena* spp.). Common dominant herbaceous species include yellow star-thistle (*Centaurea solstitialis*), medusahead (*Taeniatherum caput-medusae*), and vinegar weed (*Trichostema lanceolatum*).

Annual grassland habitat supports breeding, foraging, and shelter habitat for several species of wildlife. Wildlife species observed in this habitat during field surveys include horned lark (*Eremophila alpestris*), northern harrier (*Circus cyaneus*), killdeer (*Charadrius vociferus*), red-tailed hawk (*Buteo jamaicensis*), black phoebe (*Sayornis nigricans*), western meadowlark (*Sturnella neglecta*), and coyote (*Canis latrans*).

#### 5.3.2 Blue Oak Woodland

Blue oak woodlands are defined as woodlands with blue oak as the sole or dominating species in the tree canopy along with foothill pine (*Pinus sabiniana*), interior live oak (*Quercus wislizenii*), and valley oak (*Quercus lobata*). Typically, blue oak woodland exhibits a continuous, intermittent, or savanna-like canopy that is one or two-tiered; shrubs are infrequent or common; and ground cover is grassy (Sawyer and Keeler-Wolf 1995).

Oak woodlands provide breeding, foraging, and cover habitat to a variety of wildlife species. Species expected to occur within this habitat type include ash-throated flycatcher (*Myiarchus cinerascens*), acorn woodpecker (*Melanerpes formicivorus*), oak titmouse (*Baeolophus inornatus*), and northern flicker (*Colaptes auratus*).

### 5.3.3 Wetlands

#### *Riverine Seasonal Wetland*

A total of **9.61** acres of riverine seasonal wetland have been delineated within the site (**Figure 4**). Riverine seasonal wetlands are defined by a hydrologic regime dominated by unidirectional flow of water. Riverine seasonal wetlands typically occur in topographic folds or swales and represent natural drainages that convey sufficient water to support wetland vegetation. Riverine seasonal wetlands typically convey water during and shortly after storm events. Riverine seasonal wetlands have a moderately defined bed and bank and often exhibit sufficient gradient to convey water off of the site. As in depressional seasonal wetlands, plant species found within riverine seasonal wetlands are typically adapted to a hydrologic regime dominated by saturation rather than inundation. Riverine seasonal wetlands often form the headwaters of ephemeral drainages throughout the site.

Riverine seasonal wetlands occur between slopes and topographic folds within the grassland community. Vegetation associated with riverine seasonal wetlands included pennyroyal (*Mentha pulegium*), Mediterranean barley, and coyote thistle (*Eryngium yaseyi*). During the time field surveys were performed, the lower reaches of most riverine seasonal wetlands conveyed water.

#### *Depressional Seasonal Wetland*

A total of **0.71** acre of depressional seasonal wetland has been delineated within the site (**Figure 4**). Depressional seasonal wetlands occur on the margins of riverine features throughout the site. Depressional seasonal wetlands exhibit a hydrologic regime dominated by saturation, rather than inundation. Depressional seasonal wetlands were identified on the site as depressions within the topography with a hydrologic regime dominated by saturation and capable of supporting hydrophytic plant species and hydric soils. Plant species in depressional seasonal wetlands are adapted to withstand short periods of saturation or saturated soils conditions but will not withstand prolonged periods of inundation, as is common in vernal pools.

#### *Riverine Seasonal Marsh*

A total of **0.06** acre of riverine seasonal marsh has been delineated within the site (**Figure 4**). Seasonal marshes are those wetlands that are seasonally saturated and/or inundated and saturation/inundation persists for some period into the warm season but generally not beyond. Riverine seasonal marshes are dominated by unidirectional flow of water for some portion of the wet season. Riverine seasonal marsh on the site is represented by areas that receive additional hydrology from nearby perennial features during high flow or flood level events. Within the Central Valley, these features are typically located along the fringes of slow-moving, low-gradient riverine systems or at the lower extents of the downstream terminus of riverine seasonal features.



### *Seep*

A total of 6.31 acres of seep have been delineated within the site (Figure 4). Seeps are characterized as areas where groundwater intersects with the soil surface. Typically, flow from seeps continues for some period after the rainy season and may continue all year. Seeps can support isolated wetland vegetation (such as on a hillside) or seeps may form the headwaters of a riverine seasonal wetland or other jurisdictional drainage feature. Vegetation in seeps often consists of plant species associated with seasonal and perennial marsh habitats. When seeps flow for only short periods beyond the rainy season and into the warm season, herbaceous perennial wetland species typically dominate. Seeps that persist for longer periods may support woody, perennial, obligate plant species. Seeps identified within the site include sloped seeps and seeps associated with larger riverine features within scoured depressions.

### *Vernal Pool*

A total of 0.39 acre of vernal pool has been delineated within the site (Figure 4). Vernal pools are shallow, seasonally inundated depressional wetlands that form in soils with a subsurface layer that restricts the downward flow of water. These layers include hardpans, claypans or thick clay layers. Vernal pools were identified on the site as depressions within the topography with a hydrologic regime dominated by inundation and capable of supporting hydrophytic plant species and hydric soils. Plant species found within vernal pools are those that require extended periods of inundation and, as such, are commonly associated with these seasonal wetland features.

Vernal pool communities are characterized as shallow depressions underlain by an impermeable layer causing them to inundate with water seasonally and are dominated by annual herbs and grasses adapted to these unique conditions. Dominant plant species found in vernal pools include coyote thistle and annual hairgrass (*Deschampsia danthonioides*). Some of the vernal pools mapped within the site are characterized as scoured, deep-water pools within ephemeral drainages.

### *Ephemeral Drainage*

A total of 9.72 acres of ephemeral drainage have been delineated within the site. Ephemeral drainages are located throughout the site, typically downstream of riverine seasonal wetland features (Figure 4). Ephemeral drainages are features that do not meet the three-parameter criteria for vegetation, hydrology and soils but do convey water and exhibit an "ordinary high water mark." Ephemeral drainages are primarily fed by stormwater runoff. These features convey flows during and immediately after storm events but may stop flowing or begin to dry if the interval between storm events is long enough. Typically, these features exhibit a defined bed and bank and often show signs of scouring as a result of rapid flow events. Ephemeral drainages may exhibit vegetation patterns commonly associated with vernal pools or depressional seasonal wetlands. Often these features are lightly vegetated due to seasonal rapid-flow events resulting in a scoured channel.

#### *Ditch/Canal*

A total of **0.56** acre of ditch/canal has been delineated within the site (**Figure 4**). A total of **0.14** acre of potentially jurisdictional ditch/canal has been delineated within the site. Non-tributary water conveyance features excavated in uplands and constructed for the transport and distribution of groundwater are not jurisdictional features. Conversely, water conveyance features excavated in uplands and constructed for transport and distribution of surface water may be jurisdictional features, specifically if they are tributary to known waters of the U.S.

An additional **0.42** acre of ditches/canal was delineated on the site and is not connected to any other water conveyance feature on or off of the site. At no time was standing or flowing water observed within the interior remnant ditches on the site. As a result, these features or a portion thereof may be considered non-jurisdictional by the Corps. However, the Corps reviews these situations on a case by case basis. The ditches/canals are located throughout the interior of the site.

#### *Excavated Pond*

A total **0.85** acre of excavated pond has been delineated within the eastern-central portion of the site (**Figure 4**). Ponds are typically the result of the deliberate impoundment of water through artificial damming. When stock ponds occur as the result of the construction of artificial impoundment features that restrict or stop the flow of jurisdictional waters of the U.S., the resulting pond becomes jurisdictional to the limits of the ordinary high water mark or wetland boundary. Conversely, ponds wholly excavated in uplands and supplied by surface run off or groundwater are not jurisdictional features. Some of the ponds on the site are excavated and are not the result of the impoundment of a natural drainage way. Nor are the excavated ponds tributaries to or from any waters of the U.S. The hydrology of the ponds is supplied by seasonal precipitation. Therefore, the Corps will not likely assert jurisdiction of these features.

#### *Stock Pond*

A total of **1.55** acres of stock pond has been delineated within the site (**Figure 4**). Stock ponds are typically the result of the deliberate impoundment of water through artificial damming. When stock ponds occur as the result of the construction of artificial impoundment features that restrict or stop the flow of jurisdictional waters of the U.S., the resulting pond becomes jurisdictional to the limits of the ordinary high water mark. Conversely, stock ponds wholly excavated in uplands and supplied by surface run off or groundwater are not jurisdictional features. The stock ponds on the site are re-charged by seasonal precipitation as well as riverine seasonal wetlands that are hydrologically connected. As such, these features would likely be subject to Corps jurisdiction.

### **5.4 Special-status Species**

Special-status species are plant and wildlife species that have been afforded special recognition by federal, state, or local resource agencies or organizations. Special-status species are defined as:

- Listed or proposed for listing under CESA and/or FESA;
- Protected under other regulations (e.g. Migratory Bird Treaty Act);
- Listed by CDFG as a Species of Special Concern;
- Listed by the USFWS as a Species of Concern;
- Listed by CNPS as being rare (a ranking of 1A, 1B, or 2); or
- Any other species that would receive consideration according to the CEQA Guidelines.

Special-status species considered for this analysis are based on queries of the CNDDB and the online versions of the USFWS and CNPS species occurrence lists for the 7.5-minute USGS Folsom, Folsom SE, Buffalo Creek, and Clarksville topographic quadrangles (**Table 1**). **Table 1** includes the common name and scientific name for each species, regulatory status, habitat descriptions, and potential for occurrence on the site. **Figure 3** depicts the locations of special-status species recorded in the CNDDB within five miles of the site. The following set of criteria has been used to determine each species' potential for occurrence on the site:

- **Present:** Species known to occur on the site, based on CNDDB records, and/or was observed on the site during the field survey(s).
- **Likely:** Species known to occur on or near the site (based on CNDDB records within five miles, and/or based on professional expertise specific to the site or species) and there is suitable habitat on the site.
- **Low:** Species known to occur in the vicinity of the site, and there is marginal habitat on the site. -OR- Species is not known to occur in the vicinity of the site; however there is suitable habitat on the site.
- **No:** Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site. -OR- Species was surveyed for during the appropriate season with negative results.

Only those species that are known to be present, are likely to occur, or have a low potential for occurrence will be discussed in further detail following **Table 1**.

Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Legenere <i>Legenere limosa</i>	--;--;1B	Moist areas and vernal pools.	Low.
Pincushion navarretia <i>Navarretia myersii</i> ssp. <i>myersii</i>	--;--;1B	Vernal pools at elevations between 65 and 2,000 feet.	Likely.
Pine Hill ceanothus <i>Ceanothus roderickii</i>	FE;--;1B	Dry, stony soils in chaparral areas. Often associated with serpentine or gabbro soil types.	No; appropriate gabbroic soils and chaparral habitat do not occur within the site.
Pine Hill flannelbush <i>Fremontodendron decumbens</i>	FE;--;1B	Chaparral and oak and pine woodlands often on rocky ridges with gabbro soils.	No; appropriate gabbroic soils and chaparral habitat do not occur within the site.
Red Hills soaproot <i>Chlorogalum grandiflorum</i>	FSC;--;1B	Open hillsides in chaparral communities. Usually associated with gabbro or serpentine soils.	No; appropriate gabbroic soils and chaparral habitat do not occur within the site.
Sacramento Orcutt grass <i>Orcuttia viscida</i>	FE;--;1B	Found in deep vernal pools. Populations known from eastern Sacramento County.	Likely.
San Joaquin spearscale <i>Atriplex joaquiniana</i>	FSC;--;1B	Seasonal alkali wetlands and alkali sinks.	No; appropriate habitat conditions do not occur within the site.
Slender Orcutt grass <i>Orcuttia tenuis</i>	FE;--;1B	Vernal pools with annual grasslands and blue oak woodlands from Siskiyou to Sacramento counties.	Low.
Tuolumne button-celery <i>Eryngium pinnatisectum</i>	--;--;1B	Cismontane woodland, lower montane coniferous forest, and vernal pools (mesic), at elevations between 230 and 3,005 feet from Amador, Calaveras, Sacramento, and Tuolumne counties.	Low.
<b>Wildlife</b>			
<b>Invertebrates</b>			
California linderiella <i>Linderiella occidentalis</i>	FSC;--;--	Vernal pools, swales, and ephemeral freshwater habitat.	Likely.
Conservancy fairy shrimp <i>Branchinecta conservatio</i>	FSC;--;--	Vernal pools, swales, and ephemeral freshwater habitat.	Likely.
Midvalley fairy shrimp <i>Branchinecta mesovallensis</i>	FSC;--;--	Vernal pools, swales, and ephemeral freshwater habitat.	Likely.
South Forks ground beetle <i>Nebria darlingtoni</i>	FSC;--;--	Under stones along the margins of cool streams. Known to occur in Placer County.	No; site does not support suitable stream habitat.

Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT;--;--	Blue elderberry shrubs usually associated with riparian areas.	Low.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT;--;--	Vernal pools, swales, and ephemeral freshwater habitat.	Likely.
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>	FE;--;--	Vernal pools, swales, and ephemeral freshwater habitat.	Likely.
<b>Amphibians/Reptiles</b>			
California horned lizard <i>Phrynosoma coronatum frontale</i>	FSC;CSC;--;--	Found in open oak and conifer woodlands, grasslands, and riparian areas. Most often found in areas with sandy soil types and a moderately open shrub canopy for cover.	No; site does not support shrub habitat or rocky outcroppings for cover. No CNDDB records occur within five miles of the site for this species.
California red-legged frog <i>Rana aurora draytonii</i>	FT;CSC;--;--	Requires a permanent water source and is typically found along quiet, slow-moving streams, ponds, or marsh communities with emergent vegetation.	No; site does not support suitable aquatic, upland, or dispersal habitat for this species. No known populations occur within project vicinity.
California tiger salamander <i>Ambystoma californiense</i>	FPT;CSC;--;--	Ponded water required for breeding. Adults spend summer in small mammal burrows. No known occurrences north of the Cosumnes River basin.	No; no known occurrences within the vicinity of the site. Site is located north of known distribution for this species. Seasonal wetland habitat too disturbed from cattle grazing.
Giant garter snake <i>Thamnophis gtagas</i>	FT;CT;--;--	Agricultural wetlands and other wetlands such as irrigation and drainage canals, low-gradient streams, marshes, ponds, sloughs, small lakes, and associated uplands.	No; site does not support suitable aquatic or upland habitat for this species.
Western pond turtle <i>Clemmys marmorata</i>	FSC;CSC;--;--	Agricultural wetlands and other wetlands such as irrigation and drainage canals, low-gradient streams, marshes, ponds, sloughs, small lakes, and associated uplands.	Low.
Western spadefoot <i>Spea hammondi</i>	FSC;CSC;--;--	Open grasslands and woodlands. Requires vernal pools or seasonal wetlands for breeding.	Low.

Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
<b>Fish</b>			
Central Valley spring-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	FT;CT;--;	Sacramento and San Joaquin Rivers and their tributaries.	No; there is no suitable habitat for this species on the site.
Central Valley winter-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	FE;CE;--;	Sacramento and San Joaquin Rivers and their tributaries.	No; there is no suitable habitat for this species on the site.
Central Valley steelhead <i>Oncorhynchus mykiss</i>	FT;--;--;	Sacramento and San Joaquin Rivers and their tributaries.	No; there is no suitable habitat for this species on the site.
Delta smelt <i>Hypomesus transpacificus</i>	FT;CT;--;	Sacramento and San Joaquin Rivers and their tributaries.	No; there is no suitable habitat for this species on the site.
Green sturgeon <i>Acipenser medirostris</i>	--;CSC;--;	Sacramento and San Joaquin Rivers and their tributaries.	No; there is no suitable habitat for this species on the site.
Longfin smelt <i>Spirinchus thaleichthys</i>	FSC;CSC;--;	Sacramento and San Joaquin Rivers and their tributaries.	No; there is no suitable habitat for this species on the site.
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	FSC;CSC;--;	Sacramento and San Joaquin Rivers and their tributaries.	No; there is no suitable habitat for this species on the site.
<b>Birds</b>			
Aleutian Canada goose <i>Branta canadensis leucopareia</i>	ED (FSC);CSC;-- (Wintering)	Winter resident of agricultural lands.	No; site does not contain suitable agricultural fields for wintering.
American peregrine falcon <i>Falco peregrinus anatum</i>	ED(FSC);CE;--;	Nests on high cliffs, banks, dunes, or mounds in woodland, forest, and coastal habitats near permanent water sources.	No; there is no suitable nesting habitat for this species on the site.
Bald eagle <i>Haliaeetus leucocephalus</i>	FT;CE;--;	Nesting restricted to the mountainous habitats near permanent water sources in the northernmost counties of California, the Central Coast Region, and on Santa Catalina Island. Winters throughout most of California at lakes, reservoirs, river systems, and coastal wetlands.	No; there is no suitable habitat for this species on the site.
Bank swallow <i>Riparia riparia</i>	FSC;CT;--;	Nests in riverbanks and forages over riparian areas and adjacent uplands.	No; there is no suitable nesting habitat for this species on the site.

Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Black swift <i>Cypseloides niger</i>	FSC;CSC;--;--	Nests on cliffs near water sources.	No; there is no suitable nesting habitat for this species on the site.
California thrasher <i>Toxostoma redivivum</i>	FSC;--;--;--	Found in dense chaparral or thickets in riparian corridors.	No; there is no suitable habitat for this species on the site.
Cooper's hawk <i>Accipiter cooperii</i>	--;CSC;--;--	Nests in riparian corridors. Forages in woodlands and riparian areas.	Likely.
Ferruginous hawk <i>Buteo regalis</i>	FSC;CSC;--;--	A winter resident of open habitats in California including grasslands, shrubsteppes, sagebrush, deserts, saltbush-greasewood shrublands, and outer edges of pinyon-pine and other forests.	Low.
Lawrence's goldfinch <i>Carduelis lawrencei</i>	FSC;--;--;--	Nests in open oak or other arid woodland and chaparral habitats near water.	No; there is no suitable habitat in close proximity to water within the site.
Lewis' woodpecker <i>Melanerpes lewis</i>	FSC;--;--;--	Coniferous forests and oak woodlands. Breeds at higher montane elevations. In Central Valley, occurs in foothill woodlands during winter months following winter storms.	No; site is located at too low an elevation for this species to occur.
Little willow flycatcher <i>Empidonax traillii brewsteri</i>	FSC;CE;--;--	Nests in dense riparian vegetation such as willows, alders.	No; there is no suitable habitat for this species on the site.
Loggerhead shrike <i>Lanius ludovicianus</i>	FSC;CSC;--;--	Found in a variety of woodland and grassland habitats throughout California. Occupied habitat often supports shrub canopy layer for hunting perch sites.	No. Site does not contain sufficient shrubs for nesting habitat.
Long-billed curlew <i>Numenius americanus</i>	FSC;CSC;--;-- (nesting)	Mudflats and shallow marsh areas.	No; there is no suitable habitat for this species on the site.
Mountain plover <i>Charadrius montanus</i>	FSC;CSC;--;--	Winters in California in agricultural fields and grasslands.	No; site does not support suitable wintering habitat and the site is not a known wintering site for this species.
Northern harrier <i>Circus cyaneus</i>	--;CSC;--;-- (nesting)	Nests and forages within open agricultural fields and grasslands. Builds vegetated stick nests on the ground.	Present.
Nuttall's woodpecker <i>Picoides nuttallii</i>	FSC;--;--;--	Permanent resident of low-elevation riparian deciduous and oak habitats.	Low.

Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Oak titmouse <i>Baeolophus inornatus</i>	FSC;--;--	Oak savannah and oak woodlands.	Low.
Rufous hummingbird <i>Selasphorus rufus</i>	--;CSC;--	Nests within berry tangles, shrubs, and conifers in areas north of California and in the Trinity Mountains of Trinity and Humboldt counties.	No; there is no suitable habitat for this species on the site.
Swainson's hawk <i>Buteo swainsoni</i>	FSC;CT;-- (Nesting)	Nests in isolated trees or riparian woodlands adjacent to suitable foraging habitat (agricultural fields, grasslands, etc.)	Likely.
Tricolored blackbird <i>Agelaius tricolor</i>	FSC;CSC;--	Nests in dense blackberry, cattail, tules, willow, or wild rose within emergent wetlands throughout the Central Valley and foothills surrounding the valley.	No; there is no suitable habitat for this species on the site.
Vaux's swift <i>Chaetura vauxi</i>	FSC;CSC;-- (nesting)	Nests within large hollow trees and snags in redwood and Douglas-fir habitats.	No; there is no suitable habitat for this species on the site.
Western burrowing owl <i>Athene cunicularia hypugaea</i>	FSC;CSC;-- (burrow sites)	Nests in burrows in the ground, often in old ground squirrel burrows or badger, within open dry grassland and desert habitat.	Present.
White-faced ibis <i>Plegadis chihi</i>	FSC;CSC;--	Nests colonially in riparian areas with large trees.	No; there is no suitable habitat for this species on the site.
White-tailed kite <i>Elanus leucurus</i>	FSC;CFR;--	Nests in isolated trees or woodland areas with suitable open foraging habitat.	Likely.
Other Raptors (Hawks, Owls and Vultures)	MBTA and §1503.5 Department of Fish and Game Code	Nests in a variety of communities including cismontane woodland, mixed coniferous forest, chaparral, montane meadow, riparian, and urban communities.	Present.
<b>Mammals</b>			
Fringed myotis <i>Myotis thysanodes</i>	FSC;--;--	Found in a variety of habitats in California except in the Central Valley and desert areas. Roosts in caves, buildings, and rock crevices.	No; the site does not contain suitable roosting habitat for bat species. No evidence of bat roosts was identified during field surveys.



Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Greater western mastiff bat <i>Eumops perotis californicus</i>	FSC; CSC; --; --	Found in grasslands and open woodlands and conifer habitats. Roosts in cliff faces, buildings, tunnels, and caves.	No; the site does not contain suitable roosting habitat for bat species. No evidence of bat roosts was identified during field surveys.
Long-eared myotis <i>Myotis evotis</i>	FSC; --; --; --	Found throughout California except for the Central Valley and desert areas. Roosts in buildings, snags, and rock crevices.	No; the site does not contain suitable roosting habitat for bat species. No evidence of bat roosts was identified during field surveys.
Long-legged myotis <i>Myotis volans</i>	FSC; --; --; --	Woodland and forest communities above approximately 4,000 feet above MSL. Roosts in rock crevices, buildings, under tree bark, in snags, mines, and caves.	No; the site is located at too low an elevation for this species to occur. No evidence of bat roosts was identified during field surveys.
Pacific western big-eared bat <i>Corynorhinus townsendii townsendii</i>	FSC; CSC; --; --	Roosts in a wide variety of habitats (i.e., riparian scrub, woodland), in abandoned buildings, and bridges.	No; the site does not contain suitable roosting habitat for bat species. No evidence of bat roosts was identified during field surveys.
San Joaquin pocket mouse <i>Perognathus inornatus</i>	FSC; --; --; --	Annual grassland and scrub habitats with loose, friable soils for burrowing.	No; there is no suitable habitat for this species on the site. There are no known records or occurrences of this species within the site or surrounding grassland communities.
Spotted bat <i>Euderma maculatum</i>	FSC; CSC; --; --	Roosts in rock crevices and occasional buildings of foothills and desert areas.	No; the site does not contain suitable roosting habitat for bat species. No evidence of bat roosts was identified during field surveys.
Small-footed myotis <i>Myotis ciliolabrum</i>	FSC; --; --; --	Roosts in a wide variety of habitats (i.e., riparian, scrub, woodland), in abandoned buildings, and bridges.	No; the site does not contain suitable roosting habitat for bat species. No evidence of bat roosts was identified during field surveys.
Yuma myotis <i>Myotis yumanensis</i>	FSC; CSC; --; --	Reside in open forests and woodland habitats with sources of water over which to feed. Roost in buildings, mines, caves, and crevices	No; the site does not contain suitable roosting habitat for bat species. No evidence of bat roosts was identified during field surveys.

Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
<b>Federally Listed Species:</b> FE = federal endangered  FT = federal threatened  FSC = federal species of concern	FC = candidate  PT = proposed threatened  FPD = proposed for delisting  FD = delisted	<b>California State Listed Species:</b> CE = California state endangered  CT = California state threatened  CR = California state rare  CSC = California Species of Special Concern	<b>CNPS* List Categories:</b> 1A = plants presumed extinct in California 1B = plants rare, threatened, or endangered in California and elsewhere 2 = plants rare, threatened, or endangered in California, but common elsewhere 3 = plants about which we need more information 4 = plants of limited distribution  <b>Other Special-status Listing:</b> SLC = species of local or regional concern or conservation significance
Source: Foothill Associates			

#### 5.4.1 Listed and Special-status Plants

Based on a records search of the CNDDB and the USFWS list, special-status plant species have the potential to occur on the site or in the vicinity. Based on field observations and literature review specific to the special-status plants listed in Table 1, the potential for occurrence has been determined for each species. The species that are likely to occur within the site include Boggs Lake hedge-hyssop (*Gratiola heterosepala*), pincushion navarretia (*Navarretia myersii* ssp. *myersii*), and Sacramento Orcutt grass (*Orcuttia viscida*). The species that are considered to have a low potential to occur on the site include Ahart's dwarf rush (*Juncus leiostermus* var. *ahartii*), dwarf downingia (*Downingia pusilla*), legenere (*Legenere limosa*), slender Orcutt grass (*Orcuttia tenuis*), and Tuolumne button celery (*Eryngium pinnatisectum*).

#### Plant Species Likely to Occur

##### Boggs Lake Hedge-hyssop

Boggs Lake hedge-hyssop is an annual herb. It is typically found on the margins of vernal pools, shallow ponds, marshes and swamps, or lake margins often in clay soils. The identification period is May through June. Boggs Lake hedge-hyssop is threatened by development, grazing, trampling, and off-road vehicle use (CNPS 2001). There is one record for this species occurring within five miles of the project site (CNDDB 2005). This species was not observed on the site during the biological assessment; however, the biological assessment was conducted outside of the identification period for this species and the vernal pools on the site are potential habitat for this species. Therefore, this species is likely to occur within the site.

#### Pincushion Navarretia

Pincushion navarretia is a small annual herb. It is found in the margins of vernal pools. The known distribution for this species is small with only four known locations of this species in Amador, Merced, Lake, and Sacramento counties. Pincushion navarretia flowers during the month of May. There is one CNDDDB record for this species within five miles of the project site (CNDDDB 2005). The species was not observed on the site during the biological assessment; however, the biological assessment was conducted outside of the identification period for this species. The vernal pools and sloped seeps within the site are potential habitat for this species. Because suitable vernal pool habitat occurs within the site and this species has been identified within the project vicinity, this species is likely to occur within the site.

#### Sacramento Orcutt Grass

Sacramento Orcutt grass is found within deep vernal pools that maintain long periods of inundation. This plant species has a highly limited distribution within Sacramento County. The typical identification period is from May through June. There are three CNDDDB records for this species within five miles of the site (CNDDDB 2005). This species was not observed on the site during the biological assessment; however, field surveys were performed outside of the identification period for this species. The steeply-sloped, deep pools scattered within larger riverine drainages and depressional seeps are potential habitat for this species. Because suitable vernal pool habitat occurs within the site and this species has been identified within the project vicinity, this species is likely to occur on the site.

#### **Plant Species with a Low Potential to Occur**

##### Ahart's Dwarf Rush

Ahart's dwarf rush is an annual grass-like herb. It occurs on the margins of vernal pools in grassland areas. Generally, this species occurs in valley and foothill grasslands in mesic areas. It is known only from six occurrences and is threatened by development (CNPS 2001). The identification period for this species is April through May. There are no CNDDDB records for this species occurring within five miles of the site (CNDDDB 2005). This species was not observed on the site during the biological assessment; however, the biological assessment was conducted outside of the identification period for this species. Ahart's dwarf rush often occurs in steeply-sloped riverine drainages; therefore, the sloped seeps and grassland habitat within the site may represent potential habitat for this species. The potential for this species to occur on the site is low.

##### Dwarf Downingia

Dwarf downingia is a small annual herb. It occurs in vernal pools and other mesic areas with short hydrological periods within valley and foothill grassland habitat. The identification period is March through May. There are no CNDDDB records for this species within five miles of the site. This species was not observed on the site during the biological assessment; however, field surveys were not performed during the identification period of this species. The vernal pools and seeps within the site are

potential habitat for this species. Because the vernal pools, seasonal wetlands, and grasslands are moderately disturbed from cattle grazing and this species has not been reported occurring within the immediate project vicinity, this species has a low potential to occur within the site.

#### Legenere

Legenere is a small annual herb. It is found in vernal pools and seasonal marsh habitat. The identification period is April through May. There are no CNDDDB records for this species occurring within five miles of the project site (CNDDDB 2005). This species was not observed on the site during the biological assessment; however, field surveys were not performed during the identification period of this species. Because the vernal pools, seasonal wetlands, and grasslands are moderately disturbed from cattle grazing and this species has not been identified within the project vicinity, this species has a low potential to occur on the site.

#### Slender Orcutt Grass

Slender Orcutt grass is an annual herb found within deep vernal pools. Known distributions occur from Lake County south to Tehama County. The typical identification period is from May through July. There are no records in the CNDDDB for this species within five miles of the site. This species was not observed during the biological assessment; however, the site visits were performed outside of the identification period for this species. The steeply-sloped, deep pools scattered within larger riverine drainages are potential habitat for this species. However, because this species has not been identified within the project vicinity and seasonal wetlands are relatively disturbed from cattle grazing, this species has a low potential to occur on the site.

#### Tuolumne Button-celery

Tuolumne button-celery is an annual herb found in vernal pools of the foothills of the Sierra Nevada Range. This species is known to occur in Sacramento, Amador, Calaveras, and Tuolumne counties in cismontane woodland, lower montane coniferous forests, and other mesic areas. The typical identification period is June through August. There are no CNDDDB records for this species within five miles of the site. This species was not observed on the site during the biological assessment; however field surveys were not performed during the identification period of this species. The vernal pools, seasonal wetlands, and grasslands are potential habitat for this species; however, because this species has not been identified within the project vicinity and the site's seasonal wetlands are relatively disturbed from cattle grazing, this species has a low potential to occur.

#### **5.4.2 Listed and Special-status Wildlife Species**

Based on a records search of the CNDDDB and the USFWS list, special-status wildlife species have the potential to occur on the site or in the vicinity. Based on field observations and literature review specific to the special-status wildlife listed in **Table 1**,

the potential for occurrence has been determined for each species. Species that are known to be present based on field observations are northern harrier (*Circus cyaneus*), western burrowing owl (*Athene cunicularia hypugaea*), as well as other raptor species. The species that are considered to likely to occur on the site include California linderiella (*Linderiella occidentalis*), conservancy fairy shrimp (*Branchinecta conservatio*), Cooper's hawk (*Accipiter cooperii*), midvalley fairy shrimp (*Branchinecta mesoallensis*), Swainson's hawk (*Buteo swainsoni*), vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Branchinecta packardii*), and white-tailed kite (*Elanus leucurus*). Wildlife species considered to have a low potential to occur onsite include ferruginous hawk (*Buteo regalis*), Nuttall's woodpecker (*Picoides nuttallii*), oak titmouse (*Baeolophus inornatus*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), western pond turtle (*Clemmys marmorata*) and western spadefoot toad (*Spea hammondi*).

### **Wildlife Species Presumed Present**

#### Northern Harrier

The northern harrier is a large gray or brown raptor species. The female is typically larger than the male. Northern harriers are commonly observed throughout the year within the Central Valley; they are commonly seen flying low over agricultural fields and marshes while foraging for small mammals. Some individuals from other areas will over-winter in California. Harriers are ground nesting raptors that typically inhabit marshes, oak savannahs, wetlands, or grasslands; nests made of grassy vegetation are built on the ground or in low shrubs. There are no CNDDDB records for this species within five miles of the site, although this species occurs more frequently in grassland habitat than it is reported in the CNDDDB. Moreover, this species was observed foraging within the site during November 2005 field surveys and the site provides suitable nesting and foraging habitat for northern harrier. Therefore, this species is present within the site.

#### Western Burrowing Owl

Western burrowing owl is a small ground-dwelling owl that occurs in western North America from Canada to Mexico, and east to Texas, and Louisiana. Although in certain areas of its range western burrowing owls are migratory, these owls are predominantly non-migratory in California (Zeiner *et. al.* 1990). The breeding season for western burrowing owls occurs from February to August, peaking in April and May (Zeiner *et. al.* 1990). Western burrowing owls nest in burrows in the ground, often in old ground squirrel burrows. This owl is also known to use artificial burrows including pipes, culverts, and nest boxes. There are no CNDDDB records for this species within five miles of the site (CNDDDB 2005). However, two burrowing owls were observed within the site during field surveys. Because the annual grassland community within the site is suitable nesting and foraging habitat for this species and burrowing owls were observed onsite during field surveys, this species is present within the site.

### Other Raptor Species

Other raptor species forage and nest in a variety of habitats throughout Sacramento County. Raptor nests are protected under the MBTA and Section 3503.5 of the California Fish and Game Code, which make it illegal to destroy any active raptor nest. The oak woodland and grassland habitats within the site are suitable nest and foraging habitat for various raptor species. Additionally, a red-tailed hawk, northern harrier, and a pair of burrowing owl were observed during field surveys. Consequently, other raptor species are present within the site.

### Wildlife Species Likely to Occur

#### Cooper's Hawk

Cooper's hawks are usually found in riparian woodlands near streamcourses or other water. The breeding season for this species is typically between March and August (Zeiner *et al.* 1990). Nests are typically built in woodlands or riparian areas and consist of a platform of sticks. Cooper's hawks will also sometimes use abandoned corvid nests (Ehrlich *et al.* 1988). Cooper's hawks feed primarily on small birds and mammals. There are two records in the CNDDDB for this species within five miles of the project site and this species was not observed onsite during field surveys. However, the small portion of oak woodland habitat along the western project boundary represents suitable nesting and foraging habitat for this species. Therefore, Cooper's hawk is likely to occur within the site.

#### Swainson's Hawk

Swainson's hawk is a long-distance migrant with nesting grounds in western North America. The Swainson's hawk population that nests in the Central Valley winters primarily in Mexico, while the population that nests in the interior portions of North America winters in South America (Bradbury *et al.*, in prep.). Swainson's hawks arrive in the Central Valley between March and early April to establish breeding territories. Breeding occurs from late March to late August, peaking in late May through July (Zeiner *et al.* 1990). In the Central Valley, Swainson's hawks nest in isolated trees, small groves, or large woodlands next to open grasslands or agricultural fields. This species typically nests near riparian areas; however, it has been known to nest in urban areas as well. Nest locations are usually in close proximity to suitable foraging habitats, which include fallow fields, irrigated pastures, alfalfa and other hay crops, and low-growing row crops. Swainson's hawks leave their breeding grounds to return to their wintering grounds in late August or early September (Bloom and De Water 1994). There is one CNDDDB record for this species within ten miles of the site (CNDDDB 2005). This species was not observed on the site during the biological assessment; however field surveys were performed outside of the period when Swainson's hawk occur within the Central Valley. The site provides suitable Swainson's hawk foraging habitat and sparse suitable nest trees throughout the site and within the oak woodland community at the western portion of the site. Consequently, this species is likely to occur on the site.

elderberry shrubs include California sycamore (*Platanus racemosa*), willows, blackberry (*Rubus* spp.), and poison oak (USFWS 1984). Beetles require elderberry stems with a basal diameter of at least one inch in order for the larvae to utilize the stems (USFWS 1999).

There are two CNDDB records for this species within five miles of the site (CNDDB 2005). One elderberry shrub was observed onsite with sufficient stems greater than one inch in diameter and therefore is potential habitat for the valley elderberry longhorn beetle. Because of the isolated nature of the single elderberry shrub and lack of surrounding riparian habitat, valley elderberry longhorn beetle has a low potential to occur within the site.

#### Western Pond Turtle

The western pond turtle is the only abundant native turtle in California. It is brown to olive in general coloration, and possesses a distinct low-domed carapace with black flecks and lines radiating out from the center of its shields. The western pond turtle is currently divided into two subspecies: the northwestern pond turtle (*Clemmys marmorata marmorata*) is a federal and state species of concern, which occurs from the vicinity of the American River in California northward to the lower Columbia River in Oregon and Washington, and the southwestern pond turtle (*Clemmys marmorata pallida*), which occurs in coastal drainages from the vicinity of Monterey, California south to northwestern Baja California, Mexico. Western pond turtles require some slack- or slow-water aquatic habitat with aquatic basking sites and are uncommon in high gradient streams. Shallow water areas with emergent vegetation and associated upland habitat are preferred habitat elements for pond turtle breeding. Habitat fragmentation, alteration, and loss are the primary causes of the decline of this species, as well as predation by bullfrogs, wading birds, certain fishes, garter snakes, and some mammals. There are four records in the CNDDB for this species within five miles of the site (CNDDB 2005). This species was not observed on the site during field surveys. However, the excavated ponds and stock ponds are potential habitat for this species. Therefore, the potential for this species to occur on the site is low.

#### Western Spadefoot Toad

The western spadefoot toad is found throughout the Central Valley south to Baja Mexico. It is found in a variety of habitats including grasslands, washes, and floodplains. It breeds in seasonal depressional wetlands and deep vernal pools (Stebbins 2003). During the summer months, adults will seek out upland refugia such as small mammal burrows. The breeding period is typically January through May (Stebbins 2003). There is one CNDDB record for this species within five miles of the project site (CNDDB 2005) and this species was not observed on the site during the biological assessment. However, because the vernal pools and depressional seasonal wetlands on the site are relatively disturbed from cattle grazing, this species has a low potential to occur onsite.

## 5.5 Sensitive Habitats

Sensitive habitats include those that are of special concern to resource agencies or those that are protected under CEQA, Section 1600 of the California Fish and Game Code, or Section 404 of the Clean Water Act. Additionally, sensitive habitats are protected under the specific policies outlined in the Sacramento County General Plan. Sensitive habitats identified within the site include potential waters of the U.S. including depressional, riverine, and sloped seasonal wetlands as well as other waters of the U.S.; stream courses potentially regulated under Section 1600 of the California Fish and Game Code; and oak woodland habitat and native trees protected by Sacramento County (**Figure 4**).

### 5.5.1 Potential Jurisdictional Waters of the U.S.

Potential jurisdictional waters of the U.S. within the project area total approximately 29.76 acres including 9.61 acres of riverine seasonal wetland, 0.71 acre of depressional seasonal wetland, 0.06 acre of riverine seasonal marsh, 6.31 acres of seep, 0.39 acre of vernal pool, 9.72 acres of ephemeral drainage, 0.14 acre of ditch/canal, 0.48 acre of sloped seasonal wetland, 0.85 acre of excavated pond, and 1.55 acres of stock pond (**Figure 4**). Potential jurisdictional areas in the project area have been formally delineated; however, the Corps has not verified these acreages.

Jurisdictional waters of the U.S. include jurisdictional wetlands as well as all other waters of the U.S. such as creeks, ponds, and intermittent drainages. Wetlands are defined as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (Environmental Laboratories 1987). The majority of jurisdictional wetlands in the United States meet three wetland assessment criteria: hydrophytic vegetation, hydric soils, and wetland hydrology. Jurisdictional waters of the U.S. can also be defined by exhibiting a defined bed and bank and ordinary high water mark (OHWM). As discussed in the Regulatory Framework section of this document, jurisdictional waters of the U.S. are subject to Section 404 of CWA and are regulated by the Corps.

On January 9, 2001 the U.S. Supreme Court rendered a decision that has potentially reduced the Corps' ability to regulate isolated wetland/waters (some vernal pools, depressional seasonal wetlands, etc.) under the Clean Water Act. Based on review of that decision and other relevant documents, although the mapped wetlands on the site met the jurisdictional criteria in effect prior to the Supreme Court's decision, some of the wetlands/waters on the site including the vernal pools and seasonal depressional wetlands, appear to be precluded from regulation by the Corps. However, note that the Corps has not yet issued formal policy guidance based on the Supreme Court's decision. Until such guidance is issued, the federal jurisdictional status of these wetlands remains unclear.



## 6.0 DISCUSSION AND RECOMMENDATIONS

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As discussed previously, the  $\pm 1,400$ -acre site consists primarily of annual grassland habitat used for grazing as well as oak woodland habitat along the western most portion of the site. Known or potential biological constraints on the site include the following:

- Potential habitat for special-status plant species;
- Potential habitat for vernal pool invertebrates;
- Potential foraging and nesting habitat for Swainson's hawk, a state-listed species;
- Potential habitat for western burrowing owl;
- Potential nesting sites and foraging habitat for other raptor species;
- Potential habitat for valley elderberry longhorn beetle;
- Potential habitat for western pond turtle;
- Potential habitat for western spadefoot toad; and
- Sensitive habitats (potential waters of the U.S. subject to Section 404 of CWA; stream courses subject to Section 1602 of California Fish and Game Code; and protected trees and oak woodland habitat).

### 6.1 Special-status Plant Species

As discussed, vernal pools on the site represent potential habitat for special-status vernal pool plant species, including Ahart's dwarf rush, Bogg's Lake hedge-hyssop, dwarf downingia, legenera, pincushion nayarretia, Sacramento Orcutt grass, slender Orcutt grass, and Tuolumne button-celery. Therefore, it is recommended a focused plant survey be performed by a qualified botanist within suitable seasonal wetland and grassland habitat to determine the presence or absence of the aforementioned target plant species. The survey should follow CDFG's plant survey guidelines (CDFG 2000). CDFG recommends a sufficient number of visits spaced throughout the blooming period of all target plant species to accurately determine presence or absence. The survey period to identify all target plant species during their identification period extends from March through October. Because the identification period of all target plant species covers a wide range and in order to capture the identification period of early- and late-blooming plant species, a minimum of two focused plant surveys is recommended. If special-status plant species are found, a mitigation plan developed from consultation with the appropriate resource agencies should be prepared. The plan should detail the various mitigation approaches to ensure a no-net-loss of rare plants. Examples of mitigation include avoidance of the resource, salvage of plant materials where possible, acquisition of credits at an approved mitigation bank, or acquisition and preservation of property that supports these species. If no special-status plant species are identified onsite, no mitigation would be necessary.

## 6.2 Vernal Pool Invertebrates

As discussed, vernal pools on the site represent potential habitat for special-status invertebrate species including California linderiella, midvalley fairy shrimp, Conservancy fairy shrimp, vernal pool fairy shrimp, and vernal pool tadpole shrimp. If the proposed project can avoid all direct and indirect impacts to vernal pool invertebrate habitat, then no mitigation would be required. The USFWS typically considers vernal pool invertebrate habitat to be indirectly impacted by fill or development activities within 250 feet of the habitat. However, the 250-foot indirect impact area may be reduced based on site-specific information such as topography or hydrologic data indicating that activities can encroach closer than 250 feet without impacting those habitats.

If impacts to listed vernal pool invertebrate habitat cannot be avoided, then protocol-level surveys can be conducted to determine the presence or absence of these species. If the species are absent and USFWS accepts the survey findings, then no mitigation for listed vernal pool invertebrates is likely required. If the species are present, or if the project proponent decides to assume presence without conducting the surveys, then mitigation for listed vernal pool invertebrates would be required.

If mitigation for listed vernal pool invertebrates is required and the project has a federal nexus (e.g., is pursuant to a Corps permit, is federally funded, or occurs on federal land), impacts to listed vernal pool invertebrates can be addressed through Section 7 consultation with the USFWS. If the project does not have a federal nexus, the project proponent, through coordination with USFWS, can prepare a Habitat Conservation Plan under Section 10 of FESA. Typically, the USFWS requires compensatory mitigation for impacts to these species at a 3:1 ratio (2:1 preservation and 1:1 creation). Possible mitigation opportunities include onsite or offsite preservation and creation of vernal pools or purchase of vernal pool credits at a qualified mitigation bank.

## 6.3 Swainson's Hawk

Although no Swainson's hawks were observed on the property during field surveys, the site is considered potential foraging habitat for this species since they are known to nest within ten miles of the site. Currently, CDFG recommends that impacts to suitable Swainson's hawk foraging habitat within 10 miles of an active nest should be mitigated by securing a conservation easement or fee title on suitable Swainson's hawk foraging habitat in the region. Currently, this translates to the following: (1) for projects within a one-mile radius of an active nest site, the project proponent should preserve 1.0 acre of similar habitat for each acre lost, (2) for projects within a one to five-mile radius of an active nest site, the project proponent should preserve 0.75 acre of similar habitat for each acre lost, and (3) for projects within a five to ten-mile radius of an active nest site, the project proponent should preserve 0.5 acre of similar habitat for each acre lost.

The lead agency under CEQA will determine appropriate mitigation for Swainson's hawk as well as other special-status species. In the case of a conservation easement, the applicant should prepare and implement a Swainson's hawk mitigation plan to the satisfaction of CDFG that includes the preservation of Swainson's hawk habitat on the appropriate amount of foraging acreage.

The loss of Swainson's hawk foraging habitat can also be mitigated by paying the County of Sacramento's Swainson's hawk mitigation fee. The mitigation fee is set forth in Chapter 16.130 of the Sacramento County Code and is reviewed or amended, if needed, on an annual basis. The current mitigation fee is \$18,000 per acre.

#### **6.4 Western Burrowing Owl**

As stated previously, two burrowing owls were observed during field surveys and the grasslands onsite provide suitable nesting and foraging habitat for western burrowing owl. For this reason, it is recommended that a burrowing owl survey be conducted no more than 30 days prior to the onset of construction activities to determine if burrowing owls still occupy the site. Burrowing owls can be present during all times of the year in California, so this survey is recommended regardless of the time construction activities occur. If active owl burrows are located during the pre-construction survey, it is recommended that a 250-foot buffer zone be established around each burrow with an active nest until the young have fledged and are able to exit the burrow. If occupied burrows are found with no nesting occurring, if active burrows are found after the young have fledged, or if development commences after the breeding season (typically February-August), passive relocation of the birds should be performed. Passive relocation involves installing a one-way door at the burrow entrance, which encourages the owls to move from the occupied burrow. CDFG should be consulted for current guidelines and methods for passive relocation of any owls found on the site. Mitigation for project impacts that result in relocation of burrowing owls and loss of burrows and/or foraging habitat may be required for CEQA projects (CDFG recommends 6.5 acres of foraging habitat be preserved for each active burrow that would be impacted by project activities).

The lead agency under CEQA, in coordination with CDFG, is responsible for prescribing appropriate mitigation for any project-related impacts to burrowing owls. These mitigation measures would only apply in the event that burrowing owls were encountered during the pre-construction survey.

#### **6.5 Raptors**

As discussed, several species of raptors may forage and nest on the site including western burrowing owl, northern harrier, Cooper's hawk, Swainson's hawk, and white-tailed kite. Active raptor nests are protected by the California Fish and Game code Section 3503.5 and the MBTA. For this reason, if construction is expected to occur during the nesting season (February-August), a pre-construction raptor survey is recommended to determine if active raptor nests are present within 500 feet of the site. The survey should be conducted by a qualified biologist no more than 30 days prior to the onset of construction activities. If active nests are found, construction activities should not occur within 500 feet of the nests, or up to 0.5 mile in the case of an active Swainson's hawk nest, until the young have fledged or until the biologist determines that the nest is no longer active. If construction activities are proposed to occur during non-breeding season (September-January), a pre-construction survey is not required and no further studies would be necessary.

## **6.6 Valley Elderberry Longhorn Beetle**

Although no valley elderberry longhorn beetles (VELB) were observed during field surveys, one elderberry shrub was identified onsite with stems greater than one inch in diameter that represents potential habitat for VELB (**Figure 4**). Currently, the USFWS suggests mitigation for impacts to any elderberry shrub with stems greater than one inch in diameter at ground level. The USFWS calls for a 100-foot buffer to be maintained around any existing elderberry shrub to prevent potential VELB habitat from being impacted. If a 100-foot buffer cannot be maintained, then the elderberry shrub should be transplanted according to USFWS guidelines to a suitable designated mitigation area and additional elderberry shrubs and associated riparian plant species should be planted in the designated mitigation area. The number of additional elderberry shrubs and associated vegetation varies depending on the number and diameter of elderberry stems suitable for use by VELB that are impacted by the project. The USFWS requests that transplantation occur between the beginning of November and the first two weeks of February when elderberries are typically dormant and the chance of transplantation success is higher. These mitigation measures would only be required if the single elderberry shrub within the project area is planned for removal or otherwise impacted.

## **6.7 Western Pond Turtle**

As discussed, the excavated ponds and stock ponds within the site represent potential habitat for western pond turtle. If the ponds are expected to be impacted by any construction activity, it is recommended that surveys be conducted for this species within 30 days of this activity. If pond turtles are found, it is recommended that CDFG be contacted and consulted regarding either developing an avoidance plan or a plan to capture and relocate turtle(s) to suitable habitat within a nearby conservation area. Any plan to capture and relocate pond turtles should be conducted by a qualified biologist approved by CDFG. These mitigation measures would only be expected to be necessary if pond turtles were found during pre-construction surveys.

## **6.8 Western Spadefoot Toad**

The seasonal wetlands that occur onsite provide potential breeding habitat for western spadefoot toad. If the seasonal wetland habitat cannot be avoided during construction, it is recommended that a pre-construction survey for this species be conducted prior to any ground disturbance activity occurring within 250 feet of suitable seasonal wetland features. The pre-construction survey should be conducted by a qualified biologist familiar with the identification of western spadefoot toad. If western spadefoot toad is found on the site during pre-construction survey, then CDFG should be consulted for mitigation measures that may be required. If western spadefoot toad is not found during the pre-construction survey, then no further mitigation would be necessary for this species.

## **6.9 Sensitive Habitats**

The site contains approximately 29.76 acres of potentially jurisdictional waters of the U.S. features (**Figure 4**). These areas are potentially regulated by the Corps. These areas

are protected under the Sacramento County General Plan. Consequently, it is recommended that prior to the issuance of a grading permit, the wetland delineation performed on the site should be submitted to the Corps for verification and the appropriate Section 404 permit should be acquired for any project-related impacts to jurisdictional features. Any waters of the U.S. that would be lost or disturbed should be replaced or rehabilitated on a "no-net-loss" basis in accordance with the Corps' mitigation guidelines. Habitat restoration, rehabilitation, and/or replacement should be at a location and by methods agreeable to the Corps.

If a 404 permit is required for the proposed project, water quality concerns during construction would be addressed in a Section 401 water quality certification from the Regional Water Quality Control Board. A Storm Water Pollution Prevention Plan (SWPPP) would also be required during construction activities. SWPPPs are required in issuance of a National Pollutant Discharge Elimination System (NPDES) construction discharge permit by the U.S. Environmental Protection Agency. Implementation of Best Management Practices (BMPs) during construction is standard in most SWPPPs and water quality certifications. Examples of BMPs include stockpiling of debris away from regulated wetlands and waterways; immediate removal of debris piles from the site during the rainy season; use of silt fencing and construction fencing around regulated waterways; and use of drip pans under work vehicles and containment of fuel waste throughout the site during construction.

Several ephemeral drainages were identified as tributaries to Alder Creek within the western portion of the site; these drainages including Alder Creek, are most likely regulated by CDFG under California Fish and Game Code Section 1602 based on the presence of a defined bed and bank. Prior to the issuance of a grading permit, a Streambed Alteration Agreement should be obtained from CDFG, pursuant to Fish and Game Code Section 1602 for each stream crossing and any other activities affecting the bed or bank of any stream crossing. If required, the project applicant should coordinate with CDFG in developing appropriate mitigation, and should abide by the conditions of any executed permits.

#### **6.10 Protected Trees and Oak Woodland Habitat**

As mentioned previously, the western portion of the site consists of oak woodland habitat. Additionally, several scattered willow and cottonwood trees occur throughout the site. Oak woodland and other trees native to California are protected by Sacramento County. The Sacramento County Department of Environmental Review and Assessment (DERA) currently regulates both the removal of native and non-native trees and the encroachment of construction activities into the protected zones of these trees. All native oaks, California black walnuts (*Juglans californica*), and California sycamores (*Platanus racemosa*) with a diameter at breast height (DBH) of four inches and greater as well as all other trees with a 19-inch DBH and greater, are subject to their review.

Prior to the removal of any trees, it is recommended a complete inventory of all onsite trees be performed by a certified arborist pursuant to DERA's guidelines. The arborist report should provide information on the species, size and condition of the trees.

Additionally, site plans should show the trunk locations and driplines of all protected trees on site. Grading plans can then be used to evaluate the impact of the proposed project on the protected trees. Mitigation for impacts, either through onsite planting of native trees or payment of fees, is typically required as a condition of project development.

DRAFT

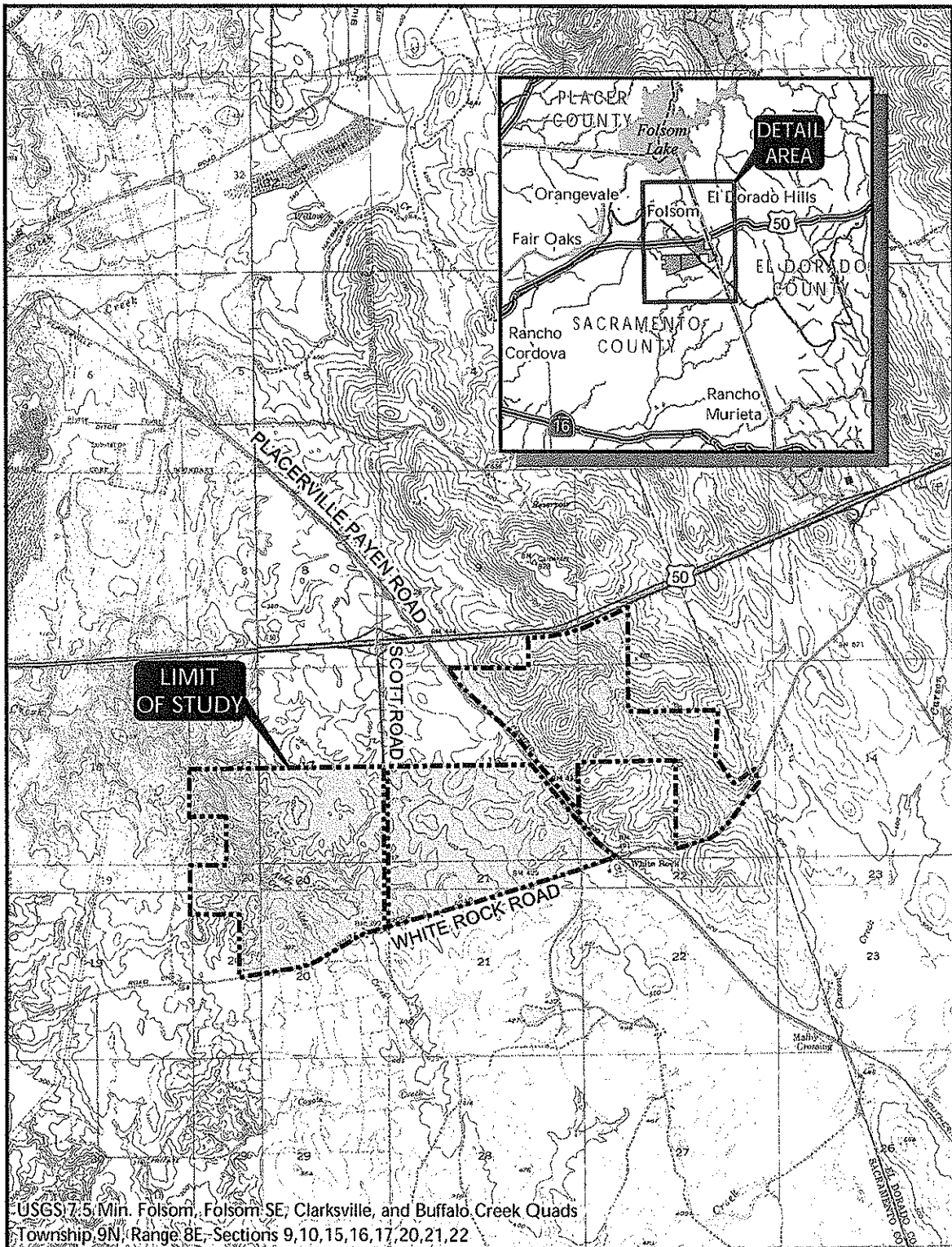
## 7.0 REFERENCES

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- Barr, C.B. 1991. *The distribution, habitat, and status of the valley elderberry longhorn beetle, *Desmocerus californicus dimorphus**. U.S. Fish and Wildlife Service: Sacramento, CA;
- Bloom, P. and D. Van De Water. 1994. *Swainson's Hawk in Life on the Edge: A Guide to California's Endangered Natural Resources: Wildlife*. BioSystems Books, Santa Cruz, CA;
- Bradbury, M., Estep, J.A., and D. Anderson. In Preparation. *Migratory Patterns and Wintering Range of the Central Valley Swainson's Hawk*.
- California Department of Fish and Game (CDFG). 2005. *California Natural Diversity Data Base*. (CNDDDB: Folsom, Folsom SE, Clarksville, and Buffalo Creek topographic quadrangles) Sacramento, California;
- California Department of Fish and Game (CDFG). May 2000 (revised). *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Plant Communities*. California Department of Fish and Game;
- California Native Plant Society (CNPS). 2001. *Inventory of Rare and Endangered Plants of California* (sixth edition). Sacramento, CA;
- Collinge, S.K., M. Holyoak, C.B. Barr, and J.T. Marty. 2001. Riparian habitat fragmentation and population persistence of the threatened valley elderberry longhorn beetle in Central California. *Biological Conservation* 100:103–113;
- Ehrlich, P.R., D.S. Dobkin, and D. Wheye. 1988. *The Birder's Handbook*. Simon and Schuster. New York;
- Environmental Laboratories. 1987. *Corps of Engineers Wetlands Delineation Manual*. U.S. Army Corps of Engineers Waterways Experiment Station. Vicksburg, MS;
- Natural Resource Conservation Service (NRCS). March 1992. *Hydric Soils List of Sacramento County, California*. U.S. Department of Agriculture;
- Natural Resource Conservation Service (NRCS). 1980. *Soil Survey of Sacramento County, California*. U.S. Department of Agriculture;
- Sawyer, John O. and Todd Keeler-Wolf. 1995. *A Manual of California Vegetation*. California Native Plant Society (CNPS), Sacramento, CA;
- Stebbins, Robert C. 2003. *Western Reptiles and Amphibians* (third edition). Houghton Mifflin Company, Boston, MA;

- U.S. Fish and Wildlife Service. 1984. *Recovery plan for the Valley Elderberry Longhorn Beetle*. U.S. Fish and Wildlife Service, Endangered Species Program: Portland, Oregon;
- U.S. Fish and Wildlife Service. 1999. *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*. Sacramento, California;
- U.S. Fish and Wildlife Service (USFWS). 2005. *Federal Endangered and Threatened Species that may be affected by Projects in the Folsom, Folsom SE, Clarksville, and Buffalo Creek 7.5-minute Series Topographic Quadrangles*; USFWS, Sacramento, California;
- U.S. Geological Survey. 1953 (photorevised 1980). *Clarksville, California*. 7.5-minute series topographic quadrangle. United States Department of Interior;
- U.S. Geological Survey. 1954 (photorevised 1980). *Folsom SE, California*. 7.5-minute series topographic quadrangle. United States Department of Interior;
- U.S. Geological Survey. 1967 (photorevised 1980). *Folsom, California*. 7.5-minute series topographic quadrangle. United States Department of Interior;
- U.S. Geological Survey. 1967 (photorevised 1980). *Buffalo Creek, California*. 7.5-minute series topographic quadrangle. United States Department of Interior; and
- Zeiner, D.C., W.R. Laudenslayer Jr., K.E. Mayer, and M. White, eds. 1990. *California's Wildlife Volume II: Birds*, State of California: The Resource Agency, Department of Fish and Game, Sacramento, CA.





## SITE AND VICINITY



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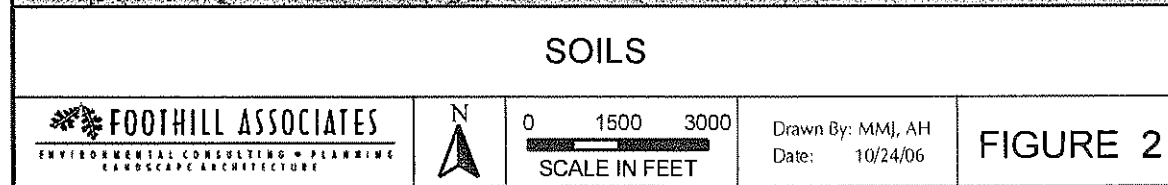
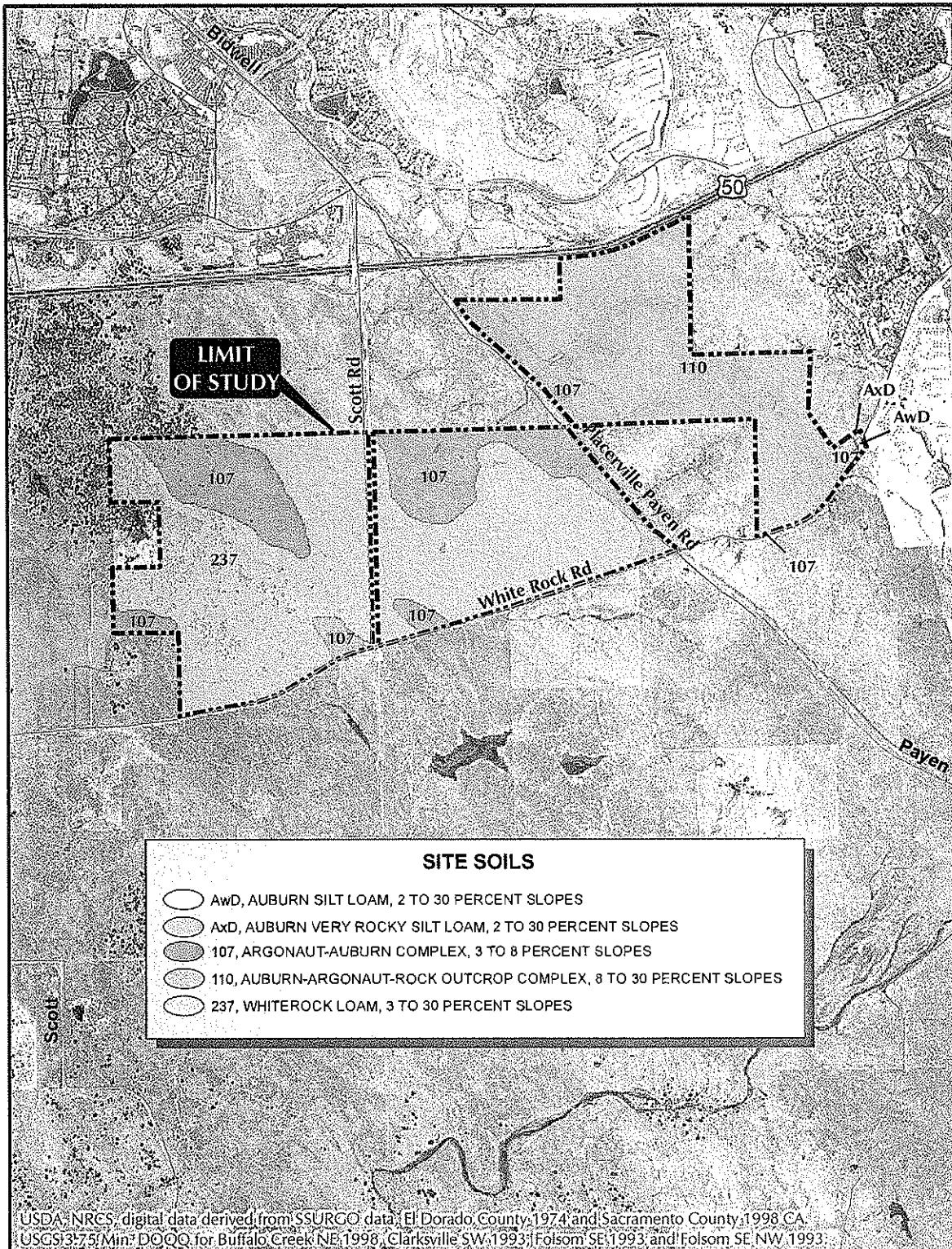
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**FIGURE 1**

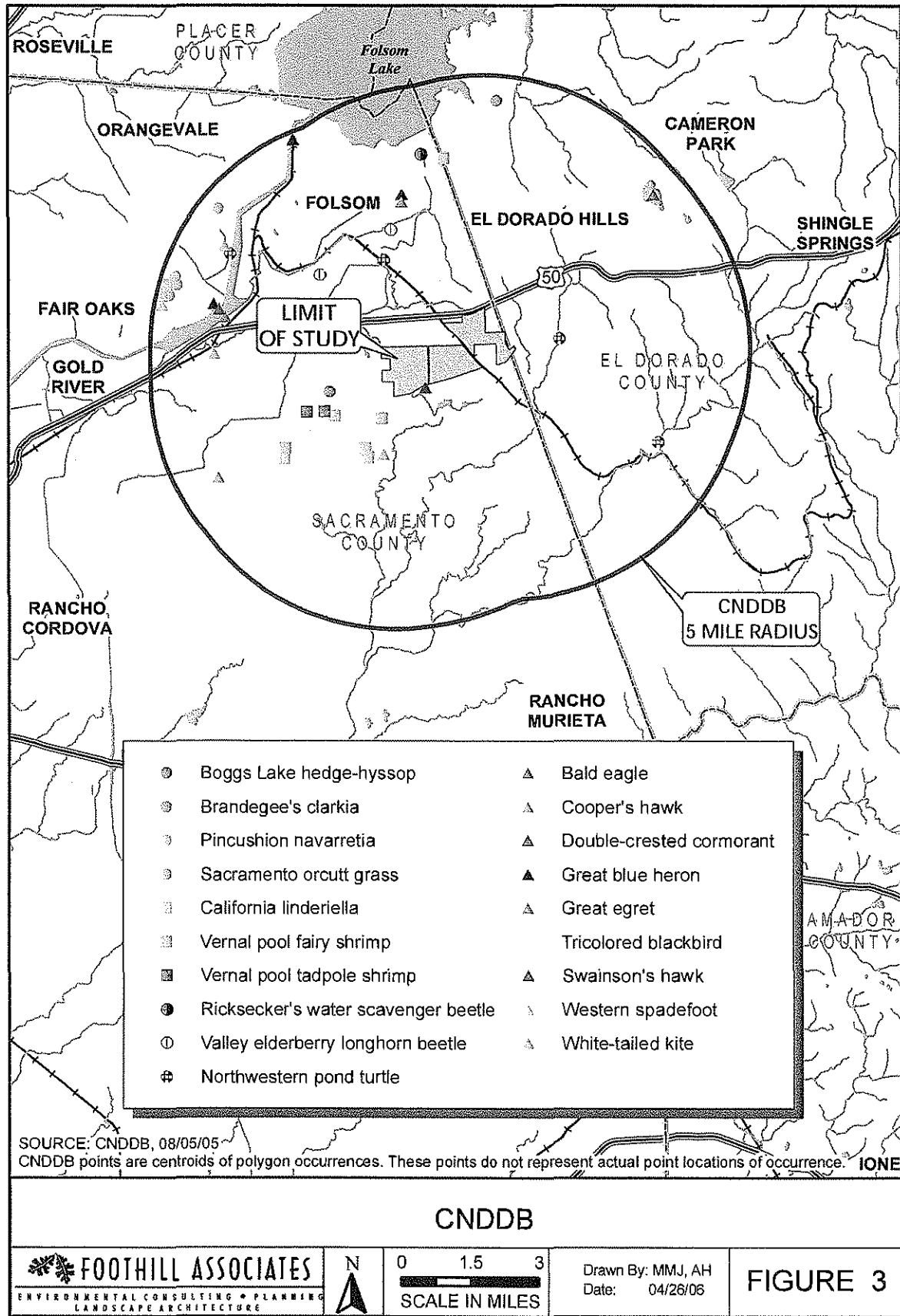
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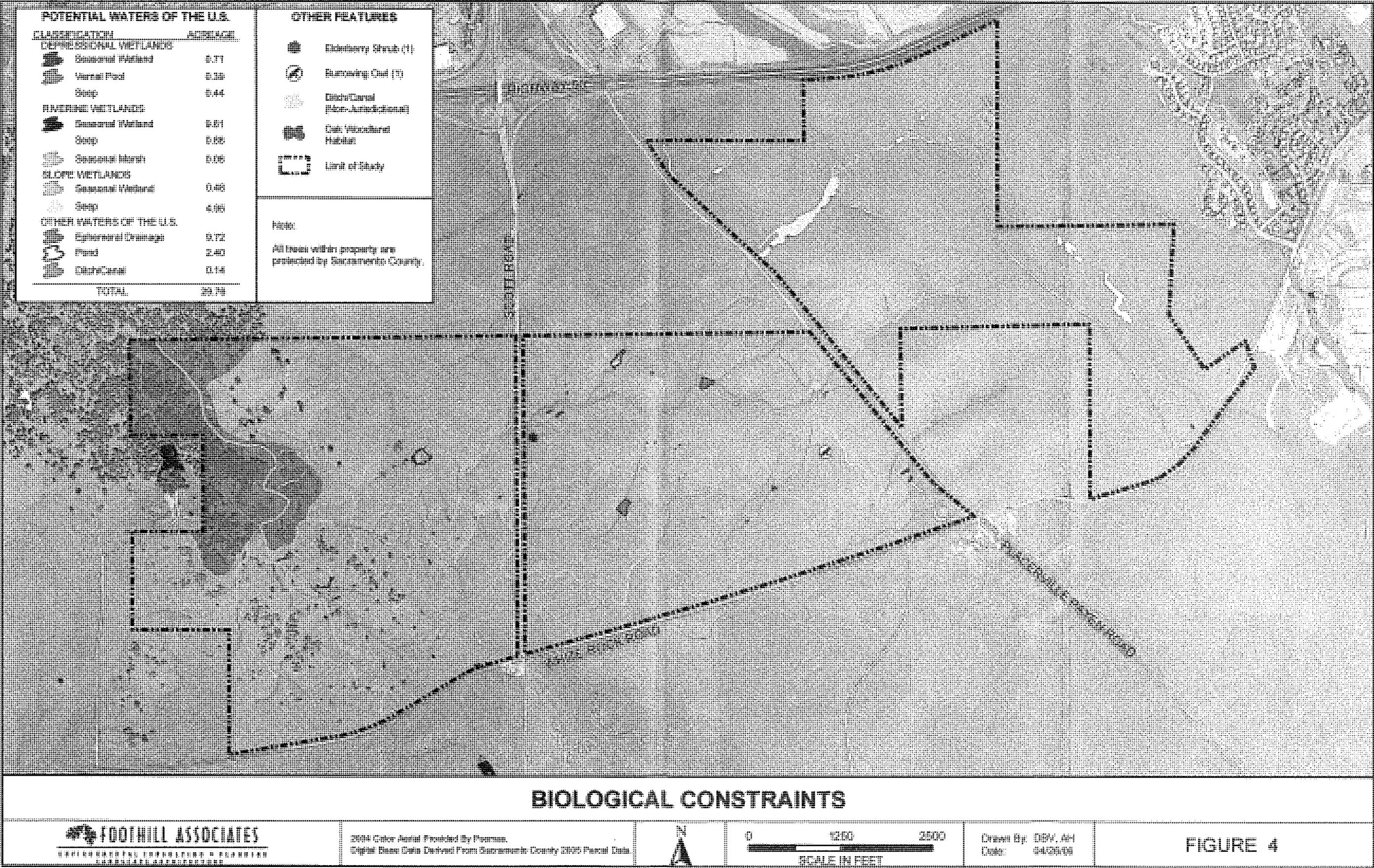
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FOLSOM SOUTH

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## **APPENDIX D6**

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Draft Special-status Species Assessment for Folsom South Area Group,  
Javanifard and Zhargami Parcel

Special-Status Species Assessment  
For  
**Folsom South Area Group**  
**Javanifard and Zhargami Parcel**  
Sacramento County, California

**DRAFT**

1 June 2007

Prepared for:  
**The Hodgson Company**



**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS



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#### **LIST OF ATTACHMENTS**

Attachment A – California Natural Diversity Database (CNDDDB) Report



## INTRODUCTION

At the request of The Hodgson Company, ECORP Consulting, Inc. (ECORP) conducted a special-status species assessment for the 30±-acre Javanifard and Zhargami parcel within the Folsom South Area Group properties, located south of Highway 50, between Prairie City Road and Scott Road in Sacramento County, California (Figure 1. *Project Site and Vicinity*). The site corresponds to a portion of Section 17, Township 9 North, and Range 8 East (MDBM) of the "Folsom, California" 7.5-minute quadrangle (U.S. Department of the Interior, Geological Survey 1980). The approximate center of the site is located at 38° 37' 45" North and 121° 07' 55" West within the Lower American River Watershed (#18020111, U.S. Department of the Interior, Geological Survey 1978).

For the purposes of this assessment, "special-status species" refers to those plant or animal species which:

- Are listed, proposed for listing, or candidates for future listing as threatened or endangered under the federal Endangered Species Act;
- Are listed or candidates for future listing as threatened or endangered under the California Endangered Species Act;
- Meet the definitions of endangered or rare under Section 15380 of the California Environmental Quality Act (CEQA) Guidelines;
- Are identified as a species of special concern by the California Department of Fish and Game (CDFG);
- Birds identified as birds of conservation concern by the U.S. Fish and Wildlife Service (USFWS);
- Plants considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered in California" (Lists 1B and 2);
- Plants listed as rare under the California Native Plant Protection Act (Fish and Game Code of California, Section 1900 et seq.);
- Are fully protected in California in accordance with the Fish and Game Code of California, Sections 3511 (birds), 4700 (mammals), 5050 (amphibians and reptiles), and 5515 (fishes); or



- Occurrences of the species are tracked by the CDFG in the California Natural Diversity Data Base (CNDDB).

The purpose of this special-status species assessment is to assess the potential for occurrence of special-status plant and animal species, or their habitat, within the project site. This special-status species assessment is preliminary and the conclusions and recommendations presented in this report are based upon a literature review, database queries, and limited site reconnaissance. This assessment does not constitute determinate-level field surveys conducted according to agency-promulgated protocols. This report is intended for general planning purposes.

## **METHODOLOGY**

Field visits were conducted by ECORP biologist Dustin Brown on 21 and 29 March 2007. During the site visits, Mr. Brown walked meandering transects through the site searching for special-status species or evidence of their presence or use of the area, as well as the occurrence of potential habitat. The special-status species considered for this site are those that have a reasonable probability of occurring on-site under current site conditions.

Background information was collected regarding the documented or potential occurrence of special-status species within or near the site from a variety of sources including:

- CNDDB record search for the "Buffalo Creek", "Carbondale", "Folsom" and "Folsom SE" CA 7.5-minute quadrangles (CDFG 2003);
- Species List for the "Buffalo Creek", "Carbondale", "Folsom" and "Folsom SE", CA 7.5-minute quadrangles created by the USFWS (USFWS 2007);
- CNPS's Inventory of Rare and Endangered Plants record search for the "Buffalo Creek", "Carbondale", "Folsom" and "Folsom SE", CA 7.5-minute quadrangles (CNPS 2007);
- *Status of Rare, Threatened, and Endangered Animal and Plants of California 2000-2004* (CDFG 2005);
- *Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2001);
- *Fairy Shrimps of California's Puddles, Pools, and Playas* (Eriksen and Belk 1999)

- *Bird Species of Special Concern in California* (Remsen, Jr. 1978);
- *Amphibian and Reptile Species of Special Concern in California* (Jennings and Hayes 1994);
- *Mammalian Species of Special Concern in California* (Williams 1986);
- *California's Wildlife*, Volumes I-III (Zeiner, *et al.* 1988, 1990a, 1990b); and
- *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer, eds. 1988).

Vegetation community classifications discussed in this report are based on the classification systems presented in *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986) and *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer Jr. 1988), but have been modified to reflect the specific conditions observed within the site.

## RESULTS AND DISCUSSION

### Existing Site Conditions

The site is composed of gently rolling terrain and is situated at an elevational range of approximately 320 to 390 feet (ft) above mean sea level. The surrounding land use is primarily rangeland. The site consists of annual grassland and oak woodland and is currently used for livestock grazing. A rural residence and associated barns and outbuildings are located in central and southwestern portions of the site.

Annual grassland is the dominant vegetation community on-site. The annual grassland community is composed primarily of non-native, naturalized Mediterranean grasses and a variety of other weedy species. Non-native grasses observed in this community include medusahead grass (*Taeniatherum caput-medusae*), wild oats (*Avena fatua*), filaree (*Erodium botrys*), ryegrass (*Lolium multiflorum*), barley (*Hordeum murinum*), and vetch (*Vicia* species).

The remainder of the site consists of an oak woodland community. Dominant trees include blue oak (*Quercus douglasii*) and Interior live oak (*Q. wislizenii*). The understory of the woodland is made up of non-native grassland plant species.

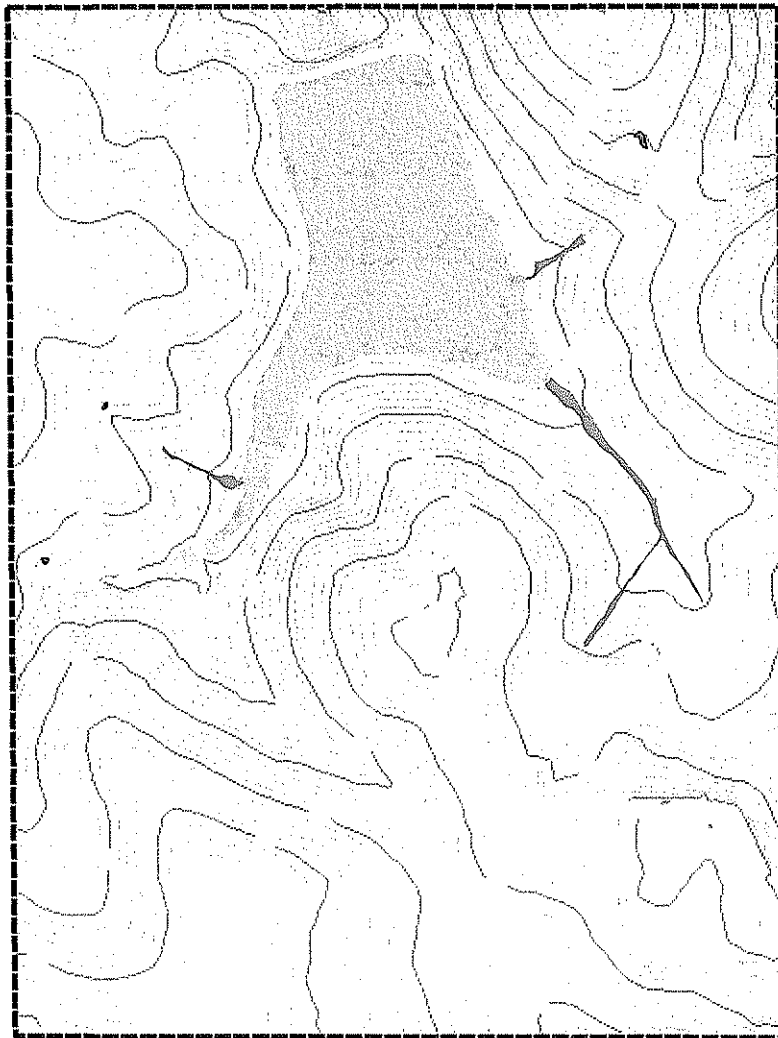
A wetland delineation was conducted at the site in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (U.S. Army Corps of Engineers 2006). Potential waters of the U.S. mapped on-site include wetlands and other waters (Figure 2. *Wetland Delineation*) (ECORP 2007). Ephemeral aquatic features present on-site include a vernal pool, seasonal wetlands, seasonal wetland swales, a seep, and ephemeral drainages. The large pond on-site is a perennial feature with mostly open water. Emergent vegetation is present along the margins of the pond and consists of water primrose (*Ludwigia peploides* var. *peploides*), lily (*Lilium* species), and willow (*Salix* species).

According to the *Soil Survey of Sacramento County, California* (U.S. Department of Agriculture, Soil Conservation Service 1993), one soil unit, or type, has been mapped within the site (Figure 3. *Natural Resources Conservation Service Soil Types*). The soil type is: (237) Whiterock loam, 3 to 30 percent slopes.

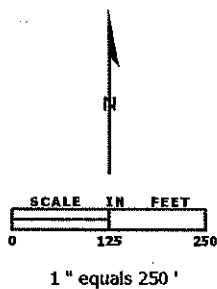
### **Evaluation of Potentially Occurring Special-Status Species**

There are no previously documented occurrences of special-status species within the site in the CNDDDB (CDFG 2003). However, several special-status species occurrences have been documented within an approximate 5-mile radius of the site (Figure 4. *CNDDDB Occurrences of Special-Status Species*). Results of the CNDDDB query for the "Buffalo Creek", "Carbondale", "Folsom" and "Folsom SE", California 7.5-minute quadrangles are included as Attachment A.

Based upon vegetation communities and conditions present on-site, species' known distributive data for the region, and the references cited above, a list of potentially occurring special-status species was developed for the site (Table 1 – *Potentially Occurring Special-Status Species Assessment*).



## WATERS OF THE U.S. ACREAGE <sup>1</sup>

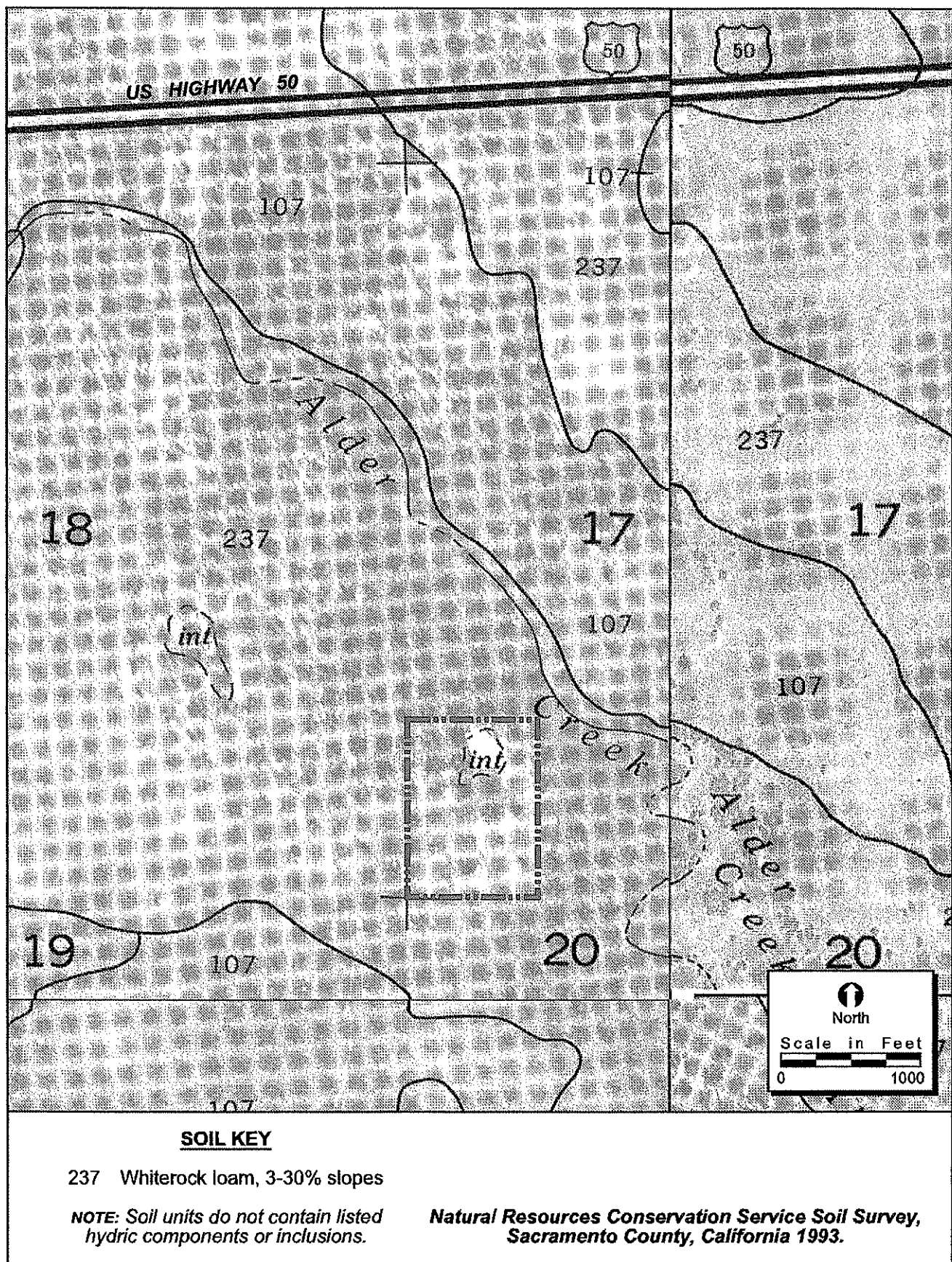


Delineator: D. Brown

CLASSIFICATION	EXISTING ACREAGE
<b>WETLANDS:</b>	
Vernal Pool	0.004
Seasonal Wetland	0.002
Seasonal Wetland Swale	0.119
Seep	0.067
<b>OTHER WATERS:</b>	
Ephemeral Drainage	0.103
Stock Pond	2.535
<b>TOTAL:</b>	<b>2.830</b>

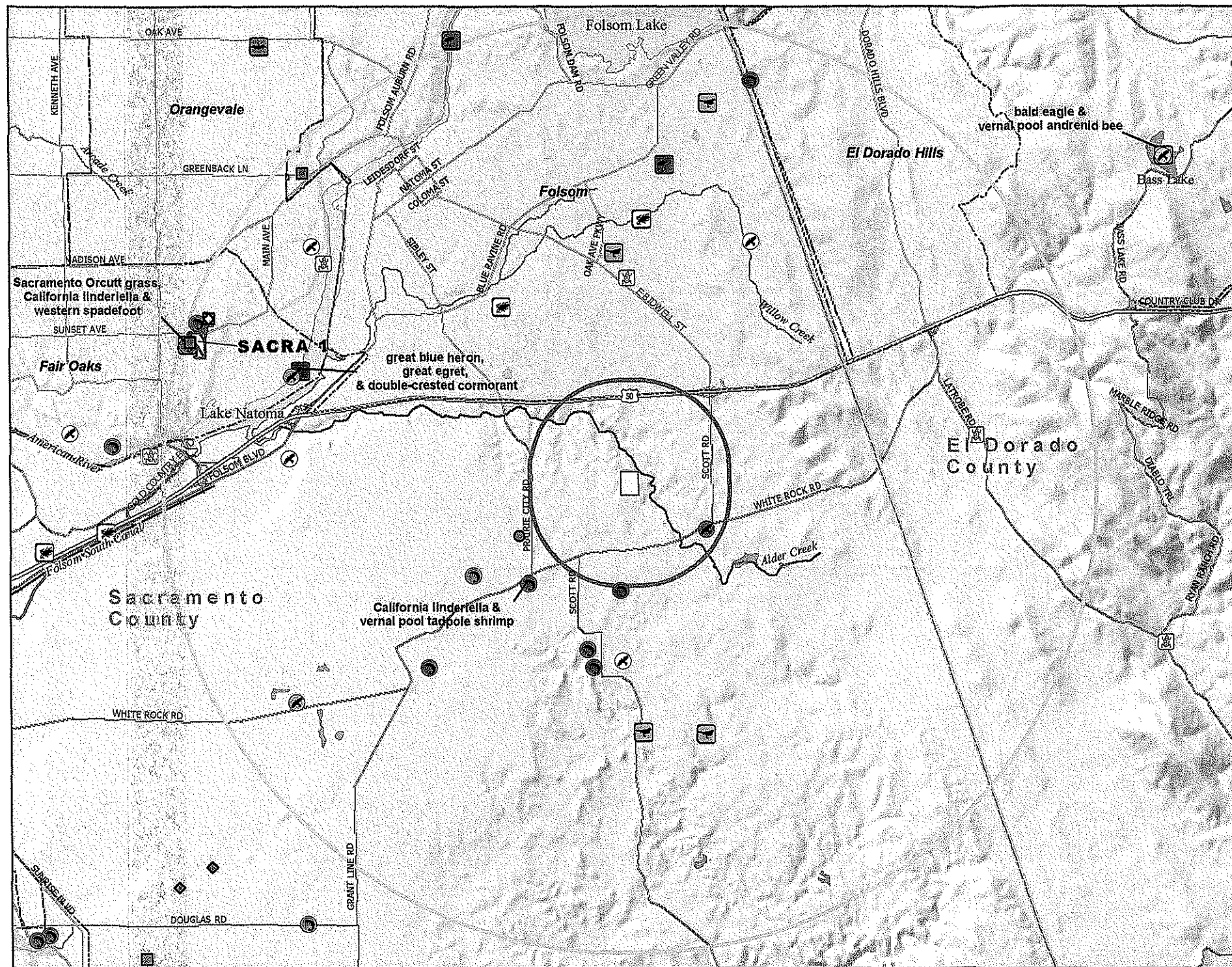
<sup>1</sup> This exhibit depicts information and data produced in strict accord with the wetland delineation methods described in the 1987 Corps of Engineers Wetland Delineation Manual and the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual, Arid West Region and conforms to Sacramento District specifications. However, wetland boundaries have not been legally surveyed and may be subject to minor adjustments if exact locations are required.

FIGURE 2. Wetland Delineation  
2005-429 Javanifard and Zhargami (FSAG)



**FIGURE 3. Natural Resources Conservation Service Soil Types**





## Map Features

### Administrative Boundaries

- City Boundary
- County Boundary
- <sup>1</sup> Project Boundary

### Distance From Site

- 1 mile
- 5 mile

### Transportation Network

- Interstate
- State Highway
- Roads
- Railroads

### Aquatic Features

- Lakes and Reservoirs
- Rivers

### <sup>2</sup> CNDDDB Occurrences

#### Plants

- Boggs Lake hedge-hyssop
- legene
- pincushion navaretta
- Sacramento Orcutt grass
- slender Orcutt grass

#### Invertebrates

- California linderella
- vernal pool tadpole shrimp
- vernal pool fairy shrimp
- Valley elderberry longhorn beetle
- vernal pool andrenid bee

#### Amphibians / Reptiles

- northwestern pond turtle
- western spadefoot

#### Birds

- bald eagle
- Cooper's hawk
- Swainson's hawk
- white-tailed kite
- double-crested cormorant
- great blue heron
- great egret
- tricolored blackbird

#### Mammals

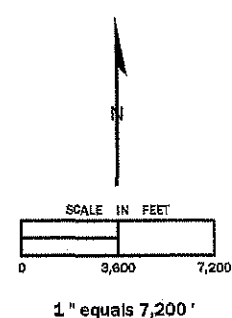
- pallid bat

### <sup>3</sup>Critical Habitat

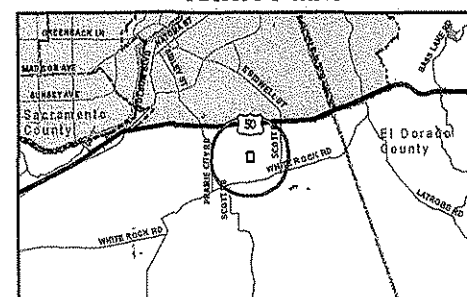
- Sacramento Orcutt Grass

## NOTES

- <sup>1</sup> Project Boundary: Sacramento County GIS Parcel Database
- <sup>2</sup> CDFG California Natural Diversity Database (CNDDDB), March 2007 Update (GIS Shapefile)
- <sup>3</sup> USFWS Final Critical Habitat, February 2007 (GIS Shapefiles)
- Map Projection: California State Plane Zone II (NAD83) feet



## VICINITY MAP



Project Located on USGS 7.5' Quadrangle: Folsom, CA

## FIGURE 4. CNDDDB OCCURRENCES OF SPECIAL-STATUS SPECIES

2005-429 Folsom South Area Group (Javanifard and Zhargami)

Location: J:\GIS_Maps\2005-429_Folsom_Area_South_Group\Javanifard_Zhargami	Map Name: Javanifard_cnddbV2.mxd	Project Manager: BG
Original Production Date: 03/20/07	Revision:	GIS Specialist: EK
Printing Date: 05/14/07	Scale: 1" equals 7,200'	



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Table 1 - Potentially Occurring Special-Status Species

Common Name	Scientific Name	Federal ESA Status <sup>1</sup>	California ESA Status <sup>1</sup>	Other Status <sup>1</sup>	Habitat Description	Approximate Survey Dates
<b>Plants</b>						
Dwarf downingia	<i>Downingia pusilla</i>	-	-	2	vernal pool/wetlands	March-May
Tuolumne button-celery	<i>Eryngium pinnatisectum</i>	-	-	1B	Foothill Woodland, Yellow Pine Forest, Freshwater Wetlands	June-August
Boggs Lake hedge-hyssop	<i>Gratiola heterosepala</i>	-	CE	1B	vernal pools	April-August
Ahart's dwarf rush	<i>Juncus leiostermus</i> var. <i>ahartii</i>	-	-	1B	vernal pools	March-May
Legenere	<i>Legenere limosa</i>	-	-	1B	vernal pools	April-June
Pincushion navarretia	<i>Navarretia myersii</i> ssp. <i>myersii</i>	-	-	1B	vernal pools	May
Slender Orcutt grass	<i>Orcuttia tenuis</i>	FT	CE	1B	vernal pools	May-October
Sacramento Orcutt grass	<i>Orcuttia viscida</i>	FE	CE	1B	vernal pools	April-July
Sanford's arrowhead	<i>Sagittaria sanfordii</i>	-	-	1B	marsh, creeks, ditches	May-October
<b>Invertebrates</b>						
Conservancy fairy shrimp	<i>Branchinecta conservatio</i>	FE	-	-	vernal pools/wetlands	November-April
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	FT	-	-	vernal pools/wetlands	November-April
Midvalley fairy shrimp	<i>Branchinecta mesoallensis</i>	-	-	CNDDB	vernal pools/wetlands	November-April
Vernal pool tadpole shrimp	<i>Lepidurus packardii</i>	FE	-	-	vernal pools/wetlands	November-April
California linderiella	<i>Linderiella occidentalis</i>	-	-	CNDDB	vernal pools/wetlands	November-April
Valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	FT	-	-	elderberry shrubs	any season
<b>Amphibians</b>						
California tiger salamander (Central California DPS) <sup>2</sup>	<i>Ambystoma californiense</i>	FT	-	CSC	vernal pools, wetlands/adjacent grassland	March-May
Western spadefoot toad	<i>Spea hammondi</i>	-	-	CSC	vernal pools, wetlands/adjacent grassland	March-May
California red-legged frog <sup>2</sup>	<i>Rana aurora draytonii</i>	FT	-	CSC	streams, marshes, ponds	May 1-November 1
<b>Reptiles</b>						
Northwestern pond turtle	<i>Emys</i> (= <i>Clemmys</i> ) <i>marmorata marmorata</i>	-	-	CSC	creeks, ponds	April-October
<b>Birds</b>						
White-tailed kite (nesting)	<i>Elanus leucurus</i>	-	-	CFP	woodland, grassland	March-June
Northern harrier (nesting)	<i>Circus cyaneus</i>	-	-	CSC	marsh, grassland	April-September
Sharp-shinned hawk (wintering)	<i>Accipiter striatus</i>	-	-	CSC	woodland	nest (April-August); winter CV (September-April)
Cooper's hawk (nesting)	<i>Accipiter cooperii</i>	-	-	CSC	woodland	April-July
Swainson's hawk (nesting)	<i>Buteo swainsoni</i>	-	CT	BCC	grassland, riparian	March-August
Ferruginous hawk (wintering)	<i>Buteo regalis</i>	-	-	CNDDB	grassland	November-February
Golden eagle (wintering)	<i>Aquila chrysaetos</i>	-	-	BCC, CSC, CFP	grassland	nest (February-August); winter CV (October- February)
Merlin (wintering)	<i>Falco columbarius</i>	-	-	CSC	woodland, grassland	September-April
Prairie falcon (wintering)	<i>Falco mexicanus</i>	-	-	BCC, CSC	grassland	October-February
Burrowing owl (burrow sites)	<i>Athene cunicularia</i>	-	-	BCC, CSC	grassland	March-August

Loggerhead shrike

*Lanius ludovicianus*

-

-

BCC, CSC grassland, woodland

March-July

**Table 1 - Potentially Occurring Special-Status Species (Continued)**

Common Name	Scientific Name	Federal ESA Status <sup>1</sup>	California ESA Status <sup>1</sup>	Other Status <sup>1</sup>	Habitat Description	Approximate Survey Dates
Lark sparrow (nesting)	<i>Chondestes grammacus</i>	-	-	CNDDDB	oak woodland, scrub	year round res. (nests April-May)
Tricolored blackbird (nesting colony)	<i>Agelaius tricolor</i>	-	-	BCC, CSC	marsh, grassland	April-June
<b>Mammals</b>						
Yuma myotis	<i>Myotis yumanensis</i>	-	-	CNDDDB	Riparian woodland, caves, mines, buildings, bridges, rock crevices, trees	April-September
Hoary bat	<i>Lasiurus cinereus</i>	-	-	CNDDDB	dense foliage of medium to large trees	April-September
Western red bat	<i>Lasiurus blossevillei</i>	-	-	CNDDDB	riparian woodlands, orchards	April-September
Townsend's big-eared bat	<i>Corynorhinus townsendii townsendii</i>	-	-	CSC, CNDDDB	caves, mines, buildings, rock crevices, trees	April-September
Pallid bat	<i>Antrozous pallidus</i>	-	-	CSC, CNDDDB	mines, man-made structures, rock outcrops, and woodland near open grasslands for foraging	April-September
American badger	<i>Taxidea taxus</i>	-	-	CSC	annual grassland	any season

<sup>1</sup> Status Codes:

- FE - Federal ESA listed, Endangered.
- FT - Federal ESA listed, Threatened.
- FPE - Formally Proposed for federal ESA listing as Endangered.
- FPT - Formally Proposed for federal ESA listing as Threatened.
- FPD - Listed under Federal ESA, but formally proposed for delisting.
- Fd - Formally Delisted (delisted species are monitored for 5 years).
- FC - Candidate for federal ESA listing as Threatened or Endangered.
- BCC - U. S. Fish and Wildlife Service Bird of Conservation Concern (USFWS, 2002).
- CE - California ESA or Native Plant Protection Act listed, Endangered.
- CT - California ESA or Native Plant Protection Act listed, Threatened.
- CR - California ESA or Native Plant Protection Act listed, Rare.
- CC - Candidate for California ESA listing as Endangered or Threatened.
- CFP - Fish and Game Code of California Fully Protected Species (§3511-birds, §4700-mammals, §5050-reptiles/amphibians).
- CSC - California Department of Fish and Game Species of Special Concern (CDFG, updated August 2004).
- 1A - California Native Plant Society/Presumed extinct.
- 1B - California Native Plant Society/Rare or Endangered in California and elsewhere.
- 2 - California Native Plant Society/Rare or Endangered in California, more common elsewhere.
- 4 - California Native Plant Society/Plants of Limited Distribution.
- CNDDDB - Species that is tracked by CDFG's Natural Diversity Database but does not have any of the above special-status designations otherwise.

<sup>2</sup> Species considered unlikely to occur given current site conditions and lack of known occurrences in the vicinity of the site.

## *Plants*

### Dwarf Downingia

Dwarf downingia (*Downingia pusilla*) is not listed pursuant to either the California or federal Endangered Species Acts; however, this species has been identified by the CNPS as a List 2 species. Dwarf downingia is a small herbaceous annual plant herb that occurs in vernal pools, seasonal wetland swales, and man-made features such as tire ruts, scraped depressions, stock ponds, and roadside ditches (Hickman 1993, CNPS 2001, CDFG 2003). This species blooms from March through May and typically occurs at elevations from sea level to 1,460 ft (CNPS 2001). In California, it occurs in Merced, Mariposa, Napa, Placer, Sacramento, Solano, Sonoma, Stanislaus, Tehama, and Yuba counties (CNPS 2001).

There are no CNDDDB occurrences for dwarf downingia within 5 miles of the site (see Figure 4). The vernal pool and seasonal wetlands on-site represent potential habitat for this species.

### Tuolumne Button-Celery

Tuolumne button-celery (*Eryngium pinnatisectum*) is not listed pursuant to either the California or federal Endangered Species Acts; however, it is designated as a CNPS List 1B species. This species is a spiny semi-aquatic, annual or perennial that occurs in vernal pools and seasonal wetland features within cismontane woodland and lower montane coniferous forest habitats (CNPS 2001). This species typically occurs at elevations ranging from 230 to 3,000 ft above mean sea level and blooms from June through August (CNPS 2001). The current range of this species includes Amador, Calaveras, Sacramento, and Tuolumne counties (CNPS 2001, CDFG 2005).

There are no CNDDDB occurrences for Tuolumne button-celery within 5 miles of the site (CDFG 2003). The vernal pool and seasonal wetlands on-site represent potential habitat for this species.

### Boggs Lake Hedge-Hyssop

Boggs Lake hedge-hyssop (*Gratiola heterosepala*) is listed as endangered pursuant to the California Endangered Species Act and is a CNPS List 1B species. This species is a small, semi-aquatic, herbaceous annual that occurs in shallow waters or moist clay soils of vernal pools and lake margins up to 7,800 ft in elevation (CNPS 2001, CDFG 2005). Boggs Lake hedge-hyssop generally blooms from April through August (CNPS 2001). The current range of this species includes Fresno, Lake, Lassen, Madera, Merced, Modoc, Placer, Sacramento, Shasta, Siskiyou, San Joaquin, Solano, and Tehama counties and one occurrence in Lake County, Oregon (CNPS 2001, CDFG 2005).

The nearest CNDDDB occurrence for Boggs Lake hedge-hyssop is located approximately 1 mile west of the site (CDFG 2003). The vernal pool and seasonal wetlands on-site represent potential habitat for this species.

### Ahart's Dwarf Rush

Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*) is not listed pursuant to either the California or federal Endangered Species Acts; however, it is designated as a CNPS List 1B species. This species is an herbaceous annual that occurs in vernal pool margins and mesic valley and foothill grasslands at elevations ranging from 100 to 330 ft (CNPS 2001). Ahart's dwarf generally blooms from March through May (CNPS 2001). The current range of this species includes Butte, Calaveras, Placer, Sacramento, and Yuba counties (CNPS 2001).

There are two CNDDDB occurrences for Ahart's dwarf rush within 5 miles of the site (CDFG 2003) (see Figure 4). The vernal pool and seasonal wetlands on-site represent potential habitat for this species.

### Legenere

Legenere (*Legenere limosa*) is not listed pursuant to either the California or federal Endangered Species Acts; however, it is designated as CNPS List 1B species. This annual herb has been

documented in a variety of seasonally inundated aquatic features including seasonal wetlands, wetland swales, marshes, vernal pools, artificial ponds, and floodplains of intermittent drainages at elevations up to 2,900 ft above mean sea level (CNPS 2001, CDFG 2003). *Legenere* blooms from April through June (CNPS 2001). *Legenere* is known from Lake, Napa, Placer, Sacramento, Shasta, San Mateo, Solano, Sonoma, Stanislaus, and Tehama counties (CNPS 2001). However, the species is believed to have been extirpated from Sonoma and Stanislaus counties (CNPS 2001).

The nearest occurrences of this species documented in the CNDDDB are located approximately 6 miles southwest of the site (CDFG 2003). The vernal pool and seasonal wetlands on-site represent potential habitat for this species.

#### Pincushion Navarretia

Pincushion navarretia (*Navarretia myersii* ssp. *myersii*) is not listed pursuant to either the California or federal Endangered Species Acts; however, this species has been identified by the CNPS as a List 1B species. This species is an herbaceous annual that occurs in vernal pools at elevations ranging from 65 to 1,100 ft above mean sea level (CNPS 2001), and typically blooms in May (CNPS 2001, CNPS 2007). The range of pincushion navarretia includes Amador, Lake, Merced, and Sacramento counties (CNPS 2001, CNPS 2007).

The nearest CNDDDB occurrence for pincushion navarretia is located approximately 5 miles west of the site (CDFG 2003). The vernal pool and seasonal wetlands on-site represent potential habitat for this species.

#### Slender Orcutt Grass

Slender Orcutt grass (*Orcuttia tenuis*) is listed in accordance with both the federal and California Endangered Species Acts as threatened and endangered, respectively. This species occurs in vernal pools at elevations ranging from 115 to 5,775 ft above mean sea level (CNPS 2001). Slender Orcutt grass is an annual herb that blooms from May through October (CNPS 2001), occurring primarily on substrates of volcanic origin (Crampton 1959, Corbin and Schoolcraft

1989; *as cited in* USFWS 2003). This species is known to occur in the same type of vernal pool complexes as Sacramento Orcutt grass in Sacramento County; however, these species have not been observed co-existing in the same vernal pool (USFWS 2003). The median area of pools occupied by populations studied by Stone *et al.* (1988, *as cited in* USFWS 2003) was 1.6 acres and ranged from 0.2 to 111.0 acres (USFWS 2003). The geographic range of slender Orcutt grass includes the following counties: Lake, Lassen, Plumas, Sacramento, Shasta, Siskiyou, and Tehama (CNPS 2001).

The nearest CNDDDB occurrence for slender Orcutt grass is located approximately 7 miles southwest of the site (CDFG 2003). The vernal pool and seasonal wetlands on-site represent potential habitat for this species.

#### Sacramento Orcutt Grass

Sacramento Orcutt grass (*Orcuttia viscida*) is listed as endangered in accordance with both the federal and California Endangered Species Acts. Sacramento Orcutt grass is endemic to the southeastern Sacramento Valley (Keeler-Wolf *et al.* 1998, *as cited in* USFWS 2003), with all known occurrences restricted to Sacramento County. Sacramento Orcutt grass is an annual herb that occurs in vernal pools at elevations ranging from 100 to 330 ft above sea level (CNPS 2001), and blooms from April through July (CNPS 2001). The median area of occupied pools discovered prior to 1988 was 0.69 acre and ranged from 0.25 to 2.03 acres (USFWS 2003). Known occurrences of this species within the general region are limited to a small area east of Mather Field, Phoenix Field Ecological Reserve, Phoenix Park (introduced population), and an area near Rancho Seco Lake (USFWS 2003).

The nearest CNDDDB occurrence for Sacramento Orcutt grass is located approximately 5 miles west of the site (CDFG 2003). The vernal pool and seasonal wetlands on-site represent potential habitat for this species.

### Sanford's Arrowhead

Sanford's arrowhead (*Sagittaria sanfordii*) is not listed pursuant to either the California or federal Endangered Species Acts; however, it is designated as a CNPS List 1B species. This species is an herbaceous perennial that occurs in shallow freshwater marshes, swamps, ponds, and ditches up to 2,000 ft in elevation, and blooms from May through October (CNPS 2001). The known range of Sanford's arrowhead includes Butte, Del Norte, Fresno, Kern, Merced, Orange, Sacramento, San Joaquin, Shasta, Tehama, and Ventura counties, although this species is believed to have been extirpated from Orange and Ventura counties (CNPS 2001).

There are no CNDDB occurrences for Sanford's arrowhead within 5 miles of the site (CDFG 2003). However, the pond on-site represents potential habitat for this species.

### *Invertebrates*

#### Conservancy Fairy Shrimp

The Conservancy fairy shrimp (*Branchinecta conservatio*) was listed as an endangered species in accordance with the Federal Endangered Species Act, on 19 September 1994 (USFWS 1994). This species is usually associated with cool-water pools, which are low to moderate in dissolved solids (Eriksen and Belk 1999). Conservancy fairy shrimp have been netted from November to late April, at water temperatures ranging from as low as 41°F (5°C) early in the ponding cycle, to as high as 75°F (24°C) near the end of the season (Syrdahl 1993, *as cited in* Eriksen and Belk 1999). Hatching generally occurs in the week following inundation of the pool at temperatures around 50°F (10°C). Maturation takes at least 19 days; if pool temperatures slowly increase to at least 68°F (20°C); however, the average time to maturity is 49 days (Eriksen and Belk 1999).

The distribution of Conservancy fairy shrimp is limited to the northern two-thirds of the Central Valley at an elevation range of approximately 16 – 475 ft above mean sea level (Eriksen and Belk 1999). Populations of *B. conservatio* have been documented within a limited range and include the Glide Tule Elk Reserve (Yolo County), Vina Plains (Tehama County), Sacramento National Wildlife Refuge (NWR) (Glenn County), along Highway 99 (Butte County), Jepson

Prairie Preserve and the surrounding area immediately east of Travis Air Force Base (Solano County), Mapes Ranch (Stanislaus County), and near Haystack Mountain northeast of Merced and the Merced/San Luis NWR complex (Merced County) (Eriksen and Belk 1999, CDFG 2003). In addition, there is one occurrence from Beale Air Force Base (AFB) (Yuba County) where an undetermined number of *B. conservatio* were observed and "one specimen was collected and deposited in personal collection of D.G. Alexander" (CDFG 2003).

There are no CNDDDB occurrences for Conservancy fairy shrimp within 10 miles of the site (CDFG 2003). The vernal pool and seasonal wetlands on-site represent potential habitat for this species.

#### Vernal Pool Fairy Shrimp

The vernal pool fairy shrimp (*Branchinecta lynchi*) is listed as threatened in accordance with the federal Endangered Species Act. Vernal pool fairy shrimp may occur in seasonal ponds, vernal pools, and swales during the wet season, which generally occurs from December through May. This species can be found in a variety of pool sizes, ranging from less than 0.001 acre to over 24.5 acres (Eriksen and Belk 1999). The shrimp hatch from cysts when colder water (50°F [10°C] or less) fills the pool and mature in as few as 18 days, under optimal conditions (Eriksen and Belk 1999). At maturity, mating takes place and cysts are dropped. Vernal pool fairy shrimp occur in disjunct patches dispersed across California's Central Valley from Shasta County to Tulare County, the central and southern Coast Ranges from northern Solano County to Ventura County, and three areas in Riverside County (USFWS 2003).

There are two CNDDDB occurrences for vernal pool fairy shrimp within 5 miles of the site (CDFG 2003) (see Figure 4). The vernal pool and seasonal wetlands on-site represent potential habitat for this species.

#### Midvalley Fairy Shrimp

The Midvalley fairy shrimp (*Branchinecta mesoivallensis*) is not listed pursuant to either the California or federal Endangered Species Acts, but occurrences of this species are tracked by



the CNDDDB. The Midvalley fairy shrimp was formally described as a species in 2000 (Belk and Fugate 2000). This species typically occurs in small, shallow vernal pools, swales, and various artificial ephemeral wetland types (e.g., roadside puddles, scrapes and ditches, and railroad toe-drain pools) (Belk and Fugate 2000, USFWS 2004). Midvalley fairy shrimp have been collected from late January to early April (Eriksen and Belk 1999). The cysts typically hatch in the first week of pool filling if water temperatures are near 10°C (50°F) (Eriksen and Belk 1999). This species has been documented in several California counties including: Sacramento, Solano, Contra Costa, San Joaquin, Madera, Merced, Fresno, and Yolo (Belk and Fugate 2000, CDFG 2003, USFWS 2004).

There are no CNDDDB occurrences for Midvalley fairy shrimp within 5 miles of the site (CDFG 2003). The vernal pool and seasonal wetlands on-site represent potential habitat for this species.

#### Vernal Pool Tadpole Shrimp

The vernal pool tadpole shrimp (*Lepidurus packardii*) is listed as endangered pursuant to the federal Endangered Species Act. This species inhabits vernal pools containing clear to highly turbid water, ranging in size from 0.001 to 89.0 acres (USFWS 1994). Vernal pool tadpole shrimp are distinguished from other vernal pool branchiopods discussed in this report by a large, shield like carapace that covers the anterior half of their body (USFWS 2003). Cysts hatch during the wet season and the shrimp reach maturity in a few weeks. This species matures slowly and is long lived, relative to other species. Vernal pool tadpole shrimp will continue to grow as long as the pools they occur in remain inundated, and in some instances can survive for six months or longer (USFWS 2003). The geographic range of vernal pool tadpole shrimp extends from Shasta County to northern Tulare County in California's Central Valley, and in the central coast range from Solano County to Alameda County (USFWS 2003).

There are two CNDDDB occurrences for vernal pool tadpole shrimp within 5 miles of the site (CDFG 2003) (see Figure 4). The vernal pool and seasonal wetlands on-site represent potential habitat for this species.

### California Linderiella

California linderiella (*Linderiella occidentalis*) is not listed pursuant to either the California or federal Endangered Species Acts; however, occurrences of this species are tracked by the CNDDDB. This species is endemic to California's vernal pools and seasonal ponds. California linderiella inhabit a variety of seasonal ponds, vernal pools, and swales. The shrimp hatch from cysts during late December when water temperatures are below 68°F (20°C), more commonly at 50°F (10°C) (Eriksen and Belk 1999). California linderiella, due to its tolerance for warmer water, may persist until the pools evaporate completely (Helm 1998). This species ranges from Tehama County south through the Central Valley to Fresno County with disjunct populations in Mendocino and Lake Counties south to Ventura and Santa Barbara Counties (Eriksen and Belk 1999).

There are six CNDDDB occurrences for California linderiella within 5 miles of the site (CDFG 2003) (see Figure 4). The vernal pool and seasonal wetlands on-site represent potential habitat for this species.

### Valley Elderberry Longhorn Beetle

The Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) is listed as threatened in accordance with the federal Endangered Species Act (USFWS 1980). The USFWS recently released a status review for the Valley elderberry longhorn beetle in which it determined that this species is likely no longer in danger of extinction and recommended that it be delisted (USFWS 2006). However, the USFWS is required to undertake a separate rule-making process, distinct from the status review, in order to implement formal changes in the status of a listed species.

The Valley elderberry longhorn beetle is completely dependent on its host plant, elderberry (*Sambucus* species), which occurs in riparian and other woodland and scrub communities (USFWS 1999). Elderberry plants, located within the range of the beetle, with one or more stems measuring 1.0 inch or greater in diameter at ground level are considered to be habitat for the species (USFWS 1999). The adult flight season extends from late March through June.

During that time the adults feed on foliage and perhaps flowers, mate, and females lay eggs on living elderberry plants (Barr 1991). Following hatching, the larvae bore into live elderberry stems, where they develop for one to two years feeding on the pith. The final larval stage creates an exit hole in the stem and then plugs the hole and remains in the stem through pupation (Talley *et al.* 2007). The beetle's current distribution is patchy throughout California's Central Valley, from Shasta County to Kern County, and associated foothills up to an elevation of approximately 3,000 ft (USFWS 1999).

There are two CNDDDB occurrences for Valley elderberry longhorn beetle within 5 miles of the site (CDFG 2003). No elderberry shrubs were observed within the site during field surveys conducted by ECORP in March of 2007. However, this effort did not represent a determinate elderberry survey and a future elderberry survey will need to be conducted to establish absence/presence.

### *Fish*

There appear to be no immediate fish issues within the site. However, impacts to water quality may affect down stream conditions for federally listed fish species, such as Central Valley Steelhead (*Onchorynchus mykiss*, federal-threatened) and fall-run Chinook salmon (*Oncorhynchus tshawytscha*, federal candidate for listing and CDFG species of special concern).

### *Amphibians*

#### California Tiger Salamander

The Central Valley population of the California tiger salamander (*Ambystoma californiense*) is listed as a threatened species pursuant to the federal Endangered Species Act and is designated as a species of special concern by the CDFG. Although there are no documented occurrences (current or historic) of California tiger salamander near the Javanifard and Zhargami project site or vicinity, the project site lies within the assumed range for the species. California tiger salamanders typically occur within annual grassland/vernal pool landscapes, but often utilize adjacent habitat types, particularly if potential breeding habitat (e.g., stock ponds or other

seasonal wetlands) is present. The vernal pool and seasonal wetlands present on-site are very shallow and appear to have short hydro periods. The large pond appears to support a large population of introduced game fish. In addition, the nearest documented occurrence of this species (Occurrence No. 424) is located approximately 15 miles south of the site, near Highway 104. The occurrence of the California tiger salamander on-site is considered unlikely given current site conditions and the lack of known occurrences in the vicinity of the site. However, the USFWS may require a habitat assessment for California tiger salamander. While unlikely, the USFWS may require determinate surveys.

#### Western Spadefoot Toad

The western spadefoot (*Spea hammondi*) toad is not listed pursuant to either the California or federal Endangered Species Acts; however, it is designated as a CDFG species of special concern. Necessary habitat components of the western spadefoot toad include suitable underground retreats and breeding ponds. Suitable breeding sites include temporary rain pools, such as vernal pools and seasonal wetlands, or pools within portions of intermittent drainages (Jennings and Hayes 1994). Spadefoot toads spend most of their adult life within underground burrows or other suitable refugia, such as rodent burrows. In California, western spadefoot toads are known to occur from the Redding area, Shasta County southward to northwestern Baja California, at elevations below 4,475 ft (Jennings and Hayes 1994).

There is one CNDDDB occurrence for western spadefoot toad within 5 miles of the site (CDFG 2003). This occurrence is located in the Phoenix Field Ecological Reserve, approximately five miles west of the project area. Additional occurrences of this species have been documented from vernal pool landscapes south of the site. The vernal pool, seasonal wetlands, and ephemeral drainages on-site represent potential breeding habitat for this species.

#### California Red-Legged Frog

The California red-legged frog (*Rana aurora draytonii*) is listed as a threatened species pursuant to the federal Endangered Species Act and is designated as a species of special concern by the CDFG. The subspecies has experienced a 70 percent reduction in its range in California due to

habitat alteration, excessive harvest, and introduction of non-native predators, especially bullfrogs (*Rana catesbeiana*) and introduced fish species. Current information suggests that the California red-legged frog has been extirpated from most of its Sierra Nevada range (Jennings 1996). Although considered extirpated in the Central Valley, a limited number of drainages in the foothills of the Sierra Nevada are known to support California red-legged frogs (USFWS 2005).

California red-legged frog breeding habitat includes coastal lagoons, marshes, springs, permanent and semi-permanent natural ponds, and ponded and backwater portions of streams. This species also breeds in artificial impoundments including stock ponds, irrigation ponds, and siltation ponds. The large pond on-site represents potential California red-legged frog breeding habitat. However, due to the presence of introduced fish and bullfrogs within the pond and the lack of known occurrences in the vicinity of the site, the occurrence of California red-legged frogs on-site is considered highly unlikely. However, the USFWS may require a habitat assessment and/or determinate surveys for California red-legged frog. The USFWS has taken a more conservative/cautious position on this species given newly discovered populations in the Sierra Nevada foothills.

The nearest CNDDDB occurrence (Occurrence No. 814) of California red-legged frog is located approximately 7 miles north of the site. This was an observation of a single frog near Folsom Lake in 2005 that has not been verified and is considered suspect. The nearest documented breeding occurrence (Occurrence No. 586) of California red-legged frogs is located approximately 30 miles east of the site in Spivey Pond, near Pollock Pines.

## *Reptiles*

### Northwestern Pond Turtle

The northwestern pond turtle (*Emys* [= *Clemmys*] *marmorata marmorata*) is not listed pursuant to either the California or federal Endangered Species Acts; however, it is designated as a CDFG species of special concern. Northwestern pond turtles occur in a variety of fresh and brackish water habitats including marshes, lakes, ponds, and slow moving streams (Jennings and Hayes

1994). This species is primarily aquatic; however, they typically leave aquatic habitats in the fall to reproduce and to overwinter (Jennings and Hayes 1994). Deep, still water with abundant emergent woody debris, overhanging vegetation, and rock outcrops is optimal for basking and thermoregulation. Although adults are habitat generalists, hatchlings and juveniles require specialized habitat for survival through the first few years. Hatchlings require shallow water habitat with relatively dense submergent or short emergent vegetation in which to forage.

Northwestern pond turtles are typically active between March and November. Mating generally occurs during late April and early May and eggs are deposited between late April and early August (Jennings and Hayes 1994). Eggs are deposited within excavated nests in upland areas, with substrates that typically have high clay or silt fractions, usually in the vicinity of aquatic habitats (Jennings and Hayes 1994). The majority of nesting sites are located within 650 ft of the aquatic habitat; however, sites have been documented as far as 1,310 ft from the aquatic habitat.

There are three CNDDDB occurrences for northwestern pond turtle within 5 miles of the site (CDFG 2003). ECORP biologists observed several adult northwestern pond turtles within the large pond on-site during field surveys conducted in March of 2007.

## *Birds*

### White-Tailed Kite

White-tailed kite (*Elanus leucurus*) is not listed pursuant to either the California or federal Endangered Species Acts; however, the species is fully protected pursuant to Section 3511 of the Fish and Game Code of California. This species is a yearlong resident in valley lowlands and is primarily found in or near foraging areas such as open grasslands, meadows, farmlands, savannahs, and emergent wetlands. White-tailed kites typically nest from March through June in trees within riparian, oak woodland, and savannah communities of the Central Valley and Coast Range.

Large trees scattered throughout the site provide potential nesting habitat for white-tailed kites. There are no white-tailed kite nesting records within the site (CDFG 2003). However, the CNDDDB contains three occurrences of this species within 5 miles of the project (CDFG 2003). The nearest of these occurrences is located approximately 2 miles south of the site. No white-tailed kites were observed on-site during field surveys conducted by ECORP in March of 2007.

#### Northern Harrier

The northern harrier (*Circus cyaneus*) is not listed pursuant to either the California or federal Endangered Species Acts; however, it is considered to be a species of special concern by the CDFG. This species is known to nest within the Central Valley, along the Pacific Coast, and in northeastern California. The northern harrier is a ground nesting species and typically nests in emergent wetland/marsh, open grasslands, or savannah communities. Foraging occurs within a variety of open environments such as marshes, agricultural fields, and grasslands.

The annual grassland community on-site provides potential nesting and foraging habitat for northern harrier. No northern harriers were observed within the site during field surveys conducted by ECORP in March of 2007.

#### Sharp-Shinned Hawk

Sharp-shinned hawk (*Accipiter striatus*) is not listed pursuant to either the California or federal Endangered Species Acts; however, it is designated as a species of special concern by CDFG. The species is a common migrant and winter resident in the Central Valley of California. A wide variety of communities, with the exception of open prairie, bare desert, and alpine, are used during winter (Zeiner *et al.* 1990a). Breeds in ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine communities (Zeiner *et al.* 1990a). Nests are usually found in dense, even-aged, single-layer forests near water (Zeiner *et al.* 1990a). Conifers appear to be most frequently used, although deciduous trees are the norm in some locals (Bildstein and Meyer 2000). Breeding occurs from April through August with the peak season from May to July (Zeiner *et al.* 1990a).

The trees and grassland on-site represent potential foraging habitat for sharp-shinned hawks. Sharp-shinned hawks do not nest in the region. No sharp-shinned hawks were observed within the site during field surveys conducted by ECORP in March of 2007.

#### Cooper's Hawk

The Cooper's hawk (*Accipiter cooperii*) is not listed pursuant to either the California or federal Endangered Species Acts; however, it is designated as a species of special concern by the CDFG. Typical nesting and foraging habitats include riparian woodland, dense oak woodland, and other woodlands near water. Breeding generally occurs in the foothills of the Sierra Nevada and Coast Range, but in recent years, breeding has expanded to include the Sacramento Valley (CDFG 2003).

Large trees scattered throughout the site provide potential nesting habitat for Cooper's hawk. There are no Cooper's hawk nesting records within the site (CDFG 2003). However, the CNDDDB contains two occurrences of this species within 5 miles of the project (CDFG 2003). The nearest of these occurrences is located approximately 3 miles west of the site. No Cooper's hawks were observed within the site during field surveys conducted by ECORP in March of 2007.

#### Swainson's Hawk

The Swainson's hawk (*Buteo swainsoni*) is listed as a threatened species and is protected pursuant to the California Endangered Species Act. This species nests in North America (Canada, western United States, and Mexico) and typically winters from South America north to Mexico. However, a small population has been observed wintering in the Sacramento-San Joaquin River Delta (England *et al.* 1997). In California, the nesting season for Swainson's hawk ranges from mid-March to late August.

Swainson's hawks nest within tall trees in a variety of wooded communities including riparian, oak woodland, roadside landscape corridors, urban areas, and agricultural areas, among others. Foraging habitat includes open grassland, savannah, low-cover row crop fields, and livestock



pastures. In the Central Valley, Swainson's hawks typically feed on a combination of California vole (*Microtus californicus*), California ground squirrel (*Spermophilus beecheyi*), ring-necked pheasant (*Phasianus colchicus*), many passerine birds, and grasshoppers (*Melanoplus* species). Swainson's hawks are opportunistic foragers and will readily forage in association with agricultural mowing, harvesting, disking, and irrigating (Estep 1989). The removal of vegetative cover by such farming activities results in more readily available prey items for this species.

Large trees scattered throughout the site provide potential nesting habitat for Swainson's hawks, and the grassland represents suitable foraging habitat. There are no Swainson's hawk nesting records within the site (CDFG 2003). However, there is one documented occurrence (Occurrence No. 200) of this species within 5 miles of the project (CDFG 2003). This occurrence is located approximately one mile southeast of the site. The nearest documented nesting occurrence (Occurrence No. 660) is located approximately 6 miles south of the site. No Swainson's hawks were observed within the site during field surveys conducted by ECORP in March of 2007.

#### Ferruginous Hawk

Ferruginous hawks (*Buteo regalis*) are not listed pursuant to either the California or federal Endangered Species Acts; however, they are designated as a species of special concern by the CDFG. This species typically occurs in open environments and nests from Oregon to Canada, though nesting has recently been documented in Lassen County, California (Small 1994). For the remainder of the State, including the Central Valley, ferruginous hawk occurrences are restricted to the non-breeding season (September through April) (Small 1994). Winter foraging occurs within a variety of open communities including annual grasslands, agricultural areas, and savannahs.

Annual grasslands within the site provide potential foraging (wintering) habitat for ferruginous hawks. Ferruginous hawk do not nest in the region and no ferruginous hawks were observed during field surveys conducted by ECORP in March of 2007.

### Golden Eagle

The golden eagle (*Aquila chrysaetos*) is not listed pursuant to either the California or federal Endangered Species Acts; however, it is a CDFG species of special concern and is fully protected according to Section 3511 of the Fish and Game Code of California. Golden eagles generally nest on cliff ledges and/or large lone trees in rolling to mountainous terrain. Occurrences within the Central Valley are usually dispersing post-breeding birds, non-breeding sub-adults, or migrants. Foraging habitat includes open grassland and savannah.

Annual grassland within the site provides potential foraging (wintering) habitat for golden eagles. There are no golden eagle nesting records within the site and no CNDDDB occurrences of this species within five miles of the project (CDFG 2003). No golden eagles were observed within the site during field surveys conducted by ECORP in March of 2007.

### Merlin

The Merlin (*Falco columbarius*) is not listed pursuant to either the California or federal Endangered Species Acts, but is a CDFG species of special concern. This falcon breeds in Canada and Alaska and occurs in California as a migrant during the non-breeding season (September through April). Foraging habitat includes a wide range of open environments including seacoast estuaries, desert, open grasslands, and semi-open woodlands.

The trees and annual grassland within the site provide potential foraging (wintering) habitat for Merlin. Merlins do not nest in the region and no Merlins were observed within the site during field surveys conducted in March of 2007.

### Prairie Falcon

Prairie falcons (*Falco mexicanus*) are not listed pursuant to either the California or federal Endangered Species Acts; however, they are considered to be a USFWS bird of conservation concern and CDFG species of special concern. In California, prairie falcons nest in the Sierra Nevada foothills, Coast Range, northeastern California, and southern California. Prairie falcons

occurring within the Central Valley may include migrants from the north and post-breeding down slope migrants. In California, prairie falcons inhabit a range of desert, grassland, alpine meadows, rangeland, scrub, and other open communities (Zeiner *et al.* 1990a, Small 1994).

Annual grassland within the site provides potential foraging (wintering) habitat for prairie falcon. Prairie falcons do not nest in the region and no prairie falcons were observed within the site during field surveys conducted in March of 2007.

#### Burrowing Owl

The burrowing owl (*Athene cunicularia*) is not listed pursuant to either the California or federal Endangered Species Acts; however, it is designated as a bird of conservation concern by the USFWS and a species of special concern by the CDFG. Burrowing owls inhabit dry open rolling hills, grasslands, desert floors, and open bare ground with gullies and arroyos. This species typically uses burrows created by fossorial mammals, most notably the California ground squirrel, but may also use man-made structures such as cement culverts; cement, asphalt, or wood debris piles; or openings beneath cement or asphalt pavement (CDFG 1995). The breeding season extends from 1 February through 31 August (CBOC 1993, CDFG 1995).

Annual grasslands within the site provide potential nesting and foraging habitat for burrowing owls. There are no burrowing owl nesting records within the site (CDFG 2003). The closest documented CNDDDB occurrence (Occurrence No. 91) of this species is located approximately 5.6 miles southwest of the project. No burrowing owls were observed within the site during field surveys conducted in March of 2007.

#### Loggerhead Shrike

The loggerhead shrike (*Lanius ludovicianus*) is not listed pursuant to either the California or federal Endangered Species Acts; but is identified as a bird of conservation concern by the USFWS and a species of special concern by the CDFG. Loggerhead shrikes nest in small trees and shrubs in woodlands and savannahs, and forage in open communities throughout California. The nesting season extends from March through June.

The oak woodland on-site provides potential nesting habitat and the annual grassland provides potential foraging habitat for the loggerhead shrike. No occurrences of loggerhead shrikes have been documented in the vicinity of the site, according to the CNDDDB (CDFG 2003), and none were observed within the site during the field surveys conducted in March of 2007.

#### Lark Sparrow

The lark sparrow (*Chondestes grammacus*) is not listed and protected pursuant to either California or federal Endangered Species Acts. However, this species' nest sites are tracked by CDFG in the CNDDDB. Consequently, it is subject to review during the CEQA process. Lark sparrows can be found throughout California, generally west of the Sierra Nevada. They nest within a wide variety of communities including oak woodland, chaparral, and oak savannah, among others. Their nests are constructed on the ground, in small trees, or shrubs. The nesting season generally occurs from April through May.

The oak woodland on-site provides potential nesting and foraging habitat and the annual grassland provides potential foraging habitat for the lark sparrow. No occurrences of lark sparrow have been documented in the vicinity of the site, according to the CNDDDB (CDFG 2003), and none were observed within the site during the field surveys conducted in March of 2007.

#### Tricolored Blackbird

The tricolored blackbird (*Agelaius tricolor*) is not listed pursuant to either the California or federal Endangered Species Acts; however, it is designated as a species of special concern by the CDFG. This colonial nesting species is distributed widely throughout the Central Valley and Coast Range. Tricolored blackbirds nest in colonies that can range from several pairs to several thousand pairs, depending on prey availability, the presence of predators, or level of human disturbance. This nomadic species typically nests in emergent marsh, riparian thickets, and blackberry brambles, usually with some nearby standing water or ground saturation. Open grassland and agricultural fields are typical foraging areas with nesting generally occurring from April through June.

The emergent vegetation associated with the pond and seep on-site represent potential nesting habitat and annual grassland represents potential foraging habitat for tricolored blackbirds. There are no tricolored blackbird nesting records within the site (CDFG 2003). However, the CNDDB contains four occurrences of this species within 5 miles of the site (CDFG 2003). The nearest of these occurrences is located approximately 2 miles north of the site. No tricolored blackbirds were observed within the site during field surveys conducted by ECORP in March of 2007.

### Common Raptor Species

All raptors and their nests including common species are protected by Section 3503.5 of the Fish and Game Code of California and by the Federal Migratory Bird Treaty Act. These raptor species include red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*B. lineatus*), American kestrel (*Falco sparverius*), and great horned owl (*Bubo virginianus*), among others. In general, raptor nesting occurs from February through August, depending upon the species and various environmental conditions.

### Mammals

#### Yuma Myotis

The Yuma myotis (*Myotis yumanensis*) is not listed pursuant to either the California or federal Endangered Species Acts; however, this species is currently tracked by the CDFG in the CNDDB (CDFG 2003). Yuma myotis occurs throughout California in a variety of communities including riparian, arid scrublands and deserts, and forests. This species roosts in bridges, buildings, cliff crevices, caves, mines, and trees (WBWG 2005). Yuma myotis feed primarily on emergent aquatic insects and thus forage mainly over open water or adjacent riparian vegetation (Philpott 1996). This species can form large maternity colonies in late May early June.

Large trees and outbuildings scattered throughout the site provide potential roosting habitat for Yuma myotis. According to the CNDDB (CDFG 2003), no occurrences of Yuma myotis have been documented in the vicinity of the site.

### Hoary Bat

The hoary bat (*Lasiurus cinereus*) is not listed pursuant to either the California or federal Endangered Species Acts; however, this species is currently tracked by the CDFG in the CNDDDB (CDFG 2003). Hoary bats can be distinguished from other species by a combination of its large size, frosted fur, and golden coloration around the face. This bat is widespread in California, although distribution is patchy in the southern deserts. Hoary bats are solitary roosters, concealing themselves in the foliage of both coniferous and deciduous trees. Suitable roosting habitat includes woodlands and forests with medium to large-size trees and dense foliage, to elevations up to 13,000 ft. This species is highly migratory, making long migrations to and from warmer winter habitats. Sexes are separated geographically throughout most of the summer range. Hoary bats feed primarily on moths, foraging in open areas or along habitat edges (Zeiner *et al.* 1990b).

Large trees scattered throughout the site provide potential roosting habitat for the hoary bat. According to the CNDDDB (CDFG 2003), no occurrences of the hoary bat have been documented in the vicinity of the site.

### Western Red Bat

The western red bat (*Lasiurus blossevillei*) is not listed pursuant to either the California or federal Endangered Species Acts; however, this species is currently tracked by the CDFG in the CNDDDB (CDFG 2003). In addition, the Western Bat Working Group has classified the western red bat in California as "imperiled or are at high risk of imperilment" (WBWG 1998). The western red bat is easily distinguished from other western bat species by its distinctive red coloration. This bat occurs from Shasta County to the Mexican border, west of the Sierra Nevada/Cascade crest and deserts, and is typically associated with forested and riparian communities. This solitary species roosts in the foliage of large shrubs and trees in communities bordering forests, rivers, cultivated fields, and urban areas. They feed on a variety of insects, usually foraging in or near riparian areas. This species is a year-round resident of California, however, they do migrate seasonally with the extent of these movements being poorly understood (Shump and Shump 1982, Philpott 1996).

Large trees scattered throughout the site provide potential roosting habitat for western red bats. According to the CNDDDB (CDFG 2003), no occurrences of western red bat have been documented in the vicinity of the site.

#### Townsend's Big-Eared Bat

The Townsend's big-eared bat (*Corynorhinus townsendii*) is not listed pursuant to either the California or federal Endangered Species Acts; though it is designated as a species of special concern by the CDFG. In addition, the Western Bat Working Group has classified the Townsend's big-eared bat in California as "imperiled or are at high risk of imperilment" (WBWG 2005). Distribution of this species is strongly correlated with the availability of caves and cave-analogue roosting habitat, including abandoned mines. Townsend's big-eared bats have also been reported to utilize buildings, bridges, rock crevices, and hollow trees as roost sites (WBWG 2005). These bats are highly sensitive to human disturbance at roosting, maternity, and hibernacula sites. This species will roost alone or in groups of 15-100 individuals. They feed primarily on moths and prefer to forage along the edge of clumps of native vegetation. Townsend's big-eared bats are year-round residents in California, and even though they hibernate during the winter, will occasionally forage during the winter months (Kunz and Martin 1982, Philpott 1996).

Large trees and outbuildings scattered throughout the site provide potential roosting habitat for Townsend's big-eared bats. According to the CNDDDB (CDFG 2003), no occurrences of Townsend's big-eared bat have been documented in the vicinity of the site.

#### Pallid Bat

The pallid bat (*Antrozous pallidus*) is not listed pursuant to either the California or federal Endangered Species Acts; however, it is designated as a CDFG species of special concern. In addition, the Western Bat Working Group has classified the pallid bat in California as "imperiled or are at high risk of imperilment" (WBWG 2005). The pallid bat is a large buff-colored bat, with large ears and broad wings (Orr 1954). The pallid bat occurs in Oregon and Washington and throughout the southwestern United States, south into Mexico (Hermanson and O'Shea

1983). Pallid bats inhabit low elevation rocky arid deserts and canyonlands, shrub-steppe grasslands, oak woodlands, karst formations, and higher elevation coniferous forests (Philpott 1996, WBWG 2005). Day and night roosts include crevices in rocky outcrops and cliffs, caves, mines, and trees; and in various human structures such as bridges, barns, porches, bat boxes, and human-occupied as well as vacant buildings (WBWG 2005). Pallid bats are primarily insectivores and feed by gleaning prey items from the ground or from vegetation (Bell 1982).

Large trees and outbuildings scattered throughout the site provide potential roosting habitat for pallid bats. There are no pallid bat records within the site (CDFG 2003). However, the CNDDDB contains an occurrence of this species located approximately 6 miles northwest of the site (CDFG 2003).

#### American Badger

The American badger (*Taxidea taxus*) is not listed pursuant to either the California or federal Endangered Species Acts; however, it is designated as a species of special concern by the CDFG. The American badger is associated with dry, open, herbaceous communities with friable soils (Zeiner *et al.* 1990b).

The annual grassland on-site may represent potential habitat for the American badger. The nearest American badger occurrence is located approximately 8 miles southwest of the site (CDFG 2003). No American badgers or potential burrows were observed within the site during the field surveys conducted in March of 2007.

#### **Critical Habitat**

This site does not fall within any areas designated or proposed as critical habitat by the USFWS for any listed species. The nearest critical habitat unit, Sacramento Orcutt grass critical habitat (Unit SACRA-1), is situated approximately 5 miles northwest of the site (see Figure 4).



## CONCLUSION

Based on the vegetation communities, habitat, and current conditions observed on-site, there are several potentially occurring special-status species. The vernal pool and seasonal wetlands on-site represent potential habitat for several plants, including dwarf downingia, Tuolumne button-celery, Boggs Lake hedge-hyssop, Ahart's dwarf rush, legenere, pincushion navarretia, slender Orcutt grass, and Sacramento Orcutt grass. The large pond represents potential habitat for Sanford's arrowhead. Vernal pool fairy shrimp, Conservancy fairy shrimp, Midvalley fairy shrimp, California linderiella, and vernal pool tadpole shrimp may occur in the vernal pool and seasonal wetlands. Although not observed during the field survey, potential habitat (i.e., elderberry shrubs) may exist on-site for the Valley elderberry longhorn beetle. As such, an elderberry survey is recommended. The large pond, vernal pool, and seasonal wetlands on-site do not appear to represent California tiger salamander breeding habitat due to the presence of introduced sport fish in the large pond and the shallow depth/short hydro period of the on-site vernal pool and seasonal wetlands. The vernal pool, seasonal wetlands, and drainages on-site may provide breeding habitat for the western spadefoot toad. The presence of introduced sport fish in the large pond reduces the suitability of this feature as potential breeding habitat for western spadefoot toads. The large pond on-site represents potential California red-legged frog breeding habitat. However, due to the presence of introduced sport fish and bullfrogs within the pond and the lack of occurrences of this species in the vicinity of the site, the occurrence of California red-legged frogs on-site is considered highly unlikely. The large pond on-site provides habitat for the western pond turtle and several adults of this species were observed during the field survey. Potential nesting habitat occurs on-site for white-tailed kite, Cooper's hawk, Swainson's hawk, northern harrier, burrowing owl, loggerhead shrike, lark sparrow, and tricolored blackbird. Sharp-shinned hawk, ferruginous hawk, golden eagle, Merlin, and prairie falcon may utilize the site for foraging. Special-status bats that may roost or forage on-site include Western red bat, hoary bat, Yuma myotis, Townsend's big-eared bat, and pallid bat. Annual grassland on-site represents potential habitat for the American badger.

## REFERENCES

- Barr, C.B. 1991. The distribution, habitat and status of the valley elderberry longhorn beetle (*Desmocerus californicus dimorphus* Fisher) (Coleoptera: Cerambycidae). U.S. Fish and Wildlife Service, Sacramento, CA.
- Belk, D. and M. Fugate. 2000. Two new Branchinecta (Crustacea: Anostraca) from the southwestern United States. *The Southwestern Naturalist* 45:111-117.
- Bell, G.P. 1982. Behavioral and ecological aspects of gleaning by a desert insectivorous bat, *Antrozous pallidus* (Chiroptera: Vespertilionidae). *Behavioral Ecology and Sociobiology*, 10:217-223.
- Bildstein, K.L., and K. Meyer. 2000. Sharp-shinned Hawk (*Accipiter striatus*). In *The Birds of North America*, No. 482 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.
- California Burrowing Owl Consortium (CBOC). 1993. Burrowing Owl Survey Protocol and Mitigation Guidelines. Dated April 1993.
- California Department of Fish and Game (CDFG). 1995. Staff Report on Burrowing Owl Mitigation. Dated September 25, 1995.
- California Department of Fish and Game (CDFG). 2003. Rarefind CDFG Natural Diversity Database. Commercial Version 3.1.1, dated March 31, 2007. Sacramento, California.
- California Department of Fish and Game (CDFG). 2005. The Status of Rare, Threatened, and Endangered Plants and Animals of California 2000-2004. Sacramento, California.
- California Native Plant Society (CNPS). 2001. Inventory of Rare and Endangered Plants of California (sixth edition). Rare Plant Scientific Advisory Committee, David P. Tibor, Convening Editor. California Native Plant Society, Sacramento, CA. 388pp.
- California Native Plant Society (CNPS). 2007. Inventory of Rare and Endangered Plants (online edition, v7-07b). California Native Plant Society. Sacramento, CA. Accessed on May 2, 2007 from <http://www.cnps.org/inventory>.
- ECORP Consulting, Inc. (ECORP). 2007. Wetland Delineation for Folsom South Owners Group, Javanifard and Zhargami Parcel, Sacramento County, California. Dated: 7 May 2007.
- England, A.S., M.J. Bechard, and C.S. Houston. 1997. Swainson's Hawk (*Buteo swainsoni*). In: A. Poole and F. Gill (eds.), *The Birds of North America*, No. 265. The Academy of Natural Sci. Philadelphia, PA, and the American Ornithologists' Union, Washington, D.C.
- Eriksen, C. and D. Belk. 1999. Fairy Shrimps of California's Puddles, Pools, and Playas. Mad River Press, Inc. Eureka, CA.

- Estep, J.A. 1989. Biology, movements, and habitat relationships of the Swainson's hawk in the Central Valley of California, 1986-1987. California Department of Fish and Game, Nongame Bird and Mammal Section Report.
- Helm, B. 1998. Biogeography of eight large branchiopods endemic to California. Pp. 124-139 In: C.W. Witham, E.T. Bauder, D. Belk, W.R. Ferren Jr., and R. Ornduff (Eds). Ecology, Conservation, and Management of Vernal Pool Ecosystems - Proceedings from a 1996 Conference. California Native Plant Society, Sacramento, CA.
- Hermanson, J.W., and T.J. O'Shea. 1983. *Antrozous pallidus*. American Society of Mammalogists, Mammalian Species. 213:1-8.
- Hickman, J.C. ed. 1993. The Jepson Manual, Higher Plants of California, University of California Press, Berkeley, California.
- Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Nongame-Heritage Program, California Department of Fish and Game, Sacramento, CA.
- Jennings, M.R., and M.P. Hayes. 1994. Amphibian and reptile species of special concern in California. Final report to the California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, California 225 pp.
- Jennings, M.R. 1996. Status of Amphibians. Sierra Nevada Ecosystem Project: Final report to Congress, vol. II, Assessments and scientific basis for management options, chapter 31, pages 921-944. Davis: University of California, Centers for Water and Wildland Resources.
- Kunz, T.H. and R.A. Martin. 1982. *Plecotus townsendii*. American Society of Mammalogists, Mammalian Species. 175:1-6.
- Mayer, K.E. and W.F. Laudenslayer, Jr. (eds). 1988. A Guide to Wildlife Habitats of California. California Department of Forestry and Fire Protection. 166pp.
- Moyle, P.B. 2002. Inland Fishes of California. University of California Press, Berkeley, Los Angeles, and London.
- Orr, R.T. 1954. Natural history of the pallid bat, *Antrozous pallidus*. Proceedings of the California Academy of Sciences, Fourth Series, 28(4):165-246.
- Philpott, W.L. 1996 (Year Approximate). Natural Histories of California Bats. U.S. Forest Service, 17 pages.
- Remsen, J.V., Jr. 1978. Bird Species of Special Concern in California. California Department of Fish and Game, Nongame Invest. Report 78-1, Sacramento, California.
- Shump, K.A. and A. U. Shump. 1982. Mammalian Species, 183:1-6.

- Small, A. 1994. California Birds: Their Status and Distribution. Ibis Publishing Company. Vista, California. 342 pp.
- Talley, T.S., E. Fleishman, M. Holyoak, D.D. Murphy, and A. Ballard. 2007. Rethinking a rare-species conservation strategy in an urban landscape: The case of the valley elderberry longhorn beetle. *Biological Conservation* 135(2007):21-32.
- U.S. Department of Agriculture, Soil Conservation Service. 1993. Soil Survey of Sacramento County, California. U.S. Department of Agriculture, Soil Conservation Service. Davis, California.
- U.S. Department of the Interior, Fish and Wildlife Service (USFWS). 1980. Listing the Valley Elderberry Longhorn Beetle as a Threatened Species with Critical Habitat. Final Rule. *Federal Register* 45(155):52803-52807.
- U.S. Department of the Interior, Fish and Wildlife Service (USFWS). 1994. Determination of Endangered Status for the Conservancy Fairy Shrimp, Longhorn Fairy Shrimp, and the Vernal Pool Tadpole Shrimp; and Threatened Status for the Vernal Pool Fairy Shrimp. Final Rule. *Federal Register* 59(180):48136-48153.
- U.S. Department of the Interior, Fish and Wildlife Service (USFWS). 1999. Conservation Guidelines for the Valley Elderberry Longhorn Beetle. Dated July 9, 1999.
- U.S. Department of the Interior, Fish and Wildlife Service (USFWS). 2003. Final Designation of Critical Habitat for Four Vernal Pool Crustaceans and Eleven Vernal Pool Plants in California and Southern Oregon; Final Rule. *Federal Register* 68(151):46684-46867.
- U.S. Department of the Interior, Fish and Wildlife Service (USFWS). 2004. 12-Month Finding for a Petition to List the Midvalley Fairy Shrimp as Endangered. *Federal Register* 69(16):3592-3598.
- U.S. Department of the Interior, Fish and Wildlife Service (USFWS). 2005. Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog. Appendix: California red-legged frog ecology and distribution. August 2005.
- U.S. Department of the Interior, Fish and Wildlife Service (USFWS). 2006. Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*) 5-Year Status Review: Summary and Evaluation. Sacramento Fish and Wildlife Office, Sacramento, CA.
- U.S. Department of the Interior, Fish and Wildlife Service (USFWS). 2007. Species Lists for the "Buffalo Creek", "Carbondale", "Folsom" and "Folsom SE", California 7.5-minute Quadrangles. Internet website [http://www.fws.gov/sacramento/es/spp\\_lists/auto\\_list.cfm](http://www.fws.gov/sacramento/es/spp_lists/auto_list.cfm).
- U.S. Department of the Interior, Geological Survey. 1978. Hydrologic Unit Map, State of California. Geological Survey. Reston, Virginia.

- U.S. Department of the Interior, Geological Survey. 1992. "Folsom, California" 7.5-minute Quadrangle. Geological Survey. Denver, Colorado.
- Western Bat Working Group (WBWG). 2005. Bat Species Accounts Developed for the 1998 Reno Biennial Meeting, Updated at the 2005 Portland Biennial Meeting. Available on-line at: [http://www.wbwg.org/species\\_accounts.htm](http://www.wbwg.org/species_accounts.htm).
- Williams, D.F. 1986. Mammalian Species of Special Concern in California. State of California Department of Fish and Game, Wildlife Management Division. Sacramento, California. 112 pp.
- Zeiner, D.C., W.F. Laudenslayer, Jr., and K.E. Mayer (eds). 1988. California's Wildlife, Volume I, Amphibian and Reptiles. California Statewide Habitat Relationships System, California Department of Fish and Game, Sacramento, CA.
- Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White (eds). 1990a. California's Wildlife, Volume II, Birds. California Statewide Wildlife Habitat Relationships System. California Department of Fish and Game, Sacramento, CA.
- Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White (eds). 1990b. California's Wildlife, Volume III, Mammals. California Statewide Wildlife Habitat Relationships System. California Department of Fish and Game, Sacramento, CA.

## **ATTACHMENT A**

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### California Natural Diversity Database (CNDDDB) Report

***Accipiter cooperii***

Cooper's hawk

Element Code: ABNKC12040

Status

NDDB Element Ranks

Other Lists

Federal: None

Global: G5

CDFG Status: SC

State: None

State: S3

Habitat Associations

General: WOODLAND, CHIEFLY OF OPEN, INTERRUPTED OR MARGINAL TYPE.

Micro: NEST SITES MAINLY IN RIPARIAN GROWTHS OF DECIDUOUS TREES, AS IN CANYON BOTTOMS ON RIVER FLOOD-PLAINS; ALSO, LIVE OAKS.

Occurrence No. 53

Map Index: 17186

EO Index: 12046

Dates Last Seen

Occ Rank: Fair

Element: 1990-05-14

Origin: Natural/Native occurrence

Site: 1990-05-14

Presence: Presumed Extant

Record Last Updated: 1990-11-27

Trend: Unknown

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.59458° / -121.19843°

Township: 09N

UTM: Zone-10 N4273327 E656893

Range: 07E

Radius: 80 meters

Mapping Precision: SPECIFIC

Section: 34

Qtr: XX

Elevation: 200 ft

Symbol Type: POINT

Meridian: M

Location: NORTH SIDE OF WHITE ROCK ROAD, APPROXIMATELY 1 MI WEST OF GRANT LINE ROAD, EAST OF SACRAMENTO.

Location Detail: ADULT OBSERVED SEVERAL TIMES IN THIS VICINITY; ONE TIME, CARRYING FOOD INTO COTTONWOOD TREES, ALTHOUGH NO NEST COULD BE OBSERVED.

Ecological: HABITAT IS DISTURBED AREA, CONSISTING OF GRAVEL PILES, COYOTE BUSH, AND SCATTERED COTTONWOOD TREES.

Owner/Manager: PVT-GENCORP AEROJET

Occurrence No. 54

Map Index: 17187

EO Index: 12153

Dates Last Seen

Occ Rank: Good

Element: 1990-06-30

Origin: Natural/Native occurrence

Site: 1990-06-30

Presence: Presumed Extant

Record Last Updated: 1990-11-27

Trend: Unknown

Quad Summary: Folsom (3812162/511B)

County Summary: Sacramento

Lat/Long: 38.64610° / -121.19863°

Township: 09N

UTM: Zone-10 N4279044 E656763

Range: 07E

Radius: 80 meters

Mapping Precision: SPECIFIC

Section: 10

Qtr: XX

Elevation: 150 ft

Symbol Type: POINT

Meridian: M

Location: MISSISSIPPI BAR, ON THE WEST SIDE OF LAKE NATOMA NEAR THE BIKE TRAIL, ORANGEVALE.

Ecological: 3 JUVENILES OBSERVED IN AN AREA OF LIVE OAKS, COTTONWOODS, FOOTHILL PINE AND POISON OAK.

Threat: AREA IS A NATURE/RECREATION AREA, ALTHOUGH DISTURBANCE MAY EXIST FROM A GRAVEL COMPANY JUST WEST OF THE SITE.

Owner/Manager: DPR-FOLSOM LAKE SRA

***Agelaius tricolor***

tricolored blackbird

Element Code: ABPBX0020

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G2G3	CDFG Status: SC
State: None	State: S2	

**Habitat Associations**

General: HIGHLY COLONIAL SPECIES, MOST NUMEROUS IN CENTRAL VALLEY & VICINITY, LARGELY ENDEMIC TO CALIFORNIA.  
Micro: REQUIRES OPEN WATER, PROTECTED NESTING SUBSTRATE, & FORAGING AREA WITH INSECT PREY WITHIN A FEW KM OF THE COLONY.

Occurrence No. 4	Map Index: 11994	EO Index: 14208	Dates Last Seen
Occ Rank: Good			Element: 1994-XX-XX
Origin: Natural/Native occurrence			Site: 1997-XX-XX
Presence: Presumed Extant			
Trend: Fluctuating			Record Last Updated: 1998-09-08

Quad Summary: Folsom (3812162/511B)  
County Summary: Sacramento

Lat/Long: 38.66519° / -121.13333°	Township: 09N
UTM: Zone-10 N4281277 E662403	Range: 08E
Area: 20.8 acres	Section: 06
Elevation: 350 ft	Meridian: M
Mapping Precision: SPECIFIC	Qtr: XX
Symbol Type: POLYGON	

Location: "FOLSOM" COLONY SITE; ALONG NATOMAS DITCH/PLACERVILLE (SCOTT) ROAD, SE OF FOLSOM.  
Location Detail: BIRDS FORAGE IN GRASSLAND UP TO 3 MILES RADIUS FROM COLONY.  
Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES, SURROUNDED BY GRASSLAND.  
Threat: THREATENED BY ENCROACHING DEVELOPMENT. NESTING HABITAT PRESERVED, BUT SITE NO LONGER ATTRACTIVE TO BREEDING TRICOLORS.  
General: 1330 BIRDS OBSERVED IN MAY 1982. EGGS COLLECTED IN APR 1987 FOR SELENIUM COMPARISON STUDY (KESTERSON). 75-100 PAIRS OBSERVED IN 1990. SITE MONITORED APRIL-JUNE 1992-94; 3000 ADULTS IN 1992, 3500 IN 1993, 6000 IN 1994, NONE OBSERVED IN 1997.  
Owner/Manager: PVT

Occurrence No. 93	Map Index: 12196	EO Index: 24734	Dates Last Seen
Occ Rank: Unknown			Element: 1987-05-31
Origin: Natural/Native occurrence			Site: 1992-06-30
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1996-01-03

Quad Summary: Clarksville (3812161/511A)  
County Summary: El Dorado

Lat/Long: 38.65406° / -121.00633°	Township: 09N
UTM: Zone-10 N4280274 E673480	Range: 09E
Radius: 1/5 mile	Section: 08
Elevation: 1,200 ft	Meridian: M
Mapping Precision: NON-SPECIFIC	Qtr: NE
Symbol Type: POINT	

Location: CRAZY HORSE CAMPGROUND, 150 YARDS SOUTH OF HIGHWAY 50, BETWEEN BASS LAKE EXIT AND CAMERON PARK EXIT.  
Ecological: NESTING SUBSTRATE IS CATTAILS ON A SMALL POND.  
General: COLONY OF ~500 ADULTS OBSERVED; ADULTS CARRYING INSECTS TO YOUNG IN NESTS. SITE VISITED IN 1992; NO BIRDS OBSERVED, ALTHOUGH HABITAT WAS STILL PRESENT.  
Owner/Manager: PVT

Occurrence No. 158	Map Index: 11720	EO Index: 24681	Dates Last Seen
Occ Rank: Unknown			Element: 1972-XX-XX
Origin: Natural/Native occurrence			Site: 1972-XX-XX
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2002-08-09

Quad Summary: Elk Grove (3812143/496A), Buffalo Creek (3812152/511C), Carmichael (3812153/512D)  
County Summary: Sacramento

Lat/Long: 38.51379° / -121.26440°	Township: 08N
UTM: Zone-10 N4264251 E651317	Range: 06E
Radius: 1 mile	Section: 25
Elevation: 140 ft	Meridian: M
Mapping Precision: NON-SPECIFIC	Qtr: SE
Symbol Type: POINT	

Location: NEAR JUNCTION OF JACKSON RD (HWY 16) AND EAGLES NEST RD, APPROX ONE MILE SOUTH OF MATHER REGIONAL PARK.  
Ecological: NESTING IN CATTAILS AND TULE.  
General: OBSERVED NESTS CONTAINING 1 TO 4 EGGS. OLD NESTS ALSO PRESENT.  
Owner/Manager: UNKNOWN



***Agelaius tricolor***

Tricolored blackbird

Element Code: ABPBXB0020

**Status**

Federal: None

State: None

**NDBB Element Ranks**

Global: G2G3

State: S2

**Other Lists**

CDFG Status: SC

**Habitat Associations**

General: HIGHLY COLONIAL SPECIES, MOST NUMEROUS IN CENTRAL VALLEY & VICINITY, LARGELY ENDEMIC TO CALIFORNIA.

Micro: REQUIRES OPEN WATER, PROTECTED NESTING SUBSTRATE, & FORAGING AREA WITH INSECT PREY WITHIN A FEW KM OF THE COLONY.

Occurrence No. 178

Map Index: 17177

EO Index: 12052

Dates Last Seen

Occ Rank: Good

Element: 1994-04-23

Origin: Natural/Native occurrence

Site: 1994-04-23

Presence: Presumed Extant

Record Last Updated: 1994-12-13

Trend: Unknown

Quad Summary: Sloughhouse (3812142/495B), Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.50135° / -121.16891°

UTM: Zone-10 N4263032 E659670

Radius: 1/5 mile

Elevation: 100 ft

Mapping Precision: NON-SPECIFIC

Symbol Type: POINT

Township: 08N

Range: 07E

Section: 36

Meridian: M

Qtr: SW

Location: NORTH OF DEER CREEK, JUST SOUTH OF KIEFER BLVD, ~2 MILES SE THE INTERSECTION OF KIEFER BLVD AND GRANT LINE ROAD.

Location Detail: IN 1990, BIRDS WERE NESTING IN TWO GROUPS, ~100 YARDS APART; BOTH GROUPS NESTING IN ~1/4 ACRE OF BLACKBERRY BRAMBLES.

Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRY, WITH WILLOWS AND EUCALYPTUS ADJACENT, LOCATED AT THE BOTTOM OF A SWALE. FORAGING HABITAT CONSISTS OF OPEN FIELDS USED FOR GRAZING.

General: 150-200 PAIRS OBSERVED NESTING IN 1990. IN 1994, ~20 BIRDS WERE OBSERVED NESTING AND ABOUT 40 BIRDS WERE OBSERVED FORAGING NEARBY.

Owner/Manager: PVT

Occurrence No. 180

Map Index: 17305

EO Index: 11959

Dates Last Seen

Occ Rank: Excellent

Element: 1999-05-11

Origin: Natural/Native occurrence

Site: 1999-05-11

Presence: Presumed Extant

Record Last Updated: 2004-05-13

Trend: Unknown

Quad Summary: Folsom SE (3812151/511D)

County Summary: Sacramento

Lat/Long: 38.51815° / -121.11901°

UTM: Zone-10 N4264984 E663983

Radius: 80 meters

Elevation: 150 ft

Mapping Precision: SPECIFIC

Symbol Type: POINT

Township: 08N

Range: 08E

Section: 29

Meridian: M

Qtr: NE

Location: ALONG CREVIS CREEK, JUST NORTH OF LATROBE ROAD, 1 MILE WEST OF SCOTT ROAD AND 2 MILES NORTH OF HWY 16, SACRAMENTO CO.

Location Detail: COLONY SITE CONSISTS OF A BLACKBERRY PATCH, MEASURING ABOUT 180-FT X 20-FT, ON THE NORTH SIDE OF THE CREEK.

Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES; SURROUNDING FORAGING HABITAT IS GRAZED GRASSLAND.

Threat: THREATENED BY CONVERSION OF FORAGING HABITAT TO VINEYARDS (DEC 1997).

General: SITE WAS OBSERVED FROM 22 APRIL-10 JUN 1989; 300 ADULTS OBSERVED NESTING. 4000 ADULTS NESTED SUCCESSFULLY IN 1992 AND 1994, WITH MANY FLEDGLINGS OBSERVED. NO NESTING IN 1993 OR 1997. 3500 OBSERVED NESTING 11 MAY 1999 BY HAMILTON & COOK.

Owner/Manager: PVT

Occurrence No. 181

Map Index: 17306

EO Index: 17188

Dates Last Seen

Occ Rank: Excellent

Element: 1999-04-24

Origin: Natural/Native occurrence

Site: 1999-04-24

Presence: Presumed Extant

Record Last Updated: 2004-05-13

Trend: Unknown

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.58916° / -121.12861°

UTM: Zone-10 N4272847 E662986

Area: 6.2 acres

Elevation: 250 ft

Mapping Precision: SPECIFIC

Symbol Type: POLYGON

Township: 09N

Range: 08E

Section: 32

Meridian: M

Qtr: SW

Location: ALONG SCOTT ROAD, APPROXIMATELY 0.2 MILE SOUTH OF COYOTE CREEK CROSSING, SACRAMENTO COUNTY.

Location Detail: COLONY OCCUPIES 2+ ACRES. THIS MAY BE ONE OF THE FEW COLONY SITES LOCATED IN A RELATIVELY PRISTINE SETTING.

Ecological: NESTING SUBSTRATE CONSISTS OF TULE AND CATTAILS, IN A FRESHWATER MARSH. COLONY SUCCESS IS ALWAYS POOR DUE TO PREDATION.

Threat: THREATS INCLUDE PREDATION AND CONVERSION OF SURROUNDING FORAGING HABITAT TO VINEYARDS.

General: 300+ PAIRS OBSERVED NEST-BUILDING ON 8 APR 1990; IN JUNE, 1000 BIRDS MADE A SECOND NESTING ATTEMPT. 5000 BIRDS OBSERVED NESTING IN 1994. 300 NESTED IN 1997. 2000 BIRDS OBSERVED NESTING 24 APR 1999 BY FRIGIEN.

***Agelaius tricolor***

tricolored blackbird

Element Code: ABPBX0020

Status  
Federal: None  
State: None

NDDB Element Ranks  
Global: G2G3  
State: S2

Other Lists  
CDFG Status: SC

Habitat Associations

General: HIGHLY COLONIAL SPECIES, MOST NUMEROUS IN CENTRAL VALLEY & VICINITY. LARGELY ENDEMIC TO CALIFORNIA.

Micro: REQUIRES OPEN WATER, PROTECTED NESTING SUBSTRATE, & FORAGING AREA WITH INSECT PREY WITHIN A FEW KM OF THE COLONY.

Owner/Manager: PVT

Occurrence No.	236	Map Index:	23673	EO Index:	7321	Dates Last Seen	
Occ Rank:	Excellent					Element:	1993-04-22
Origin:	Natural/Native occurrence					Site:	1993-04-22
Presence:	Presumed Extant					Record Last Updated:	1993-06-22
Trend:	Unknown						
Quad Summary:	Folsom SE (3812151/511D)						
County Summary:	Sacramento						
Lat/Long:	38.58884° / -121.11613°					Township:	09N
UTM:	Zone-10 N4272834 E664074					Range:	08E
Area:				Mapping Precision:	NON-SPECIFIC	Section:	32
Elevation:	250 ft			Symbol Type:	POLYGON	Meridian:	M
						Qtr:	E
Location:	0.8 MILE EAST OF SCOTT ROAD AND 2 MILES SOUTH OF WHITE ROCK ROAD, APPROXIMATELY 6 MILES SE OF FOLSOM.						
Ecological:	NESTING SUBSTRATE CONSISTS OF TULE, LOCATED ON A 3-ACRE POND; SURROUNDED BY GRAZED AGRICULTURAL LAND.						
General:	COLONY OF APPROXIMATELY 500 ADULTS OBSERVED NESTING ON 22 APRIL 1993.						
Owner/Manager:	PVT						

Occurrence No.	252	Map Index:	23984	EO Index:	8658	Dates Last Seen	
Occ Rank:	Unknown					Element:	1990-05-XX
Origin:	Natural/Native occurrence					Site:	1990-05-XX
Presence:	Presumed Extant					Record Last Updated:	1993-08-19
Trend:	Unknown						
Quad Summary:	Clarksville (3812151/511A)						
County Summary:	Sacramento						
Lat/Long:	38.68877° / -121.11439°					Township:	10N
UTM:	Zone-10 N4283927 E663997					Range:	08E
Area:	5.9 acres			Mapping Precision:	SPECIFIC	Section:	28
Elevation:	400 ft			Symbol Type:	POLYGON	Meridian:	M
						Qtr:	SW
Location:	ADJACENT TO NATOMAS DITCH, 0.7 MILE SOUTH OF GREEN VALLEY ROAD AT MORMON ISLAND DAM, FOLSOM.						
Ecological:	NESTING SUBSTRATE CONSISTS OF BLACKBERRY THICKETS ON THE EAST SIDE OF NATOMAS DITCH.						
Threat:	THREATENED BY PROPOSED DEVELOPMENT.						
General:	200-250 PAIRS OF TRICOLORED'S OBSERVED IN 1990.						
Owner/Manager:	UNKNOWN						

Occurrence No.	330	Map Index:	36574	EO Index:	31571	Dates Last Seen	
Occ Rank:	Good					Element:	1997-04-20
Origin:	Natural/Native occurrence					Site:	1997-04-20
Presence:	Presumed Extant					Record Last Updated:	2003-08-21
Trend:	Unknown						
Quad Summary:	Folsom (3812162/511B)						
County Summary:	Placer						
Lat/Long:	38.73287° / -121.21532°					Township:	10N
UTM:	Zone-10 N4288646 E655122					Range:	07E
Radius:	80 meters			Mapping Precision:	SPECIFIC	Section:	09
Elevation:	270 ft			Symbol Type:	POINT	Meridian:	M
						Qtr:	NE
Location:	JUST NW OF GRANITE BAY HIGH SCHOOL, GRANITE BAY						
Ecological:	NESTING SUBSTRATE CONSISTS OF CATTAILS, IN FRESHWATER MARSH HABITAT. SITE APPEARS TO BE A WETLAND IN "RECOVERY," DUE TO SURROUNDING DEVELOPMENT.						
Threat:	POSSIBLY THREATENED BY HUMAN DISTURBANCE FROM SURROUNDING RESIDENTIAL DEVELOPMENT.						
General:	250+ ADULTS (MAINLY MALES) OBSERVED FLYING EASTWARD (AND RETURNING), PRESUMABLY TO (AND FROM) A FORAGING AREA.						
Owner/Manager:	UNKNOWN						

***Andrena blennospermatis***

A vernal pool andrenid bee

Element Code: IHHYM35030

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G2	CDFG Status:
State: None	State: S2	

Habitat Associations

General: THIS BEE IS OLIGOLECTIC ON VERNAL POOL BLENNOSPERMA.

Micro: BEES NEST IN THE UPLANDS AROUND VERNAL POOLS.

Occurrence No. 6

Map Index: 22872

EO Index: 59395

Dates Last Seen

Occ Rank: Unknown

Element: 19XX-XX-XX

Origin: Natural/Native occurrence

Site: 19XX-XX-XX

Presence: Presumed Extant

Record Last Updated: 2005-01-14

Trend: Unknown

Quad Summary: Clarksville (3812161/511A)

County Summary: El Dorado

Lat/Long: 38.67978° / -121.02259°

Township: 10N

UTM: Zone-10 N4283097 E672004

Range: 09E

Radius: 2/5 mile

Mapping Precision: NON-SPECIFIC

Section: 31

Qtr: NE

Elevation: 1,250 ft

Symbol Type: POINT

Meridian: M

Location: BASS LAKE, 6 MILES WSW RESCUE.

Ecological: THIS SPECIES IS OLIGOLECTIC ON VERNAL POOL FLOWERS, ESP. BLENNOSPERMA.

General: NO ADDITIONAL COLLECTING DATA GIVEN.

Owner/Manager: EL DORADO IRR DIST

*Antrozous pallidus*

pallid bat

Element Code: AMACC10010

Status

NDDB Element Ranks

Other Lists

Federal: None

Global: G5

CDFG Status: SC

State: None

State: S3

Habitat Associations

General: DESERTS, GRASSLANDS, SHRUBLANDS, WOODLANDS & FORESTS. MOST COMMON IN OPEN, DRY HABITATS WITH ROCKY AREAS FOR ROOSTING.

Micro: ROOSTS MUST PROTECT BATS FROM HIGH TEMPERATURES. VERY SENSITIVE TO DISTURBANCE OF ROOSTING SITES.

Occurrence No. 233

Map Index: 66566

EO Index: 66699

Dates Last Seen

Occ Rank: Unknown

Element: 1941-06-24

Origin: Natural/Native occurrence

Site: 1941-06-24

Presence: Presumed Extant

Record Last Updated: 2006-10-03

Trend: Unknown

Quad Summary: Folsom (3812162/511B)

County Summary: Sacramento

Lat/Long: 38.69846° / -121.20435°

Township: 10N

UTM: Zone-10 N4284845 E656151

Range: 07E

Radius: 3/5 mile

Mapping Precision: NON-SPECIFIC

Section: 27

Qtr: XX

Elevation: 250 ft

Symbol Type: POINT

Meridian: M

Location: 2 MI NW OF FOLSOM.

Location Detail: MAPPED ACCORDING TO THE LAT/LONG COORDINATES GIVEN IN MANIS, WITH UNCERTAINTY OF 804.672M.

General: 1 FEMALE SPECIMEN COLLECTED BY P.Q. TOMICH ON 24 JUN 1941, MVZ #106649.

Owner/Manager: UNKNOWN

***Ardea alba***

great egret

Element Code: ABNGA05010

Status

NDDB Element Ranks

Other Lists

Federal: None

Global: G5

CDFG Status:

State: None

State: S4

Habitat Associations

General: COLONIAL NESTER IN LARGE TREES.

Micro: ROOKERY SITES LOCATED NEAR MARSHES, TIDE-FLATS, IRRIGATED PASTURES, AND MARGINS OF RIVERS AND LAKES.

Occurrence No. 15

Map Index: 17072

EO Index: 12096

Dates Last Seen

Occ Rank: None

Element: 1989-05-09

Origin: Natural/Native occurrence

Site: 1990- -

Presence: Possibly Extirpated

Record Last Updated: 1990-11-07

Trend: Unknown

Quad Summary: Clarksville (3812161/511A), Folsom (3812162/511B)

County Summary: Sacramento

Lat/Long: 38.67918° / -121.12308°

Township: 10N

UTM: Zone-10 N4282847 E663263

Range: 06E

Radius: 1/5 mile

Mapping Precision: NON-SPECIFIC

Section: 32

Qtr: NE

Elevation: 350 ft

Symbol Type: POINT

Meridian: M

Location: JUST SOUTH OF THE INTERSECTION OF BLUE RAVINE RD AND THE RD CONNECTING BLUE RAVINE AND GREEN VALLEY RDS, S OF FOLSOM LK.

Location Detail: ROOKERY IS LOCATED IN SOME COTTONWOODS BORDERING DREDGER TAILINGS.

Threat: THE PROXIMITY OF A NEW SUBDIVISION, MAY HAVE ALREADY CREATED CONDITIONS TOO ADVERSE FOR CONTINUED NESTING BY EGRETS.

General: 4 ADULTS OBSERVED NESTING IN 1989; NONE IN 1990. GREAT BLUE HERONS ALSO NEST AT THIS LOCATION.

Owner/Manager: PVT

Occurrence No. 32

Map Index: 17123

EO Index: 60309

Dates Last Seen

Occ Rank: Good

Element: 2005-02-25

Origin: Natural/Native occurrence

Site: 2005-02-25

Presence: Presumed Extant

Record Last Updated: 2005-02-28

Trend: Stable

Quad Summary: Folsom (3812162/511B)

County Summary: Sacramento

Lat/Long: 38.64689° / -121.19683°

Township: 09N

UTM: Zone-10 N4279135 E656918

Range: 07E

Area: 19.3 acres

Mapping Precision: SPECIFIC

Section: 10

Qtr: XX

Elevation: 150 ft

Symbol Type: POLYGON

Meridian: M

Location: MISSISSIPPI BAR, ON THE WEST SIDE OF LAKE NATOMA, ACROSS FROM THE WILLOW CREEK ACCESS, FOLSOM LAKE STATE RECREATION AREA

Ecological: NESTING SUBSTRATE CONSISTS OF GRAY PINES (AKA FOOTHILL PINES). GREAT BLUE HERONS AND DOUBLE-CRESTED CORMORANTS ALSO NEST AT THIS ROOKERY SITE.

Threat: POSSIBLE THREAT FROM BOATERS. AREA IS SIGNED WARNING BOATERS NOT TO DISTURB THE NESTING BIRDS.

General: 15+ PAIRS OCCUPYING NESTS AND PERFORMING COURTSHIP DISPLAYS ON 25 FEB 2005. THIS HAS BEEN AN ACTIVE ROOKERY FOR 25+ YEARS.

Owner/Manager: DPR-FOLSOM LAKE SRA

**Ardea herodias**

great blue heron

Element Code: ABNGA04010

<p>Status</p> <p>Federal: None</p> <p>State: None</p>	<p>NDOB Element Ranks</p> <p>Global: G5</p> <p>State: S4</p>	<p>Other Lists</p> <p>CDFG Status:</p>
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Habitat Associations

General: COLONIAL NESTER IN TALL TREES, CLIFFSIDES, AND SEQUESTERED SPOTS ON MARSHES.

Micro: ROOKERY SITES IN CLOSE PROXIMITY TO FORAGING AREAS: MARSHES, LAKE MARGINS, TIDE-FLATS, RIVERS AND STREAMS, WET MEADOWS.

Occurrence No. 30	Map Index: 17072	EO Index: 12140	Dates Last Seen
Occ Rank: None			Element: 1989-06-05
Origin: Natural/Native occurrence			Site: 1990-XX-XX
Presence: Possibly Extirpated			
Trend: Unknown			Record Last Updated: 1990-11-07

Quad Summary: Clarksville (3812161/511A), Folsom (3812162/511B)

County Summary: Sacramento

Lat/Long: 38.67918° / -121.12308°	Township: 10N
UTM: Zone-10 N4282847 E663263	Range: 08E
Radius: 1/5 mile	Section: 32
Elevation: 350 ft	Meridian: M
Mapping Precision: NON-SPECIFIC	Qtr: NE
Symbol Type: POINT	

Location: JUST SOUTH OF THE INTERSECTION OF BLUE RAVINE RD AND THE RD CONNECTING BLUE RAVINE AND GREEN VALLEY RDS, S OF FOLSOM LK.

Location Detail: ROOKERY IS LOCATED IN SOME COTTONWOODS BORDERING DREDGER TAILINGS.

Threat: THE PROXIMITY OF A NEW SUBDIVISION MAY HAVE ALREADY CREATED CONDITIONS TOO ADVERSE FOR CONTINUED NESTING BY HERONS.

General: 14 ADULTS AND 2 JUVENILES OBSERVED IN 1989; NONE IN 1990. GREAT EGRETS ALSO NEST HERE.

Owner/Manager: PVT

Occurrence No. 32	Map Index: 17120	EO Index: 12168	Dates Last Seen
Occ Rank: Excellent			Element: 1990-03-18
Origin: Natural/Native occurrence			Site: 1990-03-18
Presence: Presumed Extant			
Trend: Stable			Record Last Updated: 1991-04-09

Quad Summary: Folsom (3812162/511B)

County Summary: Sacramento

Lat/Long: 38.69921° / -121.16554°	Township: 10N
UTM: Zone-10 N4284995 E659525	Range: 07E
Radius: 1/5 mile	Section: 25
Elevation: 200 ft	Meridian: M
Mapping Precision: NON-SPECIFIC	Qtr: XX
Symbol Type: POINT	

Location: AMERICAN RIVER CANYON, ADJACENT TO FOLSOM STATE PRISON, ON THE EAST SIDE OF THE AMERICAN RIVER, 0.6 MI BELOW FOLSOM DAM.

Location Detail: 22 ADULTS OBSERVED NESTING IN COTTONWOOD TREES.

Ecological: HABITAT IS A COTTONWOOD RIPARIAN WOODLAND. NO VISIBLE DISTURBANCES, DESPITE ITS PROXIMITY TO THE STATE PRISON BUILDINGS.

General: NESTS WERE ALREADY BUILT IN THE COTTONWOOD TREES; MOST ADULTS WERE STANDING IN PAIRS ON THE NESTS, ALTHOUGH ONE NEST HAD AN ADULT SITTING ON THE NEST.

Owner/Manager: DOC-FOLSOM STATE PRISON

Occurrence No. 33	Map Index: 17121	EO Index: 12156	Dates Last Seen
Occ Rank: Excellent			Element: 1990-03-18
Origin: Natural/Native occurrence			Site: 1990-03-18
Presence: Presumed Extant			
Trend: Stable			Record Last Updated: 1991-04-09

Quad Summary: Folsom (3812162/511B)

County Summary: Sacramento

Lat/Long: 38.70602° / -121.16197°	Township: 10N
UTM: Zone-10 N4285757 E659820	Range: 07E
Radius: 1/5 mile	Section: 24
Elevation: 200 ft	Meridian: M
Mapping Precision: NON-SPECIFIC	Qtr: SW
Symbol Type: POINT	

Location: 0.25 MI SOUTH OF THE BASE OF FOLSOM DAM, ON THE WEST SIDE OF THE AMERICAN RIVER CANYON.

Location Detail: 32 ADULTS OBSERVED NESTING IN COTTONWOOD TREES.

Ecological: HABITAT IS COTTONWOOD RIPARIAN WOODLAND.

General: APPROXIMATELY 20 NESTS WERE OBSERVED IN JANUARY BY SOGGE WITH 10 UNPAIRED, STANDING ADULTS; MOST ADULTS WERE STANDING IN PAIRS ON THE NESTS BY MARCH WHEN OBSERVED BY JOHNSON, ALTHOUGH 2 NESTS HAD ADULTS SITTING ON NESTS, AS WELL.

Owner/Manager: BOR

***Ardea herodias***

great blue heron

Element Code: ABNGA04010

Status

NDDB Element Ranks

Other Lists

Federal: None

Global: G5

CDFG Status:

State: None

State: S4

Habitat Associations

General: COLONIAL NESTER IN TALL TREES, CLIFFSIDES, AND SEQUESTERED SPOTS ON MARSHES.

Micro: ROOKERY SITES IN CLOSE PROXIMITY TO FORAGING AREAS; MARSHES, LAKE MARGINS, TIDE-FLATS, RIVERS AND STREAMS, WET MEADOWS.

Occurrence No. 34

Map Index: 17123

EQ Index: 12165

Dates Last Seen

Occ Rank: Unknown

Element: 2005-02-25

Origin: Natural/Native occurrence

Site: 2005-02-25

Presence: Presumed Extant

Record Last Updated: 2005-02-28

Trend: Stable

Quad Summary: Folsom (3812162/511B)

County Summary: Sacramento

Lat/Long: 38.64689° / -121.19683°

Township: 09N

UTM: Zone-10 N4279135 E656918

Range: 07E

Area: 19.3 acres

Mapping Precision: SPECIFIC

Section: 10

Qtr: XX

Elevation: 150 ft

Symbol Type: POLYGON

Meridian: M

Location: MISSISSIPPI BAR, ON THE WEST SIDE OF LAKE NATOMA, ACROSS FROM THE WILLOW CREEK ACCESS, FOLSOM LAKE STATE RECREATION AREA

Ecological: NESTING SUBSTRATE CONSISTS OF GRAY PINES (AKA FOOTHILL PINES). GREAT EGRETS AND DOUBLE-CRESTED CORMORANTS ALSO NEST AT THIS ROOKERY SITE.

Threat: POSSIBLE THREAT FROM BOATERS. AREA IS SIGNED WARNING BOATERS NOT TO DISTURB THE NESTING BIRDS.

General: UNKNOWN NUMBER OF NESTS OBSERVED IN THE TOPS OF SOME FOOTHILL PINES ON 10 MAY 1989. 20+ PAIRS OCCUPYING NESTS AND PERFORMING COURTSHIP DISPLAYS ON 25 FEB 2005. THIS HAS BEEN AN ACTIVE ROOKERY FOR 25+ YEARS.

Owner/Manager: DPR-FOLSOM LAKE SRA

***Athene cunicularia***

burrowing owl

Element Code: ABNSB10010

<p>----- Status -----</p> <p>Federal: None</p> <p>State: None</p>	<p>NDDB Element Ranks</p> <p>Global: G4</p> <p>State: S2</p>	<p>Other Lists</p> <p>CDFG Status: SC</p>
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Habitat Associations

General: OPEN, DRY ANNUAL OR PERENIAL GRASSLANDS, DESERTS & SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.  
Micro: SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.

Occurrence No. 91	Map Index: 17158	EO Index: 5049	Dates Last Seen
Occ Rank: Good			Element: 1989-06-14
Origin: Natural/Native occurrence			Site: 1989-06-14
Presence: Presumed Extant			
Trend: Stable			Record Last Updated: 1994-08-11

Quad Summary: Buffalo Creek (3812152/511C)  
County Summary: Sacramento

Lat/Long: 38.55170° / -121.17270°	Township: 08N
UTM: Zone-10 N4268613 E659228	Range: 07E
Area: 10.5 acres	Section: 14
Elevation: 250 ft	Meridian: M
Mapping Precision: SPECIFIC	Qtr: NE
Symbol Type: POLYGON	

Location: 200 YDS SOUTH OF GLORY LANE, 0.75 MI EAST OF GRANT LINE ROAD, ENE OF MATHER AFB, RANCHO CORDOVA.

Location Detail: TWO BURROWS OCCUPIED BY TWO PAIRS OF OWLS.

Ecological: HABITAT IS ROLLING GRASSLANDS WITH VERNAL POOLS.

Threat: THE ONLY OBVIOUS THREAT IS ONGOING GRAZING.

General: THE WESTERN-MOST PAIR HAD 3 YOUNG AT THE BURROW IN THE EVENING.

Owner/Manager: PVT

Occurrence No. 307	Map Index: 40373	EO Index: 35380	Dates Last Seen
Occ Rank: Unknown			Element: 1994-04-XX
Origin: Natural/Native occurrence			Site: 1994-04-XX
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1998-12-11

Quad Summary: Buffalo Creek (3812152/511C)  
County Summary: Sacramento

Lat/Long: 38.53037° / -121.18579°	Township: 08N
UTM: Zone-10 N4266223 E658134	Range: 07E
Radius: 80 meters	Section: 23
Elevation: 190 ft	Meridian: M
Mapping Precision: SPECIFIC	Qtr: XX
Symbol Type: POINT	

Location: 1.1 MILES NNW OF THE INTERSECTION OF KIEFER BLVD AND GRANT LINE RD.

Location Detail: JUST NORTH OF THE KIEFER LANDFILL EXPANSION FOOTPRINT.

Ecological: BURROW FOUND IN ANNUAL GRASSLANDS WITH VERNAL POOLS.

Threat: PROPOSED LANDFILL EXPANSION

General: ONE BURROW SHOWING SIGN OF RECENT OCCUPATION.

Owner/Manager: SAC COUNTY

Occurrence No. 308	Map Index: 40374	EO Index: 35381	Dates Last Seen
Occ Rank: Unknown			Element: 1994-04-XX
Origin: Natural/Native occurrence			Site: 1994-04-XX
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1998-12-11

Quad Summary: Buffalo Creek (3812152/511C)  
County Summary: Sacramento

Lat/Long: 38.52053° / -121.19245°	Township: 08N
UTM: Zone-10 N4265120 E657575	Range: 07E
Radius: 80 meters	Section: 27
Elevation:	Meridian: M
Mapping Precision: SPECIFIC	Qtr: XX
Symbol Type: POINT	

Location: KIEFER LANDFILL SITE, 0.5 MI EAST OF INTERSECTION OF KIEFER BLVD AND GRANT LINE RD.

Location Detail: JUST OUTSIDE THE KIEFER LANDFILL EXPANSION FOOTPRINT.

Ecological: BURROWS IN ANNUAL GRASSLANDS WITH VERNAL POOLS.

Threat: PROPOSED LANDFILL EXPANSION

General: THREE BURROWS WITH SIGNS OF RECENT OCCUPATION OBSERVED.

Owner/Manager: SAC COUNTY



***Branchinecta lynchi***

vernal pool fairy shrimp

Element Code: ICBRA03030

Status  
Federal: Threatened  
State: None

NDDB Element Ranks  
Global: G3  
State: S2S3

Other Lists  
CDFG Status:

**Habitat Associations**

General: ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MTNS, AND SOUTH COAST MTNS, IN ASTATIC RAIN-FILLED POOLS.  
Micro: INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Occurrence No. 31 Map Index: 33262 EO Index: 2583 Dates Last Seen  
Occ Rank: Fair Element: 1995-03-24  
Origin: Natural/Native occurrence Site: 1995-03-24  
Presence: Presumed Extant  
Trend: Unknown Record Last Updated: 1995-08-30

Quad Summary: Buffalo Creek (3812152/511C)  
County Summary: Sacramento

Lat/Long: 38.61182° / -121.13272° Township: 09N  
UTM: Zone-10 N4275355 E662577 Range: 08E  
Radius: 80 meters Mapping Precision: SPECIFIC Section: 30 Qtr: NE  
Elevation: 350 ft Symbol Type: POINT Meridian: M

Location: 1 MILE EAST OF THE INTERSECTION OF PRAIRIE CITY ROAD AND WHITE ROCK ROAD, SACRAMENTO COUNTY.  
Ecological: HABITAT CONSISTS OF NORTHERN HARDPAN AND NORTHERN VOLCANIC MUDFLOW VERNAL POOLS IN NON-NATIVE GRASSLAND; POOL WATER FAIRLY TURBID. DOMINANT PLANTS INCLUDE CALITRICHE SP., RANUNCULUS SP., AND ERYNGIUM SP.  
Threat: POSSIBLE THREAT FROM OVERGRAZING (POOL SHOWS EVIDENCE OF USE BY CATTLE).  
General: 1 FEMALE COLLECTED FROM WETLAND NUMBER 24 ON 24 MARCH 1995 (IDENTIFIED BY D. BELK); DEPOSITED AT CAS.  
Owner/Manager: PVT-CAVITT RANCH

Occurrence No. 33 Map Index: 32441 EO Index: 2104 Dates Last Seen  
Occ Rank: Unknown Element: 1995-02-01  
Origin: Natural/Native occurrence Site: 1995-02-01  
Presence: Presumed Extant  
Trend: Unknown Record Last Updated: 1995-09-22

Quad Summary: Sloughouse (3812142/495B), Buffalo Creek (3812152/511C), Carmichael (3812153/512D)  
County Summary: Sacramento

Lat/Long: 38.50257° / -121.24805° Township: 08N  
UTM: Zone-10 N4263033 E652766 Range: 07E  
Radius: 1/5 mile Mapping Precision: NON-SPECIFIC Section: 31 Qtr: SE  
Elevation: 120 ft Symbol Type: POINT Meridian: M

Location: ADJACENT TO MATHER AIR FORCE BASE; APPROX. 0.6 KM SOUTHWEST OF THE INTERSECTION BETWEEN SUNRISE BLVD AND JACKSON ROAD.  
Location Detail: GRECH PROPERTY (SURVEYED FOR SACRAMENTO AGGREGATES).  
Ecological: HARDPAN VERNAL POOL IN ANNUAL GRASSLAND.  
Threat: RURAL AGRICULTURAL USES.  
General: POOLS #41 & 42: <50 ADULTS OBSERVED; POOLS #47 & 48: 50+ ADULTS OBSERVED; 11 ADULTS COLLECTED AND DEPOSITED IN CAS.  
Owner/Manager: PVT

Occurrence No. 43 Map Index: 28976 EO Index: 30715 Dates Last Seen  
Occ Rank: Unknown Element: 1996-02-06  
Origin: Natural/Native occurrence Site: 1996-03-22  
Presence: Presumed Extant  
Trend: Unknown Record Last Updated: 1997-03-10

Quad Summary: Buffalo Creek (3812152/511C)  
County Summary: Sacramento

Lat/Long: 38.54240° / -121.23355° Township: 08N  
UTM: Zone-10 N4267477 E653945 Range: 07E  
Area: Mapping Precision: NON-SPECIFIC Section: 17 Qtr: XX  
Elevation: 160 ft Symbol Type: POLYGON Meridian: M

Location: BETWEEN DOUGLAS BLVD AND KEIFER BLVD; BETWEEN SUNRISE BLVD AND JAEGER ROAD; EAST OF MATHER AFB.  
Location Detail: SAMMIS DOUGLAS SUNRISE SITE. 1995: 386 WATERBODIES SAMPLED IN T08N, R07E, SEC 8, 17 & 20. 1996: 33 WATERBODIES SAMPLED IN PILOT WETLANDS IN T08N, R07E, SEC 20. 1993: 56 NATURAL SEASONAL WETLANDS & 27 MANMADE VERNAL POOLS INSPECTED IN SEC 20  
Ecological: HARDPAN VERNAL POOL IN ANNUAL GRASSLAND. ALSO, NATURAL SEASONAL WETLANDS & MANMADE VERNAL POOLS.  
Threat: AGRICULTURAL.  
General: 1995: DATA SUMMARIZED. ~60 POOLS HAD B. LYNCHI. NUMBERS VARIED FROM <10 TO 1000+. SAMPLES DEPOSITED IN CAS. 1996: 50+ OBS IN 3 POOLS (SB4, SB6 & SB11) IN SEC 20. 1993: OBS IN 4 OF 56 SEASONAL WETLANDS & 3 OF 27 MANMADE POOLS IN SEC 20.  
Owner/Manager: PVT-SARES REGIS GROUP

***Branchinecta lynchi***

vernal pool fairy shrimp

Element Code: ICBRA03030

Status  
Federal: Threatened  
State: None

NDDB Element Ranks  
Global: G3  
State: S2S3

Other Lists  
CDFG Status:

**Habitat Associations**

General: ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MTNS, AND SOUTH COAST MTNS, IN ASTATIC RAIN-FILLED POOLS.  
Micro: INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Occurrence No. 134      Map Index: 34807      EO Index: 1765      Dates Last Seen  
Occ Rank: Good      Element: 1996-03-08  
Origin: Natural/Native occurrence      Site: 1996-03-08  
Presence: Presumed Extant  
Trend: Unknown      Record Last Updated: 1996-09-09

Quad Summary: Buffalo Creek (3812152/511C)  
County Summary: Sacramento

Lat/Long: 38.59987° / -121.17173°      Township: 09N  
UTM: Zone-10 N4273960 E659206      Range: 07E  
Area: 423.6 acres      Mapping Precision: SPECIFIC      Section: 35      Qtr: NE  
Elevation: 280 ft      Symbol Type: POLYGON      Meridian: M

Location: SOUTHEAST OF WHITE ROCK ROAD X GRANT LINE ROAD; SOUTH OF FOLSOM.  
Location Detail: GENCORP AEROJET OFFSITE GET B SITE; POOL #71, WATER DEPTH APPROX. 25 CM, TURBIDITY LIKE STRONG TEA.  
Ecological: OLD DREDGE PIT IN NON-NATIVE GRASSLAND.  
Threat: ADJACENT LAND USE: GRAZING PASTURELAND, STATE RECREATIONAL VEHICLE AREA.  
General: 1 BRANCHINECTA LYNCHI COLLECTED AND DEPOSITED IN CAS; LINDERIELLA OCCIDENTALIS ALSO PRESENT.  
Owner/Manager: PVT-GENCORP AEROJET

Occurrence No. 135      Map Index: 34808      EO Index: 12630      Dates Last Seen  
Occ Rank: Good      Element: 1996-01-30  
Origin: Natural/Native occurrence      Site: 1996-01-30  
Presence: Presumed Extant  
Trend: Unknown      Record Last Updated: 1996-08-08

Quad Summary: Folsom (3812162/511B)  
County Summary: Sacramento

Lat/Long: 38.63534° / -121.23497°      Township: 09N  
UTM: Zone-10 N4277789 E653623      Range: 07E  
Radius: 80 meters      Mapping Precision: SPECIFIC      Section: 17      Qtr: XX  
Elevation: 105 ft      Symbol Type: POINT      Meridian: M

Location: EAST END OF SAILOR BAR; 100 METERS NORTH OF AMERICAN RIVER; 0.9 KM WEST OF HAZEL AVENUE BRIDGE.  
Location Detail: SOUTHEAST OF PARKING LOT AT FIRST FISHING ACCESS ROAD; ADJACENT LAND USE: PUBLIC PARKWAY, GRAVEL STORAGE AREA FOR COUNTY.  
Ecological: VERNAL POOL IN DREDGE TAILINGS; GRAVEL AND COBBLED SOIL; SCATTERED LIVE OAKS AND COTTONWOOD TREES BORDERING RIPARIAN AREA.  
Threat: POSSIBLE THREAT: PUBLIC PARKWAY, RECREATIONAL AND FISHING ACCESS AREA.  
General: >50 ADULTS OBSERVED IN POOL; UNKNOWN NUMBER COLLECTED AND DEPOSITED IN CAS; LINDERIELLA OCCIDENTALIS ALSO PRESENT.  
Owner/Manager: SAC COUNTY

Occurrence No. 168      Map Index: 33695      EO Index: 30607      Dates Last Seen  
Occ Rank: Unknown      Element: 1993-03-25  
Origin: Natural/Native occurrence      Site: 1993-03-25  
Presence: Presumed Extant  
Trend: Unknown      Record Last Updated: 1997-03-10

Quad Summary: Clarksville (3812161/511A)  
County Summary: Sacramento, El Dorado

Lat/Long: 38.69245° / -121.10569°      Township: 10N  
UTM: Zone-10 N4284351 E664746      Range: 08E  
Radius: 3/5 mile      Mapping Precision: NON-SPECIFIC      Section: 28      Qtr: XX  
Elevation: 400 ft      Symbol Type: POINT      Meridian: M

Location: EAST OF BLUE RAVINE, SOUTHEAST OF MORMON ISLAND DAM.  
Location Detail: VERNAL POOLS LOCATED SOMEWHERE IN SECTION 28.  
Ecological: NATURAL VERNAL POOLS AND MANMADE VERNAL POOLS.  
General: B. LYNCHI OBSERVED IN 1 NATURAL VERNAL POOL AND 2 MANMADE VERNAL POOLS. SUGNET RECORD #S 83 & 84. NO LEPIDURUS PACKARDI OBSERVED.  
Owner/Manager: UNKNOWN

***Branchinecta lynchi***

vernal pool fairy shrimp

Element Code: ICBRA03030

Status  
Federal: Threatened  
State: None

NDDG Element Ranks  
Global: G3  
State: S2S3

Other Lists  
CDFG Status:

**Habitat Associations**

General: ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MTNS, AND SOUTH COAST MTNS, IN ASTATIC RAIN-FILLED POOLS.

Micro: INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Occurrence No. 190 Map Index: 36874

EO Index: 31871

Dates Last Seen

Occ Rank: Good  
Origin: Natural/Native occurrence  
Presence: Presumed Extant  
Trend: Unknown

Element: 2000-03-15  
Site: 2000-03-15

Record Last Updated: 2000-08-10

Quad Summary: Sloughhouse (3812142/4958), Elk Grove (3812143/495A), Carmichael (3812153/512D), Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.50388° / -121.25393°  
UTM: Zone-10 N4263168 E652250  
Area:  
Elevation: 125 ft

Mapping Precision: NON-SPECIFIC  
Symbol Type: POLYGON

Township: 08N  
Range: 07E  
Section: 31 Qtr: XX  
Meridian: M

Location: VICINITY OF THE INTERSECTION OF EAGLES NEST ROAD AND HWY 16 (JACKSON ROAD), SOUTH OF MATHER AIR FORCE BASE.

Ecological: HABITAT CONSISTS OF NORTHERN HARDPAN VERNAL POOLS, AS WELL AS SCRAPES, SWALES, DEPRESSIONS, AND STOCK PONDS; SURROUNDED BY NON-NATIVE GRASSLAND.

Threat: THREATENED BY GRAVEL MINING.

General: NUMEROUS FAIRY SHRIMP FOUND AT THIS SITE DURING SPRING 1996 AND 1997 SURVEYS. OBSERVED 10+ ADULTS MARCH 2000, IN WESTERN PORTION OF POLYGON.

Owner/Manager: PVT

Occurrence No. 192 Map Index: 37098

EO Index: 32095

Dates Last Seen

Occ Rank: Unknown  
Origin: Natural/Native occurrence  
Presence: Presumed Extant  
Trend: Unknown

Element: 1994-05-11  
Site: 1994-05-11

Record Last Updated: 1997-10-07

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.51464° / -121.21016°  
UTM: Zone-10 N4264436 E656044  
Area:  
Elevation: 150 ft

Mapping Precision: NON-SPECIFIC  
Symbol Type: POLYGON

Township: 08N  
Range: 07E  
Section: 28 Qtr: SE  
Meridian: M

Location: SOUTH OF BLODGETT RESERVOIR (LAGUNA CREEK), NE OF THE INTERSECTION OF HWY 16 AND GRANT LINE ROAD, SE OF SACRAMENTO.

Ecological: HABITAT CONSISTS OF NORTHERN HARDPAN VERNAL POOLS.

General: "DUTRA" SITE. BRANCHINECTA LYNCHI, LEPIDURUS PACKARDI, LINDERIELLA OCCIDENTALIS, AND AN UNKNOWN BRANCHINECTA SPECIES WERE OBSERVED ON 11 MAY 1994.

Owner/Manager: UNKNOWN

Occurrence No. 199 Map Index: 40261

EO Index: 35263

Dates Last Seen

Occ Rank: Unknown  
Origin: Natural/Native occurrence  
Presence: Presumed Extant  
Trend: Unknown

Element: 1994-04-XX  
Site: 1994-04-XX

Record Last Updated: 1998-11-30

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.52143° / -121.18916°  
UTM: Zone-10 N4265225 E657860  
Area: 17.1 acres  
Elevation: 220 ft

Mapping Precision: SPECIFIC  
Symbol Type: POLYGON

Township: 08N  
Range: 07E  
Section: 27 Qtr: XX  
Meridian: M

Location: KIEFER LANDFILL, 0.7 MI E JCT OF GRANT LINE RD & KIEFER BLVD, 1.7 MILES NNE OF DEER CREEK CROSSING AT JACKSON HWY (16).

Location Detail: INSIDE KIEFER LANDFILL EXPANSION FOOTPRINT REDUCTION AREA.

Ecological: NORTHERN HARDPAN VERNAL POOL COMMUNITY.

Threat: PROPOSED LANDFILL EXPANSION.

General: B. LUNCHI FOUND IN 6 POOLS. LEPIDURUS PACKARDI ALSO FOUND HERE.

Owner/Manager: SAC COUNTY

***Branchinecta lynchi***

vernal pool fairy shrimp

Element Code: ICBRA03030

Status  
Federal: Threatened  
State: None

NDDB Element Ranks  
Global: G3  
State: S2S3

Other Lists  
CDFG Status:

Habitat Associations

General: ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MTNS, AND SOUTH COAST MTNS, IN ASTATIC RAIN-FILLED POOLS.

Micro: INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Occurrence No. 200 Map Index: 40263 EO Index: 35265 Dates Last Seen  
Occ Rank: Unknown Element: 1994-04-XX  
Origin: Natural/Native occurrence Site: 1994-04-XX  
Presence: Presumed Extant  
Trend: Unknown Record Last Updated: 1998-11-30

Quad Summary: Buffalo Creek (3812152/511C)  
County Summary: Sacramento

Lat/Long: 38.53093° / -121.18642° Township: 08N  
UTM: Zone-10 N4266284 E658078 Range: 07E  
Radius: 80 meters Mapping Precision: SPECIFIC Section: 23 Qtr: SW  
Elevation: 230 ft Symbol Type: POINT Meridian: M

Location: KIEFER LANDFILL, 1.1 MILES NE JCT OF GRANT LINE RD & KIEFER BLVD, 0.2 MILE S OF GRANT LINE RD AT BM 216.  
Location Detail: KIEFER LANDFILL EXPANSION FOOTPRINT AREA.  
Ecological: NORTHERN HARDPAN VERNAL POOL COMMUNITY.  
Threat: PROPOSED LANDFILL EXPANSION  
General: OBSERVED IN VERNAL POOL IN THE NORTHERN CORNER OF THE PROPERTY WITHIN THE PROPOSED LANDFILL FOOTPRINT. LEPIDURUS PACKARDI ALSO FOUND HERE.  
Owner/Manager: SAC COUNTY

Occurrence No. 205 Map Index: 41017 EO Index: 41017 Dates Last Seen  
Occ Rank: Unknown Element: 1999-02-16  
Origin: Natural/Native occurrence Site: 1999-02-16  
Presence: Presumed Extant  
Trend: Unknown Record Last Updated: 2001-08-20

Quad Summary: Folsom SE (3812151/511D)  
County Summary: Sacramento

Lat/Long: 38.50772° / -121.12511° Township: 08N  
UTM: Zone-10 N4263816 E663475 Range: 08E  
Radius: 80 meters Mapping Precision: SPECIFIC Section: 32 Qtr: NW  
Elevation: 180 ft Symbol Type: POINT Meridian: M

Location: 0.65 MILE SOUTH OF LATROBE ROAD AND 1.25 MILES WEST OF SCOTT ROAD, WEST OF RANCHO MURRIETA.  
Location Detail: ONE VERNAL POOL (#24) OF 35 SURVEYED CONTAINED FAIRY SHRIMP.  
Ecological: HABITAT CONSISTS OF VERNAL POOLS WITHIN NON-NATIVE GRASSLAND; SURROUNDED BY VINEYARDS.  
General: 100'S OBSERVED ON 28 JAN, 8 APR, AND 22 APR 1998, AND 10'S BY 20 MAY 1998; MANY FEMALES W/EGG CASES. 21 DEC 1998, A FEW IMMATURES OBSERVED; DURING 1 FEB AND 16 FEB 1999 SURVEYS, 1000'S OF INDIVIDUALS OBSERVED, MOSTLY FEMALES W/EGG CASES.  
Owner/Manager: PVT

Occurrence No. 321 Map Index: 48381 EO Index: 48381 Dates Last Seen  
Occ Rank: Unknown Element: 2002-01-12  
Origin: Natural/Native occurrence Site: 2002-01-31  
Presence: Presumed Extant  
Trend: Unknown Record Last Updated: 2002-07-29

Quad Summary: Buffalo Creek (3812152/511C), Carmichael (3812153/512D)  
County Summary: Sacramento

Lat/Long: 38.55732° / -121.25130° Township: 08N  
UTM: Zone-10 N4269103 E652367 Range: 07E  
Area: 15.5 acres Mapping Precision: SPECIFIC Section: 07 Qtr: XX  
Elevation: 135 ft Symbol Type: POLYGON Meridian: M

Location: MATHER LAKE REGIONAL PARK, NE SIDE OF MATHER LAKE, SOUTH OF DOUGLAS ROAD & WEST OF SUNRISE BLVD.  
Location Detail: OBSERVED IN ALL OF THE SAMPLED WETLANDS (A, B, C, D, E, F AND G).  
Ecological: HABITAT CONSISTS OF ANNUAL GRASSLAND DOMINATED BY NON-NATIVE PLANTS WITH NATURALLY OCCURRING & POSSIBLY ARTIFICIAL SEASONAL WETLANDS, INCLUDING VERNAL POOLS. PLANTS WITHIN WETLANDS: CARTER'S BUTTERCUP, WINGED WATER-STARWORT, POPCORN FLOWER.  
General: INDIVIDUALS OBSERVED ON 12 JAN 2002. VOUCHER SPECIMENS TO BE COLLECTED ON 31 JAN 2002, HOWEVER NO INDIVIDUALS WERE OBSERVED.  
Owner/Manager: SAC COUNTY-PARKS & REC

***Branchinecta mesoallensis***

midvalley fairy shrimp

Element Code: ICBRA03150

Status

NDDB Element Ranks

Other Lists

Federal: None

Global: G2

CDFG Status:

State: None

State: S2

Habitat Associations

General: VERNAL POOLS IN THE CENTRAL VALLEY.

Micro:

Occurrence No. 44

Map index: 48367

EO index: 48367

Dates Last Seen

Occ Rank: Unknown

Element: XXXX-XX-XX

Origin: Natural/Native occurrence

Site: XXXX-XX-XX

Presence: Presumed Extant

Record Last Updated: 2002-07-25

Trend: Unknown

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.55351° / -121.24842°

Township: 08N

UTM: Zone-10 N4268688 E652800

Range: 07E

Radius: 1/10 mile

Mapping Precision: NON-SPECIFIC

Section: 18

Qtr: NE

Elevation: 180 ft

Symbol Type: POINT

Meridian: M

Location: EAST OF MATHER REGIONAL PARK; 0.4 MILE SOUTH OF DOUGLAS BLVD AND 0.2 MILE WEST OF SUNRISE BLVD.

General: UNKNOWN NUMBER OF INDIVIDUALS OBSERVED/COLLECTED AT SITE #026 ON AN UNKNOWN DATE. LOCATION INFORMATION OBTAINED FROM VARIOUS SOURCES.

Owner/Manager: UNKNOWN

Occurrence No. 55

Map index: 51354

EO index: 51354

Dates Last Seen

Occ Rank: Unknown

Element: 1995-XX-XX

Origin: Natural/Native occurrence

Site: 1995-XX-XX

Presence: Presumed Extant

Record Last Updated: 2003-05-21

Trend: Unknown

Quad Summary: Sloughhouse (3812142/495B), Elk Grove (3812143/496A), Buffalo Creek (3812152/511C), Carmichael (3812153/512D)

County Summary: Sacramento

Lat/Long: 38.50163° / -121.24825°

Township: 08N

UTM: Zone-10 N4262928 E652750

Range: 07E

Area:

Mapping Precision: NON-SPECIFIC

Section: 31

Qtr: XX

Elevation: 110 ft

Symbol Type: POLYGON

Meridian: M

Location: SOUTH OF JACKSON ROAD, EAST OF EAGLES NEST ROAD AND NW OF LAGUNA CREEK; APPROX 3 MILES SE OF THE OLD MATHER AFB

Location Detail: GRECH PROPERTY

Ecological: HABITAT CONSISTS OF HARDPAN VERNAL POOLS AND SEASONAL WETLANDS WITHIN NON-NATIVE ANNUAL GRASSLAND.

General: SPECIES OBSERVED IN UNKNOWN NUMBER OF 80 SAMPLED POOLS DURING FEB - MAY 1995.

Owner/Manager: PVT

***Buteo swainsoni***

Swainson's hawk

Element Code: ABNKC19070

<p>----- Status -----</p> <p>Federal: None</p> <p>State: Threatened</p>	<p>NDDB Element Ranks</p> <p>Global: G5</p> <p>State: S2</p>	<p>----- Other Lists -----</p> <p>CDFG Status:</p>
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Habitat Associations

General: BREEDS IN GRASSLANDS WITH WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH  
Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 193	Map Index: 11920	EO Index: 27107	----- Dates Last Seen -----
Occ Rank: Unknown			Element: 1979-06-29
Origin: Natural/Native occurrence			Site: 1982-06-28
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1989-08-10

Quad Summary: Sloughhouse (3812142/495B), Buffalo Creek (3812152/511C)  
County Summary: Sacramento

Lat/Long: 38.49768° / -121.17078°	Township: 08N
UTM: Zone-10 N4262621 E659515	Range: 07E
Radius: 1/5 mile	Section: 35
Elevation: 150 ft	Meridian: M
	Qtr: XX

Mapping Precision: NON-SPECIFIC  
Symbol Type: POINT

Location: 1.5 MI EAST OF SLOUGHHOUSE ON N SIDE OF HWY 16.

General: DFG SWHA #SA003. 1 ADULT OBS IN 1979 BUT NO NEST FOUND. NO ADULTS OR NEST FOUND IN 1982.

Owner/Manager: PVT

Occurrence No. 200	Map Index: 12012	EO Index: 27098	----- Dates Last Seen -----
Occ Rank: Unknown			Element: 1982-06-28
Origin: Natural/Native occurrence			Site: 1982-06-28
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1989-08-10

Quad Summary: Folsom SE (3812151/511D)  
County Summary: Sacramento

Lat/Long: 38.62129° / -121.11550°	Township: 09N
UTM: Zone-10 N4276436 E664054	Range: 08E
Radius: 1/5 mile	Section: 20
Elevation: 400 ft	Meridian: M
	Qtr: NW

Mapping Precision: NON-SPECIFIC  
Symbol Type: POINT

Location: INTERSECTION OF WHITE ROCK AND SCOTT RDS, ABOUT 1.5 MILES OF HWY 50.

General: DFG SWHA #SA001. 1 ADULT OBS IN AREA BOTH 1979 AND 1982. NO NESTS FOUND.

Owner/Manager: PVT

Occurrence No. 659	Map Index: 26343	EO Index: 4374	----- Dates Last Seen -----
Occ Rank: Good			Element: 1993-06-17
Origin: Natural/Native occurrence			Site: 1993-06-17
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1994-12-06

Quad Summary: Buffalo Creek (3812152/511C)  
County Summary: Sacramento

Lat/Long: 38.50592° / -121.15879°	Township: 08N
UTM: Zone-10 N4263556 E660542	Range: 07E
Radius: 80 meters	Section: 36
Elevation: 100 ft	Meridian: M
	Qtr: NE

Mapping Precision: SPECIFIC  
Symbol Type: POINT

Location: ALONG CREVIS CREEK, JUST EAST OF ITS CONFLUENCE WITH DEER CREEK, 0.5 MILE NE OF THE KIEFER BLVD CROSSING OVER DEER CREEK

Location Detail: NEST STRUCTURE IS VISIBLE FROM KIEFER BLVD.

Ecological: HABITAT CONSISTS OF VALLEY OAK RIPARIAN; ADJACENT HABITAT DOMINATED BY CULTIVATED FIELDS AND NON-NATIVE GRASSLAND.

General: PAIR WAS FIRST OBSERVED IN THE AREA ON 13 APRIL 1993; NEST SITE WAS REVISITED ON 17 JUNE 1993 AND NEST SITE WAS STILL ACTIVE AT THAT TIME.

Owner/Manager: PVT

***Buteo swainsoni***

Swainson's hawk

Element Code: ABNKC19070

Status

NDDB Element Ranks

Other Lists

Federal: None

Global: G5

CDFG Status:

State: Threatened

State: S2

Habitat Associations

General: BREEDS IN GRASSLANDS WITH WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH

Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 660

Map Index: 26342

EO Index: 4377

Dates Last Seen

Occ Rank: Good

Element: 1993-06-17

Origin: Natural/Native occurrence

Site: 1993-06-17

Presence: Presumed Extant

Record Last Updated: 1995-01-26

Trend: Unknown

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.53242° / -121.14261°

Township: 08N

UTM: Zone-10 N4266526 E661894

Range: 08E

Radius: 80 meters

Mapping Precision: SPECIFIC

Section: 19

Qtr: XX

Elevation: 130 ft

Symbol Type: POINT

Meridian: M

Location: ALONG DEER CREEK, JUST SOUTH OF ITS CONFLUENCE WITH CARSON CREEK, 3.5 MILES ENE OF BLODGETT RESERVOIR.

Ecological: HABITAT CONSISTS OF VALLEY OAK RIPARIAN SURROUNDED BY NON-NATIVE GRASSLAND; GRASSLAND ON GENTLE TO MODERATELY SLOPING HILLS.

General: PAIR OBSERVED COURTING/NEST-BUILDING ON 16 AND 17 JUNE 1993.

Owner/Manager: PVT

Occurrence No. 704

Map Index: 39165

EO Index: 34167

Dates Last Seen

Occ Rank: Good

Element: 1998-07-01

Origin: Natural/Native occurrence

Site: 1998-07-01

Presence: Presumed Extant

Record Last Updated: 1998-07-15

Trend: Unknown

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.50281° / -121.17567°

Township: 08N

UTM: Zone-10 N4263182 E659077

Range: 07E

Radius: 80 meters

Mapping Precision: SPECIFIC

Section: 35

Qtr: XX

Elevation: 100 ft

Symbol Type: POINT

Meridian: M

Location: DEER CREEK, 0.7 MILE DOWNSTREAM FROM THE KIEFER BLVD CROSSING, NE OF SLOUGHHOUSE.

Ecological: NEST TREE (SUSPECTED) IS A LARGE VALLEY OAK ALONG DEER CREEK, ADJACENT TO GRASSLAND. HABITAT CONSISTS OF A DENSE STRINGER OF VALLEY/FOOTHILL RIPARIAN VEGETATION; BORDERED BY ANNUAL GRASSLAND AND AGRICULTURAL LANDS (PASTURE AND CROPLAND).

General: PAIR OF SWHA OBSERVED OCCUPYING/DEFENDING THE SITE ON 1 JUL 1998.

Owner/Manager: SAC COUNTY

***Ceanothus roderickii***

Pine Hill ceanothus

Element Code: PDRHA04190

Status

NDDB Element Ranks

Other Lists

Federal: Endangered

Global: G2

CNPS List: 1B.2

State: Rare

State: S2.1

Habitat Associations

General: CHAPARRAL, CISMONTANE WOODLAND.

Micro: GABBROIC SOILS; OFTEN IN "HISTORICALLY DISTURBED" AREAS WITH AN ENSEMBLE OF OTHER RARE PLANTS. 260-630M.

Occurrence No. 20

Map Index: 22145

EO Index: 16646

Dates Last Seen

Occ Rank: Unknown

Element: 1986-XX-XX

Origin: Natural/Native occurrence

Site: 1986-XX-XX

Presence: Presumed Extant

Record Last Updated: 1993-01-25

Trend: Unknown

Quad Summary: Clarksville (3812161/511A)

County Summary: El Dorado

Lat/Long: 38.73531° / -121.05130°

Township: 10N

UTM: Zone-10 N4289207 E669375

Range: 08E

Radius: 80 meters

Mapping Precision: SPECIFIC

Section: 12

Qtr: SW

Elevation: 860 ft

Symbol Type: POINT

Meridian: M

Location: WEST OF SWEETWATER CREEK, 0.5 KM (0.25 MI) NW OF LANDING STRIP AND 2.5 KM (1.5 MI) NNE OF LIVE OAK SCHOOL.

Location Detail: LOCATED IN THE NE 1/4 OF THE SW 1/4 OF SECTION 12.

General: MAP DETAIL IS ONLY SOURCE OF INFORMATION FOR THIS SITE.

Owner/Manager: UNKNOWN



***Chlorogalum grandiflorum***

Red Hills soaproot

Element Code: PMLIL0G020

Status

NDDB Element Ranks

Other Lists

Federal: None

Global: G2

CNPS List: 1B.2

State: None

State: S2.2

Habitat Associations

General: CISMONTANE WOODLAND, CHAPARRAL, LOWER MONTANE CONIFEROUS FOREST.

Micro: OCCURS ON BOTH SERPENTINE AND GABBRO SUBSTRATES; OFTEN ON "HISTORICALLY DISTURBED" SITES. 240-760M.

Occurrence No. 35

Map Index: 30914

EO Index: 3843

Dates Last Seen

Occ Rank: Unknown

Element: 1986-XX-XX

Origin: Natural/Native occurrence

Site: 1986-XX-XX

Presence: Presumed Extant

Trend: Unknown

Record Last Updated: 1995-03-03

Quad Summary: Clarksville (3812161/511A)

County Summary: El Dorado

Lat/Long: 38.71931° / -121.02787°

Township: 10N

UTM: Zone-10 N4287475 E671450

Range: 09E

Radius: 80 meters

Mapping Precision: SPECIFIC

Section: 18

Qtr: SE

Elevation: 1,260 ft

Symbol Type: POINT

Meridian: M

Location: 0.5 MILE WEST OF DEER VALLEY ROAD & 0.2 MILE SOUTH OF MARTEL CREEK, NORTH OF BASS LAKE.

Location Detail: MAPPED JUST TO THE WEST OF 1381' ELEVATION MARKER IN THE NW 1/4 OF THE SE 1/4 OF SECTION 18.

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS MAP DETAIL PROVIDED BY WILSON.

Owner/Manager: UNKNOWN

***Clarkia biloba ssp. brandegeae***

Brandegee's clarkia

Element Code: PDONA05053

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G4G5T2	CNPS List: 1B.2
State: None	State: S2.2	

Habitat Associations

General: CHAPARRAL, CISMONTANE WOODLAND.

Micro: OFTEN IN ROADCUTS, 295-885M.

Occurrence No. 25	Map Index: 56254	EO Index: 56270	Dates Last Seen
Occ Rank: Fair			Element: 2003-05-19
Origin: Natural/Native occurrence			Site: 2003-05-19
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2006-07-05

Quad Summary: Clarksville (3812161/511A)

County Summary: El Dorado

Lat/Long: 38.71002° / -121.08387°	Township: 10N
UTM: Zone-10 N4286340 E666602	Range: 09E
Area:	Section: 22
Elevation: 655 ft	Meridian: M
	Qtr: NE

Location: NORTHEAST OF THE INTERSECTION OF GREEN VALLEY ROAD AND FRANCISCO ROAD, SOUTH OF VILLAGE CENTER DRIVE IN EL DORADO HILLS.

Location Detail: LOCATED NEAR THE SOUTH END OF THE PROPERTY, ON TOP OF A RISE ADJACENT TO GREEN VALLEY ROAD. MAPPED WITHIN THE NE 1/4 OF SECTION 22.

Ecological: HIGHLY DISTURBED NON-NATIVE ANNUAL GRASSLAND. MAJOR COMPONENTS ARE BROMUS DIANDRUS, TRIFOLIUM HIRTUM, TAENIATHERUM CAPUT-MEDUSAE, AND LOTUS PURSHIANUS. SITE ALSO SUPPORTS A SMALL QUERCUS DOUGLASH WOODLAND.

Threat: AREA IS PLANNED FOR DEVELOPMENT. DOMINATED BY NON-NATIVE ANNUAL GRASSES.

General: 500 PLANTS SEEN IN 2003.

Owner/Manager: PVT

***Desmocerus californicus dimorphus***

valley elderberry longhorn beetle

Element Code: IICOL48011

Status  
 Federal: Threatened  
 State: None

NDDB Element Ranks  
 Global: G3T2  
 State: S2

Other Lists  
 CDFG Status:

Habitat Associations

General: OCCURS ONLY IN THE CENTRAL VALLEY OF CALIFORNIA, IN ASSOCIATION WITH BLUE ELDERBERRY (SAMBUCUS MEXICANA).

Micro: PREFERS TO LAY EGGS IN ELDERBERRIES 2-8 INCHES IN DIAMETER; SOME PREFERENCE SHOWN FOR "STRESSED" ELDERBERRIES.

Occurrence No. 1 Map Index: 11640 EO Index: 14459 Dates Last Seen  
 Occ Rank: Unknown Element: 1987-04-23  
 Origin: Natural/Native occurrence Site: 1987-04-23  
 Presence: Presumed Extant  
 Trend: Unknown Record Last Updated: 1998-08-10

Quad Summary: Carmichael (3812153/512D), Folsom (3812162/511B), Citrus Heights (3812163/512A)

County Summary: Sacramento

Lat/Long: 38.61518° / -121.30359° Township: 09N  
 UTM: Zone-10 N4275439 E647692 Range: 06E  
 Area: 1,403.9 acres Mapping Precision: SPECIFIC Section: 22 Qtr: XX  
 Elevation: 60 ft Symbol Type: POLYGON Meridian: M

Location: ALONG AMERICAN RIVER, NIMBUS FLAT AREA OF LAKE NATOMA SOUTH TO DOWNSTREAM END OF GOETHE PARK.

Location Detail: FOUND ALONG THE AMERICAN RIVER PARKWAY TO THE LOWER SOUTHEAST SHORE OF LAKE NATOMA; INCLUDES CRITICAL AND ESSENTIAL HABITAT AREAS.

Ecological: LARVAE ARE STEM AND ROOT BORERS OF ELDERBERRY; EXIT HOLES ARE ROUND. BUPRESTID LARVAE ALSO BORE INTO ELDERBERRY; EXIT HOLES ARE OVAL. ADULTS FEED ON FOLIAGE AND FLOWERS.

Threat: POPULATIONS OF VELB ARE REDUCED AS ELDERBERRY GROVES ARE REDUCED IN NUMBER.

General: 1987 SURVEY OF NIMBUS FLATS FOUND BOTH OLD AND NEW EXIT HOLES.

Owner/Manager: SAC COUNTY, DPR

Occurrence No. 57 Map Index: 24044 EO Index: 14209 Dates Last Seen  
 Occ Rank: Fair Element: 1992-01-14  
 Origin: Natural/Native occurrence Site: 1992-01-14  
 Presence: Presumed Extant  
 Trend: Unknown Record Last Updated: 1993-08-24

Quad Summary: Folsom (3812162/511B)

County Summary: Placer

Lat/Long: 38.74345° / -121.20825° Township: 10N  
 UTM: Zone-10 N4289831 E655714 Range: 07E  
 Radius: 80 meters Mapping Precision: SPECIFIC Section: 09 Qtr: NE  
 Elevation: 260 ft Symbol Type: POINT Meridian: M

Location: SOUTH OF DOUGLAS BLVD WHERE IT INTERSECTS WITH KINGSGATE, GRANITE BAY.

Location Detail: SITE INCLUDES TWO GROUPS OF ELDERBERRY SHRUBS: ONE IS 100 FEET EAST OF KINGSGATE INTERSECTION & THE SECOND IS 200 FEET WEST OF THE KINGSGATE INTERSECTION.

Ecological: HABITAT CONSISTS OF TWO SMALL OUTCROPS OF ELDERBERRY SHRUBS; ONE GROUP OF 6 PLANTS WITH STEMS <1" AND THE OTHER GROUP OF 2 PLANTS WITH STEMS UP TO 4".

General: WEATHERED BOREHOLES FOUND IN BOTH PLANT GROUPINGS.

Owner/Manager: PVT

Occurrence No. 132 Map Index: 39257 EO Index: 34259 Dates Last Seen  
 Occ Rank: Poor Element: 1995-04-21  
 Origin: Natural/Native occurrence Site: 1995-04-21  
 Presence: Presumed Extant  
 Trend: Unknown Record Last Updated: 1998-07-29

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.62158° / -121.23644° Township: 09N  
 UTM: Zone-10 N4276259 E653525 Range: 07E  
 Radius: 80 meters Mapping Precision: SPECIFIC Section: 20 Qtr: XX  
 Elevation: 130 ft Symbol Type: POINT Meridian: M

Location: BETWEEN FOLSOM BLVD AND HIGHWAY 50, 1.25 ROAD MILES SW OF HAZEL AVE AND FOLSOM BLVD, RANCHO CORDOVA.

Location Detail: HIGHWAY FRONTAGE.

Ecological: INTRODUCED WEEDS (OAT & FOXTAIL), ELDERBERRY PLANT, BLACK WALNUT.

Threat: ROADSIDE MOWING, FIRE

General: 1 ADULT OBSERVED.

Owner/Manager: CALTRANS

***Desmocerus californicus dimorphus***

valley elderberry longhorn beetle

Element Code: IICOL48011

Status  
Federal: Threatened  
State: None

NDDB Element Ranks  
Global: G3T2  
State: S2

Other Lists  
CDFG Status:

Habitat Associations

General: OCCURS ONLY IN THE CENTRAL VALLEY OF CALIFORNIA, IN ASSOCIATION WITH BLUE ELDERBERRY (SAMBUCUS MEXICANA).

Micro: PREFERS TO LAY EGGS IN ELDERBERRIES 2-8 INCHES IN DIAMETER; SOME PREFERENCE SHOWN FOR "STRESSED" ELDERBERRIES.

Occurrence No. 169 Map Index: 39545 EO Index: 34547 Dates Last Seen  
Occ Rank: Unknown Element: 1990-62-9  
Origin: Natural/Native occurrence Site: 1990-62-9  
Presence: Presumed Extant  
Trend: Unknown Record Last Updated: 2000-05-03

Quad Summary: Clarksville (3812161/511A), Folsom (3812162/511B)  
County Summary: Sacramento

Lat/Long: 38.67053° / -121.12783° Township: 09N  
UTM: Zone-10 N4281879 E662870 Range: 08E  
Area: 13.9 acres Mapping Precision: SPECIFIC Section: 05 Qtr: SW  
Elevation: 340 ft Symbol Type: POLYGON Meridian: M

Location: WILLOW CREEK, 0.1 MILE WEST OF PREWETT DRIVE, FOLSOM.

Location Detail: FOUND IN AREA "E" AND JUST EAST OF AREA "H" IN THE LAKE NATOMA SHORES VELB MITIGATION MONITORING PROJECT AREA. ALSO THE LEXINGTON HILLS PRESERVE SITE.

Ecological: ELDERBERRY AND ASSOCIATED NATIVE HABITAT.

General: 1 EXIT HOLE OBSERVED IN 1994, NO CHANGE 1995. 2 PLANTS WITH NEW EXIT HOLES JUST OUTSIDE MONITORING AREA, 1996. 16 PLANTS WITH NEW EXIT HOLES & 1 ADULT, 1999.  
SAME AREA, 1997. EXIT HOLES IN PRESERVE, 1999.

Owner/Manager: UNKNOWN

Occurrence No. 170 Map Index: 39550 EO Index: 34552 Dates Last Seen  
Occ Rank: Unknown Element: 1992-XX-XX  
Origin: Natural/Native occurrence Site: 1999-06-15  
Presence: Presumed Extant  
Trend: Unknown Record Last Updated: 2000-05-02

Quad Summary: Folsom (3812162/511B)  
County Summary: Placer

Lat/Long: 38.72227° / -121.19342° Township: 10N  
UTM: Zone-10 N4287506 E657050 Range: 07E  
Area: 32.8 acres Mapping Precision: SPECIFIC Section: 15 Qtr: XX  
Elevation: 300 ft Symbol Type: POLYGON Meridian: M

Location: LINDA CREEK, GRANITE BAY GOLF CLUB, SOUTH OF EAST ROSEVILLE PARKWAY AND EAST OF BARTON ROAD.

Location Detail: SEVERAL PLANTS IN RIPARIAN CORRIDOR OF LINDA CREEK, OTHERS WERE MOVED TO ONSITE MITIGATION AREA ABOUT IN THE MIDDLE OF THE PROPERTY.

Ecological: RIPARIAN, OPEN OAK WOODLAND. SITE IS BEING DEVELOPED AS A GOLF COURSE. SOME AREAS WILL REMAIN IN OPEN SPACE AND A VELB COMPENSATION AREA IS BEING CREATED FOR MITIGATION. IN 1997 69 OF THE 86 PLANTED ELDERBERRIES HAD SURVIVED.

General: 20 ELDERBERRIES, 8 WITH EXIT HOLES OBSERVED IN 1991 & 1992. SOME BUSHES TRANSPLANTED TO COMPENSATION AREA & ADDITIONAL SEEDLINGS PLANTED. YEARLY SURVEYS CONDUCTED 1993-1999 BUT NO ADULTS OR NEW EXIT HOLES OBSERVED.

Owner/Manager: PVT

Occurrence No. 188 Map Index: 45079 EO Index: 45079 Dates Last Seen  
Occ Rank: Poor Element: 2000-01-24  
Origin: Natural/Native occurrence Site: 2000-01-24  
Presence: Presumed Extant  
Trend: Unknown Record Last Updated: 2001-03-13

Quad Summary: Buffalo Creek (3812152/511C)  
County Summary: Sacramento

Lat/Long: 38.61857° / -121.24886° Township: 09N  
UTM: Zone-10 N4275904 E652450 Range: 07E  
Radius: 80 meters Mapping Precision: SPECIFIC Section: 19 Qtr: SE  
Elevation: 125 ft Symbol Type: POINT Meridian: M

Location: SOUTH SIDE OF BUFFALO CREEK DRAINAGE CANAL, ON THE NORTH SIDE OF HIGHWAY 50, EAST EDGE OF SACRAMENTO

Location Detail: FOUND ALONG THE WEST EDGE OF THE RIGHT-OF-WAY FENCE.

Ecological: HABITAT CONSISTS OF A RIPARIAN CORRIDOR ALONG BUFFALO CREEK. CREEK HAS A MUD SUBSTRATE, WITH EMERGENT VEGETATION AND SAND BAR WILLOW IN ISOLATED STANDS. SURROUNDING AREA HAS BEEN EXTENSIVELY MODIFIED BY HYDRAULIC MINING.

*Desmocerus californicus dimorphus*

valley elderberry longhorn beetle

Element Code: IICOL48011

Status

NDDB Element Ranks

Other Lists

Federal: Threatened

Global: G3T2

CDFG Status:

State: None

State: S2

Habitat Associations

General: OCCURS ONLY IN THE CENTRAL VALLEY OF CALIFORNIA, IN ASSOCIATION WITH BLUE ELDERBERRY (SAMBUCUS MEXICANA).

Micro: PREFERS TO LAY EGGS IN ELDERBERRIES 2-8 INCHES IN DIAMETER; SOME PREFERENCE SHOWN FOR "STRESSED" ELDERBERRIES.

Threat: THREATENED BY A PROPOSED RESIDENTIAL DEVELOPMENT.

General: 3 OF 12 ELDERBERRY BUSHES FOUND TO CONTAIN EXIT HOLES ON 24 JAN 2000.

Owner/Manager: PVT

Occurrence No. 191

Map Index: 48761

EO Index: 48761

Dates Last Seen

Occ Rank: Unknown

Element: 1996-XX-XX

Origin: Transplant Outside of Native Hab./Range

Site: 1996-XX-XX

Presence: Presumed Extant

Record Last Updated: 2002-09-10

Trend: Unknown

Quad Summary: Folsom (3812162/511B)

County Summary: Sacramento

Lat/Long: 38.65684° / -121.15625°

Township: 09N

UTM: Zone-10 N4280309 E660428

Range: 07E

Area:

Mapping Precision: NON-SPECIFIC

Section: 01

Qtr: XX

Elevation: 300 ft

Symbol Type: POLYGON

Meridian: M

Location: PRAIRIE OAKS; SOUTH OF WILLOW CREEK, EAST OF PRAIRIE CITY ROAD AND 0.6 MILE NORTH OF HWY 50.

Location Detail: 3 MITIGATION AREAS (VILLAGES 5B, 2 AND 3) WITHIN PROJECT SITE

Ecological: HABITAT CONSISTS OF A PRESERVE (9.47 ACRES) WITH 27 TRANSPLANTED ELDERBERRY SHRUBS (SAMBUCUS MEXICANA), 1,155 ELDERBERRY SEEDLINGS AND 462 OTHER ASSOCIATED TREE AND SHRUB SPECIES (BOX ELDER, FREMONT COTTONWOOD, WILLOW SPECIES, ETC.).

General: 27 OF 29 EXISTING ELDERBERRY SHRUBS (10 WITH EVIDENCE OF VELB) TRANSPLANTED TO MITIGATION AREAS. TRANSPLANTS DONE BETWEEN FALL OF 1995 & SPRING OF 1996. OF 730 ADDITIONAL ELDERBERRY MITIGATION PLANTINGS 94 ARE >5 FT IN HEIGHT, 231 2-5 FT.

Owner/Manager: UNKNOWN

***Dumontia oregonensis***

A water flea

Element Code: ICBRA23010

Status

NDDB Element Ranks

Other Lists

Federal: None

Global: G1G3

CDFG Status:

State: None

State: S1

Habitat Associations

General: VERNAL POOLS. IN CALIFORNIA, KNOWN ONLY FROM MATHER FIELD.

Micro:

Occurrence No. 1

Map index: 59599

EO index: 59635

Dates Last Seen

Occ Rank: Unknown

Element: 2004-04-XX

Origin: Natural/Native occurrence

Site: 2004-04-XX

Presence: Presumed Extant

Record Last Updated: 2005-01-26

Trend: Unknown

Quad Summary: Buffalo Creek (3812152/511C), Carmichael (3812153/512D)

County Summary: Sacramento

Lat/Long: 38.55255° / -121.27941°

Township: 08N

UTM: Zone-10 N4268528 E649927

Range: 06E

Area:

Mapping Precision: NON-SPECIFIC

Section: 13

Qtr: XX

Elevation: 130 ft

Symbol Type: POLYGON

Meridian: M

Location: MATHER FIELD.

General: SPECIES KNOWN ONLY FROM ONE LOCALITY IN OREGON WHEN DESCRIBED. NO ADDITIONAL COLLECTING DATA GIVEN.

Owner/Manager: SAC COUNTY

***Elanus leucurus***

white-tailed kite

Element Code: ABNKC06010

Status

NDDB Element Ranks

Other Lists

Federal: None

Global: G5

CDFG Status:

State: None

State: S3

Habitat Associations

General: ROLLING FOOTHILLS AND VALLEY MARGINS WITH SCATTERED OAKS & RIVER BOTTOMLANDS OR MARSHES NEXT TO DECIDUOUS WOODLAND.

Micro: OPEN GRASSLANDS, MEADOWS, OR MARSHES FOR FORAGING CLOSE TO ISOLATED, DENSE-TOPPED TREES FOR NESTING AND PERCHING.

Occurrence No. 22

Map Index: 24817

EO Index: 12178

Dates Last Seen

Occ Rank: Good

Element: 1990-06-23

Origin: Natural/Native occurrence

Site: 1990-06-23

Presence: Presumed Extant

Record Last Updated: 1993-12-06

Trend: Unknown

Quad Summary: Buffalo Creek (3812152/511C), Carmichael (3812153/512D)

County Summary: Sacramento

Lat/Long: 38.55327° / -121.24791°

Township: 08N

UTM: Zone-10 N4268659 E652671

Range: 07E

Radius: 1/5 mile

Mapping Precision: NON-SPECIFIC

Section: 18

Qtr: NE

Elevation: 160 ft

Symbol Type: POINT

Meridian: M

Location: SE CORNER OF MATHER LAKE, MATHER AIR FORCE BASE.

Location Detail: NEST IS LOCATED IN A TREE AT THE EDGE OF A FRESHWATER LAKE.

Threat: MAIN THREAT IS THE UNCERTAIN FUTURE OF MATHER AFB; IT IS UNKNOWN WHETHER MATHER LAKE WILL BE MAINTAINED.

General: 2 ADULTS AND 2 JUVENILES OBSERVED IN 1990.

Owner/Manager: DOD-MATHER AFB

Occurrence No. 23

Map Index: 24818

EO Index: 12685

Dates Last Seen

Occ Rank: Fair

Element: 1990-06-01

Origin: Natural/Native occurrence

Site: 1990-06-01

Presence: Presumed Extant

Record Last Updated: 1994-02-03

Trend: Unknown

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.52377° / -121.20708°

Township: 08N

UTM: Zone-10 N4265454 E656293

Range: 07E

Radius: 80 meters

Mapping Precision: SPECIFIC

Section: 28

Qtr: NE

Elevation: 180 ft

Symbol Type: POINT

Meridian: M

Location: N SIDE OF BLODGETT RESERVOIR, AT THE UPSTREAM END, JUST SOUTH OF KIEFER BLVD, 2 MILES NW OF SLOUGHHOUSE.

Ecological: NEST TREE IS A LIVE OAK WITH ADJACENT EUCALYPTUS TREES.

General: BLODGETT RESERVOIR IS A PRIVATE GUN/FISHING CLUB, 2 ADULTS AND 4 JUVENILES WERE OBSERVED IN 1990.

Owner/Manager: PVT

Occurrence No. 24

Map Index: 24819

EO Index: 12138

Dates Last Seen

Occ Rank: Good

Element: 1989-06-XX

Origin: Natural/Native occurrence

Site: 1989-06-XX

Presence: Presumed Extant

Record Last Updated: 1993-12-06

Trend: Unknown

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.60061° / -121.13253°

Township: 09N

UTM: Zone-10 N4274111 E662619

Range: 08E

Radius: 80 meters

Mapping Precision: SPECIFIC

Section: 29

Qtr: SW

Elevation: 290 ft

Symbol Type: POINT

Meridian: M

Location: NORTH SIDE OF SCOTT ROAD, 0.5 MILE NORTH OF THE BRIDGE OVER COYOTE CREEK, 5 MILES SOUTH OF FOLSOM.

Location Detail: NEST APPEARED TO BE LOCATED IN A CLUMP OF MISTLETOE.

Ecological: NEST TREE IS A LIVE OAK; SURROUNDING FORAGING HABITAT CONSISTS OF OAK/GRASSLAND IN A ROLLING TERRAIN CONTAINING SMALL, SEASONAL CREEKS.

General: 2 ADULTS OBSERVED FROM FEBRUARY-JUNE 1989; NESTING SUCCESS UNKNOWN.

Owner/Manager: PVT

***Elanus leucurus***

white-tailed kite

Element Code: ABNKC06010

Status

NDDB Element Ranks

Other Lists

Federal: None

Global: G5

CDFG Status:

State: None

State: S3

**Habitat Associations**

General: ROLLING FOOTHILLS AND VALLEY MARGINS WITH SCATTERED OAKS & RIVER BOTTOMLANDS OR MARSHES NEXT TO DECIDUOUS WOODLAND.

Micro: OPEN GRASSLANDS, MEADOWS, OR MARSHES FOR FORAGING CLOSE TO ISOLATED, DENSE-TOPPED TREES FOR NESTING AND PERCHING.

Occurrence No. 29

Map Index: 24812

EO Index: 6462

Dates Last Seen

Occ Rank: Excellent

Element: 1989-06-20

Origin: Natural/Native occurrence

Site: 1989-06-20

Presence: Presumed Extant

Record Last Updated: 1993-12-07

Trend: Unknown

Quad Summary: Folsom (3812162/511B)

County Summary: Sacramento

Lat/Long: 38.66673° / -121.19425°

Township: 09N

UTM: Zone-10 N4281341 E657099

Range: 07E

Radius: 80 meters

Mapping Precision: SPECIFIC

Section: 3

Qtr: XX

Elevation: 200 ft

Symbol Type: POINT

Meridian: M

Location: SNIPES/PERSHING RAVINE, ON THE WEST SIDE OF LAKE NATOMA, ORANGEVALE.

Ecological: MIX OF BLUE OAK, FOOTHILL PINE, POISON OAK, AND BUCKEYE.

Threat: POSSIBILITY OF DEVELOPMENT - MANY LOTS ARE FOR SALE.

General: 2 ADULTS AND 3 JUVENILES OBSERVED IN 1989.

Owner/Manager: PVT

Occurrence No. 30

Map Index: 24811

EO Index: 6461

Dates Last Seen

Occ Rank: Good

Element: 1988-06-XX

Origin: Natural/Native occurrence

Site: 1988-06-XX

Presence: Presumed Extant

Record Last Updated: 1995-11-02

Trend: Unknown

Quad Summary: Folsom (3812162/511B)

County Summary: Sacramento

Lat/Long: 38.63745° / -121.24341°

Township: 09N

UTM: Zone-10 N4278009 E652884

Range: 07E

Radius: 80 meters

Mapping Precision: SPECIFIC

Section: 17

Qtr: XX

Elevation: 125 ft

Symbol Type: POINT

Meridian: M

Location: SAILOR BAR, NEAR THE END OF KENNETH AVENUE, NORTH OF THE AMERICAN RIVER AND 1 MILE WEST OF HAZEL AVENUE, FAIR OAKS.

Location Detail: NEST IS LOCATED IN THE CENTER-TOP OF A LIVE OAK FOUND AMONG DREDGER TAILINGS, BETWEEN THE BLUFFS TO THE NORTH AND THE SERVICE ROAD FOLLOWING THE RIVER TO THE SOUTH.

Ecological: NEST TREE IS A LIVE OAK; SURROUNDING VEGETATION CONSISTS OF COTTONWOODS, WILLOWS, COYOTE BUSH, POISON OAK, WILD GRAPE, AND ELDERBERRY.

Threat: THREATS INCLUDE HUMAN DISTURBANCE AND UNLEASHED DOGS.

General: ONE BIRD OBSERVED ON NEST IN 1988.

Owner/Manager: SAC COUNTY.

Occurrence No. 31

Map Index: 24810

EO Index: 6463

Dates Last Seen

Occ Rank: Good

Element: 1992-XX-XX

Origin: Natural/Native occurrence

Site: 1992-XX-XX

Presence: Presumed Extant

Record Last Updated: 1993-12-07

Trend: Unknown

Quad Summary: Folsom (3812162/511B)

County Summary: Sacramento

Lat/Long: 38.71458° / -121.23824°

Township: 10N

UTM: Zone-10 N4286577 E653169

Range: 07E

Radius: 80 meters

Mapping Precision: SPECIFIC

Section: 20

Qtr: NW

Elevation: 200 ft

Symbol Type: POINT

Meridian: M

Location: WOODBRIDGE PARK, EAST SIDE OF LINDA CREEK, 0.5 MILE SOUTH OF OLD AUBURN ROAD, ORANGEVALE.

Location Detail: NEST SITE LOCATED SOUTH OF POND AND EAST OF THE TENNIS COURTS, BORDERING THE FENCELINE; DEVELOPED PARK ON ONE SIDE AND LINDA CREEK RIPARIAN AREA ON THE OTHER.

Ecological: HABITAT CONSISTS OF OAK/RIPARIAN WOODLAND ALONG THE CREEKSIDE

General: NEST WITH 2 ADULTS OBSERVED ON 26 MAY 1992; 2 YOUNG OBSERVED IN NEST DURING A SUBSEQUENT VISIT.

Owner/Manager: UNKNOWN



*Elanus leucurus*

white-tailed kite

Element Code: ABNKC06010

Status

NDDB Element Ranks

Other Lists

Federal: None

Global: G5

CDFG Status:

State: None

State: S3

Habitat Associations

General: ROLLING FOOTHILLS AND VALLEY MARGINS WITH SCATTERED OAKS & RIVER BOTTOMLANDS OR MARSHES NEXT TO DECIDUOUS WOODLAND.

Micro: OPEN GRASSLANDS, MEADOWS, OR MARSHES FOR FORAGING CLOSE TO ISOLATED, DENSE-TOPPED TREES FOR NESTING AND PERCHING.

Occurrence No. 40

Map Index: 24987

EO Index: 22256

Dates Last Seen

Occ Rank: Good

Element: 1991-03-10

Origin: Natural/Native occurrence

Site: 1991-03-10

Presence: Presumed Extant

Record Last Updated: 1994-02-15

Trend: Unknown

Quad Summary: Folsom (3812162/511B)

County Summary: Sacramento

Lat/Long: 38.63314° / -121.19923°

Township: 09N

UTM: Zone-10 N4277605 E656739

Range: 07E

Radius: 80 meters

Mapping Precision: SPECIFIC

Section: 15

Qtr: XX

Elevation: 160 ft

Symbol Type: POINT

Meridian: M

Location: S OF FOLSOM BLVD, S OF PAC BELL BLDG, PRIOR TO ENTRANCE TO AEROJET, 1 MI E OF HAZEL AVE EXIT FROM HWY 50, RANCHO CORDOVA

Ecological: TRANSITIONAL PLANT COMMUNITIES, FOOTHILL PINE, TOYAN PRESENT.

General: 1 ADULT OBSERVED SITTING ON A NEST IN A TREE IN 1991.

Owner/Manager: UNKNOWN

Occurrence No. 96

Map Index: 65930

EO Index: 66009

Dates Last Seen

Occ Rank: Unknown

Element: 1990-05-07

Origin: Natural/Native occurrence

Site: 1990-05-07

Presence: Presumed Extant

Record Last Updated: 2006-08-22

Trend: Unknown

Quad Summary: Clarksville (3812161/511A)

County Summary: Sacramento

Lat/Long: 38.66683° / -121.10599°

Township: 09N

UTM: Zone-10 N4281507 E664778

Range: 08E

Radius: 1/10 mile

Mapping Precision: NON-SPECIFIC

Section: 04

Qtr: NW

Elevation: 440 ft

Symbol Type: POINT

Meridian: M

Location: ABOUT 3.4 MI ESE OF FOLSOM, 1.6 MI NNE OF INTERSECTION OF PLACERVILLE ROAD (EAST BIDWELL ST) & HWY 50.

Threat: THREATENED BY PROPOSED DEVELOPMENT.

General: ACTIVE NEST OBSERVED ON 7 MAY 1990. A PAIR WAS OBSERVED IN COURTSHIP 12 MAR 1990 THAT MAY BE THE SAME PAIR OF KITES THAT WERE SUBSEQUENTLY OBSERVED ON 7 MAY 1990.

Owner/Manager: UNKNOWN

***Emys (=Clemmys) marmorata marmorata***

northwestern pond turtle

Element Code: ARAAD02031

Status

NDDB Element Ranks

Other Lists

Federal: None

Global: G3G4T3

CDFG Status: SC

State: None

State: S3

Habitat Associations

General: ASSOCIATED WITH PERMANENT OR NEARLY PERMANENT WATER IN A WIDE VARIETY OF HABITATS.

Micro: REQUIRES BASKING SITES. NESTS SITES MAY BE FOUND UP TO 0.5 KM FROM WATER.

Occurrence No. 35

Map Index: 32697

EO Index: 1201

Dates Last Seen

Occ Rank: Fair

Element: 1991-03-07

Origin: Natural/Native occurrence

Site: 1991-03-07

Presence: Presumed Extant

Record Last Updated: 1995-11-06

Trend: Unknown

Quad Summary: Folsom (3812162/511B)

County Summary: Sacramento

Lat/Long: 38.66115° / -121.13086°

Township: 09N

UTM: Zone-10 N4280833 E662627

Range: 08E

Radius: 80 meters

Mapping Precision: SPECIFIC

Section: 05

Qtr: SW

Elevation: 375 ft

Symbol Type: POINT

Meridian: M

Location: NATOMAS DITCH; NORTHEAST SIDE OF PLACERVILLE ROAD; 0.1-0.2 MILES N OF NATOMAS DITCH X PLACERVILLE ROAD.

Ecological: OLD MAN-MADE DITCH; VERY LITTLE AQUATIC VEGETATION; SPIKE RUSH AND BLACKBERRIES DOMINANT; SOME WILLOWS AND A FEW ALDERS; SURROUNDING HABITAT IS GRAZED GRASSLAND.

Threat: DITCH THREATENED BY DEWATERING; GRAZING; PROPOSED DEVELOPMENT FOR COMMUNITY COLLEGE AND SHOPPING CENTER.

General: 2 ADULTS OBSERVED, 1 RETAINED BY DFG AS LIVE SPECIMEN; SITE IS UNDER LITIGATION; GOOD POND TURTLE HABITAT, NOT MUCH FOR FISH; NO FROGS OBSERVED.

Owner/Manager: PVT

Occurrence No. 36

Map Index: 32698

EO Index: 1156

Dates Last Seen

Occ Rank: Fair

Element: 1993-04-25

Origin: Natural/Native occurrence

Site: 1993-04-25

Presence: Presumed Extant

Record Last Updated: 1995-11-06

Trend: Unknown

Quad Summary: Folsom (3812162/511B)

County Summary: Sacramento

Lat/Long: 38.66391° / -121.19198°

Township: 09N

UTM: Zone-10 N4281032 E657303

Range: 07E

Radius: 80 meters

Mapping Precision: SPECIFIC

Section: 3

Qtr: XX

Elevation: 80 ft

Symbol Type: POINT

Meridian: M

Location: POND AT SNIPES-PERSHING RAVINE; ADJACENT TO LAKE NATOMAS (WEST SIDE), AT NORTH END OF MISSISSIPPI BAR; ORANGEVALE.

Ecological: POND, MAY BE SOMEWHAT ARTIFICIAL; CULVERTS ON EAST END TO DELIVER EXCESS WATER TO RIVER SIDE OF BIKE TRAIL; MIXED VEGETATION, DOMINATED BY LIVE OAK AND FOOTHILL PINE SURROUNDING POND.

Threat: POTENTIAL THREAT INCLUDE: DEVELOPMENT OF PRIVATE PARCELS, RECREATIONAL DISTURBANCE-HIKING & BIKING TRAILS.

General: 1 ADULT OBSERVED FORAGING; HIKING TRAIL ENCIRCLES HALF OF POND; BIKE TRAIL VISIBLE FROM POND.

Owner/Manager: DPR-FOLSOM LAKE SRA, PVT

Occurrence No. 46

Map Index: 32824

EO Index: 1472

Dates Last Seen

Occ Rank: Unknown

Element: XXXX-XX-XX

Origin: Natural/Native occurrence

Site: XXXX-XX-XX

Presence: Presumed Extant

Record Last Updated: 1996-01-18

Trend: Unknown

Quad Summary: Folsom (3812162/511B)

County Summary: Sacramento

Lat/Long: 38.63370° / -121.22737°

Township: 09N

UTM: Zone-10 N4277619 E654288

Range: 07E

Radius: 1/5 mile

Mapping Precision: NON-SPECIFIC

Section: 17

Qtr: XX

Elevation: 105 ft

Symbol Type: POINT

Meridian: M

Location: 2.5 MILES EAST OF FAIR OAKS, IMMEDIATELY DOWNSTREAM FROM NIMBUS DAM AT NIMBUS FISH HATCHERY.

General: COLLECTION MADE BY DFG, DATE AND NUMBERS OF SPECIMENS UNKNOWN.

Owner/Manager: DFG-NIMBUS FH

***Emys (=Clemmys) marmorata marmorata***

northwestern pond turtle

Element Code: ARAAD02031

Status

NDD8 Element Ranks

Other Lists

Federal: None

Global: G3G4T3

CDFG Status: SC

State: None

State: S3

Habitat Associations

General: ASSOCIATED WITH PERMANENT OR NEARLY PERMANENT WATER IN A WIDE VARIETY OF HABITATS.

Micro: REQUIRES BASKING SITES. NESTS SITES MAY BE FOUND UP TO 0.5 KM FROM WATER.

Occurrence No. 47

Map Index: 32825

EO Index: 6654

Dates Last Seen

Occ Rank: Unknown

Element: XXXX-XX-XX

Origin: Natural/Native occurrence

Site: XXXX-XX-XX

Presence: Presumed Extant

Record Last Updated: 1996-01-18

Trend: Unknown

Quad Summary: Clarksville (3812161/511A)

County Summary: El Dorado

Lat/Long: 38.63570° / -121.06092°

UTM: Zone-10 N4278134 E668773

Radius: 80 meters

Elevation: 520 ft

Mapping Precision: SPECIFIC

Symbol Type: POINT

Township: 09N

Range: 08E

Section: 14

Qtr: NE

Meridian: M

Location: SSW OF CLARKSVILLE: 2.2 KM SOUTH OF HIGHWAY 50, CARSON CREEK AT LATROBE ROAD.

General: COLLECTED BY R.W. HANSEN AND R.L. TREMPOR, DATE AND NUMBER OF SPECIMENS UNKNOWN.

Owner/Manager: UNKNOWN

Occurrence No. 68

Map Index: 32844

EO Index: 14223

Dates Last Seen

Occ Rank: Unknown

Element: 1988-08-16

Origin: Natural/Native occurrence

Site: 1988-08-16

Presence: Presumed Extant

Record Last Updated: 1996-01-22

Trend: Unknown

Quad Summary: Folsom SE (3812151/511D)

County Summary: El Dorado

Lat/Long: 38.60268° / -121.02322°

UTM: Zone-10 N4274538 E672134

Radius: 1/5 mile

Elevation: 500 ft

Mapping Precision: NON-SPECIFIC

Symbol Type: POINT

Township: 09N

Range: 09E

Section: 30

Qtr: SE

Meridian: M

Location: DEER CREEK AT LATROBE ROAD: APPROX. 3.8 MILES NORTHWEST OF LATROBE.

General: 2 CAPTURED AND RETAINED BY D.C. HOLLAND ON 16 AUGUST 1988.

Owner/Manager: UNKNOWN

Occurrence No. 96

Map Index: 37856

EO Index: 32863

Dates Last Seen

Occ Rank: Good

Element: 1997-04-19

Origin: Natural/Native occurrence

Site: 1997-04-19

Presence: Presumed Extant

Record Last Updated: 1998-01-08

Trend: Unknown

Quad Summary: Folsom (3812162/511B)

County Summary: Placer, Sacramento

Lat/Long: 38.71478° / -121.18053°

UTM: Zone-10 N4206697 E658187

Area: 26.8 acres

Elevation: 500 ft

Mapping Precision: SPECIFIC

Symbol Type: POLYGON

Township: 10N

Range: 07E

Section: 14

Qtr: XX

Meridian: M

Location: BALDWIN RESERVOIR WETLAND AND WILDLIFE PRESERVE, GRANITE BAY.

Ecological: HABITAT CONSISTS OF FRESHWATER MARSH, SURROUNDING AN ABANDONED WATER DISTRICT RESERVOIR. OPEN WATER IS SURROUNDED BY SCIRPUS & TYPHA. ISLANDS & ROCKY BASKING SITES PRESENT. ADJACENT UPLANDS SUPPORT MOSTLY RUDERAL SPECIES.

General: 2 ADULTS OBSERVED ON 19 APRIL 1997.

Owner/Manager: PVT-SAN JUAN WATER DIST

***Emys (=Clemmys) marmorata marmorata***

northwestern pond turtle

Element Code: ARAAD02031

_____ Status _____	NDDB Element Ranks	_____ Other Lists _____
Federal: None	Global: G3G4T3	CDFG Status: SC
State: None	State: S3	

\_\_\_\_\_ Habitat Associations \_\_\_\_\_

General: ASSOCIATED WITH PERMANENT OR NEARLY PERMANENT WATER IN A WIDE VARIETY OF HABITATS.

Micro: REQUIRES BASKING SITES. NESTS SITES MAY BE FOUND UP TO 0.5 KM FROM WATER.

Occurrence No. 131	Map index: 46092	EO Index: 46092	_____ Dates Last Seen _____
Occ Rank: Good			Element: 2001-09-26
Origin: Natural/Native occurrence			Site: 2001-09-26
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2001-10-10

Quad Summary: Folsom SE (3812151/511D), Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.53992° / -121.12767°	Township: 08N
UTM: Zone-10 N4267384 E663179	Range: 08E
Area:	Section: 17
Elevation: 120 ft	Meridian: M
	Qtr: SW

Mapping Precision: NON-SPECIFIC  
Symbol Type: POLYGON

Location: DEER CREEK, 8 MILES SSE OF LAKE NATOMA.

Ecological: HABITAT CONSISTS OF AN ISOLATED POOL IN DEER CREEK.

Threat: THREATENED BY PROPOSED RANCHETTE DEVELOPMENT.

General: 5 ADULTS OBSERVED BASKING ON A SUBMERGED LOG ON 26 SEP 2001.

Owner/Manager: UNKNOWN

***Eryngium pinnatisectum***

Tuolumne button-celery

Element Code: PDAPI0Z0P0

Status

NDDB Element Ranks

Other Lists

Federal: None

Global: G3

CNPS List: 1B.2

State: None

State: S3.2

Habitat Associations

General: VERNAL POOLS, CISMONTANE WOODLAND, LOWER MONTANE CONIFEROUS FOREST.

Micro: VOLCANIC SOILS; VERNAL POOLS AND MESIC SITES WITHIN OTHER NATURAL COMMUNITIES. 250-450M.

Occurrence No. 17

Map Index: 57565

EO index: 57581

Dates Last Seen

Occ Rank: Unknown

Element: 1941-06-01

Origin: Natural/Native occurrence

Site: 1941-06-01

Presence: Presumed Extant

Trend: Unknown

Record Last Updated: 2004-10-21

Quad Summary: Carbondale (3812141/495A), Folsom SE (3812151/511D)

County Summary: Amador, Sacramento

Lat/Long: 38.50001° / -121.04407°

UTM: Zone-10 N4263107 E670559

Radius: 1 mile

Elevation: 200 ft

Mapping Precision: NON-SPECIFIC

Symbol Type: POINT

Township: 08N

Range: 08E

Section: 36

Meridian: M

Qtr: XX

Location: JUST E OF MICHIGAN BAR; COSUMNES RIVER.

Location Detail: MAPPED GENERALLY BY CNDDB IN A 1 MILE CIRCLE AROUND MICHIGAN BAR.

General: NEEDS FIELDWORK.

Owner/Manager: UNKNOWN

***Fremontodendron decumbens***

Pine Hill flannelbush

Element Code: PDSTE03030

----- Status -----	NDDB Element Ranks	----- Other Lists -----
Federal: Endangered	Global: G1	CNPS List: 1B.2
State: Rare	State: S1.2	

----- Habitat Associations -----

General: CHAPARRAL, CISMONTANE WOODLAND.

Micro: ROCKY RIDGES; GABBRO OR SERPENTINE ENDEMIC; OFTEN AMONG ROCKS AND BOULDERS. 420-685M.

Occurrence No. 5	Map Index: 12203	EO Index: 3845	----- Dates Last Seen -----
Occ Rank: Unknown			Element: 1985-XX-XX
Origin: Natural/Native occurrence			Site: 1985-XX-XX
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1995-03-21

Quad Summary: Clarksville (3812161/511A)

County Summary: El Dorado

Lat/Long: 38.72885° / -121.00682°	Township: 10N
UTM: Zone-10 N4288573 E673257	Range: 09E
Radius: 80 meters	Section: 17
Elevation: 1,500 ft	Otr: NE
Mapping Precision: SPECIFIC	Meridian: M
Symbol Type: POINT	

Location: SOUTHEAST OF DEER VALLEY ROAD AND WEST OF STARBUCK ROAD, WEST OF PINE HILL.

Location Detail: MAPPED ABOUT 200 M SOUTH OF DEER VALLY ROAD AND 200 M WEST OF STARBUCK ROAD. WITHIN THE NE 1/4 OF THE NE 1/4 OF SECTION 17.

Ecological: IN GABBRO SOIL ON A ROCKY OUTCROP ON THE CREST OF A SMALL RIDGE. GROWING IN CHAPARRAL WITH ARCTOSTAPHYLOS AND ADENOSTOMA.

Threat: NO THREATS IN 1983, BUT FUTURE RESIDENTIAL DEVELOPMENT WOULD THREATEN THIS OCCURRENCE.

General: 54 PLANTS SEEN IN 1983.

Owner/Manager: PVT

Occurrence No. 6	Map Index: 12207	EO Index: 3844	----- Dates Last Seen -----
Occ Rank: Unknown			Element: 1985-XX-XX
Origin: Natural/Native occurrence			Site: 1985-XX-XX
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1995-01-26

Quad Summary: Clarksville (3812161/511A)

County Summary: El Dorado

Lat/Long: 38.72341° / -121.00556°	Township: 10N
UTM: Zone-10 N4287972 E673379	Range: 09E
Area: 8.3 acres	Section: 17
Elevation: 1,410 ft	Otr: NE
Mapping Precision: SPECIFIC	Meridian: M
Symbol Type: POLYGON	

Location: EAST OF DEER VALLEY ROAD AND WEST OF STARBUCK ROAD, WEST OF PINE HILL.

Location Detail: TWO COLONIES MAPPED; 12 PLANTS AT THE 1476' SUMMIT OF HILL, 1 PLANT EAST OF SUMMIT ALONG STARBUCK ROAD. WITHIN THE SE 1/4 OF THE NE 1/4 OF SECTION 17.

Ecological: IN GABBRO SOIL ON A ROCKY OUTCROP ON THE CREST OF A SMALL RIDGE. GROWING IN CHAPARRAL WITH ARCTOSTAPHYLOS AND ADENOSTOMA.

Threat: NO THREATS IN 1983, BUT FUTURE RESIDENTIAL DEVELOPMENT WOULD THREATEN THIS OCCURRENCE.

General: 13 PLANTS SEEN IN 2 COLONIES IN 1983.

Owner/Manager: PVT

***Galium californicum ssp. sierrae***

El Dorado bedstraw

Element Code: PDRUB0N0E7

Status

NDDB Element Ranks

Other Lists

Federal: Endangered

Global: G5T1

CNPS List: 1B.2

State: Rare

State: S1.2

Habitat Associations

General: CISMONTANE WOODLAND, CHAPARRAL, LOWER MONTANE CONIFEROUS FOREST.

Micro: MORE OFTEN IN PINE-OAK WOODLAND THAN IN CHAPARRAL; RESTRICTED TO GABBROIC SOILS. 100-585M.

Occurrence No. 12

Map Index: 49114

EO Index: 49114

Dates Last Seen

Occ Rank: Excellent

Element: 1994-06-16

Origin: Natural/Native occurrence

Site: 1994-06-16

Presence: Presumed Extant

Trend: Unknown

Record Last Updated: 2002-10-23

Quad Summary: Clarksville (3812161/511A), Pilot Hill (3812171/527D)

County Summary: El Dorado

Lat/Long: 38.74609° / -121.03649°

Township: 10N

UTM: Zone-10 N4290431 E670636

Range: 09E

Area: 12.8 acres

Mapping Precision: SPECIFIC

Section: 06

Qtr: W

Elevation: 1,050 ft

Symbol Type: POLYGON

Meridian: M

Location: RIDGE BETWEEN SWEETWATER & CRACKER CREEKS, NORTH OF CLARKSVILLE, EAST OF FOLSOM LAKE.

Location Detail: 5 COLONIES MAPPED AS 4 POLYGONS FROM TOP OF 1361' PEAK & ALONG THE E EDGE OF RIDGE, EXTENDING DOWN A SEASONAL DRAINAGE FOR 1000 FT TO ABOUT 100 FT ABOVE CRACKER CRK. MAPPED WITHIN THE W 1/2 OF SEC 6 & THE NE 1/4 OF THE NW 1/4 OF SEC 7.

Ecological: ON OPEN RESCUE STONY LOAM SOILS, GROWING AMONGST ROCKS AND BOULDERS IN THE GABBROIC NORTHERN MIXED CHAPARRAL PLANT COMMUNITY. ASSOCIATES INCLUDE ADENOSTOMA FASCICULATUM, ARCTOSTAPHYLOS VISCIDA SSP. VISCIDA, ERIODICTYON CALIFORNICUM, ET AL.

Threat: PROPOSED HOUSING DEVELOPMENT.

General: 5 COLONIES OBSERVED BY WOOD AND FRASER IN 1994. FROM NORTH TO SOUTH, NUMBER OF PLANTS AT EACH COLONY: 100, 1, 3, 30, AND 1. SITE SHOULD BE PRESERVED AS OPEN SPACE.

Owner/Manager: PVT-KANAKA VALLEY RANCH

***Gratiola heterosepala***

Boggs Lake hedge-hyssop

Element Code: PDSCR0R060

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G3	CNPS List: 1B.2
State: Endangered	State: S3.1	

Habitat Associations

General: MARSHES AND SWAMPS (FRESHWATER), VERNAL POOLS.

Micro: CLAY SOILS; USUALLY IN VERNAL POOLS, SOMETIMES ON LAKE MARGINS. 5-2400M.

Occurrence No. 18	Map Index: 12991	EO Index: 30956	Dates Last Seen
Occ Rank: Good			Element: 1991-04-XX
Origin: Natural/Native occurrence			Site: 1991-04-XX
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1999-03-16

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.52326° / -121.19422°	Township: 08N
UTM: Zone-10 N4265419 E657415	Range: 07E
Area: 9.7 acres	Section: 27
Elevation: 220 ft	Meridian: M
Mapping Precision: SPECIFIC	Qtr: N
Symbol Type: POLYGON	

Location: NEAR KIEFER LANDFILL, ABOUT 0.2-0.5 MILE ENE OF KIEFER BLVD AT GRANT LINE ROAD, SOUTHEAST OF RANCHO CORDOVA.

Location Detail: PLANTS OBSERVED IN SEVEN POOLS, MAPPED AT CNDDB AS FIVE POLYGONS; SOUTHERN TWO POLYGONS WITH THREE POOLS IS LOCATED ABOUT 0.25 MI DUE EAST OF INTERSECTION OF ROADS; NORTHERN 3 POLYGONS W/4 POOLS IS LOCATED ABOUT 0.45 MI ENE OF INTERSECTION.

Ecological: VERNAL POOLS SURROUNDED BY ANNUAL GRASSLAND. ASSOCIATED VEGETATION INCLUDES PLAGIOBOTHRYIS STIPITATUS, ERYNGIUM VASEYI, PSILOCARPUS BREVISSIMUS, DOWNINGIA BICORNUTA, AND ORCUTTIA VISCIDA.

Threat: CATTLE GRAZING, BUT POPULATION APPEARS STABLE UNDER CURRENT REGIME. INDIRECT IMPACTS FROM PROPOSED LANDFILL EXPANSION.

General: 10,000+ PLANTS OBSERVED IN ONE POOL IN 1988 (D. STONE), UNKNOWN NUMBER OF PLANTS OBSERVED IN 6 ADDITIONAL POOLS IN 1990-1991 BY JONES AND STOKES ASSOC.(SACRAMENTO CO. 1998).

Owner/Manager: SAC COUNTY

Occurrence No. 48	Map Index: 24906	EO Index: 6407	Dates Last Seen
Occ Rank: Excellent			Element: 1989-06-02
Origin: Natural/Native occurrence			Site: 1989-06-02
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1995-12-13

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.62046° / -121.15306°	Township: 09N
UTM: Zone-10 N4276278 E660786	Range: 07E
Area: 3.4 acres	Section: 24
Elevation: 290 ft	Meridian: M
Mapping Precision: SPECIFIC	Qtr: XX
Symbol Type: POLYGON	

Location: NW OF INTERSECTION OF PRAIRIE CITY RD AND WHITE ROCK RD. AEROJET PROPERTY.

Ecological: IN PONDS WITH DOWNINGIA BICORNUTA, ELEOCHARIS PALUSTRIS, GRATIOLA EBRACTEATA, LASTHENIA GLABERRIMA, PLAGIOBOTHRYIS STIPITATA MICRANTHA, AND PSILOCARPUS BREVISSIMUS.

Threat: POSSIBLE SITE OF CLAY EXTRACTION BY AEROJET.

General: PLANTS NOT COUNTED IN 1988 OR 1989. MAPPED AS 3 SMALL POLYGONS.

Owner/Manager: PVT-GENCORP AEROJET



***Gratiola heterosepala***

Boggs Lake hedge-hyssop

Element Code: PDSCR0R060

Status

NDDB Element Ranks

Other Lists

Federal: None

Global: G3

CNPS List: 1B.2

State: Endangered

State: S3.1

Habitat Associations

General: MARSHES AND SWAMPS (FRESHWATER), VERNAL POOLS.

Micro: CLAY SOILS; USUALLY IN VERNAL POOLS, SOMETIMES ON LAKE MARGINS. 5-2400M.

Occurrence No. 57

Map Index: 28976

EO Index: 30713

Dates Last Seen

Occ Rank: Unknown

Element: 1993-06-18

Origin: Natural/Native occurrence

Site: 1993-06-18

Presence: Presumed Extant

Record Last Updated: 1994-08-08

Trend: Unknown

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.54240° / -121.23355°

Township: 08N

UTM: Zone-10 N4267477 E653945

Range: 07E

Area:

Mapping Precision: NON-SPECIFIC

Section: 17

Qtr: XX

Elevation: 160 ft

Symbol Type: POLYGON

Meridian: M

Location: BETWEEN DOUGLAS RD AND KIEFER BLVD, E OF SUNRISE BLVD AND MATHER AFB.

Location Detail: MAPPED AS NON-SPECIFIC POLYGON PER SECTIONS GIVEN ON LIST (8, 17, & 20).

General: ONLY INFO IS LIST FROM D. TAYLOR GIVING TRS (AS REPORTED BY SUGNET & ASSOC). EXACT LOCATION UNKNOWN. BETTER INFO NEEDED.

Owner/Manager: UNKNOWN

Occurrence No. 82

Map Index: 40095

EO Index: 35097

Dates Last Seen

Occ Rank: Unknown

Element: 1991-04-XX

Origin: Natural/Native occurrence

Site: 1991-04-XX

Presence: Presumed Extant

Record Last Updated: 1998-11-05

Trend: Unknown

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.53063° / -121.19119°

Township: 08N

UTM: Zone-10 N4266242 E657663

Range: 07E

Radius: 80 meters

Mapping Precision: SPECIFIC

Section: 22

Qtr: SE

Elevation: 227 ft

Symbol Type: POINT

Meridian: M

Location: NEAR KIEFER LANDFILL, EAST SIDE OF GRANT LINE ROAD ABOUT 0.9 MILE NE OF KIEFER BLVD, SOUTHEAST OF RANCHO CORDOVA.

Location Detail: PLANTS OBSERVED IN ONE POOL. MAPPED IN DRAINAGE ON EAST SIDE OF ROAD ABOUT 200 METERS NE OF 227' BENCHMARK.

Ecological: VERNAL POOL.

Threat: INDIRECT IMPACTS FROM PROPOSED LANDFILL EXPANSION.

General: UNKNOWN NUMBER OF PLANTS OBSERVED IN 1990-1991 BY JONES AND STOKES ASSOC.(SACRAMENTO CO. 1998).

Owner/Manager: SAC COUNTY

***Haliaeetus leucocephalus***

bald eagle

Element Code: ABNKC10010

Status

NDDB Element Ranks

Other Lists

Federal: Threatened

Global: G5

CDFG Status:

State: Endangered

State: S2

**Habitat Associations**

General: OCEAN SHORE, LAKE MARGINS, & RIVERS FOR BOTH NESTING & WINTERING. MOST NESTS WITHIN 1 MI OF WATER.

Micro: NESTS IN LARGE, OLD-GROWTH, OR DOMINANT LIVE TREE W/OPEN BRANCHES, ESPECIALLY PONDEROSA PINE. ROOSTS COMMUNALLY IN WINTER.

Occurrence No. 130

Map Index: 22872

EO Index: 11783

Dates Last Seen

Occ Rank: Fair

Element: 1996-01-16

Origin: Natural/Native occurrence

Site: 1996-01-16

Presence: Presumed Extant

Record Last Updated: 1996-02-07

Trend: Unknown

Quad Summary: Clarksville (3812161/511A)

County Summary: El Dorado

Lat/Long: 38.67978° / -121.02259°

Township: 10N

UTM: Zone-10 N4283097 E672004

Range: 09E

Radius: 2/5 mile

Mapping Precision: NON-SPECIFIC

Section: 31

Qtr: NE

Elevation: 1,250 ft

Symbol Type: POINT

Meridian: M

Location: BASS LAKE, 3 MILES ENE OF EL DORADO HILLS.

Ecological: WINTERING TERRITORY, HABITAT CONSISTS OF FOOTHILL PINE/OAK WOODLAND; OAK WOODLAND DOMINATES THE NORTH AND WEST EDGE OF THE RESERVOIR, FOOTHILL PINES DOMINATE THE EAST EDGE, AND GRASSLAND IS FOUND ALONG THE REMAINING AREA.

Threat: THREATENED BY ONGOING RESIDENTIAL DEVELOPMENT.

General: EAGLES HAVE BEEN OBSERVED WINTERING AT THIS SITE FOR THE PAST 40 YEARS. TWO ADULTS WINTERED IN 1992-93; TWO ADULTS WINTERED IN 1993-94; ONE ADULT WINTERED IN 1994-95; ONE ADULT WINTERED IN 1995-96.

Owner/Manager: EL DORADO IRR DIST

*Helianthemum suffrutescens*

Bisbee Peak rush-rose

Element Code: PDCIS020F0

Status

NDDB Element Ranks

Other Lists

Federal: None

Global: G2Q

CNPS List: 3.2

State: None

State: S2.2

Habitat Associations

General: CHAPARRAL

Micro: OFTEN ON SERPENTINE, GABBROIC, OR IONE FORMATION SOILS; IN OPENINGS IN CHAPARRAL. 45-610M.

Occurrence No. 20

Map Index: 12156

EO Index: 7482

Dates Last Seen

Occ Rank: Excellent

Element: 1994-06-16

Origin: Natural/Native occurrence

Site: 1994-06-16

Presence: Presumed Extant

Record Last Updated: 2003-03-07

Trend: Unknown

Quad Summary: Clarksville (3812161/511A), Pilot Hill (3812171/527D)

County Summary: El Dorado

Lat/Long: 38.76331° / -121.02948°

Township: 11N

UTM: Zone-10 N4292355 E671205

Range: 08E

Area:

Mapping Precision: NON-SPECIFIC

Section: 36

Qtr: E

Elevation: 1,000 ft

Symbol Type: POLYGON

Meridian: M

Location: SOUTH OF S. FORK AMERICAN RIVER, ABOUT 0.4 MI EAST OF SALMON FALLS RD EXTENDING EAST ABOUT 1.5 MI, WEST OF FOLSOM LAKE.

Location Detail: HILLS SOUTH OF S. FORK AMERICAN BETWEEN SALMON FALLS RD & KANAKA VALLEY. WITHIN SE 1/4 SE 1/4 SECTION 25, S 1/2 SW 1/4 SECTION 30, E 1/2 SECTION 36, N 1/2 SECTION 31, W 1/2 SECTION 6, & NW 1/4 SECTION 7. NEED OVERLAY TO SEE MAP DETAIL.

Ecological: CHAPARRAL DOMINATED BY ARCTOSTAPHYLOS VISCIDA AND ADENOSTOMA FASCICULATUM. ASSOCIATED WITH ERIODICTYON CALIFORNICUM, BACCHARIS PILULARIS SPP. CONSANGUINEA, SALVIA SONOMENSIS, CALYSTEGIA STEBBINSII, CEANOTHUS RODERICKII, ET AL.

Threat: RECREATIONAL USE; TARGET SHOOTING, ORVS, PROPOSED HOUSING DEVELOPMENT.

General: SEEN 1981-1984, 1987. 682 PLANTS SEEN AT SCATTERED SITES IN 1994. SITE SHOULD BE PRESERVED. RARE ASSOCIATES INCLUDE CALYSTEGIA STEBBINSII, CEANOTHUS RODERICKII, SENECIO LAYNEAE, & WYETHIA RETICULATA. INCLUDES FORMER OCCURRENCE #17.

Owner/Manager: PVT

Occurrence No. 29

Map Index: 42833

EO Index: 42833

Dates Last Seen

Occ Rank: Fair

Element: 1997-05-25

Origin: Natural/Native occurrence

Site: 1997-05-25

Presence: Presumed Extant

Record Last Updated: 2000-04-26

Trend: Unknown

Quad Summary: Clarksville (3812161/511A), Shingle Springs (3812068/510B)

County Summary: El Dorado

Lat/Long: 38.72047° / -121.00059°

Township: 10N

UTM: Zone-10 N4287655 E673819

Range: 09E

Radius: 80 meters

Mapping Precision: SPECIFIC

Section: 16

Qtr: SW

Elevation: 1,400 ft

Symbol Type: POINT

Meridian: M

Location: IMMEDIATELY WEST OF PINE HILL, ABOUT 0.5 MILE WEST OF PINE HILL SUMMIT, NORTHWEST OF SHINGLE SPRINGS.

Location Detail: AT BASE OF WEST SLOPE OF PINE HILL. FROM DEVELOPED AREA OF CHAPEL AND RETREAT, TAKE ROAD TO OCCUPIED MOBILE HOME. ONE PLANT ON THE SOUTH SIDE OF ROAD, ONE PLANT BEHIND MOBILE HOME. MAPPED WITHIN THE NW 1/4 OF THE SW 1/4 OF SECTION 16.

Ecological: GROWING IN CHAPARRAL WITH ARCTOSTAPHYLOS SPP., ADENOSTOMA FASCICULATUM, AND CEANOTHUS SPP. ON GABBRO SOILS; SOUTHEAST EXPOSURE. SEVERAL LARGE POPULATIONS OF WYETHIA RETICULATA ALSO ON PROPERTY.

Threat: DEVELOPMENT AND ROAD WIDENING ARE THREATS.

General: 2 PLANTS OBSERVED IN 1997. THE RARE WYETHIA RETICULATA IS ALSO ON THIS PROPERTY.

Owner/Manager: PVT

***Helianthemum suffrutescens***

Bisbee Peak rush-rose

Element Code: PDCIS020F0

_____ Status _____	NDDB Element Ranks	_____ Other Lists _____
Federal: None	Global: G2Q	CNPS List: 3.2
State: None	State: S2.2	

\_\_\_\_\_ Habitat Associations \_\_\_\_\_

General: CHAPARRAL.

Micro: OFTEN ON SERPENTINE, GABBROIC, OR IONE FORMATION SOILS; IN OPENINGS IN CHAPARRAL. 45-610M.

Occurrence No. 35	Map index: 50450	EO Index: 50450	_____ Dates Last Seen _____
Occ Rank: Good			Element: 1994-06-16
Origin: Natural/Native occurrence			Site: 1994-06-16
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2003-03-07

Quad Summary: Clarksville (3812161/511A)

County Summary: El Dorado

Lat/Long: 38.73278° / -121.03557°	Township: 10N
UTM: Zone-10 N4288955 E670748	Range: 09E
Area: 1.3 acres	Section: 07 Qtr: SW
Elevation: 900 ft	Meridian: M
Mapping Precision: SPECIFIC	
Symbol Type: POLYGON	

Location: WEST FACING SLOPE ABOVE THE CONFLUENCE OF SWEETWATER & MARTEL CREEKS, NNE OF CLARKSVILLE, EAST OF FOLSOM LAKE.

Location Detail: HALFWAY UP THE SLOPE, MAPPED WITHIN THE SW 1/4 OF THE SW 1/4 OF SECTION 7.

Ecological: ON RESCUE STONY LOAM OILS, GROWING AMONGST ROCKS AND BOULDERS IN A MODERATELY OPEN AREA OF A GABBROIC NORTHERN MIXED CHAPARRAL PLANT COMMUNITY. ASSOCIATES INCLUDE ADENOSTOMA FASCICULATUM, ARCTOSTAPHYLOS VISCIDA SSP. VISCIDA, ET AL.

Threat: NONE NOTED IN 1994.

General: 3 PLANTS OBSERVED IN 1994. SITE QUALITY IS EXCELLENT, BUT POPULATION IS VERY SMALL. SITE SHOULD BE PROTECTED AS OPEN SPACE.

Owner/Manager: PVT-KANAKA VALLEY RANCH

***Hydrochara rickseckeri***

Ricksecker's water scavenger beetle

Element Code: IICOL5V010

Status

NDDB Element Ranks

Other Lists

Federal: None

Global: G1G2

CDFG Status:

State: None

State: S1S2

Habitat Associations

General: AQUATIC.

Micro:

Occurrence No. 5

Map Index: 60652

EO Index: 60688

Dates Last Seen

Occ Rank: Unknown

Element: 1997-XX-XX

Origin: Natural/Native occurrence

Site: 1997-XX-XX

Presence: Presumed Extant

Record Last Updated: 2005-03-29

Trend: Unknown

Quad Summary: Buffalo Creek (3812152/511C), Carmichael (3812153/512D)

County Summary: Sacramento

Lat/Long: 38.54508° / -121.26159°

UTM: Zone-10 N4267728 E651496

Area: 1,605.4 acres

Elevation: 140 ft

Mapping Precision: SPECIFIC

Symbol Type: POLYGON

Township: 08N

Range: 06E

Section: 13

Qtr: XX

Meridian: M

Location: MATHER FIELD REGIONAL PARK.

Location Detail: NO OTHER LOCATION INFORMATION GIVEN.

General: ONE SPECIMEN COLLECTED.

Owner/Manager: SAC COUNTY

Occurrence No. 10

Map Index: 60722

EO Index: 60758

Dates Last Seen

Occ Rank: Unknown

Element: XXXX-XX-XX

Origin: Natural/Native occurrence

Site: XXXX-XX-XX

Presence: Presumed Extant

Record Last Updated: 2005-03-29

Trend: Unknown

Quad Summary: Clarksville (3812161/511A)

County Summary: Sacramento

Lat/Long: 38.69379° / -121.11502°

UTM: Zone-10 N4284483 E663931

Area:

Elevation: 390 ft

Mapping Precision: NON-SPECIFIC

Symbol Type: POLYGON

Township: 10N

Range: 08E

Section: 29

Qtr: XX

Meridian: M

Location: BLUE RAVINE, SOUTH OF MORMON ISLAND DAM, FOLSOM LAKE.

General: NO OTHER COLLECTION INFORMATION GIVEN.

Owner/Manager: UNKNOWN

*Juncus leiospermus* var. *ahartii*

Ahart's dwarf rush

Element Code: PMJUN011L1

Status	NDDDB Element Ranks	Other Lists
Federal: None	Global: G2T1	CNPS List: 1B.2
State: None	State: S1.2	

Habitat Associations

General: VERNAL POOLS.

Micro: RESTRICTED TO THE EDGES OF VERNAL POOLS. 30-100M.

Occurrence No. 7	Map Index: 43632	EO Index: 43632	Dates Last Seen
Occ Rank: None			Element: XXXX-XX-XX
Origin: Natural/Native occurrence			Site: XXXX-XX-XX
Presence: Possibly Extirpated			
Trend: Unknown			Record Last Updated: 2000-08-25

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.52384° / -121.24060°	Township: 08N
UTM: Zone-10 N4265406 E653370	Range: 07E
Radius: 1/5 mile	Section: 29
Elevation: 150 ft	Meridian: M
	Qtr: NW

Location: SOUTHEAST CORNER OF KIEFER BOULEVARD AND SUNRISE BOULEVARD, WEST OF BLODGETT RESERVOIR, SOUTHEAST OF RANCHO CORDOVA.

Location Detail: PROPOSED SHALAKO GOLF COURSE.

Threat: PROPOSED GOLF COURSE.

General: 4 PLANTS OBSERVED. NEEDS FIELDWORK.

Owner/Manager: UNKNOWN

**Legenere limosa**

legenere

Element Code: PDCAM0C010

Status

NDDB Element Ranks

Other Lists

Federal: None

Global: G2

CNPS List: 1B.1

State: None

State: S2.2

Habitat Associations

General: VERNAL POOLS. MANY HISTORICAL OCCURRENCES ARE EXTIRPATED.

Micro: IN BEDS OF VERNAL POOLS. 1-880M.

Occurrence No. 12 Map Index: 11838

EO Index: 30958

Dates Last Seen

Occ Rank: Unknown

Element: 1983-05-31

Origin: Natural/Native occurrence

Site: 1983-05-31

Presence: Presumed Extant

Record Last Updated: 1997-04-14

Trend: Unknown

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.56860° / -121.21580°

Township: 08N

UTM: Zone-10 N4270414 E655436

Range: 07E

Radius: 80 meters

Mapping Precision: SPECIFIC

Section: 9

Qtr: XX

Elevation: 200 ft

Symbol Type: POINT

Meridian: M

Location: APPROX. 0.8 MI NW OF JCT DOUGLAS ROAD AND NIMBUS ROAD, 1.6 MI NE OF JCT DOUGLAS RD AND SUNRISE BLVD.

Location Detail: N SIDE OF CREEK.

Ecological: VERNAL POOL. CORNING SOILS WITH ALAMO CLAY.

Threat: AREA PLANNED FOR DEVELOPMENT AS INDUSTRIAL PARK.

General: MORE THAN 1000 PLANTS IN LARGE VERNAL POOL (1-2 ACRES) IN 1983.

Owner/Manager: PVT

Occurrence No. 13 Map Index: 11827

EO Index: 30957

Dates Last Seen

Occ Rank: Unknown

Element: 1983-05-31

Origin: Natural/Native occurrence

Site: 1983-05-31

Presence: Presumed Extant

Record Last Updated: 1997-04-14

Trend: Unknown

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.56544° / -121.22241°

Township: 08N

UTM: Zone-10 N4270053 E654867

Range: 07E

Radius: 80 meters

Mapping Precision: SPECIFIC

Section: 9

Qtr: XX

Elevation: 190 ft

Symbol Type: POINT

Meridian: M

Location: 1.2 MI NE OF JCT DOUGLAS ROAD AND SUNRISE BLVD, IMMEDIATELY N OF MAN-MADE KNOLL.

Location Detail: N SIDE OF CREEK.

Ecological: VERNAL POOL ON CORNING SOILS WITH ALAMO CLAY.

Threat: AREA PROPOSED AS AN INDUSTRIAL PARK.

General: ABOUT 100 PLANTS IN 1983 IN 1000 SQUARE FOOT VERNAL POOL.

Owner/Manager: PVT

Occurrence No. 47 Map Index: 41016

EO Index: 41016

Dates Last Seen

Occ Rank: Good

Element: 1993-XX-XX

Origin: Natural/Native occurrence

Site: 1997-XX-XX

Presence: Presumed Extant

Record Last Updated: 1999-05-04

Trend: Unknown

Quad Summary: Buffalo Creek (3812152/511C), Carmichael (3812153/512D)

County Summary: Sacramento

Lat/Long: 38.52618° / -121.25141°

Township: 08N

UTM: Zone-10 N4265647 E652423

Range: 07E

Area: 2.5 acres

Mapping Precision: SPECIFIC

Section: 19

Qtr: XX

Elevation: 145 ft

Symbol Type: POLYGON

Meridian: M

Location: MATHER FIELD, ABOUT 0.6 MILE EAST OF EAGLES NEST ROAD ALONG NORTH SIDE OF KIEFER BLVD, RANCHO CORDOVA.

Location Detail: MAPPED IN 1 POOL IMMEDIATELY NORTH OF KIEFER BLVD. JSA POOL #1390.

Ecological: GROWING WITHIN AN INTERCONNECTED VERNAL POOL AND SWALE SYSTEM, ASSOCIATED WITH ELEOCHARIS MACROSTACHYA, LASTHENIA GLABERRIMA, ERYNGIUM, GRATIOLA EBRACTEATA, DOWNINGIA SPP., ISOETES, AND PILULARIA AMERICANA.

General: ABOUT 500 PLANTS OBSERVED IN 1993. AREA SEARCHED BUT NO PLANTS OBSERVED IN 1997.

Owner/Manager: SAC COUNTY

***Lepidurus packardii***

vernal pool tadpole shrimp

Element Code: ICBRA10010

Status

NDDB Element Ranks

Other Lists

Federal: Endangered

Global: G3

CDFG Status:

State: None

State: S2S3

Habitat Associations

General: INHABITS VERNAL POOLS AND SWALES IN THE SACRAMENTO VALLEY CONTAINING CLEAR TO HIGHLY TURBID WATER.

Micro: POOLS COMMONLY FOUND IN GRASS BOTTOMED SWALES OF UNPLOWED GRASSLANDS. SOME POOLS ARE MUD-BOTTOMED & HIGHLY TURBID.

Occurrence No. 12

Map Index: 32441

EQ Index: 2105

Dates Last Seen

Occ Rank: Unknown

Element: 1995-02-22

Origin: Natural/Native occurrence

Site: 1995-05-24

Presence: Presumed Extant

Record Last Updated: 1995-09-22

Trend: Unknown

Quad Summary: Sloughouse (3812142/495B), Buffalo Creek (3812152/511C), Carmichael (3812153/512D)

County Summary: Sacramento

Lat/Long: 38.50257° / -121.24805°

Township: 08N

UTM: Zone-10 N4263033 E652766

Range: 07E

Radius: 1/5 mile

Mapping Precision: NON-SPECIFIC

Section: 31

Qtr: SE

Elevation: 120 ft

Symbol Type: POINT

Meridian: M

Location: ADJACENT TO MATHER AIR FORCE BASE; APPROX. 0.6 KM SOUTHWEST OF THE INTERSECTION BETWEEN SUNRISE BLVD AND JACKSON ROAD.

Location Detail: GRECH PROPERTY (SURVEYED FOR SACRAMENTO AGGREGATES).

Ecological: HARDPAN VERNAL POOL IN ANNUAL GRASSLAND

Threat: RURAL AGRICULTURAL USES.

General: POOLS #42, 70, 72, & 200: <50 ADULTS OBSERVED; POOL #44 (2/1/1995): 50+ ADULTS OBSERVED, (2/22/1995): <50 ADULTS OBSERVED; POOLS #41 & 83C: 50+ ADULTS OBSERVED; 6 ADULTS COLLECTED AND DEPOSITED IN CAS.

Owner/Manager: PVT

Occurrence No. 23

Map Index: 28975

EO Index: 30716

Dates Last Seen

Occ Rank: Unknown

Element: 1996-03-22

Origin: Natural/Native occurrence

Site: 1996-03-22

Presence: Presumed Extant

Record Last Updated: 1997-03-10

Trend: Unknown

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.55947° / -121.19671°

Township: 08N

UTM: Zone-10 N4269434 E657119

Range: 07E

Area:

Mapping Precision: NON-SPECIFIC

Section: 10

Qtr: XX

Elevation: 160 ft

Symbol Type: POLYGON

Meridian: M

Location: AREA EAST OF SUNRISE BLVD, NORTH OF JACKSON RD & SOUTH OF WHITE ROCK ROAD.

Location Detail: T09N, 07E, SECTIONS 25, 26, 35 & 36, & T08N, R07E, SECTIONS 2, 3, 8, 10, 15, 17, 20, 21 & 29. INCLUDES THE SAMMIS SUNRISE DOUGLAS PROJECT SITE & THE GENCORP AEROJECT OFFSITE GET B SITE. FEATURES LOCATED SOMEWHERE WITHIN THESE SECTIONS.

Ecological: ANNUAL GRASSLAND WITH HARDPAN VERNAL POOLS, NATURAL SEASONAL WETLANDS, SWALES, MANMADE VERNAL POOLS, STOCK PONDS, SCRAPES AND DREDGE PITS.

Threat: AGRICULTURE, ROAD CONSTRUCTION.

General: 1993: LEPIDURUS PACKARDI OBS IN ~126 OF 434 INSPECTED FEATURES THROUGHOUT THIS AREA. 1995: OBS IN ~130 OF 386 FEATURES IN T08N, R07E, SEC 8, 17, & 20. 1996: OBS IN ~45 OF 153 FEATURES IN T08N, R07E, SEC 20 & T09N, R07E, SEC 25, 26, 35 & 36.

Owner/Manager: PVT, UNKNOWN



***Lepidurus packardii***

vernal pool tadpole shrimp

Element Code: ICBRA10010

Status  
Federal: Endangered  
State: None

NDDB Element Ranks  
Global: G3  
State: S2S3

Other Lists  
CDFG Status:

Habitat Associations

General: INHABITS VERNAL POOLS AND SWALES IN THE SACRAMENTO VALLEY CONTAINING CLEAR TO HIGHLY TURBID WATER.

Micro: POOLS COMMONLY FOUND IN GRASS BOTTOMED SWALES OF UNFLOWED GRASSLANDS. SOME POOLS ARE MUD-BOTTOMED & HIGHLY TURBID.

Occurrence No. 31 Map Index: 32519 EO Index: 1749 Dates Last Seen  
Occ Rank: Unknown Element: 1990-03-17  
Origin: Natural/Native occurrence Site: 1990-03-17  
Presence: Presumed Extant  
Trend: Unknown Record Last Updated: 1995-09-15

Quad Summary: Buffalo Creek (3812152/511C)  
County Summary: Sacramento

Lat/Long: 38.61300° / -121.15126° Township: 09N  
UTM: Zone-10 N4275453 E660960 Range: 07E  
Area: Mapping Precision: NON-SPECIFIC Section: 24 Qtr: SE  
Elevation: 295 ft Symbol Type: POLYGON Meridian: M

Location: PRAIRIE CITY SVRA; 0.1 KM SSW OF PRAIRIE CITY ROAD X WHITE ROCK ROAD.

Ecological: LARGE, EPHEMERAL POND; VEGETATION THROUGHOUT; CLEAR WATER ALONG EDGES, BUT MILKY IN CENTER; POND DRY BY SUMMER.

Threat: LIGHT OFF-HIGHWAY VEHICLES USAGE;

General: POOL #D-L. PACKARDI OBSERVED IN EARLY AND LATE SPRING; L. OCCIDENTALIS, LYNCEUS BRACHYURUS AND OTHER INVERTS PRESENT;  
HYLA REGILLA HEARD CALLING AND TADPOLES OBSERVED IN LATE SPRING.

Owner/Manager: DPR-PRAIRIE CITY SVRA

Occurrence No. 54 Map Index: 32730 EO Index: 1142 Dates Last Seen  
Occ Rank: Fair Element: 1993-02-02  
Origin: Natural/Native occurrence Site: 1993-02-02  
Presence: Presumed Extant  
Trend: Unknown Record Last Updated: 1996-01-05

Quad Summary: Buffalo Creek (3812152/511C), Carrichael (3812153/512D)  
County Summary: Sacramento

Lat/Long: 38.55807° / -121.24877° Township: 08N  
UTM: Zone-10 N4269191 E652566 Range: 07E  
Area: 20.2 acres Mapping Precision: SPECIFIC Section: 07 Qtr: SE  
Elevation: 140 ft Symbol Type: POLYGON Meridian: M

Location: FORMER MATHER AIR FORCE BASE; WESTERN PORTION OF TRIANGLE FORMED BY DOUGLAS RD, SUNRISE BOULEVARD & FOLSOM SOUTH CANAL.

Location Detail: LAND TO THE NORTH AND EAST IS PRIVATELY-OWNED FOR INDUSTRIAL/BUSINESS; THE FORMER MATHER AFB IS TO THE SOUTH AND WEST; EAST PARCEL IS UNDEVELOPED.

Ecological: GRASSLANDS.

Threat: IDENTIFIED FOR EXCHANGE.

General: MANY INDIVIDUALS OF BOTH SPECIES, LEPIDURUS PACKARDI AND LINDERIELLA OCCIDENTALIS, OBSERVED; COLLECTION MADE.

Owner/Manager: BLM

Occurrence No. 95 Map Index: 20270 EO Index: 30662 Dates Last Seen  
Occ Rank: Unknown Element: 1990-01-01  
Origin: Natural/Native occurrence Site: 1990-01-01  
Presence: Presumed Extant  
Trend: Unknown Record Last Updated: 1997-03-18

Quad Summary: Buffalo Creek (3812152/511C)  
County Summary: Sacramento

Lat/Long: 38.61434° / -121.16239° Township: 09N  
UTM: Zone-10 N4275582 E659986 Range: 07E  
Area: 375.6 acres Mapping Precision: SPECIFIC Section: 24 Qtr: SE  
Elevation: 280 ft Symbol Type: POLYGON Meridian: M

Location: NORTHWEST OF THE INTERSECTION OF WHITE ROCK ROAD AND PRAIRIE CITY ROAD.

Location Detail: A "NATURAL STOCK POND" SOMEWHERE IN SECTION 24.

Ecological: "NATURAL STOCK POND". NORTHERN HARDPAN VERNAL POOLS KNOWN FROM THIS SAME AREA. THIS OCCURRENCE WAS SNAPPED TO THE VERNAL POOL COMMUNITY OCCURRENCE.

General: LEPIDURUS PACKARDI OBSERVED IN A "NATURAL STOCKPOND". SUGNET RECORD #180.

Owner/Manager: PVT, UNKNOWN

***Lepidurus packardii***

vernal pool tadpole shrimp

Element Code: ICBRA10010

Status  
Federal: Endangered  
State: None

NDDB Element Ranks  
Global: G3  
State: S2S3

Other Lists  
CDFG Status:

**Habitat Associations**

General: INHABITS VERNAL POOLS AND SWALES IN THE SACRAMENTO VALLEY CONTAINING CLEAR TO HIGHLY TURBID WATER.

Micro: POOLS COMMONLY FOUND IN GRASS BOTTOMED SWALES OF UNPLOWED GRASSLANDS. SOME POOLS ARE MUD-BOTTOMED & HIGHLY TURBID.

Occurrence No. 113      Map Index: 36874      EO Index: 31890      Dates Last Seen  
Occ Rank: Good      Element: 2000-03-15  
Origin: Natural/Native occurrence      Site: 2000-03-15  
Presence: Presumed Extant  
Trend: Unknown      Record Last Updated: 2004-11-17

Quad Summary: Sloughhouse (3812142/495B), Elk Grove (3812143/495A), Carmichael (3812153/512D), Buffalo Creek (3812152/511C)  
County Summary: Sacramento

Lat/Long: 38.50388° / -121.25393°      Township: 08N  
UTM: Zone-10 N4263168 E652250      Range: 07E  
Area:      Mapping Precision: NON-SPECIFIC      Section: 31      Qtr: XX  
Elevation: 125 ft      Symbol Type: POLYGON      Meridian: M

Location: VICINITY OF THE INTERSECTION OF EAGLES NEST ROAD AND HWY 16 (JACKSON ROAD), SOUTH OF MATHER AIR FORCE BASE.

Ecological: HABITAT CONSISTS OF NORTHERN HARDPAN VERNAL POOLS, AS WELL AS SCRAPES, SWALES, DEPRESSIONS, AND STOCK PONDS; SURROUNDED BY NON-NATIVE GRASSLAND.

Threat: THREATENED BY GRAVEL MINING.

General: NUMEROUS FAIRY SHRIMP AND TADPOLE SHRIMP FOUND AT THIS SITE DURING SPRING 1996 SURVEYS. 10 PLUS ADULTS OBSERVED MARCH 2000 IN WESTERN PORTION OF POLYGON. 10+ ADULTS FOUND 15 MAR 2000.

Owner/Manager: PVT

Occurrence No. 116      Map Index: 37098      EO Index: 32096      Dates Last Seen  
Occ Rank: Unknown      Element: 1994-05-11  
Origin: Natural/Native occurrence      Site: 1994-05-11  
Presence: Presumed Extant  
Trend: Unknown      Record Last Updated: 1997-10-07

Quad Summary: Buffalo Creek (3812152/511C)  
County Summary: Sacramento

Lat/Long: 38.51464° / -121.21016°      Township: 08N  
UTM: Zone-10 N4264436 E656044      Range: 07E  
Area:      Mapping Precision: NON-SPECIFIC      Section: 28      Qtr: SE  
Elevation: 150 ft      Symbol Type: POLYGON      Meridian: M

Location: SOUTH OF BLODGETT RESERVOIR (LAGUNA CREEK), NE OF THE INTERSECTION OF HWY 16 AND GRANT LINE ROAD, SE OF SACRAMENTO.

Ecological: HABITAT CONSISTS OF NORTHERN HARDPAN VERNAL POOLS.

General: "DUTRA" SITE. BRANCHINECTA LYNCHI, LEPIDURUS PACKARDI, LINDERIELLA OCCIDENTALIS, AND AN UNKNOWN BRANCHINECTA SPECIES WERE OBSERVED ON 11 MAY 1994.

Owner/Manager: UNKNOWN

Occurrence No. 124      Map Index: 40261      EO Index: 35372      Dates Last Seen  
Occ Rank: Unknown      Element: 1994-04-XX  
Origin: Natural/Native occurrence      Site: 1994-04-XX  
Presence: Presumed Extant  
Trend: Unknown      Record Last Updated: 1998-12-11

Quad Summary: Buffalo Creek (3812152/511C)  
County Summary: Sacramento

Lat/Long: 38.52143° / -121.18916°      Township: 08N  
UTM: Zone-10 N4265225 E657860      Range: 07E  
Area: 17.1 acres      Mapping Precision: SPECIFIC      Section: 27      Qtr: XX  
Elevation: 220 ft      Symbol Type: POLYGON      Meridian: M

Location: KIEFER LANDFILL, 0.7 MI E JCT OF GRANT LINE RD & KIEFER BLVD, 1.7 MILES NNE OF DEER CREEK CROSSING AT JACKSON HWY (16).

Location Detail: INSIDE KIEFER LANDFILL EXPANSION FOOTPRINT REDUCTION AREA.

Ecological: NORTHERN HARDPAN VERNAL POOL COMMUNITY.

Threat: PROPOSED LANDFILL EXPANSION.

General: LEPIDURUS PACKARDI FOUND IN 13 POOLS. BRANCHINECTA LYNCHI ALSO FOUND HERE.

Owner/Manager: SAC COUNTY

***Lepidurus packardii***

vernal pool tadpole shrimp

Element Code: ICBRA10010

Status  
Federal: Endangered  
State: None

NDDB Element Ranks  
Global: G3  
State: S2S3

Other Lists  
CDFG Status:

Habitat Associations

General: INHABITS VERNAL POOLS AND SWALES IN THE SACRAMENTO VALLEY CONTAINING CLEAR TO HIGHLY TURBID WATER.

Micro: POOLS COMMONLY FOUND IN GRASS BOTTOMED SWALES OF UNPLOWED GRASSLANDS. SOME POOLS ARE MUD-BOTTOMED & HIGHLY TURBID.

Occurrence No. 125 Map Index: 40263 EO Index: 35373 Dates Last Seen  
Occ Rank: Unknown Element: 1994-04-XX  
Origin: Natural/Native occurrence Site: 1994-04-XX  
Presence: Presumed Extant  
Trend: Unknown Record Last Updated: 1998-12-11

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.53093° / -121.18642° Township: 08N  
UTM: Zone-10 N4266284 E658078 Range: 07E  
Radius: 80 meters Mapping Precision: SPECIFIC Section: 23 Qtr: SW  
Elevation: 230 ft Symbol Type: POINT Meridian: M

Location: KIEFER LANDFILL, 1.1 MILES NE JCT OF GRANT LINE RD & KIEFER BLVD, 0.2 MILE S OF GRANT LINE RD AT BM 216.

Location Detail: KIEFER LANDFILL EXPANSION FOOTPRINT AREA.

Ecological: NORTHERN HARDPAN VERNAL POOL COMMUNITY.

Threat: PROPOSED LANDFILL EXPANSION

General: OBSERVED IN VERNAL POOL IN THE NORTHERN CORNER OF THE PROPERTY WITHIN THE PROPOSED LANDFILL FOOTPRINT. BRANCHINECTA LYNCHI ALSO FOUND HERE.

Owner/Manager: SAC COUNTY

Occurrence No. 126 Map Index: 40367 EO Index: 35374 Dates Last Seen  
Occ Rank: Unknown Element: 1994-04-XX  
Origin: Natural/Native occurrence Site: 1994-04-XX  
Presence: Presumed Extant  
Trend: Unknown Record Last Updated: 1998-12-11

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.52352° / -121.18354° Township: 08N  
UTM: Zone-10 N4265467 E658345 Range: 07E  
Area: Mapping Precision: NON-SPECIFIC Section: 26 Qtr: XX  
Elevation: 160 ft Symbol Type: POLYGON Meridian: M

Location: KIEFER LANDFILL, 1.0 MILE EAST OF JUNCTION OF KIEFER BLVD AND GRANT LINE ROAD.

Location Detail: KIEFER LANDFILL EXPANSION FOOTPRINT AREA.

Ecological: NORTHERN HARDPAN VERNAL POOL COMMUNITY.

Threat: PROPOSED LANDFILL EXPANSION

General: LEPIDURUS PACKARDI FOUND IN 7 VERNAL POOLS. 6 OF THE POOLS ARE IN A SEASONAL DRAINAGE AND 1 OF THE POOLS HAS BEEN DAMMED TO HOLD MORE WATER.

Owner/Manager: SAC COUNTY

Occurrence No. 127 Map Index: 40369 EO Index: 35376 Dates Last Seen  
Occ Rank: Unknown Element: 1994-04-XX  
Origin: Natural/Native occurrence Site: 1994-04-XX  
Presence: Presumed Extant  
Trend: Unknown Record Last Updated: 1998-12-11

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.51927° / -121.18988° Township: 08N  
UTM: Zone-10 N4264984 E657802 Range: 07E  
Radius: 80 meters Mapping Precision: SPECIFIC Section: 27 Qtr: XX  
Elevation: 220 ft Symbol Type: POINT Meridian: M

Location: KIEFER LANDFILL, 0.6 MI ESE OF THE JUNCTION OF KIEFER BLVD AND GRANT LINE RD.

Location Detail: KIEFER LANDFILL EXPANSION FOOTPRINT AREA.

Ecological: NORTHERN HARDPAN VERNAL POOL COMMUNITY.

Threat: PROPOSED LANDFILL EXPANSION

General: FOUND IN 3 POOLS ON THE WEST SIDE OF THE LANDFILL EXPANSION BOUNDARY.

Owner/Manager: SAC COUNTY

***Lepidurus packardii***

vernal pool tadpole shrimp

Element Code: ICBRA10010

Status	NDDB Element Ranks	Other Lists
Federal: Endangered	Global: G3	CDFG Status:
State: None	State: S2S3	

**Habitat Associations**

General: INHABITS VERNAL POOLS AND SWALES IN THE SACRAMENTO VALLEY CONTAINING CLEAR TO HIGHLY TURBID WATER.

Micro: POOLS COMMONLY FOUND IN GRASS BOTTOMED SWALES OF UNPLOWED GRASSLANDS. SOME POOLS ARE MUD-BOTTOMED & HIGHLY TURBID.

Occurrence No. 128	Map Index: 40372	EO Index: 35379	Dates Last Seen
Occ Rank: Unknown			Element: 1994-04-XX
Origin: Natural/Native occurrence			Site: 1994-04-XX
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1998-12-11

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.51456° / -121.19457°	Township: 08N
UTM: Zone-10 N4264453 E657403	Range: 07E
Radius: 80 meters	Section: 27
Elevation: 190 ft	Meridian: M
Mapping Precision: SPECIFIC	Qtr: XX
Symbol Type: POINT	

Location: JUST NORTH OF KIEFER BLVD, 0.6 MI FROM THE JUNCTION OF KIEFER BLVD AND GRANT LINE RD.

Ecological: NORTHERN HARDPAN VERNAL POOL COMMUNITY.

Threat: PROPOSED LANDFILL EXPANSION.

General: OBSERVED IN A VERNAL POOL.

Owner/Manager: SAC COUNTY

Occurrence No. 133	Map Index: 41024	EO Index: 41024	Dates Last Seen
Occ Rank: Unknown			Element: 1997-01-XX
Origin: Natural/Native occurrence			Site: 1997-01-XX
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1999-05-11

Quad Summary: Buffalo Creek (3812152/511C), Carmichael (3812153/512D)

County Summary: Sacramento

Lat/Long: 38.52698° / -121.25613°	Township: 08N
UTM: Zone-10 N4265728 E652010	Range: 07E
Area: 10.6 acres	Section: 19
Elevation: 125 ft	Meridian: M
Mapping Precision: SPECIFIC	Qtr: XX
Symbol Type: POLYGON	

Location: 0.1 MILE EAST OF JUNCTION OF KIEFER BLVD AND EAGLES NEST ROAD, MATHER REGIONAL PARK (6 FEATURES, ALONG KIEFER BLVD).

Location Detail: PART OF THE MORRISON CREEK DRAINAGE, IN THE OLD MATHER AIR FORCE BASE.

Ecological: 6 FEATURES THAT ARE EITHER, VERNAL POOLS, VERNAL SWALES, OR A BRANCH OF MORRISON CREEK.

Threat: IMPACTED BY HUMANS.

General: OBSERVED IN 1993 AND 1996-97 IN 5 OF THE 6 FEATURES MAPPED. LINDERIELLA OCCIDENTALIS ALSO OBSERVED.

Owner/Manager: SAC COUNTY

Occurrence No. 135	Map Index: 41026	EO Index: 41026	Dates Last Seen
Occ Rank: Fair			Element: 2004-03-09
Origin: Natural/Native occurrence			Site: 2004-03-09
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2004-05-17

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.53421° / -121.24715°	Township: 08N
UTM: Zone-10 N4266545 E652777	Range: 07E
Area: 12.1 acres	Section: 19
Elevation: 150 ft	Meridian: M
Mapping Precision: SPECIFIC	Qtr: NE
Symbol Type: POLYGON	

Location: 0.9 MILE ENE OF JUNCTION OF KIEFER BLVD AND EAGLES NEST ROAD, MATHER REGIONAL PARK

Location Detail: ONE VERNAL POOL IN THIS PORTION OF THE COMPLEX, WITH VERNAL POOL TADPOLE SHRIMP; PART OF OLD MATHER AIR FORCE BASE.

Ecological: HABITAT CONSISTS A DISTURBED VERNAL POOL AND AN EPHEMERAL STREAM, TRIBUTARY TO MORRISON CREEK.

Threat: THREATENED BY TURBID/SEDIMENT-LADEN AND FLOC RELEASES UPSTREAM AND FUTURE WATER QUALITY ISSUES FROM URBAN RUNOFF.

General: INDIVIDUALS OBSERVED IN 1996-97, 1 ADULT OBSERVED ON 9 MAR 2004.

Owner/Manager: SAC COUNTY

***Lepidurus packardii***

vernal pool tadpole shrimp

Element Code: ICBRA10010

Status  
Federal: Endangered  
State: None

NDDB Element Ranks  
Global: G3  
State: S2S3

Other Lists  
CDFG Status:

**Habitat Associations**

General: INHABITS VERNAL POOLS AND SWALES IN THE SACRAMENTO VALLEY CONTAINING CLEAR TO HIGHLY TURBID WATER.

Micro: POOLS COMMONLY FOUND IN GRASS BOTTOMED SWALES OF UNPLOWED GRASSLANDS. SOME POOLS ARE MUD-BOTTOMED & HIGHLY TURBID.

Occurrence No. 136      Map Index: 41027      EO Index: 41027      Dates Last Seen  
Occ Rank: Unknown      Element: 1997-01-XX  
Origin: Natural/Native occurrence      Site: 1997-01-XX  
Presence: Presumed Extant  
Trend: Unknown      Record Last Updated: 1999-05-06

Quad Summary: Buffalo Creek (3812152/511C)  
County Summary: Sacramento

Lat/Long: 38.52846° / -121.24758°      Township: 08N  
UTM: Zone-10 N4265907 E652752      Range: 07E  
Radius: 80 meters      Mapping Precision: SPECIFIC      Section: 19      Qtr: XX  
Elevation: 150 ft      Symbol Type: POINT      Meridian: M

Location: 0.8 MILE EAST OF JUNCTION OF KIEFER BLVD AND EAGLES NEST ROAD, MATHER REGIONAL PARK.

Location Detail: 1 VERNAL POOL IN THIS PORTION OF THE COMPLEX, WITH VERNAL POOL TADPOLE SHRIMP (VPTS). PART OF THE OLD MATHER AIR FORCE BASE.

Ecological: DISTURBED VERNAL POOL.

Threat: IMPACTED BY HUMANS.

General: OBSERVED IN 1996-97. ALSO LINDERIELLA OCCIDENTALIS OBSERVED.

Owner/Manager: SAC COUNTY

Occurrence No. 240      Map Index: 64359      EO Index: 64438      Dates Last Seen  
Occ Rank: Good      Element: 2005-04-14  
Origin: Natural/Native occurrence      Site: 2005-04-14  
Presence: Presumed Extant  
Trend: Unknown      Record Last Updated: 2006-03-28

Quad Summary: Buffalo Creek (3812152/511C), Carmichael (3812153/512D)  
County Summary: Sacramento

Lat/Long: 38.53683° / -121.26510°      Township: 08N  
UTM: Zone-10 N4266807 E651207      Range: 06E  
Area: 1.7 acres      Mapping Precision: SPECIFIC      Section: 24      Qtr: XX  
Elevation: 140 ft      Symbol Type: POLYGON      Meridian: M

Location: NEAR INTERSECTION OF EAGLES NEST ROAD AND WOODRING ROAD, MATHER FIELD.

Ecological: VERNAL POOLS.

General: FOUND IN 2 OF 5 SURVEYED POOLS IN LOW NUMBERS (0-TO-FEW INDIVIDUALS PER DIP NET SWEEP).

Owner/Manager: SAC COUNTY-PARKS & REC

***Linderiella occidentalis***

California *Linderiella*

Element Code: ICBRA06010

<b>Status</b>	<b>NDDB Element Ranks</b>	<b>Other Lists</b>
Federal: None	Global: G3	CDFG Status:
State: None	State: S2S3	

**Habitat Associations**

General: SEASONAL POOLS IN UNFLOWED GRASSLANDS WITH OLD ALLUVIAL SOILS UNDERLAIN BY HARDPAN OR IN SANDSTONE DEPRESSIONS.  
Micro: WATER IN THE POOLS HAS VERY LOW ALKALINITY, CONDUCTIVITY, AND TDS.

Occurrence No. 63	Map Index: 32517	EO Index: 2093	<b>Dates Last Seen</b>
Occ Rank: Unknown			Element: 1996-03-20
Origin: Natural/Native occurrence			Site: 1996-06-10
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1996-06-09

**Quad Summary:** Folsom (3812162/511B)  
**County Summary:** Sacramento

Lat/Long: 38.65480° / -121.21752°	Township: 09N
UTM: Zone-10 N4279978 E655100	Range: 07E
Area:	Section: 9 Qtr: XX
Elevation: 270 ft	Meridian: M

Mapping Precision: NON-SPECIFIC  
Symbol Type: POLYGON

**Location:** PHOENIX FIELD UNIT 4, 1.3 KM ENE OF SUNSET AVENUE X HAZEL AVENUE.

**Location Detail:** 1995-2 SEASONAL WETLANDS AND 1 VERNAL POOL WERE SURVEYED. LINDERIELLA OBSERVED IN 1 SEASONAL WETLAND AND 1 VERNAL POOL. 1996-SAME WETLANDS AND POOL SURVEYED AS 1995; LINDERIELLA OBSERVED ONLY IN VP-1.

**Ecological:** VERNAL POOL AND SEASONAL WETLAND HABITAT IN ANNUAL GRASSLAND. THE SURVEY AREA IS SITUATED ON A PORTION OF THE OLD PHOENIX FIELD AIRPORT AND A MAJORITY OF THE SURVEY AREA IS COVERED BY THE REMAINS OF THE ABANDONED TARMAC.

**Threat:** RESIDENTIAL DEVELOPMENT IS UNDERWAY; SILT SCREENS, FENCES AND/OR RETAINING WALLS INSTALLED FOR HABITAT PROTECTION.

**General:** 1995: POOL #SW-1: L. OCCIDENTALIS OBSERVED ON 1/27; POOL #VP-1: L. OCCIDENTALIS OBSERVED ON 1/13, 1/27, AND 2/9. 1996: POOL #VP1-L. OCCIDENTALIS OBSERVED ON 1/9, 1/24, 2/7, 2/21, 3/6 & 3/20; MAX DEPTH OF POOL #VP1 WAS 18 INCHES.

**Owner/Manager:** CITY OF FAIR OAKS

Occurrence No. 65	Map Index: 32519	EO Index: 1750	<b>Dates Last Seen</b>
Occ Rank: Unknown			Element: 1990-03-17
Origin: Natural/Native occurrence			Site: 1990-03-17
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1995-12-05

**Quad Summary:** Buffalo Creek (3812152/511C)  
**County Summary:** Sacramento

Lat/Long: 38.61300° / -121.15126°	Township: 09N
UTM: Zone-10 N4275453 E660960	Range: 07E
Area:	Section: 24 Qtr: SE
Elevation: 295 ft	Meridian: M

Mapping Precision: NON-SPECIFIC  
Symbol Type: POLYGON

**Location:** PRAIRIE CITY SVRA; 0.1 KM SSW OF PRAIRIE CITY ROAD X WHITE ROCK ROAD.

**Ecological:** LARGE EPHEMERAL POND; VEGETATION THROUGHOUT AREA; CLEAR WATER ALONG EDGES, BUT MILKY IN CENTER; POND DRIED UP BY SUMMER.

**Threat:** LIGHT OFF-HIGHWAY VEHICLES USAGE; POSSIBILITY OF OHV OIL SPILLS.

**General:** POOL #D-L. OCCIDENTALIS OBSERVED IN EARLY SPRING, BUT FEW IN LATE SPRING; LEPIDURUS PACKARDI, LYNCEUS BRACHYURUS AND OTHER INVERTS WERE PRESENT. Hyla regilla HEARD CALLING IN EARLY SPRING AND TADPOLES PRESENT IN LATE SPRING.

**Owner/Manager:** DPR-PRAIRIE CITY SVRA

***Linderiella occidentalis***

California *Linderiella*

Element Code: ICBRA06010

Status

NDDB Element Ranks

Other Lists

Federal: None

Global: G3

CDFG Status:

State: None

State: S2S3

Habitat Associations

General: SEASONAL POOLS IN UNFLOWED GRASSLANDS WITH OLD ALLUVIAL SOILS UNDERLAIN BY HARDPAN OR IN SANDSTONE DEPRESSIONS.

Micro: WATER IN THE POOLS HAS VERY LOW ALKALINITY, CONDUCTIVITY, AND TDS.

Occurrence No. 66

Map Index: 32520

EO Index: 1748

Dates Last Seen

Occ Rank: Unknown

Element: 1990-03-17

Origin: Natural/Native occurrence

Site: 1990-03-17

Presence: Presumed Extant

Record Last Updated: 1995-12-05

Trend: Unknown

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.60255° / -121.13953°

UTM: Zone-10 N4274314 E662005

Radius: 80 meters

Elevation: 330 ft

Mapping Precision: SPECIFIC

Symbol Type: POINT

Township: 09N

Range: 08E

Section: 30

Meridian: M

Qtr: SE

Location: PRAIRIE CITY SVRA; 1.6 KM SE OF PRAIRIE CITY ROAD X WHITE ROCK ROAD.

Ecological: VERNAL POOL; VEGETATION IN AREAS WITH LOW OHV USAGE, BUT NO VEGETATION WITH HIGH OHV USAGE; POOL DRY BY SUMMER.

Threat: OFF-HIGHWAY VEHICLE USAGE.

General: POOL #D-MATURE AND ABUNDANT L. OCCIDENTALIS OBSERVED IN EARLY SPRING, BUT FEW IN LATE SPRING.

Owner/Manager: DPR-PRAIRIE CITY SVRA

Occurrence No. 67

Map Index: 32521

EO Index: 1746

Dates Last Seen

Occ Rank: Unknown

Element: 1990-03-17

Origin: Natural/Native occurrence

Site: 1990-03-17

Presence: Presumed Extant

Record Last Updated: 1995-12-05

Trend: Unknown

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.59970° / -121.13843°

UTM: Zone-10 N4274000 E662107

Area:

Elevation: 325 ft

Mapping Precision: NON-SPECIFIC

Symbol Type: POLYGON

Township: 09N

Range: 08E

Section: 30

Meridian: M

Qtr: SE

Location: PRAIRIE CITY SVRA; 2.0 KM SE OF PRAIRIE CITY ROAD X WHITE ROCK ROAD.

Ecological: VERNAL POOL PRESERVE; GRASSLAND WITH SCATTERED OAKS AND DISTINCTIVE VERNAL POOL VEGETATION; POOLS DRY BY SUMMER.

Threat: PAST CATTLE GRAZING; MINIMAL IMPACT BY OFF-HIGHWAY VEHICLES USAGE.

General: POOLS #A & B-L. OCCIDENTALIS OBSERVED IN EARLY SPRING, BUT FEW IN LATE SPRING.

Owner/Manager: DPR-PRAIRIE CITY SVRA

Occurrence No. 68

Map Index: 32324

EO Index: 1710

Dates Last Seen

Occ Rank: Good

Element: 1994-03-27

Origin: Natural/Native occurrence

Site: 1994-03-27

Presence: Presumed Extant

Record Last Updated: 1996-06-26

Trend: Unknown

Quad Summary: Folsom (3812162/511B)

County Summary: Sacramento

Lat/Long: 38.65123° / -121.21958°

UTM: Zone-10 N4279578 E654929

Area:

Elevation: 260 ft

Mapping Precision: NON-SPECIFIC

Symbol Type: POLYGON

Township: 09N

Range: 07E

Section: 9

Meridian: M

Qtr: XX

Location: PHOENIX PARK; PHOENIX FIELD VERNAL POOLS; 0.5 KM ESE OF SUNSET AVENUE X HAZEL AVENUE.

Location Detail: VP1, VP11, VP12, VP12(A & B); ACCIDENTAL HERBICIDE SPRAYING IN VP1 ON 2/24/1992.

Ecological: PHOENIX FIELD VERNAL POOLS; PROTECTED AREA WITH PUBLIC ACCESS; ORCUTTIA VISCIDA PRESENT IN VP1, VP11, VP12, VP12A & VP12B, & IN FULL FLOWER ON 4/20/1994, NOT USUAL FLOWER TIME AT END OF MAY.

Threat: ACCIDENTAL HERBICIDE SPRAYING (DIURON-KARMEX, SIMAZINE-PRINCEP, GLYPHOSATE-ROUNDUP); BICYCLE RIDERS; FOOT TRAFFIC.

General: 4/13/1979-ENG & BRODE COLLECT, ENG CAT#391, 1993-3/31-2 MALES, 5 FEMALES OBS; 4/1-2 MALES, 8 FEMALES OBS; 4/6-2 FEMALES OBS; 3/27/94-MANY ADULTS OBS CLASPING-PROTECT FROM PREDATION BY DAMSELFLY & DIVING BEETLE; ALL FEMALES W/ BROOD PATCH.

Owner/Manager: CITY OF FAIR OAKS

***Linderiella occidentalis***

California *Linderiella*

Element Code: ICBRA06010

----- Status -----	NDDB Element Ranks	----- Other Lists -----
Federal: None	Global: G3	CDFG Status:
State: None	State: S2S3	

**Habitat Associations**

General: SEASONAL POOLS IN UNFLOWED GRASSLANDS WITH OLD ALLUVIAL SOILS UNDERLAIN BY HARDPAN OR IN SANDSTONE DEPRESSIONS.  
Micro: WATER IN THE POOLS HAS VERY LOW ALKALINITY, CONDUCTIVITY, AND TDS.

Occurrence No. 109	Map Index: 32730	EO Index: 1141	----- Dates Last Seen -----
Occ Rank: Fair			Element: 1993-02-02
Origin: Natural/Native occurrence			Site: 1993-02-02
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1996-01-05

Quad Summary: Buffalo Creek (3812152/511C), Carmichael (3812153/512D)  
County Summary: Sacramento

Lat/Long: 38.55807° / -121.24877°	Township: 08N
UTM: Zone-10 N4269191 E652586	Range: 07E
Area: 20.2 acres	Section: 07 Qtr: SE
Elevation: 140 ft	Meridian: M

Location: FORMER MATHER AIR FORCE BASE; WESTERN PORTION OF TRIANGLE FORMED BY DOUGLAS RD, SUNRISE BOULEVARD & FOLSOM SOUTH CANAL.

Location Detail: LAND TO THE NORTH AND EAST IS PRIVATELY-OWNED FOR INDUSTRIAL/BUSINESS; EAST PARCEL IS UNDEVELOPED; THE FORMER MATHER AFB IS TO THE SOUTH AND WEST.

Ecological: GRASSLAND.

Threat: IDENTIFIED FOR EXCHANGE.

General: MANY INDIVIDUALS FROM BOTH SPECIES, LINDERIELLA OCCIDENTALIS AND LEPIDURUS PACKARDI, OBSERVED; UNKNOWN NUMBERS COLLECTED.

Owner/Manager: BLM

Occurrence No. 136	Map Index: 34807	EO Index: 29316	----- Dates Last Seen -----
Occ Rank: Unknown			Element: 1996-03-23
Origin: Natural/Native occurrence			Site: 1996-03-23
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1996-09-09

Quad Summary: Buffalo Creek (3812152/511C)  
County Summary: Sacramento

Lat/Long: 38.59987° / -121.17173°	Township: 09N
UTM: Zone-10 N4273960 E659206	Range: 07E
Area: 423.6 acres	Section: 35 Qtr: NE
Elevation: 280 ft	Meridian: M

Location: SOUTHEAST OF WHITE ROCK ROAD X GRANT LINE ROAD; SOUTH OF FOLSOM.

Location Detail: GENCORP-AEROJET OFFSITE GET B SITE; 120 POOLS SAMPLED DURING SURVEY CONDUCTED FROM 2/10-3/23/1996; ADJACENT LAND USE: GRAZING PASTURELAND, STATE RECREATIONAL VEHICLE AREA.

Ecological: HABITAT CONSISTS OF NON-NATIVE GRASSLAND, STOCKPONDS, SCRAPES, ARTIFICIAL PONDS, SWALES AND DREDGE PITS.

Threat: STUDY WAS CONDUCTED FOR ROAD CONSTRUCTION FOR ACCESS TO GROUNDWATER CLEANUP WELLS.

General: LINDERIELLA OBSERVED IN 48 POOLS, WITH 6 VOUCHER SPECIMENS SENT TO CAS; LEPIDURUS PACKARDI AND BRANCHINECTA LYNCHI (1 POOL) ALSO PRESENT.

Owner/Manager: PVT-GENCORP AEROJET



***Linderiella occidentalis***

California *Linderiella*

Element Code: ICBRA08010

Status

NDDB Element Ranks

Other Lists

Federal: None

Global: G3

CDFG Status:

State: None

State: S2S3

Habitat Associations

General: SEASONAL POOLS IN UNFLOWED GRASSLANDS WITH OLD ALLUVIAL SOILS UNDERLAIN BY HARDPAN OR IN SANDSTONE DEPRESSIONS.

Micro: WATER IN THE POOLS HAS VERY LOW ALKALINITY, CONDUCTIVITY, AND TDS.

Occurrence No. 137	Map Index: 34808	EO Index: 12665	Dates Last Seen
Occ Rank: Good			Element: 1996-01-30
Origin: Natural/Native occurrence			Site: 1996-01-30
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1996-07-09

Quad Summary: Folsom (3812162/511B)

County Summary: Sacramento

Lat/Long: 38.63534° / -121.23497°	Township: 09N
UTM: Zone-10 N4277789 E653623	Range: 07E
Radius: 80 meters	Section: 17
Elevation: 105 ft	Meridian: M
Mapping Precision: SPECIFIC	Qtr: XX
Symbol Type: POINT	

Location: EAST END OF SAILOR BAR, 100 METERS NORTH OF AMERICAN RIVER; 0.9 KM WEST OF HAZEL AVENUE BRIDGE.

Location Detail: SE OF PARKING LOT AT FIRST FISHING ACCESS ROAD; ADJACENT LAND USE: GRAVEL STORAGE AREA FOR COUNTY, PUBLIC PARKWAY.

Ecological: VERNAL POOL IN DREDGE TAILINGS; GRAVEL AND COBBLED SOIL, SCATTERED LIVE OAKS AND COTTONWOOD TREES BORDERING RIPARIAN AREA.

Threat: POSSIBLE THREAT: PUBLIC PARKWAY, FISHING ACCESS AREA AND RECREATIONAL USES.

General: LINDERIELLA OBSERVED; BRANCHINECTA LYNCHI ALSO PRESENT.

Owner/Manager: SAC COUNTY

Occurrence No. 147	Map Index: 28976	EO Index: 30714	Dates Last Seen
Occ Rank: Unknown			Element: 1996-03-22
Origin: Natural/Native occurrence			Site: 1996-03-22
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1996-09-09

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.54240° / -121.23355°	Township: 08N
UTM: Zone-10 N4267477 E653945	Range: 07E
Area:	Section: 17
Elevation: 160 ft	Meridian: M
Mapping Precision: NON-SPECIFIC	Qtr: XX
Symbol Type: POLYGON	

Location: BETWEEN DOUGLAS BLVD AND KEIFER BLVD; BETWEEN SUNRISE BLVD AND JAEGER ROAD; EAST OF MATHER AFB.

Location Detail: SAMMIS DOUGLAS SUNRISE PROJECT SITE. 1995: TOTAL OF 386 WATERBODIES SURVEYED OVER ENTIRE PROJECT SITE WITHIN T08N, R07E, SECTIONS 8, 17 & 20. 1996: 33 TOTAL WATERBODIES SURVEYED IN PILOT WETLANDS IN SEC 20 ONLY.

Ecological: HARDPAN VERNAL POOL IN ANNUAL GRASSLAND.

Threat: AGRICULTURAL.

General: 1995: DATA SEVERELY SUMMARIZED, ~80 POOLS HAD L. OCCIDENTALIS PRESENT, ABUNDANCES VARIED FROM <50 TO >50. 1996: >50 ADULTS OBSERVED IN 30 POOLS, 1 POOL (#SB19) OBSERVED <50 ADULTS ON 3/20/1996; ALL POOLS WITHIN SEC 20.

Owner/Manager: PVT-SARES REGIS GROUP

Occurrence No. 148	Map Index: 34820	EO Index: 12442	Dates Last Seen
Occ Rank: Unknown			Element: 1996-03-04
Origin: Natural/Native occurrence			Site: 1996-03-04
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1996-08-07

Quad Summary: Folsom (3812162/511B)

County Summary: Placer

Lat/Long: 38.73067° / -121.20815°	Township: 10N
UTM: Zone-10 N4288413 E655751	Range: 07E
Area: 3.3 acres	Section: 09
Elevation: 285 ft	Meridian: M
Mapping Precision: SPECIFIC	Qtr: SE
Symbol Type: POLYGON	

Location: WEST OF FOLSOM LAKE; 1.7 KM ESE OF EUREKA ROAD X SIERRA COLLEGE BLVD.

Location Detail: SILVERWOOD/GB HIGH SCHOOL MITIGATION SITE. 1995: 9 TOTAL WETLANDS SAMPLED. 1996: 8 TOTAL WETLANDS SAMPLED.

Ecological: CONSTRUCTED SEASONAL WETLANDS WITHIN NON-NATIVE ANNUAL GRASSLAND.

General: 2/9/1995: >50 ADULTS OBSERVED IN POOL #6. SURFACE AREA=263 SQ METERS, WATER DEPTH=9.0 CM; NO OTHER BRANCHIOPODS OBSERVED. 1996: >50 ADULTS OBSERVED IN 4 POOLS (#HV2, VP3, VP4 & VP6); NO OTHER BRANCHIOPODS OBSERVED.

Owner/Manager: PVT-HOMEFED COMMUNITIES

***Linderiella occidentalis***

California *Linderiella*

Element Code: ICBRA06010

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G3	CDFG Status:
State: None	State: S2S3	

**Habitat Associations**

General: SEASONAL POOLS IN UNPLOWED GRASSLANDS WITH OLD ALLUVIAL SOILS UNDERLAIN BY HARDPAN OR IN SANDSTONE DEPRESSIONS.  
Micro: WATER IN THE POOLS HAS VERY LOW ALKALINITY, CONDUCTIVITY, AND TDS.

Occurrence No. 154	Map Index: 37098	EO Index: 32097	Dates Last Seen
Occ Rank: Unknown			Element: 1994-05-11
Origin: Natural/Native occurrence			Site: 1994-05-11
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1997-10-08
Quad Summary: Buffalo Creek (3812152/511C)			
County Summary: Sacramento			
Lat/Long: 38.51464° / -121.21016°		Township: 08N	
UTM: Zone-10 N4264436 E656044		Range: 07E	
Area:	Mapping Precision: NON-SPECIFIC	Section: 28	Qtr: SE
Elevation: 150 ft	Symbol Type: POLYGON	Meridian: M	
Location: SOUTH OF BLODGETT RESERVOIR (LAGUNA CREEK), NE OF THE INTERSECTION OF HWY 16 AND GRANT LINE ROAD, SE OF SACRAMENTO.			
Ecological: HABITAT CONSISTS OF NORTHERN HARDPAN VERNAL POOLS.			
General: "OUTRA" SITE. BRANCHINECTA LYNCHI, LEPIDURUS PACKARDI, LINDERIELLA OCCIDENTALIS, AND AN UNKNOWN BRANCHINECTA SPECIES WERE OBSERVED ON 11 MAY 1994.			
Owner/Manager: UNKNOWN			
Occurrence No. 165	Map Index: 41024	EO Index: 41038	Dates Last Seen
Occ Rank: Unknown			Element: 1997-01-XX
Origin: Natural/Native occurrence			Site: 1997-01-XX
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1999-05-11
Quad Summary: Buffalo Creek (3812152/511C), Carmichael (3812153/512D)			
County Summary: Sacramento			
Lat/Long: 38.52698° / -121.25613°		Township: 08N	
UTM: Zone-10 N4265728 E652010		Range: 07E	
Area: 10.6 acres	Mapping Precision: SPECIFIC	Section: 19	Qtr: XX
Elevation: 125 ft	Symbol Type: POLYGON	Meridian: M	
Location: 0.1 MILE EAST OF JUNCTION OF KIEFER BLVD AND EAGLES NEST ROAD, MATHER REGIONAL PARK (6 FEATURES, ALONG KIEFER BLVD).			
Location Detail: MORRISON CREEK DRAINAGE AREA, IN THE OLD MATHER AIR FORCE BASE.			
Ecological: 6 FEATURES THAT ARE EITHER, VERNAL POOLS, VERNAL SWALES, OR A BRANCH OF MORRISON CREEK.			
Threat: IMPACTED BY HUMANS.			
General: OBSERVED IN 1993 AND 1996-97 IN 5 OF THE 6 FEATURES MAPPED. ALSO LEPIDURUS PACKARDI OBSERVED.			
Owner/Manager: SAC COUNTY			
Occurrence No. 166	Map Index: 41027	EO Index: 41039	Dates Last Seen
Occ Rank: Unknown			Element: 1997-01-XX
Origin: Natural/Native occurrence			Site: 1997-01-XX
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1999-05-11
Quad Summary: Buffalo Creek (3812152/511C)			
County Summary: Sacramento			
Lat/Long: 38.52846° / -121.24758°		Township: 08N	
UTM: Zone-10 N4265907 E652752		Range: 07E	
Radius: 80 meters	Mapping Precision: SPECIFIC	Section: 19	Qtr: XX
Elevation: 150 ft	Symbol Type: POINT	Meridian: M	
Location: 0.8 MILE EAST OF JUNCTION OF KIEFER BLVD AND EAGLES NEST ROAD, MATHER REGIONAL PARK.			
Location Detail: 1 VERNAL POOL IN THIS PORTION OF THE COMPLEX, WITH CALIFORNIA LINDERIELLA. PART OF THE OLD MATHER AIR FORCE BASE.			
Ecological: DISTURBED VERNAL POOL.			
Threat: IMPACTED BY HUMANS.			
General: OBSERVED IN 1996-97. ALSO OBSERVED LEPIDURUS PACKARDI.			
Owner/Manager: SAC COUNTY			

***Lindieriella occidentalis***

California *Lindieriella*

Element Code: ICBRA06010

Status

NDDB Element Ranks

Other Lists

Federal: None

Global: G3

CDFG Status:

State: None

State: S2S3

Habitat Associations

General: SEASONAL POOLS IN UNPLOWED GRASSLANDS WITH OLD ALLUVIAL SOILS UNDERLAIN BY HARDPAN OR IN SANDSTONE DEPRESSIONS.

Micro: WATER IN THE POOLS HAS VERY LOW ALKALINITY, CONDUCTIVITY, AND TDS.

Occurrence No. 190

Map Index: 48381

EO Index: 48383

Dates Last Seen

Occ Rank: Unknown

Element: 2002-01-31

Origin: Natural/Native occurrence

Site: 2002-01-31

Presence: Presumed Extant

Record Last Updated: 2002-07-29

Trend: Unknown

Quad Summary: Buffalo Creek (3812152/511C), Carmichael (3812153/512D)

County Summary: Sacramento

Lat/Long: 38.55732° / -121.25130°

Township: 08N

UTM: Zone-10 N4269103 E652367

Range: 07E

Area: 15.5 acres

Mapping Precision: SPECIFIC

Section: 07

Qtr: XX

Elevation: 135 ft

Symbol Type: POLYGON

Meridian: M

Location: MATHER LAKE REGIONAL PARK, NE SIDE OF MATHER LAKE, SOUTH OF DOUGLAS ROAD & WEST OF SUNRISE BLVD.

Location Detail: 31 JAN 2002: OBSERVED IN 5 OF 7 SAMPLED WETLANDS (A, B, C, E, AND F). OBSERVED IN 6 OF 7 WETLANDS ON 12 JAN 2002.

Ecological: HABITAT CONSISTS OF ANNUAL GRASSLAND DOMINATED BY NON-NATIVE PLANTS WITH NATURALLY OCCURRING & POSSIBLY ARTIFICIAL SEASONAL WETLANDS, INCLUDING VERNAL POOLS. PLANTS WITHIN WETLANDS: CARTER'S BUTTERCUP, WINGED WATER-STARWORT, POPCORN FLOWER.

General: 100'S OBSERVED IN WETLANDS A & B & 1000'S OBSERVED IN WETLANDS C, E & F ON 31 JAN 2002.

Owner/Manager: SAC COUNTY-PARKS & REC

Occurrence No. 263

Map Index: 64902

EO Index: 64981

Dates Last Seen

Occ Rank: Good

Element: 2005-04-07

Origin: Natural/Native occurrence

Site: 2005-04-07

Presence: Presumed Extant

Record Last Updated: 2006-06-20

Trend: Unknown

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.54029° / -121.25087°

Township: 08N

UTM: Zone-10 N4267214 E652440

Range: 07E

Area: 1.2 acres

Mapping Precision: SPECIFIC

Section: 18

Qtr: SE

Elevation: 160 ft

Symbol Type: POLYGON

Meridian: M

Location: 0.72 MILES SOUTHEAST OF INTERSECTION OF WOODRING WAY AND EAGLES NEST ROAD.

Ecological: VERNAL POOL IN CALIFORNIA GRASSLAND MATRIX.

General: "LOTS" OF INDIVIDUALS FOUND, BUT FSF REFERS TO THREE SEPARATELY MAPPED POOLS.

Owner/Manager: SAC COUNTY-PARKS & REC

***Navarretia myersii ssp. myersii***

pincushion navarretia

Element Code: PDPLM0C0X1

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G1T1	CNPS List: 1B.1
State: None	State: S1.1	

**Habitat Associations**

General: VERNAL POOLS, VALLEY AND FOOTHILL GRASSLAND.

Micro: CLAY SOILS WITHIN NONNATIVE GRASSLAND. 20-330M.

Occurrence No. 3	Map Index: 11841	EO Index: 19342	Dates Last Seen
Occ Rank: Good			Element: 1994-04-19
Origin: Natural/Native occurrence			Site: 1994-04-19
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2005-10-04

Quad Summary: Folsom (3812162/511B)

County Summary: Sacramento

Lat/Long: 38.65538° / -121.21511°	Township: 08N
UTM: Zone-10 N4280046 E655309	Range: 07E
Area: 7.1 acres	Section: 9 Qtr: XX
Elevation: 270 ft	Meridian: M
Mapping Precision: SPECIFIC	
Symbol Type: POLYGON	

Location: DFG PHOENIX FIELD ECOLOGICAL RESERVE, ABOUT 0.5 MILE EAST OF HAZEL AVE & NORTH OF SUNSET AVE, FAIR OAKS.

Location Detail: PLANTS FOUND IN THE MORE SHALLOW, DRY POOLS AT THIS SITE, GROWING ON OR CLOSE TO SIDE SLOPE OF POOLS.

Ecological: ASSOCIATED WITH LASTHENIA FREMONTII, POGONYNE ZIZYPHROIDES, PSILOCARPHUS SP., ERODIUM BOTRYS, JUNCUS CAPITATUS, BRODIAEA MINOR, ERYNGIUM VASEYI, DESCHAMPSIA DANTHONOIDES. ANOTHER RARE PLANT: ORCUTTIA VISCIDA ALSO HERE.

Threat: IRRIGATION RUNOFF & HORTICULTURAL ESCAPES FROM SURROUNDING BACKYARDS THREATEN.

General: AT LEAST 1000 PLANTS IN 1994. 1937 COLLECTION BY CARTER, ET AL FROM "1 MILE SE OF ORANGEVALE" ATTRIBUTED TO THIS SITE.

Owner/Manager: DFG-PHOENIX FIELD ER

### Northern Hardpan Vernal Pool

Element Code: CTT44110CA

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G3	
State: None	State: S3.1	
Habitat Associations		
General:		
Micro:		

Occurrence No. 25      Map Index: 11862      EO Index: 28006      Dates Last Seen  
Occ Rank: Unknown      Element: 1975-12-XX  
Origin: Natural/Native occurrence      Site: 1975-12-XX  
Presence: Presumed Extant  
Trend: Unknown      Record Last Updated: 1998-07-15

Quad Summary: Folsom (3812162/511B)  
County Summary: Placer, Sacramento

Lat/Long: 38.71378° / -121.20745°      Township: 10N  
UTM: Zone-10 N4286540 E655849      Range: 07E  
Radius: 1/5 mile      Mapping Precision: NON-SPECIFIC      Section: 21      Qtr: XX  
Elevation: 250 ft      Symbol Type: POINT      Meridian: M

Location: ROCK CORRAL VERNAL POOLS. (ABOUT 0.4 MILE NORTH OF CHERRY AVENUE NEAR LINDA CREEK).  
Location Detail: POOL AND GRASSLAND ADJACENT TO RELATIVELY UNDISTURBED OAK WOODLAND/RIPARIAN COMMUNITY.  
Ecological: UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO  
Threat: SOME GRAZING, HORSEBACK RIDING HERE.  
General: LARGELY INTACT.  
Owner/Manager: UNKNOWN

Occurrence No. 27      Map Index: 11973      EO Index: 27517      Dates Last Seen  
Occ Rank: Unknown      Element: 1983-XX-XX  
Origin: Natural/Native occurrence      Site: 1983-XX-XX  
Presence: Presumed Extant  
Trend: Unknown      Record Last Updated: 1998-07-15

Quad Summary: Buffalo Creek (3812152/511C)  
County Summary: Sacramento

Lat/Long: 38.60240° / -121.13828°      Township: 09N  
UTM: Zone-10 N4274300 E662114      Range: 08E  
Radius: 1/5 mile      Mapping Precision: NON-SPECIFIC      Section: 30      Qtr: SE  
Elevation: 350 ft      Symbol Type: POINT      Meridian: M

Location: PRAIRIE CITY RD, SOUTH FROM HWY 50 TO WHITE ROCK RD, E TO SCOTT RD, THEN S.  
Location Detail: SMALL AREA DENSE POOLS SEEN IN 1983 AERIAL PHOTOGRAPHS.  
Ecological: UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.  
Threat: ADJ TO ORV PARK W/SUBURBAN DEVELOPMENT THREAT IN 1990.  
General: SITE NEEDS FIELD CHECK.  
Owner/Manager: UNKNOWN

Occurrence No. 29      Map Index: 11854      EO Index: 27493      Dates Last Seen  
Occ Rank: Unknown      Element: 1976-08-XX  
Origin: Natural/Native occurrence      Site: 1976-08-XX  
Presence: Presumed Extant  
Trend: Unknown      Record Last Updated: 1998-07-15

Quad Summary: Folsom (3812162/511B)  
County Summary: Sacramento

Lat/Long: 38.66156° / -121.20884°      Township: 09N  
UTM: Zone-10 N4280742 E655841      Range: 07E  
Radius: 1 mile      Mapping Precision: NON-SPECIFIC      Section: 4      Qtr: XX  
Elevation: 270 ft      Symbol Type: POINT      Meridian: M

Location: PHOENIX FIELD VERNAL POOLS VIC OF AIRPORT. AREA MOSTLY N & E OF AIRPORT.  
Location Detail: POOLS IN FIELDS ON BLUFF TOPS W/EXTENSIVE MIMA MOUND TOPOGRAPHY.  
Ecological: DOWNINGIA, 4 SPP OF BRODIAEA, LASTHENIA, POGOGYNE ZIZYPHOIDES, LILEA SCILLOIDES, RANUNCULUS ALVEOLATUS. UNABLE TO  
CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.  
Threat: FAIR OAKS REC & PARK DESTROYED PART OF ACREAGE.  
General: DFG NOW PROTECTING 8 ACRES.  
Owner/Manager: UNKNOWN

# Northern Hardpan Vernal Pool

Element Code: CTT44110CA

_____ Status _____	NDDB Element Ranks	_____ Other Lists _____
Federal: None	Global: G3	
State: None	State: S3.1	
_____ Habitat Associations _____		
General:		
Micro:		

Occurrence No. 32      Map Index: 11910      EO Index: 16253      Dates Last Seen \_\_\_\_\_  
 Occ Rank: Unknown      Element: 1984-06-XX  
 Origin: Natural/Native occurrence      Site: 1984-06-XX  
 Presence: Presumed Extant  
 Trend: Unknown      Record Last Updated: 1998-07-15

Quad Summary: Buffalo Creek (3812152/511C)  
 County Summary: Sacramento

Lat/Long: 38.54185° / -121.18505°      Township: 08N  
 UTM: Zone-10 N4267498 E658174      Range: 07E  
 Area: 2,415.2 acres      Mapping Precision: SPECIFIC      Section: 14      Qtr: W  
 Elevation: 250 ft      Symbol Type: POLYGON      Meridian: M

Location: ON E & SE SIDE OF GRANT LINE RD. BETW 1 & 6 MI N OF HWY 16 (JACKSON RD).  
 Location Detail: TOPOGRAPHY LEVEL W/POOLS & SEVERAL LARGE VERNAL PONDS IN ANNUAL GRASSLAND W/MANY FLOWER SPP.  
 Ecological: ON UPPER (OLDEST) EDGE OF HIGH TERRACE ON REDDING SOIL SERIES SOILS. DRAINAGE TO W. ORCUTTIA VISCIDA PRESENT. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.  
 Threat: CATTLE GRAZING LIGHT OVER PAST YEARS.  
 General: SITE PARTIALLY ON LANDFILL LOCATION.  
 Owner/Manager: PVT, SAC COUNTY

Occurrence No. 66      Map Index: 11800      EO Index: 16249      Dates Last Seen \_\_\_\_\_  
 Occ Rank: Unknown      Element: 1982-XX-XX  
 Origin: Natural/Native occurrence      Site: 1982-XX-XX  
 Presence: Presumed Extant  
 Trend: Unknown      Record Last Updated: 1998-07-15

Quad Summary: Folsom (3812152/511B)  
 County Summary: Placer

Lat/Long: 38.74267° / -121.23974°      Township: 10N  
 UTM: Zone-10 N4289691 E652980      Range: 07E  
 Area: 150.6 acres      Mapping Precision: SPECIFIC      Section: 08      Qtr: NW  
 Elevation: 230 ft      Symbol Type: POLYGON      Meridian: M

Location: BOTH SIDES DOUGLAS BLVD <1 MILE WEST OF JUNCTION WITH SIERRA COLLEGE BLVD, ROSEVILLE.  
 Ecological: 4 AREAS; 14 ACRES HIGH QUALITY POOLS ON HIGH TERRACE HARDPAN, ZONED AG; 50 AC HIGH QUALITY LOW TERRACE HARDPAN POOLS, ZONED RESID; 22 AC MED QUALITY VOLCANIC MUDFLOW POOLS, ZONED AG; 14 AC LOW QUALITY LOW TERRACE HARDPAN POOLS ZONED RESID.  
 General: RANKINGS AND 1977 ZONING FROM WESCO, 1982. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP.INFO.  
 Owner/Manager: UNKNOWN

Occurrence No. 81      Map Index: 11831      EO Index: 16242      Dates Last Seen \_\_\_\_\_  
 Occ Rank: Unknown      Element: 1983-XX-XX  
 Origin: Natural/Native occurrence      Site: 1983-XX-XX  
 Presence: Presumed Extant  
 Trend: Unknown      Record Last Updated: 1998-07-15

Quad Summary: Buffalo Creek (3812152/511C)  
 County Summary: Sacramento

Lat/Long: 38.56528° / -121.22130°      Township: 08N  
 UTM: Zone-10 N4270037 E654964      Range: 07E  
 Area: 515.9 acres      Mapping Precision: SPECIFIC      Section: 9      Qtr: XX  
 Elevation: 190 ft      Symbol Type: POLYGON      Meridian: M

Location: NORTH OF DOUGLAS ROAD, EAST OF SUNRISE BLVD, WEST OF NIMBUS RD, SE OF RANCHO CORDOVA.  
 Location Detail: AREA OF DENSE VERNAL POOLS SEEN IN 1983 AERIAL PHOTOS.  
 Ecological: ON REDDING-CORNING ASSOCIATION SOILS. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.  
 Owner/Manager: UNKNOWN

# Northern Hardpan Vernal Pool

Element Code: CTT44110CA

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G3	
State: None	State: S3.1	
Habitat Associations		
General:		
Micro:		

Occurrence No. 82      Map Index: 11801      EO Index: 16240      Dates Last Seen  
Occ Rank: Unknown      Element: 1983-XX-XX  
Origin: Natural/Native occurrence      Site: 1983-XX-XX  
Presence: Presumed Extant  
Trend: Unknown      Record Last Updated: 1998-07-15

Quad Summary: Buffalo Creek (3812152/511C)  
County Summary: Sacramento

Lat/Long: 38.53657° / -121.22732°      Township: 08N  
UTM: Zone-10 N4266841 E654501      Range: 07E  
Area: 870.2 acres      Mapping Precision: SPECIFIC      Section: 20      Qtr: XX  
Elevation: 100 ft      Symbol Type: POLYGON      Meridian: M

Location: EAST OF SUNRISE BLVD, N OF KIEFER BLVD, E OF MATHER AIR FORCE BASE.  
Location Detail: DENSE VERNAL POOLS SEEN IN 1983 AERIAL PHOTOS.  
Ecological: ON REDDING-CORNING ASSOCIATION SOILS. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP.INFO.  
Owner/Manager: UNKNOWN

Occurrence No. 83      Map Index: 11793      EO Index: 16241      Dates Last Seen  
Occ Rank: Unknown      Element: 1983-XX-XX  
Origin: Natural/Native occurrence      Site: 1983-XX-XX  
Presence: Presumed Extant  
Trend: Unknown      Record Last Updated: 1998-07-15

Quad Summary: Sloughhouse (3812142/4958), Buffalo Creek (3812152/511C)  
County Summary: Sacramento

Lat/Long: 38.49760° / -121.23287°      Township: 07N  
UTM: Zone-10 N4262506 E654100      Range: 07E  
Area: 515.0 acres      Mapping Precision: SPECIFIC      Section: 05      Qtr: XX  
Elevation: 110 ft      Symbol Type: POLYGON      Meridian: M

Location: N OF GRANT LINE RD JUST EAST OF SUNRISE BLVD, ABOUT 2 MI WEST OF SLOUGHHOUSE.  
Location Detail: TWO AREAS OF DENSE VERNAL POOLS CONNECTED BY AN AREA OF SPARSE POOLS.  
Ecological: N DENSE AREA ON REDDING-CORNING ASSOCIATION SOILS. S DENSE AREA ON SAN JOAQUIN ASSOCIATION SOILS. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.  
Owner/Manager: UNKNOWN

Occurrence No. 85      Map Index: 11849      EO Index: 26874      Dates Last Seen  
Occ Rank: Unknown      Element: 1983-XX-XX  
Origin: Natural/Native occurrence      Site: 1983-XX-XX  
Presence: Presumed Extant  
Trend: Unknown      Record Last Updated: 1998-07-15

Quad Summary: Buffalo Creek (3812152/511C)  
County Summary: Sacramento

Lat/Long: 38.53490° / -121.20800°      Township: 08N  
UTM: Zone-10 N4266688 E656188      Range: 07E  
Radius: 1 mile      Mapping Precision: NON-SPECIFIC      Section: 21      Qtr: XX  
Elevation: 160 ft      Symbol Type: POINT      Meridian: M

Location: N OF BLODGETT RESERVOIR, EAST OF MATHER AIR FORCE BASE.  
Location Detail: PATCHY SPARSE DISTRIBUTION OF VERNAL POOLS IN PORTIONS OF SECTIONS 8,10,15,16,17,21,22,29.  
Ecological: ON REDDING-CORNING AND SAN JOAQUIN ASSOCIATION SOILS. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.  
Owner/Manager: UNKNOWN

**Northern Hardpan Vernal Pool**

Element Code: CTT44110CA

_____ Status _____	NDDB Element Ranks	_____ Other Lists _____
Federal: None	Global: G3	
State: None	State: S3,1	
_____ Habitat Associations _____		
General:		
Micro:		

Occurrence No. 133. Map Index: 20270 EO Index: 30661 Dates Last Seen \_\_\_\_\_  
Occ Rank: Unknown Element: 1988-04-18  
Origin: Natural/Native occurrence Site: 1988-04-18  
Presence: Presumed Extant  
Trend: Unknown Record Last Updated: 1988-07-15

Quad Summary: Buffalo Creek (3812152/511C)  
County Summary: Sacramento

Lat/Long: 38.61434° / -121.16239° Township: 09N  
UTM: Zone-10 N4275582 E659988 Range: 07E  
Area: 375.6 acres Mapping Precision: SPECIFIC Section: 24 Qtr: SE  
Elevation: 280 ft Symbol Type: POLYGON Meridian: M

Location: EXTENDING 1/2 MILE NORTH OF THE INTERSECTION OF WHITE ROCK AND PRAIRIE CITY ROADS AND WSW ABOUT 1 MILE.  
Location Detail: NUMEROUS VERNAL POOLS SCATTERED OVER THE AEROJET SACRAMENTO PROPERTY.  
Ecological: SPECIES PRESENT INCLUDED GRATIOLA HETEROSEPALA, DOWNINGIA BICORNUTA, ELEOCHARIS PALUSTRIS, ERYNGIUM VASEYI VAR. VALLICOLA, GRATIOLA EBRACTEATA, LASTHENIA GLABERRIMUS, PLAGIOBOTHRYIS STIPITATUS VAR. MICRANTHUS, PSILOCARPUS BREVISSIMUS.  
Threat: POSSIBLE SITE OF CLAY EXTRACTION BY AEROJET.  
General: MORE INFO IN WYM88R03. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.  
Owner/Manager: PVT-GENCORP AEROJET



**Northern Volcanic Mud Flow Vernal Pool**

Element Code: CTT44132CA

Status

Federal: None

State: None

NDDB Element Ranks

Global: G1

State: S1.1

Other Lists

Habitat Associations

General:

Micro:

Occurrence No. 1

Map Index: 11782

EO Index: 16218

Dates Last Seen

Occ Rank: Unknown

Origin: Natural/Native occurrence

Presence: Presumed Extant

Trend: Unknown

Element: 1982-XX-XX

Site: 1982-XX-XX

Record Last Updated: 1998-07-16

Quad Summary: Citrus Heights (3812163/512A), Roseville (3812173/528D), Folsom (3812162/511B), Rocklin (3812172/527C)

County Summary: Placer

Lat/Long: 38.75189° / -121.25431°

UTM: Zone-10 N4290690 E651693

Area: 432.3 acres

Elevation: 240 ft

Township: 10N

Range: 07E

Section: 06

Qtr: XX

Mapping Precision: SPECIFIC

Symbol Type: POLYGON

Meridian: M

Location: BETWEEN DOUGLAS BLVD & MINERS RAVINE JUST EAST OF ROSEVILLE.

Ecological: DIVERSITY OF POOL TAXA PRESENT INCLUDES DICHELOSTEMMA LACUNA-VERNALIS. MOST OF THIS LARGE AREA IS ON VOLCANIC SUBSTRATE. <50 ACRES IN THE NW PORTION OF THE BOUNDED AREA IS LOW TERRACE FORMATION W/HARDPAN VERNAL POOLS.

General: UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO

Owner/Manager: UNKNOWN

***Orcuttia tenuis***

slender orcutt grass

Element Code: PMPOA4G050

Status	NDDB Element Ranks	Other Lists
Federal: Threatened	Global: G3	CNPS List: 18.1
State: Endangered	State: S3.1	

Habitat Associations

General: VERNAL POOLS.

Micro: 30-1735M.

Occurrence No. 71	Map Index: 34526	EO Index: 272	Dates Last Seen
Occ Rank: Good			Element: 1993-05-20
Origin: Natural/Native occurrence			Site: 1993-05-20
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2005-10-13

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.55422° / -121.22933°	Township: 08N
UTM: Zone-10 N4268795 E654288	Range: 07E
Radius: 80 meters	Section: 17
Elevation: 175 ft	Meridian: M
	Qtr: NE

Location: EAST OF MATHER AIR FORCE BASE; 0.85 MILE SE OF THE INTERSECTION OF SUNRISE BLVD AND DOUGLAS ROAD.

Location Detail: ON THE BORDER OF THE SECTION LINE BETWEEN SECTIONS 8 AND 17.

Ecological: ASSOCIATED WITH ELEOCHARIS MACROSTACHYA, ERYNGIUM VASEYI, AND NAVARRETIA LEUCOCEPHALA.

General: 500 PLANTS ESTIMATED IN 1993.

Owner/Manager: PVT

***Orcuttia viscida***

Sacramento orcutt grass

Element Code: PMPOA4G070

Status

NDDB Element Ranks

Other Lists

Federal: Endangered

Global: G1

CNPS List: 18.1

State: Endangered

State: S1.1

Habitat Associations

General: VERNAL POOLS.

Micro: 30-100M.

Occurrence No. 1

Map Index: 40832

EO Index: 40832

Dates Last Seen

Occ Rank: Good

Element: 1998-07-28

Origin: Natural/Native occurrence

Site: 1998-07-28

Presence: Presumed Extant

Record Last Updated: 2005-10-28

Trend: Unknown

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.53149° / -121.18853°

Township: 08N

UTM: Zone-10 N4266343 E657893

Range: 07E

Area: 5.1 acres

Mapping Precision: SPECIFIC

Section: 22

Qtr: SE

Elevation: 220 ft

Symbol Type: POLYGON

Meridian: M

Location: GRANT LINE ROAD ABOUT 2.9 MILES NORTH OF JACKSON HIGHWAY (HWY 16), NORTH OF SLOUGHHOUSE.

Location Detail: MAPPED IN LARGE POOL ALONG EAST SIDE OF ROAD, ABOUT 1 MILE NORTHEAST OF KIEFER ROAD AND JUST SW OF BEND IN GRANTLINE ROAD.

Ecological: DEEP VERNAL POOL WITH ISOETES HOWELLII, ERYNGIUM VASEYI, PSILOCARPHUS BREVISSIMUS, LILAEA SCILLOIDES, PLAGIOBOTHRYIS STIPITATUS MICRANTHUS, AND ELEOCHARIS MACROSTACHYA.

Threat: GRAZING (THREAT?), COMPETITION WITH ELEOCHARIS MACROSTACHYA AND EXOTIC GLYCERIA DECLINATA.

General: TYPE LOCALITY. ABUNDANT IN 1986 AND 1987, ABOUT 400,000 IN 1995, AND 138,000 IN 1998. NUMEROUS COLLECTIONS MADE BY B. CRAMPTON AT THIS SITE. THIS SITE FORMERLY INCLUDED WITH NEARBY OCCURRENCE #6.

Owner/Manager: SAC COUNTY, PVT

Occurrence No. 4

Map Index: 11886

EO Index: 22369

Dates Last Seen

Occ Rank: None

Element: 1958-07-07

Origin: Natural/Native occurrence

Site: 1996-06-16

Presence: Extirpated

Record Last Updated: 1994-11-16

Trend: Unknown

Quad Summary: Folsom (3812162/511B)

County Summary: Sacramento

Lat/Long: 38.67823° / -121.19608°

Township: 10N

UTM: Zone-10 N4282614 E656917

Range: 07E

Radius: 1/5 mile

Mapping Precision: NON-SPECIFIC

Section: 34

Qtr: XX

Elevation: 240 ft

Symbol Type: POINT

Meridian: M

Location: 0.4 MI E OF JCT MAIN AVE & GREENBACK LN, ABOUT 2 MI E OF ORANGEVALE, 2.1 MI NW OF FOLSOM.

Ecological: NEARLY BARREN AREA IN THE MIDDLE OF LARGE VERNAL POOL WITH ERYNGIUM. OPEN ROLLING PLAINS WITH BLUE OAKS.

Threat: AREA NOW DEVELOPED FOR HOUSING, SHOPPING CENTER, & PARKING LOTS.

Owner/Manager: PVT

Occurrence No. 5

Map Index: 11841

EO Index: 18718

Dates Last Seen

Occ Rank: Good

Element: 1997-07-14

Origin: Natural/Native occurrence

Site: 1997-07-14

Presence: Presumed Extant

Record Last Updated: 2005-10-28

Trend: Unknown

Quad Summary: Folsom (3812162/511B)

County Summary: Sacramento

Lat/Long: 38.65538° / -121.21511°

Township: 09N

UTM: Zone-10 N4280046 E655309

Range: 07E

Area: 7.1 acres

Mapping Precision: SPECIFIC

Section: 9

Qtr: XX

Elevation: 270 ft

Symbol Type: POLYGON

Meridian: M

Location: NORTH OF SUNSET BLVD, JUST EAST OF PHOENIX FIELD AIRPORT, "PHOENIX VERNAL POOLS", FAIR OAKS.

Ecological: IN SILICA-IRON HARDPAN IN VERNAL POOLS IN BLUE OAK WOODLAND. WITH ERYNGIUM VASEYI, EREMOCARPUS SETIGERUS, ALLOCARYA STIPITATA, PSILOCARPHUS BREVISSIMUS. NAVARRETIA MYERSII, ANOTHER RARE PLANT, ALSO AT THIS SITE.

Threat: PROPERTY INVADDED BY EXOTIC PLANTS, ESPECIALLY FROM ADJACENT YARDS.

General: POOL ACQUIRED & FENCED BY CDFG AS ECOLOGICAL RESERVE. MONITORED ANNUALLY. OVER 200,000 PLANTS IN 1986, AN EXCEPTIONALLY GOOD YEAR. OVER 100,000 IN 1994-1996, 9500 IN 1997. INCLUDES FORMER OCC #2.

Owner/Manager: DFG-PHOENIX FIELD ER

***Orcuttia viscida***

Sacramento orcutt grass

Element Code: PMPOA4G070

Status  
Federal: Endangered  
State: Endangered

NDDB Element Ranks  
Global: G1  
State: S1.1

Other Lists  
CNPS List: 1B.1

Habitat Associations  
General: VERNAL POOLS.  
Micro: 30-100M.

Occurrence No. 6      Map Index: 11881      EO Index: 14411      Dates Last Seen  
Occ Rank: Excellent      Element: 1998-07-27  
Origin: Natural/Native occurrence      Site: 1998-07-27  
Presence: Presumed Extant  
Trend: Unknown      Record Last Updated: 2005-10-27

Quad Summary: Buffalo Creek (3812152/511C)  
County Summary: Sacramento

Lat/Long: 38.52317° / -121.19421°      Township: 08N  
UTM: Zone-10 N4265410 E857416      Range: 07E  
Area: 40.2 acres      Mapping Precision: SPECIFIC      Section: 27      Qtr: SE  
Elevation: 220 ft      Symbol Type: POLYGON      Meridian: M

Location: NEAR KIEFER LANDFILL, EAST SIDE OF GRANT LINE RD, NORTH AND SOUTH OF KIEFER BLVD, SOUTHEAST OF RANCHO CORDOVA.  
Location Detail: SEEN IN SEVERAL POOLS N OF KIEFER BLVD; SEARCHED FOR BUT NOT FOUND S OF KIEFER FOR SEVERAL YRS; MAY BE EXTIRPATED FROM THERE DUE TO AGRICULTURE AND USE AS PERMANENT LIVESTOCK PONDS. TADPOLE SHRIMP FOUND IN POOLS WITH *O. VISCIDA* IN 1995.  
Ecological: VERNAL POOL SURROUNDED BY ANNUAL GRASSLAND. REDDING GRAVELLY LOAM SOIL. ASSOCIATED WITH *ELEOCHARIS MACROSTACHYA*, *ERYNGIUM VASEYI*, *ALLOCARYA STIPITATA*, *PSILOCARPHUS BREVISSIMUS*, *LILAEA SCILLOIDES*, *MARSILEA VESTITA*, & *DOWNINGIA BICORNUTA*.  
Threat: LANDFILL EXPANSION MAY DESTROY SOME POOLS.  
General: 1000'S OF PLANTS IN 1990, 1,000,000+ IN 1995, 129,000+ IN 1998. INCLUDES FORMER OCC #S 3,7,9,10,12, AND 14. MAPPED AS PER JONES & STOKES REPORT, 1990.  
Owner/Manager: SAC COUNTY, PVT

Occurrence No. 15      Map Index: 11839      EO Index: 30943      Dates Last Seen  
Occ Rank: Good      Element: 1997-06-16  
Origin: Introduced Back into Native Hab./Range      Site: 1997-06-16  
Presence: Presumed Extant  
Trend: Unknown      Record Last Updated: 1999-02-16

Quad Summary: Folsom (3812162/511B)  
County Summary: Sacramento

Lat/Long: 38.65159° / -121.21905°      Township: 09N  
UTM: Zone-10 N4279619 E854974      Range: 07E  
Radius: 60 meters      Mapping Precision: SPECIFIC      Section: 9      Qtr: XX  
Elevation: 270 ft      Symbol Type: POINT      Meridian: M

Location: PHOENIX PARK, SOUTH OF SUNSET AVE, 0.5 MILE EAST OF HAZEL AVE, FAIR OAKS.  
Ecological: ON REDDING SERIES SOILS. ASSOCIATES INCLUDE *ELEOCHARIS MACROSTACHYA*, *PLAGIOBOTHRYIS STIPITATA*, *DOWNINGIA BICORNUTA*, *TRICHOSTEMA LANCEOLATUM*, *PSILOCARPHUS BREVISSIMUS*, *ERYNGIUM VASEYI*, *LILAEA SCILLOIDES*, AND *BRODIAEA MINOR*.  
Threat: SUMMER RUNOFF FROM ADJACENT BALL PARK ENTERS W LOBE OF POOL. ALSO THREATENED BY RECREATIONAL USE.  
General: THIS OCCURRENCE ESTABLISHED FROM SEED COLLECTED FROM NEARBY NATIVE OCCURRENCE #5 BY T. GRIGGS IN 1978. 1000+ PLANTS IN 1985, 10,000+ IN 1986, 1000+ IN 1991, ABOUT 100,000 IN 1995, 35 IN 1996, 1000 IN 1997.  
Owner/Manager: CITY OF FAIR OAKS-PARKS & REC

***Orcuttia viscida***

Sacramento orcutti grass

Element Code: PMPOA4G070

Status  
Federal: Endangered  
State: Endangered

NDDB Element Ranks  
Global: G1  
State: S1.1

Other Lists  
CNPS List: 18.1

Habitat Associations  
General: VERNAL POOLS.  
Micro: 30-100M.

Occurrence No. 17      Map Index: 11785      EO Index: 21912      Dates Last Seen  
Occ Rank: Good      Element: 1995-07-12  
Origin: Natural/Native occurrence      Site: 1995-07-12  
Presence: Presumed Extant  
Trend: Unknown      Record Last Updated: 1997-03-26

Quad Summary: Buffalo Creek (3812152/511C)  
County Summary: Sacramento

Lat/Long: 38.52887° / -121.24205°      Township: 08N  
UTM: Zone-10 N4265961 E653233      Range: 07E  
Radius: 80 meters      Mapping Precision: SPECIFIC      Section: 20      Qtr: SW  
Elevation: 150 ft      Symbol Type: POINT      Meridian: M

Location: EAST SIDE OF SUNRISE BLVD, APPROX. 0.2 MI NORTH OF ITS INTERSECTION WITH KIEFER BLVD.  
Location Detail: SITE OF PROPOSED INDUSTRIAL PARK DEVELOPMENT; POPULATION TO BE WITHIN PRESERVE/MITIGATION AREA.  
Ecological: Y-SHAPED VERNAL POOL SURROUNDED BY ANNUAL GRASSLAND. W/ERYNGIUM VASEYI, ELEOCHARIS MACROSTACHYA, ALLOCARYA STIPITATA, PSILOCARPHUS, GRATIOLA EBRACTEATA AND NAVARRETIA LEUCOCEPHALA.  
Threat: MODERATE-INTENSIVE GRAZING. THE INVASIVE GLYCERIA DECLINATA AND WIDENING OF SUNRISE BLVD MAY ALSO THREATEN.  
General: GREATER THAN 10,000 PLANTS IN 1987 IN 1995. ANNUAL DURATION OF INUNDATION HAS BEEN ARTIFICIALLY INCREASED BY ELEVATED GRADE OF SUNRISE BLVD.  
Owner/Manager: PVT

Occurrence No. 18      Map Index: 11806      EO Index: 22363      Dates Last Seen  
Occ Rank: Fair      Element: 1987-10-19  
Origin: Natural/Native occurrence      Site: 1987-10-19  
Presence: Presumed Extant  
Trend: Unknown      Record Last Updated: 1994-12-01

Quad Summary: Buffalo Creek (3812152/511C)  
County Summary: Sacramento

Lat/Long: 38.53452° / -121.22970°      Township: 08N  
UTM: Zone-10 N4266809 E654298      Range: 07E  
Radius: 80 meters      Mapping Precision: SPECIFIC      Section: 20      Qtr: NE  
Elevation: 165 ft      Symbol Type: POINT      Meridian: M

Location: APPROX. 0.9 MILE NORTHEAST OF INTERSECTION OF KIEFER BLVD & SUNRISE BLVD, BENEATH TRANSMISSION LINES.  
Ecological: VERNAL POOL SURROUNDED BY ANNUAL GRASSLAND. WITH ELEOCHARIS MACROSTACHYA, ERYNGIUM VASEYI, PSILOCARPHUS BREVISSIMUS, ALLOCARYA STIPITATA, NAVARRETIA LEUCOCEPHALA, DOWNINGIA BICORNUTA, ETC.  
Threat: GRAZING, COMPETITION FROM ELEOCHARIS, & ACTIVITIES ASSOCIATED WITH TRANSMISSION LINE MAINTENANCE & DEVELOPMENT THREATEN.  
General: 1000 PLANTS ESTIMATED IN 1987.  
Owner/Manager: PVT

Occurrence No. 19      Map Index: 26036      EO Index: 5231      Dates Last Seen  
Occ Rank: Good      Element: 1995-08-17  
Origin: Natural/Native occurrence      Site: 1995-08-17  
Presence: Presumed Extant  
Trend: Unknown      Record Last Updated: 2005-10-27

Quad Summary: Buffalo Creek (3812152/511C)  
County Summary: Sacramento

Lat/Long: 38.55291° / -121.17401°      Township: 08N  
UTM: Zone-10 N4268745 E659111      Range: 07E  
Area: 5.7 acres      Mapping Precision: SPECIFIC      Section: 14      Qtr: NE  
Elevation: 250 ft      Symbol Type: POLYGON      Meridian: M

Location: ENE OF MATHER AFB. 4 POOLS; 75-500 YARDS SOUTH OF GLORY LANE, 0.75-0.9 MI EAST OF GRANT LINE RD.  
Ecological: POOLS WITHIN GRASSLAND IN RED BLUFF/REDDING SOILS. WITH ERYNGIUM VASEYI, NAVARRETIA LEUCOCEPHALA, DOWNINGIA BICORNUTA.  
Threat: POOLS MODERATELY TRAMPLED BY CATTLE. POSSIBLY WITHIN SACRAMENTO COUNTY'S URBAN LIMIT.  
General: HUNDREDS OF PLANTS IN 1994, 1.2 MILLION ESTIMATED IN 1995.  
Owner/Manager: PVT

**Packera layneae**

Layne's ragwort

Status	NDDB Element Ranks	Element Code: PDAST8H1V0	Other Lists
Federal: Threatened	Global: G2		
State: Rare	State: S2.1	CNPS List: 1B.2	

Habitat Associations

General: CHAPARRAL, CISMONTANE WOODLAND.

Micro: ULTRAMAFIC SOIL: OCCASIONALLY ALONG STREAMS. 200-1000M.

Occurrence No. 16	Map Index: 12131	EO Index: 16865	Dates Last Seen
Occ Rank: Unknown			Element: 1939-05-07
Origin: Natural/Native occurrence			Site: 1939-05-07
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2001-02-20

Quad Summary: Clarksville (3812161/511A), Pilot Hill (3812171/527D)

County Summary: El Dorado

Lat/Long: 38.73776° / -121.03978°	Township: 10N
UTM: Zone-10 N4289500 E670371	Range: 09E
Radius: 1 mile	Section: 07
Elevation: 880 ft	Meridian: M
Mapping Precision: NON-SPECIFIC	Qtr: SW
Symbol Type: POINT	

Location: ABOVE SANDBAR IN FORKS OF SWEETWATER CREEK, 2 MILES ABOVE ITS MOUTH, SIERRA FOOTHILLS.

Location Detail: EXACT LOCATION UNKNOWN; COLLECTED PRIOR TO CONSTRUCTION OF FOLSOM DAM (1955), MAPPED AS BEST GUESS BY CNDD8 2 MILES ABOVE ORIGINAL CONFLUENCE OF SWEETWATER CREEK WITH SOUTH FORK AMERICAN RIVER.

Ecological: IN DARK CLAY BANKS IN PINUS SABINIANA, QUERCUS DOUGLASII BELT.

General: TYPE LOCALITY.

Owner/Manager: UNKNOWN

Occurrence No. 18	Map Index: 12197	EO Index: 7632	Dates Last Seen
Occ Rank: Unknown			Element: 1986-XX-XX
Origin: Natural/Native occurrence			Site: 1986-XX-XX
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1993-05-17

Quad Summary: Clarksville (3812161/511A)

County Summary: El Dorado

Lat/Long: 38.69516° / -121.00769°	Township: 10N
UTM: Zone-10 N4284832 E673263	Range: 09E
Radius: 80 meters	Section: 29
Elevation: 1,340 ft	Meridian: M
Mapping Precision: SPECIFIC	Qtr: NE
Symbol Type: POINT	

Location: ON BASS LAKE ROAD, WEST OF DEER CREEK, JUST EAST OF ROAD TO BASS LAKE.

Ecological: ON RESCUE HEAVILY ERODED SOIL ASSOCIATED WITH ARCTOSTAPHYLOS PATULA, TOYON, AND SALVIA SONOMENSIS.

Threat: ROAD MAINTENANCE IS A THREAT.

General: POPULATION BURNED IN FALL OF 1982 AND RETURNED UNHARMED.

Owner/Manager: UNKNOWN

Occurrence No. 19	Map Index: 12198	EO Index: 22483	Dates Last Seen
Occ Rank: Unknown			Element: 1986-XX-XX
Origin: Natural/Native occurrence			Site: 1986-XX-XX
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1993-05-17

Quad Summary: Clarksville (3812161/511A)

County Summary: El Dorado

Lat/Long: 38.68228° / -121.00643°	Township: 10N
UTM: Zone-10 N4283406 E673403	Range: 09E
Radius: 80 meters	Section: 32
Elevation: 1,360 ft	Meridian: M
Mapping Precision: SPECIFIC	Qtr: NE
Symbol Type: POINT	

Location: EAST OF BASS LAKE, ON WOODLEIGH COURT.

Ecological: ON RESCUE HEAVILY ERODED SOIL ASSOCIATED WITH ARCTOSTAPHYLOS PATULA, TOYON, AND SALVIA SONOMENSIS. SOME INDIVIDUALS UNDER MATURE CHAPARRAL NEAR ROAD.

Threat: ROAD MAINTENANCE IS A THREAT.

General: PLANT NUMBERS INCREASING IN ERODED AREAS (TYLER, 1985).

Owner/Manager: UNKNOWN

***Packera layneae***

Layne's ragwort

Element Code: PDAST8H1V0

----- Status -----	NDDB Element Ranks	----- Other Lists -----
Federal: Threatened	Global: G2	CNPS List: 18.2
State: Rare	State: S2.1	

----- Habitat Associations -----

General: CHAPARRAL, CISMONTANE WOODLAND.

Micro: ULTRAMAFIC SOIL: OCCASIONALLY ALONG STREAMS. 200-1000M.

Occurrence No. 20	Map Index: 12194	EO Index: 22487	----- Dates Last Seen -----
Occ Rank: Unknown			Element: 1986-XX-XX
Origin: Natural/Native occurrence			Site: 1986-XX-XX
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1993-05-17

Quad Summary: Clarksville (3812161/511A)

County Summary: El Dorado

Lat/Long: 38.68826° / -121.00719°	Township: 10N
UTM: Zone-10 N4284068 E673323	Range: 09E
Radius: 80 meters	Section: 29
Elevation: 1,340 ft	Meridian: M
Mapping Precision: SPECIFIC	Qtr: SE
Symbol Type: POINT	

Location: ON BASS LK RD, APPROX 1 MI NE OF BASS LK.

Location Detail: EAST SIDE OF ROAD.

Ecological: ON RESCUE HEAVILY ERODED SOIL, GRANITIC SUBSTRATE. ASSOCIATED WITH ARCTOSTAPHYLOS PATULA, TOYON, AND SALVIA SONOMENSIS.

Threat: ROAD MAINTENANCE A THREAT.

Owner/Manager: PVT

Occurrence No. 21	Map Index: 12210	EO Index: 22481	----- Dates Last Seen -----
Occ Rank: Unknown			Element: 1986-03-18
Origin: Natural/Native occurrence			Site: 1986-XX-XX
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1993-05-17

Quad Summary: Clarksville (3812161/511A)

County Summary: El Dorado

Lat/Long: 38.67693° / -121.00201°	Township: 10N
UTM: Zone-10 N4282820 E673801	Range: 09E
Radius: 80 meters	Section: 33
Elevation: 1,420 ft	Meridian: M
Mapping Precision: SPECIFIC	Qtr: SE
Symbol Type: POINT	

Location: 1 AIRMILE DUE E OF BASS LAKE.

Ecological: ON RESCUE HEAVILY ERODED SOIL WITH ARCTOSTAPHYLOS PATULA, TOYON, AND SALVIA SONOMENSIS.

Threat: SUBDIVISION ROAD WIDENING A THREAT.

General: POPULATION REPORTED TO BE EXTIRPATED BY TYLER IN 1982 DUE TO ROAD WIDENING. APPARENTLY REDISCOVERED BY WILSON IN 1986.

Owner/Manager: UNKNOWN

Occurrence No. 22	Map Index: 12211	EO Index: 22484	----- Dates Last Seen -----
Occ Rank: Unknown			Element: 1986-XX-XX
Origin: Natural/Native occurrence			Site: 1986-XX-XX
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1993-05-17

Quad Summary: Clarksville (3812161/511A)

County Summary: El Dorado

Lat/Long: 38.68586° / -121.00331°	Township: 10N
UTM: Zone-10 N4283809 E673666	Range: 09E
Radius: 80 meters	Section: 28
Elevation: 1,330 ft	Meridian: M
Mapping Precision: SPECIFIC	Qtr: SW
Symbol Type: POINT	

Location: SW OF DEER CR, 1 AIRMI ENE OF BASS LK.

Location Detail: AT CORNER OF SECTIONS 28, 29, 32, AND 33.

Threat: ROAD IMPROVEMENT A THREAT.

General: POPULATION REPORTED DESTROYED BY TAYLOR DUE TO ROAD CONSTRUCTION IN 1982. APPARENTLY REDISCOVERED IN 1986 BY WILSON.

Owner/Manager: UNKNOWN

***Packera layneae***

Layne's ragwort

Status

Federal: Threatened

State: Rare

NDDB Element Ranks

Global: G2

State: S2.1

Element Code: PDAST8H1V0

Other Lists

CNPS List: 1B.2

Habitat Associations

General: CHAPARRAL, CISMONTANE WOODLAND.

Micro: ULTRAMAFIC SOIL; OCCASIONALLY ALONG STREAMS. 200-1000M.

Occurrence No. 38

Map Index: 22131

EO Index: 8138

Dates Last Seen

Occ Rank: Fair

Origin: Natural/Native occurrence

Presence: Presumed Extant

Trend: Unknown

Element: 1986-XX-XX

Site: 1986-XX-XX

Record Last Updated: 2001-02-20

Quad Summary: Clarksville (3812161/511A)

County Summary: El Dorado

Lat/Long: 38.71774° / -121.02696°

UTM: Zone-10 N4287302 E671533

Area: 43.8 acres

Elevation: 1,180 ft

Township: 10N

Range: 09E

Section: 18

Meridian: M

Mapping Precision: SPECIFIC

Symbol Type: POLYGON

Qtr: SE

Location: MARTEL CREEK DRAINAGE, MOSTLY ON HILL (EL. 1381) SOUTH OF MARTEL CREEK, 2.5 MI NORTH OF BASS LAKE, NNE OF CLARKSVILLE.

Location Detail: SEVERAL COLONIES SCATTERED NORTH AND SOUTH (MOSTLY SOUTH) OF MARTEL CREEK FROM ABOUT 0.8 TO 1.5 MILES UPSTREAM FROM CONFLUENCE WITH SWEETWATER CREEK, MOSTLY WITHIN THE SE 1/4 OF SECTION 18.

Ecological: ASSOCIATES INCLUDE SALVIA SONOMENSIS, WYETHIA RETICULATA, W. BOLANDER, STYRAX OFFICINALIS, POLYGALA CORNUTA, CEONOTHUS LEMMONII, SWERTIA ALBICAULIS, AND NAVARRETIA FILICAULIS.

Threat: MINING IS A POTENTIAL THREAT FOR SITES ON PUBLIC LAND; SOME ROADS AND MINING SCARS, BUT MUCH OF THE AREA IS NOT IMPACTED.

General: SEVERAL OTHER SENSITIVE PLANT SPECIES ARE ALSO FOUND IN THIS AREA INCLUDING WYETHIA RETICULATA, CHLOROGALUM GRANDIFLORUM, AND GALIUM CALIFORNICUM SSP. SIERRAE.

Owner/Manager: BLM, PVT



***Phalacrocorax auritus***

double-crested cormorant

Element Code: ABNFD01020

----- Status -----	NDDB Element Ranks	----- Other Lists -----
Federal: None	Global: G5	CDFG Status: SC
State: None	State: S3	

----- Habitat Associations -----

General: COLONIAL NESTER ON COASTAL CLIFFS, OFFSHORE ISLANDS, & ALONG LAKE MARGINS IN THE INTERIOR OF THE STATE.

Micro: NESTS ALONG COAST ON SEQUESTERED ISLETS, USUALLY ON GROUND WITH SLOPING SURFACE, OR IN TALL TREES ALONG LAKE MARGINS.

Occurrence No. 37	Map Index: 17123	EQ Index: 60310	----- Dates Last Seen -----
Occ Rank: Good			Element: 2005-02-25
Origin: Natural/Native occurrence			Site: 2005-02-25
Presence: Presumed Extant			
Trend: Stable			Record Last Updated: 2005-02-28

Quad Summary: Folsom (3812162/511B)

County Summary: Sacramento

Lat/Long: 38.64689° / -121.19683°	Township: 09N
UTM: Zone-10 N4279135 E656918	Range: 07E
Area: 19.3 acres	Section: 10 Qtr: XX
Elevation: 150 ft	Meridian: M
Mapping Precision: SPECIFIC	
Symbol Type: POLYGON	

Location: MISSISSIPPI BAR, ON THE WEST SIDE OF LAKE NATOMA, ACROSS FROM THE WILLOW CREEK ACCESS, FOLSOM LAKE STATE RECREATION AREA

Ecological: NESTING SUBSTRATE CONSISTS OF GRAY PINES (AKA FOOTHILL PINES). GREAT BLUE HERONS AND GREAT EGRETS ALSO NEST AT THIS ROOKERY SITE.

Threat: POSSIBLE THREAT FROM BOATERS. AREA IS SIGNED WARNING BOATERS NOT TO DISTURB THE NESTING BIRDS.

General: 3+ PAIRS OCCUPYING NESTS AND PERFORMING COURTSHIP DISPLAYS ON 25 FEB 2005. THIS HAS BEEN AN ACTIVE ROOKERY FOR 25+ YEARS.

Owner/Manager: DPR-FOLSOM LAKE SRA

***Pseudobahia bahiifolia***

Hartweg's golden sunburst

Element Code: PDAST7P010

<p>----- Status -----</p> <p>Federal: Endangered</p> <p>State: Endangered</p>	<p>NDDB Element Ranks</p> <p>Global: G2</p> <p>State: S2.1</p>	<p>Other Lists</p> <p>CNPS List: 1B.1</p>
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----- Habitat Associations -----

General: VALLEY AND FOOTHILL GRASSLAND, CISMONTANE WOODLAND.

Micro: CLAY SOILS, PREDOMINANTLY ON THE NORTHERN SLOPES OF KNOLLS, BUT ALSO ALONG SHADY CREEKS OR NEAR VERNAL POOLS. 15-150M.

Occurrence No. 36	Map Index: 66937	EO Index: 67087	----- Dates Last Seen -----
Occ Rank: Unknown			Element: 1939-05-07
Origin: Natural/Native occurrence			Site: 1939-05-07
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2006-11-03

Quad Summary: Clarksville (3812161/511A)

County Summary: El Dorado

Lat/Long: 38.73635° / -121.03962°	Township: 10N
UTM: Zone-10 N4289344 E670387	Range: 09E
Radius: 2/5 mile	Section: 07
Elevation:	Meridian: M
	Qtr: XX

Mapping Precision: NON-SPECIFIC  
Symbol Type: POINT

Location: FORKS OF SWEETWATER CREEK, 2 MILES ABOVE MOUTH.

Location Detail: MAPPED AS BEST GUESS BY CNDDDB 2 MILES SE OF WHERE THE MOUTH OF THE CREEK PROBABLY EXISTED IN 1939.

General: 1939 COLLECTION BY CONSTANCE IS THE ONLY SOURCE FOR THIS OCCURRENCE. NEEDS FIELDWORK.

Owner/Manager: UNKNOWN

***Rana aurora draytonii***

California red-legged frog

Element Code: AAABH01022

----- Status -----	NDDB Element Ranks	----- Other Lists -----
Federal: Threatened	Global: G4T2T3	CDFG Status: SC
State: None	State: S2S3	

----- Habitat Associations -----

General: LOWLANDS & FOOTHILLS IN OR NEAR PERMANENT SOURCES OF DEEP WATER WITH DENSE, SHRUBBY OR EMERGENT RIPARIAN VEGETATION.  
Micro: REQUIRES 11-20 WEEKS OF PERMANENT WATER FOR LARVAL DEVELOPMENT. MUST HAVE ACCESS TO ESTIVATION HABITAT.

Occurrence No. 814	Map Index: 61448	EO Index: 61484	----- Dates Last Seen -----
Occ Rank: Fair			Element: 2005-05-12
Origin: Natural/Native occurrence			Site: 2005-05-12
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2005-05-31

Quad Summary: Clarksville (3812161/511A)  
County Summary: El Dorado

Lat/Long: 38.73547° / -121.08304°	Township: 10N
UTM: Zone-10 N4289167 E666615	Range: 08E
Radius: 80 meters	Section: 10
Elevation: 485 ft	Meridian: M
Mapping Precision: SPECIFIC	Qtr: SE
Symbol Type: POINT	

Location: DRAINAGE/WATERCOURSE AT THE END OF FITCH WAY, EAST SIDE OF FOLSOM LAKE, SW OF IRON MOUNTAIN  
Location Detail: THIS DRAINAGE EMANATES FROM A PVC PIPE AT THE END OF FITCH WAY; FROG OBSERVED ON A SMALL FOOTBRIDGE CROSSING THE WATERCOURSE.  
Ecological: HABITAT CONSISTS OF A SMALL WATERCOURSE THAT DRAINS INTO FOLSOM LAKE; VEGETATED BY SEDGES AND HIMALAYAN BLACKBERRY.  
General: 1 JUVENILE FROG OBSERVED ON 12 MAY 2005.  
Owner/Manager: DPR-FOLSOM LAKE SRA, BOR

***Spea (=Scaphiopus) hammondi***

western spadefoot

Element Code: AAABF01030

Status		NDDB Element Ranks	Other Lists	
Federal: None		Global: G3	CDFG Status: SC	
State: None		State: S3		

Habitat Associations

General: OCCURS PRIMARILY IN GRASSLAND HABITATS, BUT CAN BE FOUND IN VALLEY-FOOTHILL HARDWOOD WOODLANDS.  
Micro: VERNAL POOLS ARE ESSENTIAL FOR BREEDING AND EGG-LAYING.

Occurrence No. 55	Map Index: 32324	EO Index: 2650	Dates Last Seen
Occ Rank: Unknown			Element: 1978-03-05
Origin: Introduced Back into Native Hab./Range			Site: 1978-03-05
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1995-07-20

Quad Summary: Folsom (3812162/511B)  
County Summary: Sacramento

Lat/Long: 38.65123° / -121.21958°	Township: 09N
UTM: Zone-10 N4279578 E654929	Range: 07E
Area:	Mapping Precision: NON-SPECIFIC
Elevation: 260 ft	Section: 9 Qtr: XX
	Meridian: M

Location: PHOENIX PARK, PHOENIX FIELD, FAIR OAKS; APPROX. 0.5 KM ESE OF THE INTERSECTION BETWEEN SUNSET AVENUE AND HAZEL AVENUE.

Ecological: PHOENIX FIELD VERNAL POOLS.

General: CAPTURED & RELEASED 2 MALES. FIRST EVIDENCE OF POP AT THIS SITE; MCCREADY BELIEVES FROGS ARE INTRODUCED. NO EVIDENCE OF BREEDING; INFORMED FAIR OAKS RECREATION & PARK DISTRICT AS POOLS REGISTERED IN NATIONAL REGISTRY OF NATURAL LANDMARKS.

Owner/Manager: CITY OF FAIR OAKS

Occurrence No. 56	Map Index: 32325	EO Index: 2582	Dates Last Seen
Occ Rank: Excellent			Element: 1978-03-07
Origin: Natural/Native occurrence			Site: 1978-03-07
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1995-07-25

Quad Summary: Buffalo Creek (3812152/511C)  
County Summary: Sacramento

Lat/Long: 38.53084° / -121.21486°	Township: 08N
UTM: Zone-10 N4256226 E655599	Range: 07E
Area:	Mapping Precision: NON-SPECIFIC
Elevation: 150 ft	Section: 21 Qtr: XX
	Meridian: M

Location: ADJACENT TO (FORMER) MATHER AIR FORCE BASE. AREA BORDERED BY SUNRISE BLVD. STATE ROUTE 16, GRANT LINE RD & DOUGLAS RD.

Location Detail: MANY PONDS AND VERNAL POOLS WITHIN THE AREA.

Ecological: VERNAL POOLS. MCCREADY HAS STUDIED THIS AREA SINCE 1967, HE CONSIDERS THESE TO BE SOME OF THE FINEST VERNAL POOLS IN CALIFORNIA.

General: 65 MALES HEARD CALLING; TADPOLES OBS IN 25 DIFFERENT POOLS DURING SEVERAL LATER SPRING SURVEYS. SOME INDIVIDUAL PONDS OFF KEIFER BLVD & JAEGER RD HAD TADPOLES OF SPADEFOOT, WESTERN TOAD, & PACIFIC TREEFROG, WHICH IS AN UNUSUAL PHENOMENON.

Owner/Manager: UNKNOWN

***Taxidea taxus***

American badger

Element Code: AMAJF04010

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G5	CDFG Status: SC
State: None	State: S4	

Habitat Associations

General: MOST ABUNDANT IN DRIER OPEN STAGES OF MOST SHRUB, FOREST, AND HERBACEOUS HABITATS, WITH FRIABLE SOILS.

Micro: NEED SUFFICIENT FOOD, FRIABLE SOILS & OPEN, UNCULTIVATED GROUND. PREY ON BURROWING RODENTS. DIG BURROWS.

Occurrence No. 72	Map Index: 56588	EO Index: 56604	Dates Last Seen
Occ Rank: Excellent			Element: 1990-04-12
Origin: Natural/Native occurrence			Site: 1990-04-12
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2004-09-01

Quad Summary: Buffalo Creek (3812152/511C)

County Summary: Sacramento

Lat/Long: 38.54756° / -121.23574°	Township: 08N
UTM: Zone-10 N4268046 E653743	Range: 07E
Radius: 1/10 mile	Section: 17
Elevation: 170 ft	Meridian: M
Mapping Precision: NON-SPECIFIC	Qtr: W
Symbol Type: POINT	

Location: 0.4 MILE EAST OF SUNRISE BLVD AND 0.8 MILES SOUTH OF DOUGLAS ROAD, SOUTHEAST RANCHO CORDOVA.

Ecological: HABITAT CONSISTS PRIMARILY OF ANNUAL GRASSLAND. AREA HAS OVER 500 VERNAL POOLS AND SEVERAL LINEAR MILES OF INTERMITTENT STREAMS AND OTHER WETLANDS. THERE IS A HIGH CONCENTRATION OF MICROTUS AND FEW GROUND SQUIRRELS ON SITE.

Threat: PROPOSED FOR RESIDENTIAL AND COMMERCIAL DEVELOPMENT.

General: 3 INDIVIDUALS OBSERVED AT A DEN. THERE WERE ABOUT 15 BADGER SIZED DENS IN THE AREA - MOST FRESHLY DUG, A COUPLE WITH ENTRANCES FILLED WITH DIRT.

Owner/Manager: PVT

**Valley Needlegrass Grassland**

Element Code: CTT42110CA

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G1	
State: None	State: S3.1	
Habitat Associations		
General:		
Micro:		

Occurrence No. 42      Map Index: 11960      EO Index: 13725      Dates Last Seen

Occ Rank: Unknown      Element: 1987-06-08

Origin: Natural/Native occurrence      Site: 1988-12-09

Presence: Presumed Extant

Trend: Unknown      Record Last Updated: 1998-07-15

Quad Summary: Folsom (3812162/511B)

County Summary: Sacramento

Lat/Long: 38.66712° / -121.15273°      Township: 09N

UTM: Zone-10 N4281457 E660711      Range: 07E

Radius: 1/5 mile      Mapping Precision: NON-SPECIFIC      Section: 1      Qtr: XX

Elevation: 270 ft      Symbol Type: POINT      Meridian: M

Location: S OF PLACERVILLE RD (=SCOTT RD) JUST E OF JCT W/BUE RAVINE RD, NEAR HUMBURG CR, FOLSOM.

Location Detail: JUST D/S FROM SM EARTH DAM SUPPORTING TYPHA MARSH.

Ecological: VIRTUALLY PURE STAND OF NASSELLA PULCHRA & JUNCUS BALTICUS. ASSOC SPP INCL CENTAURIUM VENUSTUM, EPILOBIUM DENSIFLORA. THOUGH SMALL, THE STAND IS LUSH, DENSE & NOT GRAZED.

Threat: DEVELOPMENT IS A THREAT.

General: ONLY SUCH STAND KNOWN FROM SAC & PLACER CO PER BAILEY, 1986. STIPA PLANTS UNUSUALLY LARGE AND ROBUST. PERHAPS EXOTIC OR NEW SPECIES. THIS WAS OCC #042 OF CTT42110CA.

Owner/Manager: PVT

**Wyethia reticulata**

El Dorado County mule ears

Element Code: PDAST9X0D0

Status

NDDB Element Ranks

Other Lists

Federal: None

Global: G2

CNPS List: 1B.2

State: None

State: S2.2

Habitat Associations

General: CHAPARRAL, CISMONTANE WOODLAND, LOWER MONTANE CONIFEROUS FOREST.

Micro: STONY RED CLAY AND GABBROIC SOILS; OFTEN IN OPENINGS IN GABBRO CHAPARRAL. 180-630M.

Occurrence No. 13

Map Index: 12153

EO Index: 16710

Dates Last Seen

Occ Rank: Unknown

Element: 1986-XX-XX

Origin: Natural/Native occurrence

Site: 1986-XX-XX

Presence: Presumed Extant

Record Last Updated: 2003-06-27

Trend: Unknown

Quad Summary: Clarksville (3812161/511A)

County Summary: El Dorado

Lat/Long: 38.72042° / -121.02637°

Township: 10N

UTM: Zone-10 N4287600 E671577

Range: 09E

Area: 9.5 acres

Mapping Precision: SPECIFIC

Section: 18

Qtr: SE

Elevation: 940 ft

Symbol Type: POLYGON

Meridian: M

Location: ALONG UPPER MARTEL CREEK, ABOUT 0.2 TO 0.6 MILE WEST OF DEER VALLEY ROAD, NNE OF CLARKSVILLE.

Location Detail: 3 COLONIES MAPPED ACCORDING TO MAP DETAIL PROVIDED BY WILSON.

Ecological: ON RESCUE STONY SANDY LOAM IN CHAPARRAL, MOIST AREAS NEAR CREEK.

Threat: AREA BEING SUBDIVIDED.

General: UNKNOWN NUMBER OF PLANTS SEEN IN 1986.

Owner/Manager: PVT

Occurrence No. 14

Map Index: 51653

EO Index: 51653

Dates Last Seen

Occ Rank: Unknown

Element: 1986-XX-XX

Origin: Natural/Native occurrence

Site: 1986-XX-XX

Presence: Presumed Extant

Record Last Updated: 2003-06-27

Trend: Unknown

Quad Summary: Clarksville (3812161/511A)

County Summary: El Dorado

Lat/Long: 38.71224° / -121.01572°

Township: 10N

UTM: Zone-10 N4286713 E672523

Range: 09E

Radius: 80 meters

Mapping Precision: SPECIFIC

Section: 20

Qtr: NW

Elevation: 1,100 ft

Symbol Type: POINT

Meridian: M

Location: SWEETWATER CREEK.

Location Detail: MAPPED ACCORDING TO MAP DETAIL PROVIDED BY WILSON IN 1986. MAPPED WITHIN THE NE 1/4 OF THE NW 1/4 OF SECTION 20.

General: UNKNOWN NUMBER OF PLANTS OBSERVED IN 1986, 1893 AND 1894 COLLECTIONS BY CURRAN FROM SWEETWATER CREEK AND 1907 COLLECTION BY SIMPSON FROM SIMPSON'S RANCH ALONG SWEETWATER CREEK ATTRIBUTED TO THIS LOCATION. SWEETWATER CRK IS TYPE LOCATION.

Owner/Manager: UNKNOWN

Occurrence No. 34

Map Index: 51651

EO Index: 51651

Dates Last Seen

Occ Rank: Fair

Element: 1998-06-18

Origin: Natural/Native occurrence

Site: 1998-06-18

Presence: Presumed Extant

Record Last Updated: 2003-06-27

Trend: Unknown

Quad Summary: Clarksville (3812161/511A)

County Summary: El Dorado

Lat/Long: 38.70540° / -121.00257°

Township: 10N

UTM: Zone-10 N4285979 E673683

Range: 09E

Area:

Mapping Precision: NON-SPECIFIC

Section: 21

Qtr: SW

Elevation: 1,400 ft

Symbol Type: POLYGON

Meridian: M

Location: NORTHEAST CORNER OF INTERSECTION OF WINCHESTER DRIVE & STARBUCK ROAD, SOUTHWEST OF PINE HILL RESERVE, NE OF CLARKSVILLE.

Location Detail: MAPPED ON THE EAST SIDE OF STARBUCK ROAD IN THE GENERAL VICINITY OF WINCHESTER DRIVE (NOT ON TOPO MAP). MAPPED WITHIN THE NW 1/4 OF THE SW 1/4 SECTION 21.

Ecological: FOOTHILL WOODLAND DOMINATED BY MIXED OAKS, GRASS UNDERSTORY. RESCUE VERY STONY SANDY LOAM SOIL. WESTERLY EXPOSURE, 5% SLOPE.

Threat: DEVELOPMENT. SURROUNDING AREA IS SINGLE FAMILY RESIDENTIAL WITH A GOLF COURSE ACROSS THE ROAD. ANNUAL GRASSES PRESENT.

General: 16 INDIVIDUAL PLANTS PLUS A 20 BY 30 FOOT PATCH OF PLANTS OBSERVED BY WILLSON IN 1999. ABUNDANT ANNUAL GRASSES MAKE THIS A LESS THAN IDEAL HABITAT FOR RARE PLANT PROLIFERATION.

***Wyethia reticulata***

El Dorado County mule ears

Element Code: PDAST9X0D0

\_\_\_\_\_ Status \_\_\_\_\_

\_\_\_\_\_ NDDB Element Ranks \_\_\_\_\_

\_\_\_\_\_ Other Lists \_\_\_\_\_

Federal: None

Global: G2

CNPS List: 1B.2

State: None

State: S2.2

\_\_\_\_\_ Habitat Associations \_\_\_\_\_

General: CHAPARRAL, CISMONTANE WOODLAND, LOWER MONTANE CONIFEROUS FOREST.

Micro: STONY RED CLAY AND GABBROIC SOILS; OFTEN IN OPENINGS IN GABBRO CHAPARRAL. 180-630M.

Owner/Manager: PVT

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## **APPENDIX D7**

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90-Day Report, 2006-2007 Wet-Season Survey for  
Listed Vernal Pool Branchiopods, Folsom South Property

dark blue on parcel map

summary of all Folsom South docs attached here,  
including 2 more

**90-Day Report**  
**2006-2007 Wet-Season Survey**  
**for Listed Vernal Pool Branchiopods**

Folsom South Property  
Sacramento County, California

no species found in surveys  
but potential for non surveyed  
birds / mammals  
wetlands & oaks documented

& plants  
& herps  
& wetlands  
& trees  
for > 1 site

# 110  
Q 7  
d 9  
d 8

Prepared for: MJM Consulting & AKT properties

July 17, 2007

Submitted by:



**FOOTHILL ASSOCIATES**

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### Biological Community Description

Features on the site are surrounded by annual grassland habitat. The annual grassland on the property supports numerous grasses and herbaceous species. Dominants include Italian ryegrass (*Lolium multiflorum*), spring vetch (*Vicia* sp.), false dandelion (*Agoseris* sp.), rose clover (*Trifolium hirtum*), curly dock (*Rumex crispus*), white-tipped clover (*Trifolium variegatum*), wild oats (*Avena* sp.), and ripgut brome (*Bromus diandrus*).

The dominant plant species observed in vernal pool habitat include coyote thistle (*Eryngium vaseyi*), manna grass (*Glyceria occidentalis*), and annual hairgrass (*Deschampsia danthonioides*).

### 4.2 Sampling Results

Data were collected from thirty-eight features within the site (Figure 2). This includes a combination of areas mapped as vernal pools and depressional seasonal wetlands and some scour pools within riverine wetland features. No listed invertebrate species were found on the site during the 2007 wet-season surveys.

Non-listed aquatic invertebrates found during the survey included water fleas (*cladocera*), copepods (*copepoda*), seed shrimp (*ostracoda*), and flatworms (*planaria*). Diving water beetles (*dytiscidae*) and backswimmers (*notonectidae*) were also found within the features on the site. Photo documentation of the site and the field survey data sheets are included in Appendix A and Appendix B, respectively.

### 4.3 Project Site Conditions

During our survey, the site was found to be in good condition. There were no significant problems with trash dumping, off-road vehicle use, or other signs of disturbance. The site is currently being utilized for grazing operations.



ENVIRONMENTAL CONSULTING • PLANNING • LANDSCAPE ARCHITECTURE

June 22, 2006

Mike McDougall  
MJM Properties  
1037 Suncast Lane, Suite 111  
El Dorado Hills, CA 95762

+ Herps last few pgs

**Subject: Results of a Focused Plant Survey on the Folsom South Site, Located in Sacramento County, California**

Dear Mr. McDougall:

This report summarizes the results of a focused survey for special-status plants on the Folsom South site located in eastern Sacramento County, California. Special-status plants surveyed for on the site include Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*), Boggs Lake hedge-hyssop (*Gratiola heterosepala*), dwarf downingia (*Downingia pusilla*), legenere (*Legenere limosa*), pincushion navarretia (*Navarretia myersii* ssp. *myersii*), Sacramento Orcutt grass (*Orcuttia viscida*), slender Orcutt grass (*Orcuttia tenuis*), and Tuolumne button-celery (*Eryngium pinnatisectum*).

none found

#### Site Location and Description

The site is located within eastern Sacramento County and consists primarily of annual grassland and oak woodland habitats with various wetland communities contained within these two primary vegetation communities. The site is located within Township 9 North, Range 8 East, in Sections 9, 10, 15, 16, 17, 20, 21, and 22 of the USGS 7.5-minute series Folsom, Folsom SE, Clarksville, and Buffalo Creek topographic quadrangles (**Figure 1**).

#### Special-Status Plants

All special-status plant species surveyed for on the Folsom South site occur in seasonal wetland habitat such as vernal pools and depressional seasonal wetlands or on the margins of more perennial features such as marshes.

#### **Ahart's Dwarf Rush**

Ahart's dwarf rush, a CNPS List 4 species (plants of limited distribution), is an annual grass-like herb. It is a member of the rush family (Juncaceae). It occurs on the margins of vernal pools in grassland areas. Generally, this species occurs in valley and foothill grasslands in mesic areas. It is known only from six occurrences and is threatened by development (CNPS 2001). The identification period for this species is April through May. There are no CNDDDB records for this species occurring within five miles of the site (CNDDDB 2006).



April 26, 2006

Mike McDougall  
MJM Properties  
1037 Suncast Lane, Suite 111  
El Dorado Hills, CA 95762

**Subject: Special-status Amphibian and Reptile Surveys on the Folsom South Site**

Dear Mr. McDougall:

At the request of MJM Properties and AKT Development, Foothill Associates conducted a focused survey for special-status reptiles and amphibians including western pond turtle (*Clemmys marmorata*) and western spadefoot toad (*Spea hammondi*) on the  $\pm 1500$ -acre Folsom South site located in eastern Sacramento County. A habitat assessment was also conducted on the site for California red-legged frog (*Rana aurora draytonii*).

### Methods

Foothill Associates biologists conducted the survey and habitat assessment on April 14, 18, and 20, 2006. The entire project site was walked on foot, with special attention given to examining areas with suitable habitat for the species mentioned previously. Specific habitat elements such as ponds, slow-moving riverine systems, and vernal pools were examined for the presence of special-status reptiles and amphibians. Where applicable, vernal pools and ponds were sampled using a dip net to examine ponds for western spadefoot larvae (tadpoles). Weather conditions during the survey were good with clear to cloudy skies and light winds.

### Results

The subject property is bounded by State Highway 50 to the north, residential development to the east, annual grassland and White Rock Road to the south, and oak woodland to the west (Figure 1).

No western pond turtles or western spadefoot toads were found on the site. The ponds generally lack vegetative cover or basking sites that would make them more suitable western pond turtle habitat. Most suitable features on the site contain large populations of bullfrogs (*Rana catesbeiana*). The high populations of bullfrogs on the site reduce the likelihood of western spadefoot toads co-existing within vernal pools or pond habitat since bullfrog adults and tadpoles are predators of other amphibian species.

The ponds and other permanent water features on the site provide potential habitat for California red-legged frog. However, there are no known extant populations of this species in the vicinity of the site and the high prevalence of bullfrogs within permanent water sources reduces the suitability of the habitat for red-legged frogs.

### **Conclusions**

As mentioned previously, no special-status amphibian or reptile species were found on the Folsom South site. Given the current habitat conditions and the competition from exotic predatory species such as bullfrogs, it is unlikely that these species occur on the site.

The site is also unlikely to support California red-legged frogs based on the lack of known occurrences for this species in the vicinity of the site and the high population of bullfrogs within suitable California red-legged frog habitat.

If there are any questions or concerns regarding this summary memo, please feel free to contact me.

Sincerely,

David Bise  
Biologist



# Biological Resources Assessment

Folsom South  $\pm$ 1,400-acre Site  
Sacramento County, California

---

DRAFT

Prepared for: MJM Properties

January 3, 2006

Submitted by:



**FOOTHILL ASSOCIATES**

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**Table 1 — Listed and Special-status Species Potentially Occurring on the Site  
or in the Vicinity**

Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
<b>Plants</b>			
Ahart's dwarf rush <i>Juncus leiospermus</i> var. <i>ahartii</i>	--;--;1B	Found on margins of vernal pools.	<b>Low.</b>
Bisbee Peak rush-rose <i>Helianthemum</i> <i>suffrutescens</i>	--;--;3	Rocky hillsides in chaparral areas. Often associated with gabbro soil types.	<b>No;</b> appropriate gabbroic soils and chaparral habitat do not occur within the site. No CNDDDB records occur within five miles of the site for this species.
Boggs Lake hedge- hyssop <i>Gratiola heterosepala</i>	--;CE;1B	Shallow ponds and margins of vernal pools.	<b>Likely.</b>
Brandege's clarkia <i>Clarkia biloba</i> ssp. <i>brandegeae</i>	--;--;1B	Foothill woodlands, cismontane woodland, lower montane coniferous, forest openings and often road cuts. Usually in dry areas. Occurs from 900 to 2,600 feet elevation.	<b>No;</b> site is not located within elevation range of this species.
Dwarf downingia <i>Downingia pusilla</i>	--;--;2	Valley and foothill grasslands in mesic areas. Found on the edges of vernal pools in alkaline and non-alkaline soils from 3 to 1,300 feet elevation.	<b>Low.</b>
El Dorado mule ears <i>Wyethia reticulata</i>	FSC;--;1B	Wooded slopes and chaparral between 1,000 to 1,500 feet elevation. Usually associated with gabbro soils.	<b>No;</b> appropriate gabbroic soils and chaparral habitat do not occur within the site. No CNDDDB records occur within five miles of the site for this species. Site is not located within elevation range.
El Dorado bedstraw <i>Galium californicum</i> ssp. <i>sierrae</i>	FE;--;SLC;1B	Open pine forests and oak woodlands between 300 and 2,000 feet elevation associated with gabbro soils.	<b>No;</b> appropriate soil conditions do not occur onsite for this species. There are no CNDDDB records for this species within five miles of the site.
Layne's ragwort <i>Senecio layneae</i>	FT;--;1B	Dry pine woodlands, oak woodlands, or chaparral areas associated with serpentine soils.	<b>No;</b> site does not contain appropriate serpentinite soils or habitat conditions.



Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Legenere <i>Legenere limosa</i>	--;--;1B	Moist areas and vernal pools.	Low.
Pincushion navarretia <i>Navarretia myersii</i> ssp. <i>myersii</i>	--;--;1B	Vernal pools at elevations between 65 and 2,000 feet.	Likely.
Pine Hill ceanothus <i>Ceanothus roderickii</i>	FE;--;1B	Dry, stony soils in chaparral areas. Often associated with serpentine or gabbro soil types.	No; appropriate gabbroic soils and chaparral habitat do not occur within the site.
Pine Hill flannelbush <i>Fremontodendron decumbens</i>	FE;--;1B	Chaparral and oak and pine woodlands often on rocky ridges with gabbro soils.	No; appropriate gabbroic soils and chaparral habitat do not occur within the site.
Red Hills soaproot <i>Chlorogalum grandiflorum</i>	FSC;--;1B	Open hillsides in chaparral communities. Usually associated with gabbro or serpentine soils.	No; appropriate gabbroic soils and chaparral habitat do not occur within the site.
Sacramento Orcutt grass <i>Orcuttia viscida</i>	FE;--;1B	Found in deep vernal pools. Populations known from eastern Sacramento County.	Likely.
San Joaquin spearscale <i>Atriplex joaquiniana</i>	FSC;--;1B	Seasonal alkali wetlands and alkali sinks.	No; appropriate habitat conditions do not occur within the site.
Slender Orcutt grass <i>Orcuttia tenuis</i>	FE;--;1B	Vernal pools with annual grasslands and blue oak woodlands from Siskiyou to Sacramento counties.	Low.
Tuolumne button-celery <i>Eryngium pinnatisectum</i>	--;--;1B	Cismontane woodland, lower montane coniferous forest, and vernal pools (mesic), at elevations between 230 and 3,005 feet from Amador, Calaveras, Sacramento, and Tuolumne counties.	Low.
<b>Wildlife</b>			
<b>Invertebrates</b>			
California linderiella <i>Linderiella occidentalis</i>	FSC;--;--	Vernal pools, swales, and ephemeral freshwater habitat.	Likely.
Conservancy fairy shrimp <i>Branchinecta conservatio</i>	FSC;--;--	Vernal pools, swales, and ephemeral freshwater habitat.	Likely.
Midvalley fairy shrimp <i>Branchinecta mesovallensis</i>	FSC;--;--	Vernal pools, swales, and ephemeral freshwater habitat.	Likely.
South Forks ground beetle <i>Nebria darlingtoni</i>	FSC;--;--	Under stones along the margins of cool streams. Known to occur in Placer County.	No; site does not support suitable stream habitat.

Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT;--;--	Blue elderberry shrubs usually associated with riparian areas.	Low.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT;--;--	Vernal pools, swales, and ephemeral freshwater habitat.	Likely.
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>	FE;--;--	Vernal pools, swales, and ephemeral freshwater habitat.	Likely.
<b>Amphibians/Reptiles</b>			
California horned lizard <i>Phrynosoma coronatum frontale</i>	FSC;CSC;--	Found in open oak and conifer woodlands, grasslands, and riparian areas. Most often found in areas with sandy soil types and a moderately open shrub canopy for cover.	No; site does not support shrub habitat or rocky outcroppings for cover. No CNDDB records occur within five miles of the site for this species.
California red-legged frog <i>Rana aurora draytonii</i>	FT;CSC;--	Requires a permanent water source and is typically found along quiet, slow-moving streams, ponds, or marsh communities with emergent vegetation.	No; site does not support suitable aquatic, upland, or dispersal habitat for this species. No known populations occur within project vicinity.
California tiger salamander <i>Ambystoma californiense</i>	FPT;CSC;--	Ponded water required for breeding. Adults spend summer in small mammal burrows. No known occurrences north of the Cosumnes River basin.	No; no known occurrences within the vicinity of the site. Site is located north of known distribution for this species. Seasonal wetland habitat too disturbed from cattle grazing.
Giant garter snake <i>Thamnophis gigas</i>	FT;CT;--	Agricultural wetlands and other wetlands such as irrigation and drainage canals, low-gradient streams, marshes, ponds, sloughs, small lakes, and associated uplands.	No; site does not support suitable aquatic or upland habitat for this species.
Western pond turtle <i>Clemmys marmorata</i>	FSC;CSC;--	Agricultural wetlands and other wetlands such as irrigation and drainage canals, low-gradient streams, marshes, ponds, sloughs, small lakes, and associated uplands.	Low.
Western spadefoot <i>Spea hammondi</i>	FSC;CSC;--	Open grasslands and woodlands. Requires vernal pools or seasonal wetlands for breeding.	Low.

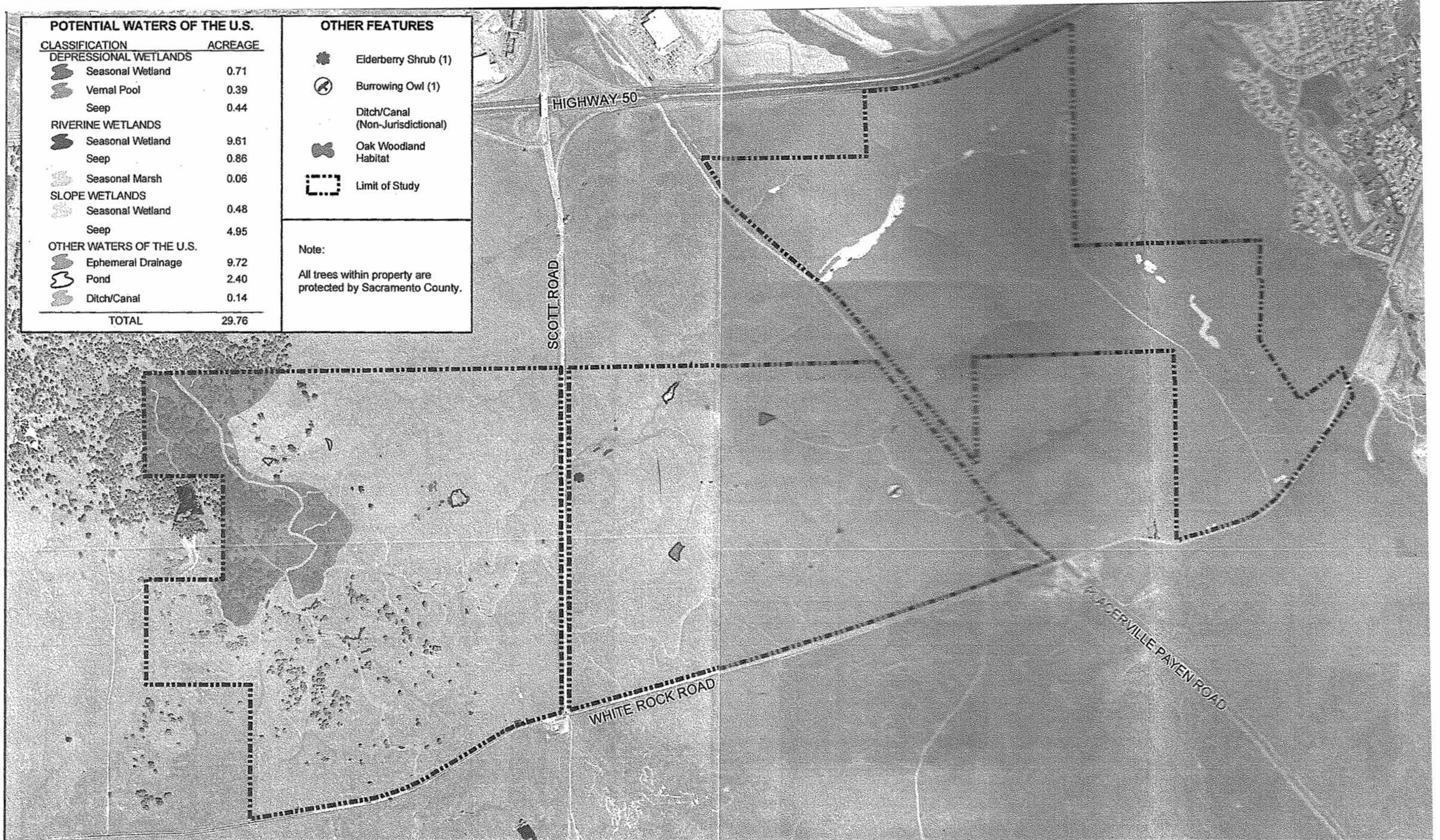
Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
<b>Fish</b>			
Central Valley spring-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	FT;CT;--;--	Sacramento and San Joaquin Rivers and their tributaries.	No; there is no suitable habitat for this species on the site.
Central Valley winter-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	FE;CE;--;--	Sacramento and San Joaquin Rivers and their tributaries.	No; there is no suitable habitat for this species on the site.
Central Valley steelhead <i>Oncorhynchus mykiss</i>	FT;--;--;--	Sacramento and San Joaquin Rivers and their tributaries.	No; there is no suitable habitat for this species on the site.
Delta smelt <i>Hypomesus transpacificus</i>	FT;CT;--;--	Sacramento and San Joaquin Rivers and their tributaries.	No; there is no suitable habitat for this species on the site.
Green sturgeon <i>Acipenser medirostris</i>	--;CSC;--;--	Sacramento and San Joaquin Rivers and their tributaries.	No; there is no suitable habitat for this species on the site.
Longfin smelt <i>Spirinchus thaleichthys</i>	FSC;CSC;--;--	Sacramento and San Joaquin Rivers and their tributaries.	No; there is no suitable habitat for this species on the site.
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	FSC;CSC;--;--	Sacramento and San Joaquin Rivers and their tributaries.	No; there is no suitable habitat for this species on the site.
<b>Birds</b>			
Aleutian Canada goose <i>Branta canadensis leucopareia</i>	FD (FSC) CSC; (Wintering)	Winter resident of agricultural lands.	No; site does not contain suitable agricultural fields for wintering.
American peregrine falcon <i>Falco peregrinus anatum</i>	FD(FSC) CE;--;--	Nests on high cliffs, banks, dunes, or mounds in woodland, forest, and coastal habitats near permanent water sources.	No; there is no suitable nesting habitat for this species on the site.
Bald eagle <i>Haliaeetus leucocephalus</i>	FE;CE;--;--	Nesting restricted to the mountainous habitats near permanent water sources in the northernmost counties of California, the Central Coast Region, and on Santa Catalina Island. Winters throughout most of California at lakes, reservoirs, river systems, and coastal wetlands.	No; there is no suitable habitat for this species on the site.
Bank swallow <i>Riparia riparia</i>	FSC;CT;--;--	Nests in riverbanks and forages over riparian areas and adjacent uplands.	No; there is no suitable nesting habitat for this species on the site.

Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Black swift <i>Cypseloides niger</i>	FSC;CSC;--;	Nests on cliffs near water sources.	No; there is no suitable nesting habitat for this species on the site.
California thrasher <i>Toxostoma redivivum</i>	FSC;--;	Found in dense chaparral or thickets in riparian corridors.	No; there is no suitable habitat for this species on the site.
Cooper's hawk <i>Accipiter cooperii</i>	--;CSC;--;	Nests in riparian corridors. Forages in woodlands and riparian areas.	Likely.
Ferruginous hawk <i>Buteo regalis</i>	FSC;CSC;--;	A winter resident of open habitats in California including grasslands, shrubsteppes, sagebrush, deserts, saltbush-greasewood shrublands, and outer edges of pinyon-pine and other forests.	Low.
Lawrence's goldfinch <i>Carduelis lawrencei</i>	FSC;--;	Nests in open oak or other arid woodland and chaparral habitats near water.	No; there is no suitable habitat in close proximity to water within the site.
Lewis' woodpecker <i>Melanerpes lewis</i>	FSC;--;	Coniferous forests and oak woodlands. Breeds at higher montane elevations. In Central Valley, occurs in foothill woodlands during winter months following winter storms.	No; site is located at too low an elevation for this species to occur.
Little willow flycatcher <i>Empidonax traillii brewsteri</i>	FSC;CSC;--;	Nests in dense riparian vegetation such as willows, alders.	No; there is no suitable habitat for this species on the site.
Loggerhead shrike <i>Lanius ludovicianus</i>	FSC;CSC;--;	Found in a variety of woodland and grassland habitats throughout California. Occupied habitat often supports shrub canopy layer for hunting perch sites.	No. Site does not contain sufficient shrubs for nesting habitat.
Long-billed curlew <i>Numenius americanus</i>	FSC;CSC;--; (nesting)	Mudflats and shallow marsh areas.	No; there is no suitable habitat for this species on the site.
Mountain plover <i>Charadrius montanus</i>	FSC;CSC;--;	Winters in California in agricultural fields and grasslands.	No; site does not support suitable wintering habitat and the site is not a known wintering site for this species.
Northern harrier <i>Circus cyaneus</i>	--;CSC;--; (nesting)	Nests and forages within open agricultural fields and grasslands. Builds vegetated stick nests on the ground.	Present.
Nuttall's woodpecker <i>Picoides nuttallii</i>	FSC;--;	Permanent resident of low-elevation riparian deciduous and oak habitats.	Low.

Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Oak titmouse <i>Baeolophus inornatus</i>	FSC;--;--	Oak savannah and oak woodlands.	Low.
Rufous hummingbird <i>Selasphorus rufus</i>	--;CSC;--	Nests within berry tangles, shrubs, and conifers in areas north of California and in the Trinity Mountains of Trinity and Humboldt counties.	No; there is no suitable habitat for this species on the site.
Swainson's hawk <i>Buteo swainsoni</i>	FSC;CT;-- (Nesting)	Nests in isolated trees or riparian woodlands adjacent to suitable foraging habitat (agricultural fields, grasslands, etc.)	Likely.
Tricolored blackbird <i>Agelaius tricolor</i>	FSC;CSC;--	Nests in dense blackberry, cattail, tules, willow, or wild rose within emergent wetlands throughout the Central Valley and foothills surrounding the valley.	No; there is no suitable habitat for this species on the site.
Vaux's swift <i>Chaetura vauxi</i>	FSC;CSC;-- (nesting)	Nests within large hollow trees and snags in redwood and Douglas-fir habitats.	No; there is no suitable habitat for this species on the site.
Western burrowing owl <i>Athene cunicularia hypugaea</i>	FSC;CSC;-- (burrow sites)	Nests in burrows in the ground, often in old ground squirrel burrows or badger, within open dry grassland and desert habitat.	Present.
White-faced ibis <i>Plegadis chihi</i>	FSC;CSC;--	Nests colonially in riparian areas with large trees.	No; there is no suitable habitat for this species on the site.
White-tailed kite <i>Elanus leucurus</i>	FSC;CFP;--	Nests in isolated trees or woodland areas with suitable open foraging habitat.	Likely.
Other Raptors (Hawks, Owls and Vultures)	MBTA and §3503.5 Department of Fish and Game Code	Nests in a variety of communities including cismontane woodland, mixed coniferous forest, chaparral, montane meadow, riparian, and urban communities.	Present.
<b>Mammals</b>			
Fringed myotis <i>Myotis thysanodes</i>	FSC;--;--	Found in a variety of habitats in California except in the Central Valley and desert areas. Roosts in caves, buildings, and rock crevices.	No; the site does not contain suitable roosting habitat for bat species. No evidence of bat roosts was identified during field surveys.

Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Greater western mastiff bat <i>Eumops perotis californicus</i>	FSC;CSC;--;--	Found in grasslands and open woodlands and conifer habitats. Roosts in cliff faces, buildings, tunnels, and caves.	No; the site does not contain suitable roosting habitat for bat species. No evidence of bat roosts was identified during field surveys.
Long-eared myotis <i>Myotis evotis</i>	FSC;--;--;--	Found throughout California except for the Central Valley and desert areas. Roosts in buildings, snags, and rock crevices.	No; the site does not contain suitable roosting habitat for bat species. No evidence of bat roosts was identified during field surveys.
Long-legged myotis <i>Myotis volans</i>	FSC; --; --; --	Woodland and forest communities above approximately 4,000 feet above MSL. Roosts in rock crevices, buildings, under tree bark, in snags, mines, and caves.	No; the site is located at too low an elevation for this species to occur. No evidence of bat roosts was identified during field surveys.
Pacific western big-eared bat <i>Corynorhinus townsendii townsendii</i>	FSC;CSC;--;--	Roosts in a wide variety of habitats (i.e., riparian scrub, woodland), in abandoned buildings, and bridges.	No; the site does not contain suitable roosting habitat for bat species. No evidence of bat roosts was identified during field surveys.
San Joaquin pocket mouse <i>Perognathus inornatus</i>	FSC; --; --; --	Annual grassland and scrub habitats with loose, friable soils for burrowing.	No; there is no suitable habitat for this species on the site. There are no known records or occurrences of this species within the site or surrounding grassland communities.
Spotted bat <i>Euderma maculatum</i>	FSC;CSC;--;--	Roosts in rock crevices and occasional buildings of foothills and desert areas.	No; the site does not contain suitable roosting habitat for bat species. No evidence of bat roosts was identified during field surveys.
Small-footed myotis <i>Myotis ciliolabrum</i>	FSC;--;--;--	Roosts in a wide variety of habitats (i.e., riparian, scrub, woodland), in abandoned buildings, and bridges.	No; the site does not contain suitable roosting habitat for bat species. No evidence of bat roosts was identified during field surveys.
Yuma myotis <i>Myotis yumanensis</i>	FSC; CSC; --; --	Reside in open forests and woodland habitats with sources of water over which to feed. Roost in buildings, mines, caves, and crevices	No; the site does not contain suitable roosting habitat for bat species. No evidence of bat roosts was identified during field surveys.





## BIOLOGICAL CONSTRAINTS





From large booklet titled  
"Folsom South  
AKT Properties"

(8)

Mr. Mike McDugle  
MJM PROPERTIES  
RE: Folsom South SOI Project Area –  
County of Sacramento, CA  
December 20, 2005  
Page 2

### TABULATION SUMMARY

As you will see from the accompanying Tree Tabulation Tables, our field review found a total of 3,077 oak and non-oak species within the seven grid areas. Composition of the 3,077 trees includes 3,067 oak trees and 10 non-oak trees apportioned as follows:

Blue Oak	.....	3,010 trees
Interior Live Oak	.....	45 trees
Valley Oak	.....	12 trees
 Fremont Cottonwood	 .....	 3 trees
Willow species	.....	6 trees
Foothill Pine	.....	0 trees
Pecan	.....	1 tree

grid area map  
identifying the  
7 sites not included

Our field review found that the oak species were predominantly located within grid areas 1 and 2, with one additional oak tree being found within grid area 3, with the largest number of oak trees falling within the 6"-11" and 12"-17" diameter classifications. The non-oak species -- including Fremont Cottonwood (*Populus fremontii*), Willow species (*Salix spp.*) and Pecan (*Carya illinoensis*) -- were found within grid areas 2, 3, 4, 5 and 7. Finally, it should be noted that no trees were found within grid area 6.

### GENERAL COMMENTS AND ARBORIST'S DISCLAIMER

As we mentioned earlier, this initial site review was performed by Sierra Nevada Arborists to tabulate and quantify the number of trees located within the seven depicted "grid areas". This report and the information contained herein should not be viewed by the client and/or any regulatory agencies as a substitution for a thorough assessment and Inventory Summary of the trees within the project areas which should be prepared by an ISA Certified Arborist prior to making an final development decisions, specifically including the placement of homes and/or other pedestrian activities within or near the fall zone of specific trees. The information contained within this report and/or the accompanying Tree Tabulation Tables should not be viewed as a guarantee or warranty against the trees' ultimate demise and/or failure in the future. Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of the trees and *attempt to reduce the risk of living near trees*. Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Since trees are living organisms conditions are often hidden within the tree and below ground and their condition may change at any time. Arborists cannot guarantee that a tree will be healthy and/or safe under all circumstances or for a



ponds on the site are re-charged by seasonal precipitation as well as a riverine seasonal wetlands that are hydrologically connected. As such, these features would likely be subject to Corps jurisdiction.

**Table 1** below provides acreage per class and summarizes the total acreage of wetlands and waters on the site.

**Table 1 — Waters of the U.S: Acreage According to Feature**

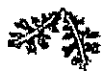
CLASS	TOTAL ACREAGE	JURISDICTIONAL	NON- JURISDICTIONAL
Vernal Pools	0.39	0.39	0.0
Depressional Seasonal Wetlands	0.71	0.71	0.0
Riverine Seasonal Wetlands	9.61	9.61	0.0
Riverine Seasonal Marsh	0.06	0.06	0.0
Seeps	6.48	6.48	0.0
Ephemeral Drainages	9.72	9.72	0.0
Ditch/Canal	0.56	0.14	0.42
Ponds	2.40	1.55	0.85
<b>TOTAL</b>	<b>29.93</b>	<b>28.66</b>	<b>1.27</b>

**BIOLOGICAL RESOURCE ASSESSMENT  
±960-ACRE MANGINI PROPERTY  
SACRAMENTO COUNTY, CALIFORNIA**

---

**Prepared for:      AKT Development**

**January 6, 1998**



**FOOTHILL ASSOCIATES**  
ENVIRONMENTAL CONSULTANTS

© 1998 Foothill Associates

## EXECUTIVE SUMMARY

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On December 12, 15-18, and 29-30 of 1997, Foothill Associates conducted a biological resource assessment of the  $\pm$  960-acre Mangini property north of White Rock Road in eastern Sacramento County (Figure 1). The purpose of this survey is to provide baseline information regarding biological resources on the property (including special status species and wetlands) and to determine the primary biological constraints on the property.

The property is currently being used for cattle grazing and supports several habitat types, including non-native grassland, oak woodland, vernal pools, seasonal marsh, seasonal wetlands, seeps, stock ponds and intermittent drainages.

Northern harriers and red-tailed hawks were the only special-status species observed on the property during the field survey. The site has the potential to support several other special-status species including vernal pool plants, listed vernal pool invertebrates, valley elderberry longhorn beetle, California tiger salamander, western spadefoot toad, raptors (including Swainson's hawk and burrowing owl), and some species of bats. The field survey and literature review revealed the following potential biological constraints on the property:

- One elderberry shrub (potential habitat for valley elderberry longhorn beetle);
- Potential nesting habitat for raptor species, including burrowing owl;
- Open mineshaft (potential roosting habitat for bat species and barn owls);
- Potential foraging habitat for Swainson's hawk;
- Approximately 0.3 acres of vernal pools (potential habitat for endemic plants, invertebrates, and breeding habitat for spadefoot toads and tiger salamanders); and
- Approximately 13.5 acres of other jurisdictional Waters of the United States (seasonal wetlands, drainages, etc.).

• Oak trees. -  $W/2$  of property is mixed oak woodland  
E  $1/2$  (scattered divider) is annual grassland/graze

TABLE 1

## Special Status Species Evaluated as Potentially Occurring on the Property

Species	Federal (USFWS)	State (CDEG)	CNPS	Habitat	Potential for Occurrence
BOGGS LAKE HEDGE-HYSSOP <i>Gratiola heterosepala</i>	-	E	1B	Marshes, swamps, vernal pools, and lake margins	Not expected to occur on the property.
LEGENERE <i>Legenere limosa</i>	-	-	1B	Vernal pools	Not expected to occur on the property.
PINCUSHION NAVARRETIA <i>Navarretia myersii</i> ssp. <i>myersii</i>	-	-	1B	Vernal pools	Not expected to occur on the property.
SLENDER ORCUTT GRASS <i>Orcuttia tenuis</i>	T	E	1B	Vernal pools	Not expected to occur on the property.
SACRAMENTO ORCUTT GRASS <i>Orcuttia viscida</i>	E	E	1B	Vernal pools	Not expected to occur on the property.
VERNAL POOL FAIRY SHRIMP <i>Branchinecta lynchi</i>	T	-	-	Vernal pools	Not expected to occur on the property.
VERNAL POOL TADPOLE SHRIMP <i>Lepidurus packardii</i>	E	-	-	Vernal pools	Not expected to occur on the property.
VALLEY ELDERBERRY LONGHORN BEETLE <i>Desmocerus californicus dimorphus</i>	T	-	-	Elderberry shrubs (host plant)	One shrub observed on site. This may be a potential habitat for the beetle. No beetles observed.
CALIFORNIA TIGER SALAMANDER <i>Ambystoma californiense</i>	C	CSC	-	Grasslands with vernal pools or other seasonal pools for breeding	Very low, could breed in vernal pool habitat on the property.
WESTERN SPADEFOOT TOAD <i>Scaphiopus hammondi</i>	-	CSC	-	Grasslands with vernal pools for breeding	Low, could breed in vernal pool habitat on the property.
NORTHWESTERN POND TURTLE <i> Clemmys marmorata marmorata</i>	-	CSC	-	Permanent water bodies with suitable basking sites	Low, could occur in larger waterbodies.
BURROWING OWL <i>Athene cunicularia</i>	MBTA	CSC	-	Open low-growing grasslands with suitable burrow sites	May occur on the property. This species is known to occur on adjacent property south of White Rock Road.
TRICOLORED BLACKBIRD <i>Agelaius tricolor</i>	MBTA	CSC	-	Emergent freshwater marsh for nesting	Not expected to nest due to the paucity of emergent freshwater marsh habitat on site, may forage on site.
SWAINSON'S HAWK <i>Buteo swainsoni</i>	MBTA	T	-	Riparian woodlands and adjacent grasslands for foraging	Low; not expected to nest, but could periodically forage on the property.
BALD EAGLE <i>Haliaeetus leucocephalus</i>	T	E	-	Large lakes, mountains, and open country	Not expected to use site due to the lack of suitable habitat on the property and the vicinity.
RAPTORS (BIRDS OF PREY, HAWKS, OWLS, ETC.)	MBTA	-	-	Woodlands and grasslands for nesting and foraging.	Some known to forage on site, others may potentially forage and nest.
BATS (LONG-LEGGED AND LONG-EARED MYOTIS)	-	CSC	-	Variety of roosting habitats including mineshafts, caves, buildings, etc.	Low potential for roosting in mineshaft on the property.

E = Endangered

T = Threatened

C = Taxa for which the USFWS has on file sufficient information on biological vulnerability and threat to support proposals to list them as Threatened or Endangered.

CSC = California Species of Special Concern

MBTA = federal Migratory Bird Treaty Act

CNPS Categories: 1B = Plants rare, threatened, or endangered in California and elsewhere

Source: Foothill Associates

TABLE 1

## Special Status Species Evaluated as Potentially Occurring on the Property

Species	Federal (USFWS)	State (CDEG)	CNPS	Habitat	Notes
BOGGS LAKE HEDGE-HYSSOP <i>Gratiola heterosepala</i>	—	E	1B	Marshes, swamps, vernal pools, and lake margins	
LEGENERE <i>Legenere limosa</i>	—	—	1B	Vernal pools	
PINCUSHION NAVARRETIA <i>Navarretia myersii</i> ssp. <i>myersii</i>	—	—	1B	Vernal pools	
SLENDER ORCUTT GRASS <i>Orcuttia tenuis</i>	T	E	1B	Vernal pools	
SACRAMENTO ORCUTT GRASS <i>Orcuttia viscida</i>	E	E	1B	Vernal pools	
VERNAL POOL FAIRY SHRIMP <i>Branchinecta lynchi</i>	T	—	—	Vernal pools	
VERNAL POOL TADPOLE SHRIMP <i>Lepidurus packardii</i>	E	—	—	Vernal pools	
VALLEY ELDERBERRY LONGHORN BEETLE <i>Desmocerus californicus dimorphus</i>	T	—	—	Elderberry shrubs (host plant)	One elderberry shrub on site; potential habitat for and source of beetles occurring on the property.
CALIFORNIA TIGER SALAMANDER <i>Ambystoma californiense</i>	C	CSC	—	Grasslands with vernal pools or other seasonal pools for breeding	Very low, could breed in vernal pool habitat on the property.
WESTERN SPADEFOOT TOAD <i>Scaphiopus hammondi</i>	—	CSC	—	Grasslands with vernal pools for breeding	Low, could breed in vernal pool habitat on the property.
NORTHWESTERN POND TURTLE <i>Clammys marmorata marmorata</i>	—	CSC	—	Permanent water bodies with suitable basking sites	Low, could occur in larger ponds on site.
BURROWING OWL <i>Athene cunicularia</i>	MBTA	CSC	—	Open low-growing grasslands with suitable burrow sites	May occur on the property; this species is known to occur on adjacent property south of White Rock Road.
TRICOLORED BLACKBIRD <i>Agelaius tricolor</i>	MBTA	CSC	—	Emergent freshwater marsh for nesting	Not expected to nest due to the paucity of emergent freshwater marsh habitat on site; may forage on site.
SWAINSON'S HAWK <i>Buteo swainsoni</i>	MBTA	T	—	Riparian woodlands and adjacent grasslands for foraging	Low; not expected to nest, but could periodically forage on the property.
BALD EAGLE <i>Haliaeetus leucocephalus</i>	T	E	—	Large lakes, mountains, and open country	Not expected to use site due to the lack of suitable habitat on the property and the vicinity.
RAPTORS (BIRDS OF PREY, HAWKS, OWLS, ETC.)	MBTA	—	—	Woodlands and grasslands for nesting and foraging.	Some known to forage on site, others may potentially forage and nest.
BATS (LONG-LEGGED AND LONG-EARED MYOTIS)	—	CSC	—	Variety of roosting habitats including mineshafts, caves, buildings, etc.	Low potential for roosting in mineshaft on the property.

E = Endangered

T = Threatened

C = Taxa for which the USFWS has on file sufficient information on biological vulnerability and threat to support proposals to list them as Threatened or Endangered.

CSC = California Species of Special Concern

MBTA = federal Migratory Bird Treaty Act

CNPS Categories: 1B = Plants rare, threatened, or endangered in California and elsewhere

Source: Foothill Associates

## ***Sensitive Habitats***

Sensitive habitats include those that are of special concern to resource agencies or those that are protected under CEQA, Section 1600 of the CDFG Code, or Section 404 of the Clean Water Act (CWA). Additionally, habitats may be protected under specific local policies. Sensitive habitats onsite include potential jurisdictional Waters of the United States, which are regulated by the United States Army Corps of Engineers (USACE).

### **Waters of the United States**

Jurisdictional Waters of the U.S. include jurisdictional wetlands (e.g. vernal pools, seasonal wetlands, etc.) as well as "other" Waters of the U.S. such as creeks, ponds, and intermittent drainages. Wetlands are defined as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (USACE, 1987). The majority of jurisdictional wetlands in the United States meet three wetland delineation criteria: hydrophytic vegetation, hydric soils, and wetland hydrology. Jurisdictional Waters of the U.S. can also be defined by exhibiting a defined bed and bank and ordinary high water mark (OHWM).

Potential jurisdictional Waters of the U.S. on the property consist of riverine seasonal wetlands and seasonal marsh, vernal pools, stock ponds, and several intermittent drainages. These areas are shown in Appendix B and listed in Table 2 below:

<b>Table 2 Waters of the United States</b>		
<b><i>Classification</i></b>	<b><i>Type</i></b>	<b><i>Acreage</i></b>
<b>Depressional</b>	Vernal pool	0.3
	Seasonal Wetland	0.1
	Stock Pond	2.7
<b>Riverine</b>	Intermittent Drainage	8.0
	Seasonal Wetland	1.1
	Seasonal Marsh	0.7
<b>Slope</b>	Seasonal Marsh	0.9
	<b>Total</b>	<b>13.8</b>

## ***Oak Woodlands***

The project site is currently located outside the area covered by the Sacramento County Tree Ordinance and is south of the incorporated area of the City of Folsom, which also has a tree removal ordinance. Thus, there is no ordinance currently governing removal of oak trees on site.

## **APPENDIX D8**

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Results of Analyses of Soil Samples Collected from the  
Proposed Folsom South Project Site

707 Dead Cat Alley, Suite 201  
Woodland CA 95695 USA



(530) 406-1178  
eco@ecoanalysts.com

1 October 2007

Ms. David Bise  
Foothill Associates  
655 Menlo Dr, Suite 100  
Rocklin, CA 95765

SUBJECT: Results of Analyses of Soil Samples Collected from the Proposed Folsom South Project Site.

Dear David,

EcoAnalysts, Inc. conducted a dry season survey of potential special-status shrimp habitats at the proposed Folsom South site, located in eastern Sacramento County, California. Soil samples were collected from twenty-seven previously identified habitats judged to be suitable for special-status shrimp species. No special-status shrimp eggs were collected from the soil samples analyzed.

EcoAnalysts, Inc. understands that Foothill will submit this report and all other pertinent materials and information to the U.S. Fish and Wildlife Service (USFWS), and the California Department of Fish and Game (DFG), as required by the USFWS guidelines for a protocol-level survey.

### **Definitions**

For the purpose of this report, special status shrimp are defined to include shrimp species listed as threatened or endangered under the federal Endangered Species Act (ESA) (50 CFR 17.11 for listed animals and various Federal Register notices for proposed species). One special-status tadpole shrimp (*Lepidurus packardi*) and one special-status fairy shrimp species (*Branchinecta lynchi*) have the potential to occur at the proposed project site. In addition, one non-listed fairy shrimp species (*Lindieriella occidentalis*) is known from the proposed project vicinity.

### **Methods**

EcoAnalysts, Inc. collected 10 soil samples each from twenty-seven potential special-status shrimp habitats at the proposed project site. Each soil sample was placed in a plastic zip-lock bag, labeled with the locality number, and taken to the EcoAnalysts, Inc. California laboratory for analysis. All potential habitats sampled were identified according to the numbers assigned to them in the field, and recorded on a base map.

### *Laboratory Analysis*

Moscow, Idaho • Bozeman, Montana • Woodland, California • Joplin, Missouri  
Selinsgrove, Pennsylvania  
[www.ecoanalysts.com](http://www.ecoanalysts.com)



Soil samples were prepared for examination in the laboratory by dissolving the clumps of soil in water and sieving the material through 300- and 150-  $\mu\text{m}$  pore size screens. The small size of these screens ensures that the eggs from the shrimp species will be retained. The portion of each sample retained in the screens was dissolved in a brine solution to separate the organic material from the inorganic material. The organic fraction was then examined under a microscope.

## **Results**

No special-status shrimp or non-listed shrimp eggs were recovered from any of the soil samples sent to EcoAnalysts, Inc. from this site.

If you have any questions please call me.

Sincerely,

D. Christopher Rogers  
Invertebrate Ecologist and Taxonomist  
EcoAnalysts, Inc.  
166 Buckeye Street  
Woodland, CA 95695, USA

## **APPENDIX D9**

---

Draft Biological Resources Assessment Report,  
Centex - Folsom Heights Property

19

Draft  
Biological Resources Assessment Report  
Centex – Folsom Heights Property



Prepared by:  
EDAW  
2022 J Street  
Sacramento, CA 95814

July 2006

**EDAW**

Draft  
Biological Resources Assessment Report  
**Centex – Folsom Height Property**



Prepared for:  
Centex Homes  
3700 Douglas Blvd., Suite 150  
Roseville, CA 95661

Attn: John Jarecki

Prepared by:  
EDAW  
2022 J Street  
Sacramento, CA 95814

Contact:  
Petra Unger or Tammie Beyerl  
916/414-5800

July 2006

**EDAW**

## ACRONYMS AND ABBREVIATIONS

CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDDB	Natural Diversity Database
CNPS	California Native Plant Society
CWA	federal Clean Water Act
DFG	California Department of Fish and Game
EDAW	EDAW Inc.
ESA	federal Endangered Species Act
MBTA	Migratory Bird Treaty Act
NPPA	Native Plant Protection Act
OHWM	ordinary high water mark
project	Folsom Heights Property development project
RWQCB	regional water quality control board
USACE	U.S. Army Corps of Engineers'
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

# **BIOLOGICAL RESOURCES ASSESSMENT**

## **INTRODUCTION**

Centex Homes has retained EDAW Inc., (EDAW) to prepare a biological resource assessment for the proposed Folsom Heights Property development project (project). The purpose of this biological resources assessment is to inventory biological resources present on the project site to aid in future planning for the site. Biological resources addressed in this report include common and sensitive biological resources. This report also, summarizes the regulatory setting pertaining to the biological resources present on the project site. A wetland delineation and tree inventory for the site have also been conducted (EDAW 2006a and 2006b).

## **PROJECT DESCRIPTION**

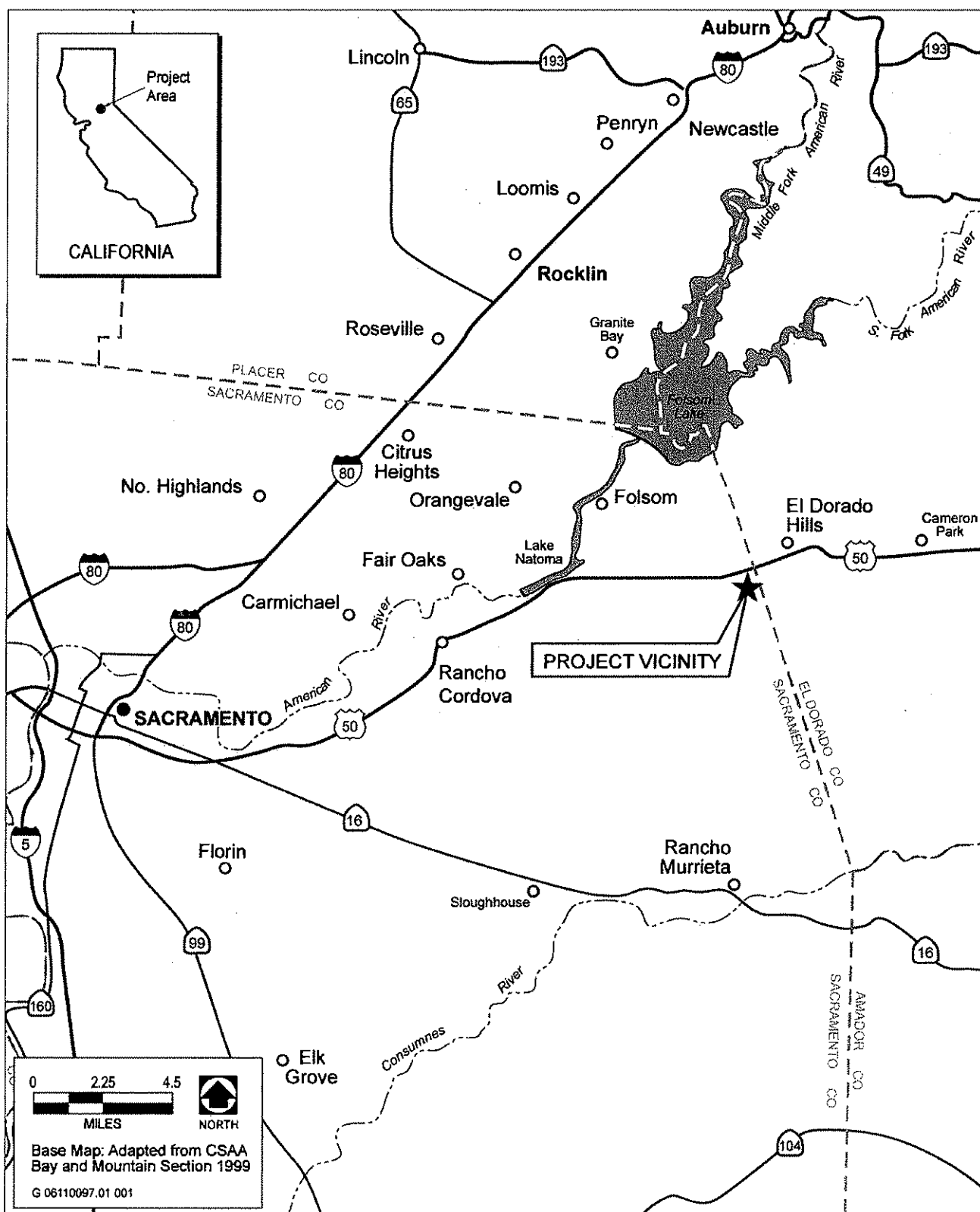
The Folsom Heights project site is located on the Sacramento-El Dorado County line and is bordered by Highway 50 to the north and White Rock Road to the south (Exhibits 1 and 2). The site is within Sacramento County, adjacent to the El Dorado County line. The site (APN numbers 072 0270 028, 072 0070 001 and 072 0070 023) is within the watershed of Carson Creek, a tributary to Deer Creek, which is tributary to the Cosumnes River. The approximately 189-acre project site has an elevation range of approximately 550 to 800 feet and is within the Clarksville U.S. Geological Survey (USGS) 7.5-minute quadrangle.

The project site is predominantly characterized by annual grassland on gently sloping to steep topography. Also present on the project site are seasonal wetland, freshwater seeps, swales, intermittent drainage, and willow scrub. The site is currently undeveloped but traversed by a number of dirt roads. Current surrounding land use includes residential, commercial, and cattle grazing with residential and commercial development planned for much of the undeveloped land immediately adjacent to the south and east.

## **ENVIRONMENTAL SETTING**

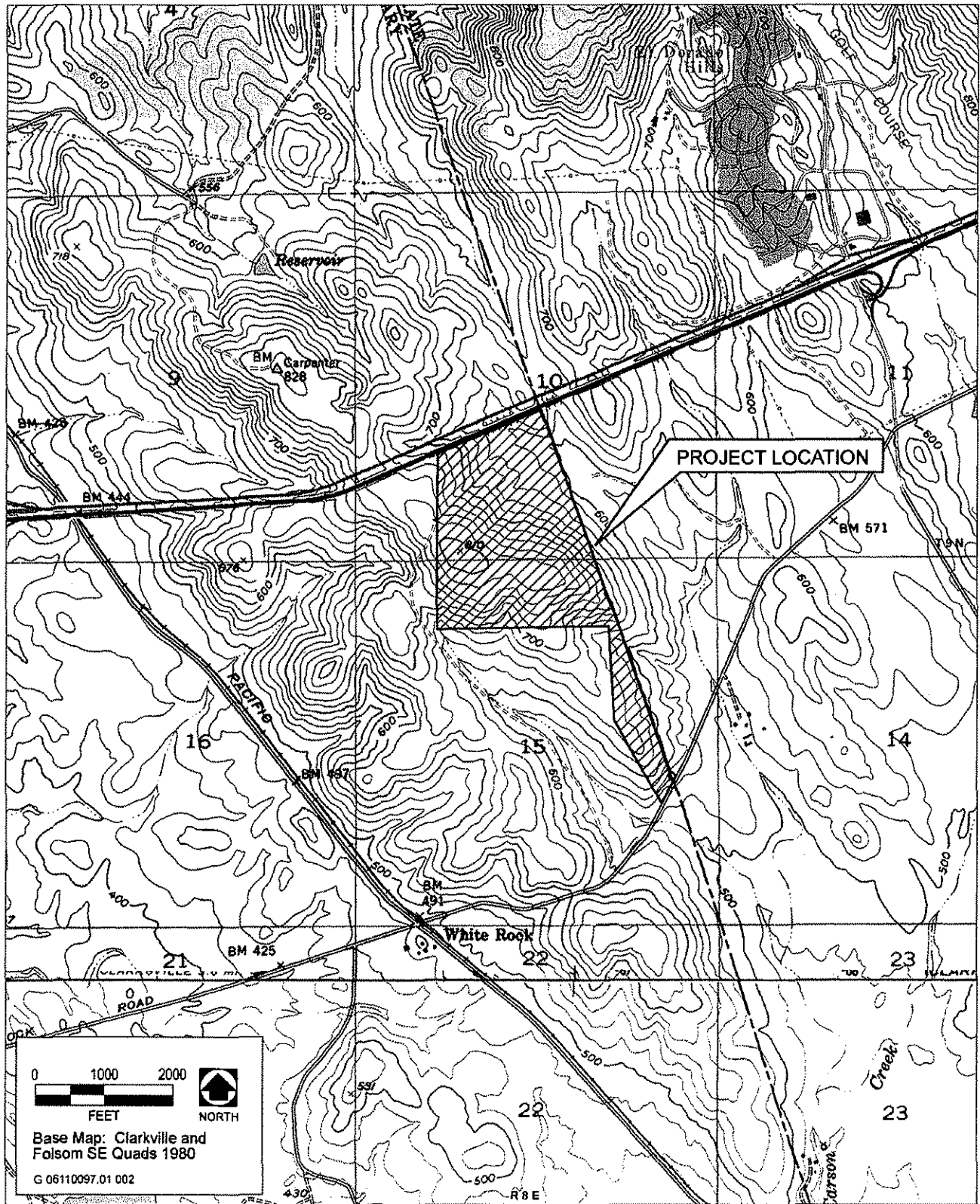
The biological resources assessment involved the following: 1) baseline data collection and literature review, 2) reconnaissance-level field surveys, and 3) evaluation of potentially-occurring special-status species and other sensitive biological resources.

EDAW biologists conducted reconnaissance-level field surveys of the project site on May 11, May 13, and May 18, 2006. The purpose of the surveys was to characterize common biological resources and to determine the potential for sensitive biological resources to occur on the project site. EDAW biologists also conducted a wetland delineation according to methods identified in the U.S. Army Corps of Engineers' (USACE) 1987 wetlands



**Project Vicinity Map**

**Exhibit 1**



**Project Location Map**

**Exhibit 2**



delineation manual (Environmental Laboratory 1987) and a tree inventory according to Sacramento County Tree Ordinance Guidelines. The results of the wetland delineation and tree survey are provided as separate reports (EDAW 2006a and 2006b).

EDAW biologists also conducted searches of the California Department of Fish and Game (DFG) Natural Diversity Database (CNDDDB) and the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants of California. The CNDDDB is a statewide inventory managed by DFG, which is continually updated with the locations and condition of the state's rare and declining species and habitats. Although the CNDDDB and CNPS are reliable tools for site-specific information on sensitive biological resources, it should be noted that they contain only those records that have been submitted to DFG or CNPS and are not always up to date.

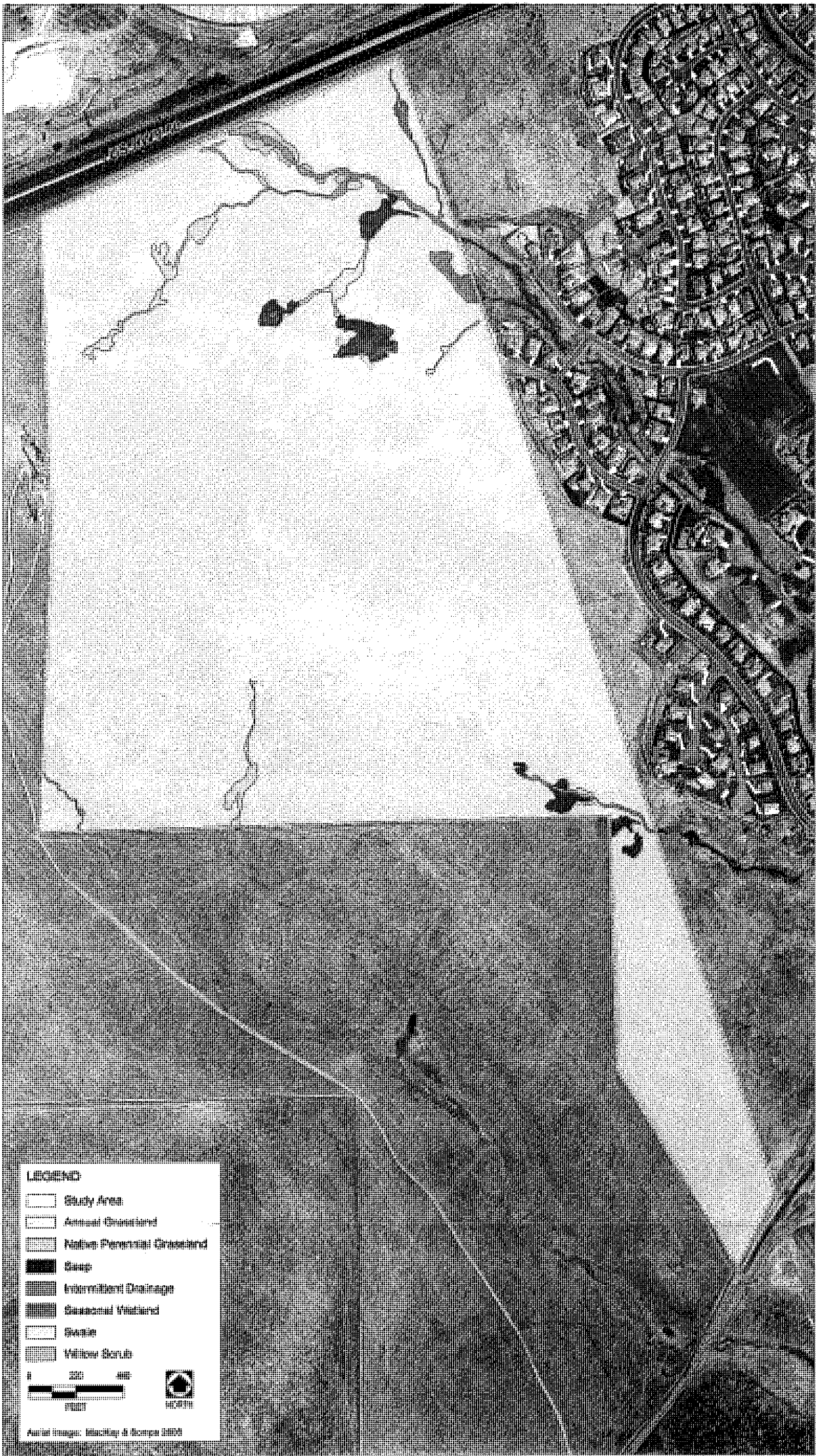
## VEGETATION

The project site is predominantly characterized by annual grassland with occurrences of seasonal wetlands, freshwater seeps, swales, willow scrub and intermittent drainages throughout the property. A cluster of cottonwoods (*Populus fremontii*) and willows (*Salix goodingii* and *Salix laevigata*) is growing around one of the seeps and was assessed in a tree survey of the site conducted by EDAW on June 23, 2006. The site also includes significant stands of native perennial grassland. This grassland is characterized by high cover of Purple needlegrass (*Nasella pulchra*) and occurs along two of the intermittent drainages.

The following paragraphs describe the vegetation communities present on the project site in more detail. Vegetation community descriptions are based on *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986). Exhibit 3 shows the locations and extent of each vegetation community within the project site. Appendix A includes a list of all plant species observed on the project site.

### Annual Grassland

Annual grassland characterized primarily by non-native grasses and weedy forbs covers the majority of the project site. This habitat type is characterized by a dense cover of nonnative annual grasses with numerous species of nonnative annual forbs, as well as native wildflowers. The annual grassland within the project site is not currently grazed or subject to any maintenance such as mowing. Grass species observed in the annual grassland include ripgut (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), Italian ryegrass (*Lolium multiflorum*), purple needlegrass (*Nasella pulchra*), and medusahead (*Taeniatherum caput-medusae*). Common nonnative forbs include cut-leaved geranium (*Geranium dissectum*), Klamath weed (*Hypericum perforatum*), prickly sow thistle (*Sonchus asper*), and Italian thistle (*Carduus pycnocephalus*). Native wildflowers observed in the annual



**Vegetation Communities at the Folsom Heights-Centex Homes Project Site**

**Exhibit 3**

grassland within the project site include wild hyacinth (*Triteleia hyacinthina*), Ithuriel's spear (*Triteleia laxa*), purple owl's-clover (*Castilleja exserta*), harvest brodiaea (*Brodiaea elegans*), and Spanish lotus (*Lotus purshianus*).

### **Native Perennial Grassland**

Stands of native perennial grassland comprised of purple needlegrass (*Nassella pulchra*) are present in the northeast corner of the project site, adjacent to an intermittent drainage. Additional stands of purple needlegrass are present in the southeast portion of the project site along another intermittent drainage.

### **Seasonal Wetlands**

Three seasonal wetlands are present on the project site. Seasonal wetlands are wetlands that pond or remain flooded for long periods during a portion of the year, generally the rainy winter season, then dry up, typically in the spring or early summer. The seasonal wetlands on the project site are located in natural depressions or low flood terraces along intermittent drainages. Plant species present include common yellow monkeyflower (*Mimulus guttatus*), Baltic rush (*Juncus balticus*), rabbitsfoot grass (*Polypogon monspeliensis*), dense-flowered willowherb (*Epilobium densiflorum*), and iris-leaved rush (*Juncus xiphioides*).

### **Freshwater Seep**

Seven seeps are present on the project site. A seep is a wetland plant community characterized by dense cover of perennial herb species usually dominated by rushes, sedges, and grasses. Seep communities occur on sites with permanently moist or wet soils resulting from daylighting groundwater. Dominant species identified in the seeps include Baltic rush, iris-leaved rush, common spikerush (*Eleocharis macrostachya*), and white hedge-nettle (*Stachys albens*).

### **Swales**

Five swales are present on the project site. Swales are seasonal wetlands that have a drainage pattern but do not typically have a well-defined channel. Swales differ from seeps because they are supported by direct precipitation and runoff, not by groundwater. Dominant plant species observed in the on-site swales include hyssop loosestrife (*Lythum hyssopifolium*), foothill meadowfoam (*Limnanthes striata*), iris-leaved juncus, rabbitsfoot grass, common spikerush, and Italian ryegrass (*Lolium multiflorum*).

### **Willow Scrub**

A small area of willow scrub is present on the project site at the point where one intermittent drainage enters the project site via culvert beneath Highway 50. The willow scrub habitat is characterized by black willow (*Salix*

*goodingii*) and arroyo willow (*Salix lasiolepis*) with a sparse herbaceous understory that includes tall flatsedge (*Cyperus eragrostis*), dense-flowered willowherb, and fiddle dock (*Rumex pulcher*).

### **Intermittent Drainages**

Four intermittent drainages traverse the project site. Intermittent drainages are supported by both groundwater sources and rainwater runoff and only flow for part of the year, typically during the winter rainy season. The intermittent drainages range from approximately 5 to 50 feet in width at the ordinary high water mark (OHWM). Hydrophytic vegetation occurs within the OHWM of the intermittent drainage channels and becomes dense in flatter portions of the drainages where the channels are wide and relatively shallow. Dominant species observed within the OHWM include dense sedge (*Carex densa*), slender rush (*Juncus tenuis*), white hedge-nettle, and rabbitsfoot grass. The beds of the drainages contain rock and cobble. All of the intermittent drainages, with the exception of one, supported shallow water in the low flow channel during the time the wetland delineation was conducted in April 2006.

## **WILDLIFE HABITAT AND COMMUNITIES**

Wildlife habitats on the project site are primarily annual grassland with small amounts of various wetland habitats. These vegetation types are described above in the *Vegetation* section. In addition, scattered willows and cottonwood (*Populus fremontii*) trees are present on the project site.

Common wildlife that were either observed during the reconnaissance level survey or are expected to occur include those typically associated with grassland and seasonal wetland habitats in the Central Valley such as red-winged blackbird, European starling, and western meadowlark.

A nine quad search centered on the Clarksville 7.5-minute USGS quadrangle was performed in both the CNDDB and CNPS databases to identify sensitive biological resources, including sensitive habitats and special-status species, that are known to occur in the vicinity of the project site. Sensitive biological resources include those that are afforded special protection through the California Environmental Quality Act (CEQA), California Fish and Game Code including the California Endangered Species Act (CESA), federal Endangered Species Act (ESA), the federal Clean Water Act (CWA), or local plans, policies, and regulations.

### **Special-Status Species**

Special-status species include plants and animals that are legally protected or that are otherwise considered sensitive by federal, state, or local resource conservation agencies and organizations. These include:

- ▶ plant and wildlife species that are listed by the state and/or federal Endangered Species Act as rare, threatened, or endangered;

- ▶ plant and wildlife species considered candidates for listing or proposed for listing;
- ▶ wildlife species identified by DFG or the U.S. Fish and Wildlife Service (USFWS) as species of concern;
- ▶ wildlife species identified by DFG as fully protected; and
- ▶ plants considered by the CNPS to be rare, threatened, or endangered.

The term California Species of Special Concern is applied by DFG to animals not listed under the federal ESA or the CESA, but nonetheless declining at a rate that could result in listing, or historically occurred in low numbers and known threats to their persistence currently exist.

Tables 1 and 2 below provide lists of special-status plant and wildlife species known or with potential to occur on the project site based on the results of the database searches, habitat types present, and the elevation range and habitat requirements of the species identified in the database searches. A number of special-status species that have been documented in the region are not addressed in this report because they are restricted to higher elevations or to habitats that are not present on the project site.

### **Special-Status Plants**

Based on database searches and existing environmental documents, EDAW botanists identified 2 special-status plants that have potential to occur on the project site. These two species; Bogg's Lake hedge-hyssop (*Gratiola heterosepala*) and Legenere (*Legenere limosa*) are on CNPS List 1B (plants considered rare, threatened, or endangered in California and elsewhere).

Table 1 provides information on these species including their listing status, habitat, distribution, flowering period, and potential to occur on the project site. Special-status plant species information provided in Table 1 is taken primarily from the *CNPS Electronic Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2006) and *The Jepson Manual Higher Plants of California* (Hickman 1993).

In addition to the species listed in Table 1 eighteen other plants were identified in the CNDDDB and CNPS database searches but were not included in the table for the reasons provided below. Stebbin's morning glory (*Calystegia stebbinsii*), Pine Hill ceanothus (*Ceanothus roderickii*), Pine Hill flannelbush (*Fremontodendron decumbens*) and El Dorado County mule ears (*Wyethia reticulata*) are known only from occurrences on the Pine Hill gabbro formation east of the project site in El Dorado county. Big-scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*), Red Hills soap root (*Chlorogalum grandiflorum*), El Dorado bedstraw, (*Galium californicum* ssp. *sierrae*), Bisbee Peak rush rose (*Helianthemum suffrutescens*), and Layne's ragwort (*Senecio layneae*) are also endemic to gabbroic and serpentine soils, which are absent from the project site. Bisbee Peak rush rose (*Helianthemum suffrutescens*) is usually found on serpentine, gabbroic, or lone soils. Brandegee's

Table 1 Special-Status Plants with Potential to Occur on the Centex - Folsom Heights Property Site					
Species	Status <sup>1</sup>			Habitat and Blooming Period	Potential for Occurrence
	USFWS	DFG	CNPS		
Plants					
Boggs Lake hedge-hyssop <i>Gratiola heterosepala</i>			1B	Marshes and swamps and clay soils in vernal pools; 30 to 7,800 feet elevation; blooms April–August	Could occur; seeps and seasonal wetlands on the site provide marginally suitable habitat.
Legenere <i>Legenere limosa</i>			1B	Vernal pools; in beds of pools; 3 to 3,000 feet elevation; blooms April–June	Could occur; intermittent drainage on site provides marginally suitable habitat.
<sup>1</sup> Legal Status Definitions U.S. Fish and Wildlife Service (USFWS): T = Federal Threatened E = Federal Endangered SC = Federal Species of Concern (no formal protection)  California Department of Fish and Game (DFG): R = Rare T = Threatened E = Endangered  California Native Plant Society (CNPS) Listing Categories: 1B = Plants rare, threatened, or endangered in California and elsewhere 2 = Plants rare, threatened, or endangered in California but more common elsewhere 3 = Plants for which more information is needed – a review list 4 = Plants of limited distribution – a watch list  Source: EDAW 2006, CNPS 2006, CNDDDB 2005					

clarkia (*Clarkia biloba* ssp. *brandegeea*), Tuolumne button-celery (*Eryngium pinnatisectum*), Aharts's dwarf rush (*Juncus leiostermus* var. *ahartii*), Pincusion navarretia (*Naverettia myersii* ssp. *myersii*), Slender orcutt's grass (*Orcuttia tenuis*), and Sacramento orcutt grass (*Orcuttia viscida*) are restricted to vernal pools habitats, which are also absent from the site.

### Special-Status Wildlife

A thorough inventory or focused surveys for wildlife have not been completed for the project site. However, based on the results of field reconnaissance surveys and database searches, EDAW wildlife biologists determined that 7 special-status wildlife species are known from or have the potential to occur at the project site. The likelihood of occurrence for each of these species was classified as either known to occur, expected, could occur or not expected. This classification was based primarily on the extent and quality of habitat in the project area; it was also based on the proximity of the project area to known extant occurrences of the species and the regional

distribution and abundance of the species. The regulatory status, habitat associations, and likelihood of occurrence of these species are summarized in Table 2.

Table 2 Special-Status Animals With Potential to Occur on the Centex - Folsom Heights Property Site				
Species	Status <sup>1</sup>		Habitat	Likelihood of Occurrence
	USFWS	DFG		
<b>Birds</b>				
Northern harrier <i>Circus cyaneus</i>	--	SC	Grasslands, agricultural fields, and freshwater marsh.	Expected; marginal foraging and nesting habitat present on the site.
White-tailed kite <i>Elanus leucurus</i>	--	FP	Forage in grasslands and agricultural fields; nest in isolated trees or small woodland patches.	Expected; suitable foraging and marginal nesting habitat present on site.
Western burrowing owl <i>Athene cunicularia hypugea</i>	--	SC	Forage in grasslands, agricultural land, and open woodlands; nests in burrows made ground squirrels and other types of underground refuge.	Could occur; marginal foraging and nesting habitat present on the site.
Ferruginous hawk <i>Buteo regalis</i>	--	SC	Forages in grasslands, agricultural fields, and other open habitats; does not nest in California.	Expected; marginal foraging and nesting habitat present on the site.
Swainson's hawk <i>Buteo swainsoni</i>	--	CT	Forages in grasslands and agricultural land, nests in riparian and isolated trees.	Not expected; marginal foraging habitat is present on site but the site location is just east of the species' range.
Tricolored blackbird <i>Agelaius tricolor</i>	--	SC	Forages in agricultural land and grasslands; nests in marshes and other areas that support cattails or dense thickets.	Could occur; marginal foraging is present on the site.
<b>Mammals</b>				
American Badger <i>Taxidea taxus</i>		SC	Drier open shrub, forest, and herbaceous habitats with friable soils.	Could occur; the closest CNNDDB occurrence (1990) is 10 miles to the southwest in Rancho Cordova.
<b>1 Legal Status Definitions</b> U.S. Fish and Wildlife Service (USFWS): T = Federal Threatened E = Federal Endangered SC = Federal Species of Concern (no formal protection)  California Department of Fish and Game (DFG): R = Rare T = Threatened E = Endangered FP = Fully Protected (legally protected, no take allowed) SC = Species of Special Concern (no formal protection) Source: EDAW 2006, CNDDDB 2006				

Nineteen additional special-status animal species were initially identified during the database searches as having the potential to occur in the project site. However, based on reconnaissance field surveys and assessment of database records, these species are not expected to occur and were eliminated from further analysis because no suitable habitat occurs at the project site or the site is outside of the known range of these species.

### **Other Ecologically Significant Wildlife Resources**

A resource is considered ecologically significant if it is:

- ▶ important to the essential character of the unit, and contributes, in part, to its statewide significance; or
- ▶ regionally significant, is an important component of a systemwide plan, or contributes to the persistence of regional or statewide biodiversity; or
- ▶ documented as significant on recognized preservation or protection lists or otherwise designated with special status by a recognized authority.

One group of resources at the project site is considered ecologically significant: the raptor community. This resource is discussed below.

### ***Raptor Community***

Although not all raptors are considered special-status species, they are a sensitive biological resource protected under Section 3503.5 of the California Fish and Game Code, which prohibits take or destruction of raptors, including their nests and eggs. Additionally, raptors are considered ecologically significant as a group because they:

- ▶ function at a high trophic level and their populations are typically sensitive to the distribution and local abundance of prey populations;
- ▶ represent a wide range of life histories with respect to nesting, foraging, and habitat-use requirements;
- ▶ include several species sensitive to habitat disturbance and loss; and
- ▶ are generally visible and an important component of a wildlife viewing experience. Also, raptor nests are protected by the California Fish and Game Code.

The annual grassland habitat and scattered trees found at the project site may provide winter, breeding, and migration habitat for a number of the raptor species known to occur over the larger region. These species include red-tailed hawk, red-shouldered hawk, Cooper's hawk, sharp-shinned hawk, and American kestrel (*Falco*



*sparverius*). Although nesting by raptors could occur at the site, the suitability of woodland habitat for raptor nesting is considered low to moderate due to a small number of large trees.

## **SENSITIVE HABITATS**

Sensitive habitats include those that are of special concern to resource agencies or are afforded specific consideration through the CEQA, Section 1602 of the California Fish and Game Code, Section 404 of the CWA, and the State's Porter Cologne Act, as discussed under *Regulatory Setting* below. Sensitive habitats may be of special concern to these agencies and conservation organizations for a variety of reasons, including their locally or regionally declining status, or because they provide important habitat to common and special-status species. Many of these communities are tracked in DFG's Natural Diversity Database, a statewide inventory of the locations and conditions of the state's rarest plant and animal taxa and vegetation types. The seasonal wetlands, freshwater seeps, swales, willow scrub, intermittent drainages and native perennial grassland described above would all be considered sensitive habitats.

## **REGULATORY SETTING**

### **FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS**

#### **CLEAN WATER ACT**

Section 404 of the CWA establishes a requirement that an applicant must obtain a permit before conducting any activity that involves any discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters of the United States, interstate waters, all other waters where the use or degradation or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries.

Wetlands are defined as those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Jurisdictional wetlands must meet three wetland delineation criteria: hydrophytic vegetation, hydric soil types, and wetland hydrology. Many surface waters and wetlands in California meet the criteria for waters of the United States, including intermittent streams and seasonal lakes and wetlands. Pursuant to Section 404 of the CWA, the USACE regulates and issues permits for activities that involve the discharge of dredged or fill materials into waters of the United States.

Pursuant to Section 401 of CWA, projects that apply for a USACE permit for discharge of dredge or fill material must obtain a certificate from the appropriate state agency stating that the intended dredge or fill activity is

consistent with the state's water quality standards and criteria. In California, the authority to grant water quality certification is delegated to the relevant regional water quality control board (RWQCB).

### **Federal Endangered Species Act**

USFWS has authority over projects that may affect the continued existence of a federally listed (threatened or endangered) species. Section 9 of the ESA prohibits the "take" of federally listed species; take is defined under the ESA, in part, as killing, harming, or harassment. Under federal regulations, take is further defined to include habitat modification or degradation where it actually results in death or injury to wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.

Section 7 of the ESA outlines procedures for federal interagency cooperation to conserve federally-listed species and designated critical habitat. Critical habitat identifies specific areas that have the physical and biological features that are essential to the conservation of a listed species, and that may require special management considerations or protection. Section 7(a)(2) requires federal agencies to consult with USFWS to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat.

For projects where federal action is not involved and take of a listed species may occur, the project proponent may seek to obtain an incidental take permit under Section 10(a) of the ESA. That section allows USFWS to permit the incidental take of listed species if such take is accompanied by a habitat conservation plan that includes components to minimize and mitigate impacts associated with the take.

### **Migratory Bird Treaty Act (MBTA)**

The MBTA first enacted in 1918, implements domestically a series of treaties between the United States and Great Britain (on behalf of Canada), Mexico, Japan, and the former U.S.S.R., which provide for international migratory bird protection and authorize the Secretary of the Interior to regulate the taking of migratory birds. MBTA provides that it shall be unlawful, except as permitted by regulations, "at any time, by any means, or in any manner, to pursue, take, or kill any migratory bird, or any part, nest or egg of any such bird, included in the terms of conventions" with certain other countries (16 U.S.C. 703). This includes direct and indirect acts, although harassment and habitat modification are not included unless they result in direct loss of birds, nests, or eggs.

## **STATE PLANS, POLICIES, REGULATIONS, AND LAWS**

### **California Endangered Species Act**

In accordance with CESA and Section 2081 of the California Fish and Game Code, a permit from DFG is required for projects that could result in the take of a species state-listed as threatened or endangered. Under CESA, “take” is defined as an activity that would directly or indirectly kill an individual of a species, but the definition does not include “harm” or “harass,” as the federal act does. As a result, the threshold for a take under CESA is higher than that under ESA.

### **Section 1602 of the California Fish and Game Code – Streambed Alterations**

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports fish or wildlife resources is subject to regulation by DFG, pursuant to Section 1602 of the California Fish and Game Code. Section 1602 states that it is unlawful for any governmental agency, including state, local, or any public utility, to substantially divert or obstruct the natural flow or substantially change: 1) the bed, channel, or bank of any river, stream, or lake, or 2) use any material from the bed, bank, or channel of any river, stream, or lake, or deposit or dispose of debris, wastes, or 3) other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake without first notifying DFG of such activity. The regulatory definition of a stream is a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports wildlife, fish, or other aquatic life. This includes watercourses having a surface or subsurface flow that support or have supported riparian vegetation. DFG’s jurisdiction within altered or artificial waterways is based upon the value of those waterways to fish and wildlife.

### **California Fish and Game Code Sections 3503–3503.5 – Protection of Bird Nests and Raptors**

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 specifically states that it is unlawful to take, possess, or destroy any raptors (i.e., hawks, owls, eagles, and falcons), including their nests or eggs. Typical violations of these codes include destruction of active nests resulting from removal of vegetation in which the nests are located. Violation of Section 3503.5 could also include failure of active raptor nests resulting from disturbance of nesting pairs by nearby project construction.

### **Fully Protected Species under the Fish and Game Code**

Protection of fully protected species is described in four sections of the Fish and Game Code that list 37 fully protected species (Fish and Game Code Sections 3511, 4700, 5050, and 5515). These statutes prohibit take or possession at any time of fully protected species. DFG is unable to authorize incidental take of fully protected

species when activities are proposed in areas inhabited by those species. DFG has informed non-federal agencies and private parties that they must avoid take of any fully protected species in carrying out projects.

### **Porter-Cologne Water Quality Control Act**

Under Porter-Cologne, waters of the state fall under jurisdiction of the RWQCB. Under the act, the RWQCB must prepare and periodically update water quality control basin plans. Each basin plan sets forth water quality standards for surface water and ground water, as well as actions to control non-point and point sources of pollution to achieve and maintain these standards. Projects that affect wetlands or waters must meet waste discharge requirements of the RWQCB, which may be issued in addition to a water quality certification under Section 401 of the CWA.

### **INFORMAL SPECIES DESIGNATIONS**

Both the Federal and State governments maintain lists of species that are not legally protected but are nevertheless rare or uncommon. Some of these species may be scarce enough to qualify for listing under the respective endangered species acts. In addition, the CNPS maintains lists of species in California that are considered rare or endangered according to their criteria.

#### **California Department of Fish and Game**

The DFG maintains an informal list of species called species of special concern. These are broadly defined as plant and wildlife species that are of concern to the DFG because of population declines and restricted distributions, and/or they are associated with habitats that are declining in California. These species are inventoried in the CNDDDB regardless of their legal status. Impacts to species of special concern may be considered significant.

#### **California Native Plant Society**

The CNPS has developed lists of plants of special concern in California. A CNPS List 1A plant is a species, subspecies, or variety that is considered to be extinct. A List 1B plant is considered rare, threatened, or endangered in California and elsewhere. A List 2 plant is considered rare, threatened, or endangered in California but is more common elsewhere. A List 3 plant is potentially endangered but additional information on rarity and endangerment is needed. A List 4 plant has a limited distribution but is presently not endangered. Impacts to List 1 and 2 plants are frequently considered significant. All species on Lists 1 and 2 meet the definitions of Section 1901, Chapter 10 of the Native Plant Protection Act (NPPA) or Sections 2062 and 2067 of CESA and are eligible for state listing. It is strongly recommended that CNPS List 1 and List 2 species be fully considered during the CEQA process. Some of the plants on List 3 meet the definitions of Section 1901, Chapter 10 of the NPPA or Sections 2062 and 2067 of CESA and are eligible for state listing. DFG and CNPS recommend that List 3 plants

be considered during the CEQA process. Plants on List 4 generally do not meet the definitions of Section 1901, Chapter 10 of the NPPA or Sections 2062 and 2067 of CESA and are not currently eligible for state listing. However, these species are generally of local concern and the CNPS and DFG recommend consideration of List 4 species during the CEQA process particularly in areas where the species is especially uncommon or has sustained a significant decline.

## **RECOMMENDATIONS**

The project site supports suitable habitat for two special-status plant species and 7 special-status wildlife species. It is not known whether any special-status plant species currently occur on the project site, as not focused special-status plant surveys have been conducted. Likewise, no focused surveys for special-status wildlife have been conducted, though the project site provides suitable foraging habitat for several special-status raptor species.

In order to determine potential impacts to special-status species with potential to occur on the project site from project implementation, it is recommended that Centex Homes retain a qualified botanist and wildlife biologist to conduct these surveys at the appropriate times of year when special-status species would be identifiable. For special-status plant species, this time corresponds to the blooming period of the target species. For special-status wildlife, the timing may vary based on the target species life cycle and/or migration patterns.

## REFERENCES

- California Native Plant Society (CNPS). 2006. *Electronic Inventory of Rare and Endangered Vascular Plants of California*. Available: <http://northcoast.com/~cnps/cgi-bin/cnps/sensinv.cgi> Last updated September 28, 2005. Accessed January 10, 2006.
- California Native Plant Society (CNPS). 2001. Inventory of Rare and Endangered Plants of California (sixth edition). Rare Plant Scientific Advisory Committee, David P. Tibor, Convening Editor. California Native Plant Society. Sacramento, CA.
- California Natural Diversity Data Base (CNDDB). 2005 [October]. Results of electronic record search. California Department of Fish and Game, Wildlife and Habitat Data Analysis Branch. Sacramento, CA.
- EDAW. 2006a. Preliminary Delineation of Waters of the United States, Including Wetlands, Centex – Folsom Heights Property. Prepared for Centex Homes. Roseville, CA.
- EDAW. 2006b. Tree Survey for the Centex – Folsom Heights Property. Prepared for Centex Homes. Roseville, CA.
- Environmental Laboratory. 1987. U.S. Army Corps of Engineers Wetlands Delineation Manual. (Technical Report Y-87-1.) U.S. Army Corps of Engineers Waterways Experiment Station. Vicksburg, MS.
- Holland, R. F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. California Department of Fish and Game; Non-game Heritage Division. Sacramento, CA.

## **APPENDIX A**

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### List of All Plant Species Observed on the Project Site

**FORTHCOMING**



Preliminary Delineation of Waters of the United States  
Centex – Folsom Heights Property



Prepared by:  
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June 28, 2006

**EDAW**

Preliminary Delineation of Waters of the United States  
**Centex – Folsom Height Property**



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## ACRONYMS AND ABBREVIATIONS

CWA	Clean Water Act
ED	ephemeral drainage
FAC	facultative
FACU	facultative upland
FACW	facultative wetland
FS	freshwater seep
GPS	global positioning system
msl	mean sea level
NI	no indicator
NL	not listed
NRCS	Natural Resources Conservation Service
OBL	obligate
OHWM	ordinary high water mark
UPL	upland
USACE	U.S. Army Corps of Engineers
USFS	United States Forest Service
USGS	U.S. Geological Survey

## INTRODUCTION

The Folsom Heights project site is located on the Sacramento-El Dorado County line and is bordered by Highway 50 to the north and White Rock Road to the south (Exhibits 1 and 2). The site is within Sacramento County, adjacent to the El Dorado County line. The site (APN numbers 072 0270 028, 072 0070 001 and 072 0070 023) is within the watershed of Carson Creek, a tributary to Deer Creek, which is tributary to the Cosumnes River. The approximately 189-acre project site has an elevation range of approximately 550 to 800 feet and is within the Clarksville USGS 7.5-minute quadrangle.

The project site is predominantly characterized by annual grassland on gently sloping to steep topography. Also present on the project site are seasonal wetland, freshwater seeps, swales, intermittent drainage, and willow scrub. The site is currently undeveloped but traversed by a number of dirt roads. Current surrounding land use includes residential, commercial, and cattle grazing with residential and commercial development planned for much of the undeveloped land immediately adjacent to the south and east.

This report presents the results of the delineation of waters of the United States, as defined by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA), for the project site. It is considered preliminary until verified by the Sacramento District of the USACE.

## DELINEATION METHODS

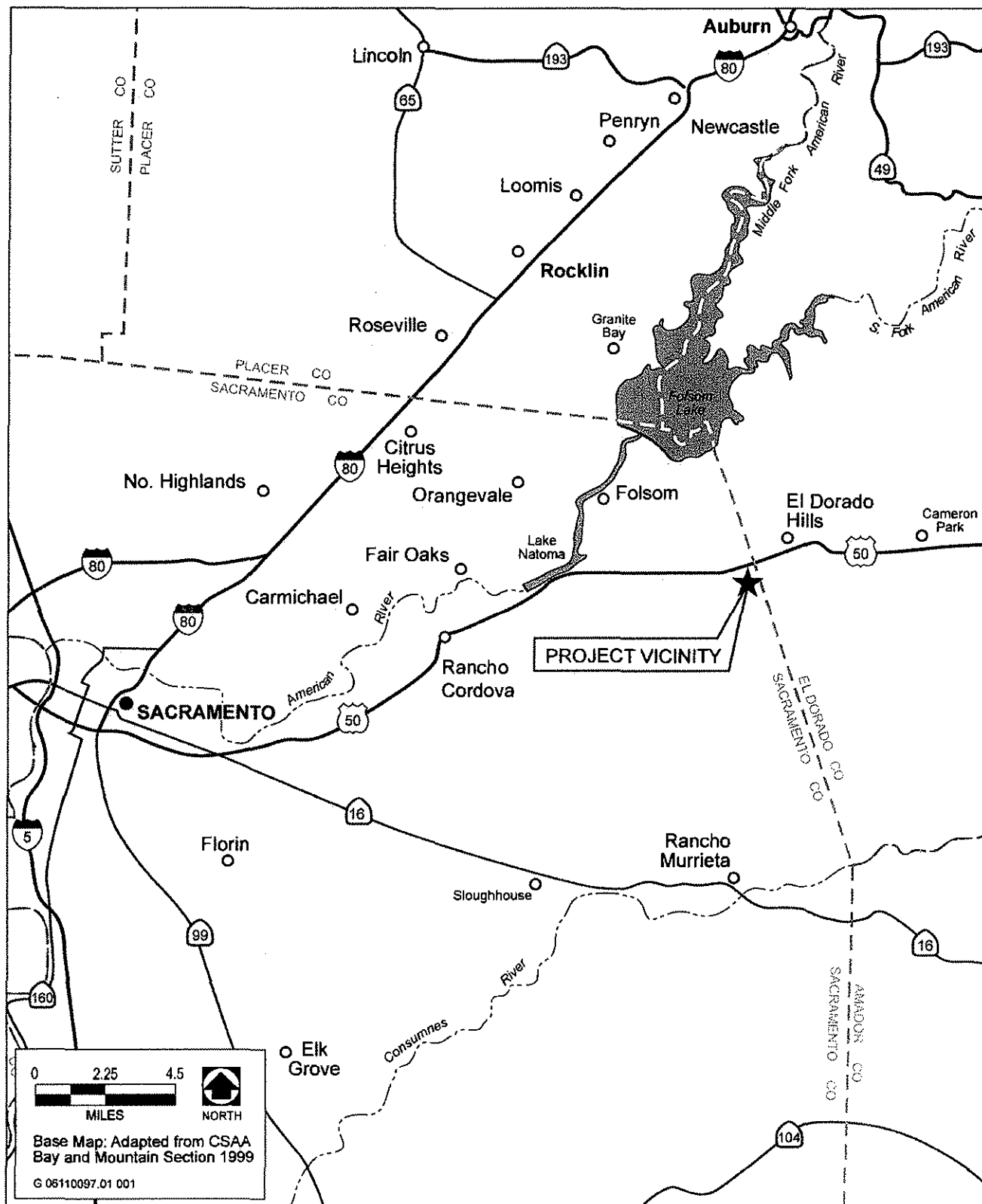
Before conducting the field delineation survey of the project site, EDAW biologists reviewed a color aerial photograph of the study site (1 inch = 200 feet scale) obtained from Centex Homes and the previously prepared biological constraints report (Foothill Associates 2005) to determine areas of potential USACE jurisdiction. The project site was surveyed on May 11 and 18, 2006 by EDAW wetland ecologists Tammie Beyerl and Petra Unger. There were no precipitation events in the area in the weeks immediately preceding the delineation but there was above average precipitation in the area through March and early April 2006.

## WETLANDS

The methods identified in the USACE 1987 wetlands delineation manual (Environmental Laboratory 1987) were used to delineate wetlands that are potentially subject to USACE jurisdiction under Section 404 of the federal CWA. The 1987 manual provides technical guidelines and methods for the three-parameter approach to determining the location and boundaries of jurisdictional wetlands. This approach requires that an area support positive indicators of hydrophytic vegetation, hydric soils, and wetland hydrology to be considered a jurisdictional wetland. Routine wetland determination forms were completed for 23 sample points. Potentially jurisdictional areas and sample point locations were recorded digitally using a global positioning system (GPS) data logger (Thales Mobile Mapper CE) and imported onto an electronic version of the aerial photograph. All other areas not recorded with the GPS data logger were mapped in the field and later digitized onto the aerial photograph.

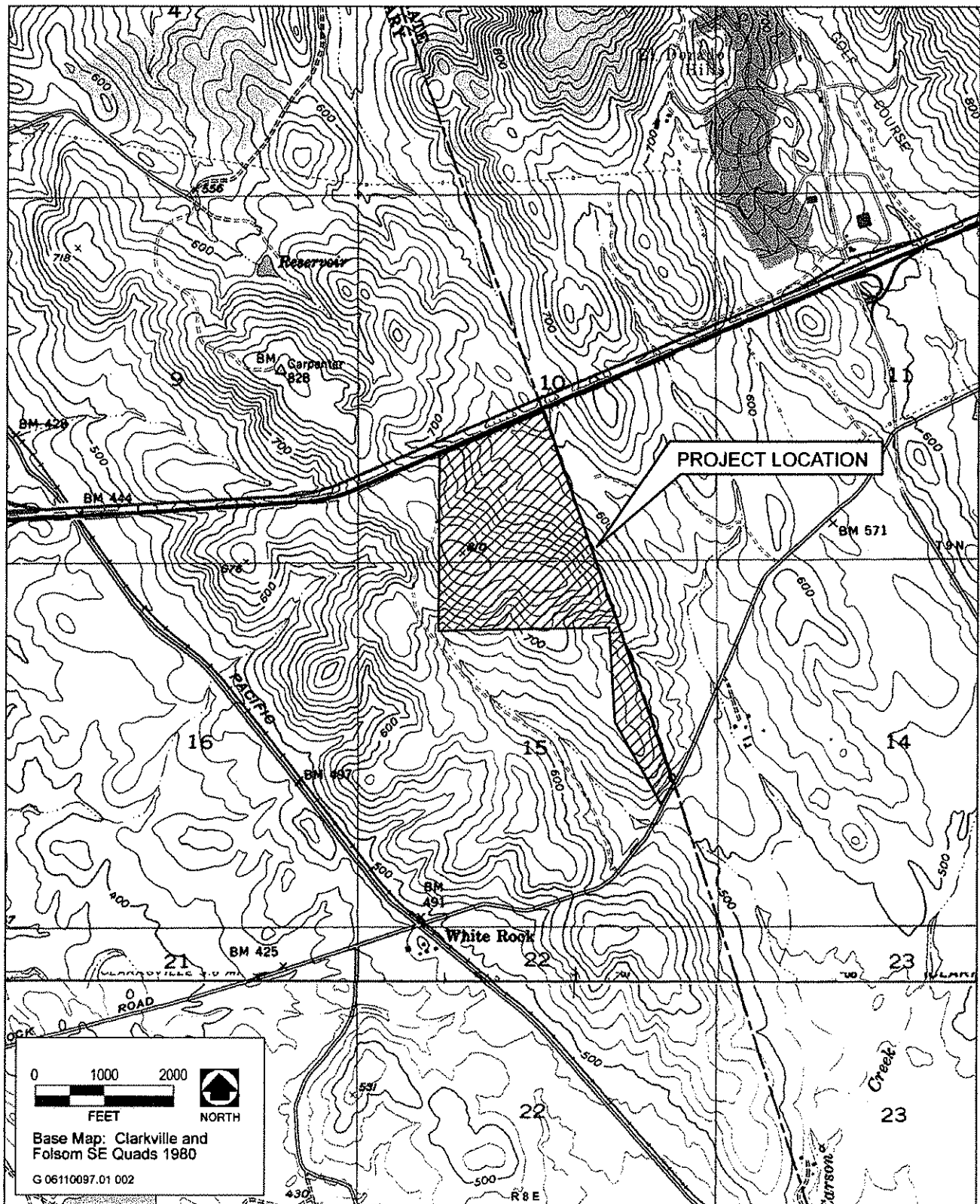
## HYDROPHYTIC VEGETATION

To determine whether the area at a sample point was dominated by hydrophytic vegetation, plant species at each sample site were recorded and the wetland indicator status was designated for the dominant species using the U.S. Fish and Wildlife Service National List of Plants that Occur in Wetlands: 1988 California (Region 0) (Reed 1988). Hydrophytic species include those listed as obligate (OBL), facultative wetland (FACW, FACW\*), or facultative (FAC; FAC\*, FAC+, but not FAC-), which corresponds to a percent probability for a given species to occur in wetlands. An asterisk is assigned to indicators derived from limited ecological information. The plus (+)



**Project Vicinity Map**

**Exhibit 1**



**Project Location Map**

**Exhibit 2**

and minus (-) designations specify the higher or lower part of the frequency range. The plant indicator categories are defined as follows:

- ▶ OBL – greater than 99% occurrence in wetlands,
- ▶ FACW – between 67% and 99% occurrence in wetlands, and
- ▶ FAC – between 34% and 67% occurrence in wetlands.

The sample site was considered dominated by hydrophytic vegetation if the percentage of hydrophytic species was greater than 50%.

Species that usually occur in nonwetlands (67–99% estimated probability), but are occasionally found in wetlands (1–33% estimated probability), are identified as facultative upland (FACU). Obligate upland (UPL) species occur in wetlands in another region, but occur almost always (>99%) in nonwetlands under natural conditions in California (Region 0). An NI (no indicator) designation is recorded for those species for which insufficient information was available to determine an indicator status. Species not listed in Reed (1988) are indicated by NL. These four indicators are used to identify species not considered hydrophytic.

## **WETLAND HYDROLOGY**

Wetland hydrology was assessed by recording observations such the presence of drift lines, flooded or saturated soil conditions, drainage patterns in wetlands, and other indicators of wetland hydrology. In addition, all potential jurisdictional areas were evaluated in terms of their status as a navigable waterway or their adjacency or hydrological connection to a navigable waterway.

## **HYDRIC SOILS**

Soils were examined by digging soil test pits to determine whether positive hydric soil indicators exist in the project site. Soils were described in terms of depth, matrix color, mottle color (when present), moisture status, and other diagnostic features indicative of hydric soils, such as the presence of concretions and oxidized rhizospheres (a redoximorphic feature, according to Vepraskas [1992]). Hydric soil indicators were based on those provided in the 1987 USACE manual and Vepraskas (1992). Where these sources disagree, determinations were based on Vepraskas (1992) because it reflects more current research on identification of hydric soils, including a list of redoximorphic features that develop under saturated, anaerobic conditions. Potential jurisdictional wetlands that did not have redoximorphic features were evaluated further to determine if they have hydric soils (SCS 1991). According to Natural Resource Conservation Service (NRCS) (formerly SCS) criteria 3 and 4, soils are considered hydric if they pond or flood frequently for long durations during the growing season.

## **DRAINAGES**

Drainages were delineated based on their ordinary high-water mark (OHWM). A drainage's OHWM typically corresponds with characteristics such as shelving, scour lines, and other natural linear features that define the bed and bank portion of the channel that floods under normal conditions.

## **SOIL SURVEY**

According to the Soil Surveys of El Dorado County (NRCS 1974) and Sacramento County, California (NRCS 1993), the soils in the project site belong to the Argonaut and Auburn soils series. A description of the soil units present on the project site is provided below. None of the soils mapped on the project site are included on the list of hydric soils of California. A soils map with the project site boundaries is included in Appendix B.



## **Argonaut Series**

The Argonaut series consists of well-drained soils underlain by metabasic or basic rocks at a depth of 20 to 40 inches. These soils are found on undulating to moderately steep, broad ridges with slopes of 2 to 30% and at elevations from 500 to 1,600 feet. Soils of this series primarily support annual grassland but include areas of oaks, foothill pine, and brush. The surface layer is strong brown, medium acid gravelly loam and gravelly silt loam about 7 inches thick. The subsoil is yellowish-red, yellowish-brown, and brown; medium acid and slightly acid heavy silt loam, clay, and gravelly clay. Weathered metaandesite is present at a depth of 30 inches.

### ***Argonaut gravelly loam, 2 to 15% slopes***

Permeability of this Argonaut soil is very slow, surface runoff is slow to medium, and the erosion hazard is slight to moderate. Less than 5 percent of the surface of this soil has bedrock outcrops. Included in this mapping unit are small areas of Auburn very rocky silt loam.

## **Auburn Series**

The Auburn series consists of well-drained soils that are underlain by hard metamorphic rocks at a depth of 12 to 26 inches. These soils are found on undulating to very steep foothills with slopes of 2 to 70% at elevations from 500 to 1,800 feet. Soils of this series primarily support annual grasses and oaks with scattered foothill pine and brush in some areas. The surface layer of Argonaut soils is brown, slightly acidic silt loam about 3 inches thick. The subsoil is reddish-yellow, slightly acidic silt loam. Weathered metabasic rock occurs at a depth of about 14 inches.

### ***Auburn silt loam, 2 to 30% slopes***

Permeability of this Auburn soil is moderate, surface runoff is medium or rapid, and erosion hazard is slight to moderate. Included in this unit are small areas of Argonaut, Creviscreek, Hicksville, and Mokelumne soils and Rock outcrop. Also included are soils that are less than 10 inches deep over bedrock. Creviscreek soils are very deep and occur along drainages, Hicksville soils are on low stream terraces, and Mokelumne soils are at the bases of slopes. Rock outcrop occurs as scattered ledges.

### ***Auburn very rocky silt loam, 2 to 30% slopes***

This Auburn soil is found on gently sloping to moderately steep slopes and the surface consists of 5 to 25% bedrock outcrops. Permeability is moderate, surface runoff is slow to medium, and the erosion hazard is slight to moderate. Included in this mapping unit are small areas of Argonaut very rocky loam, Boomer very rocky loam, and Sobrante very rocky silt loam.

### **Auburn-Argonaut-Rock outcrop complex, 8 to 30% slopes**

This soil unit is on foothills at elevations ranging from 150 to 830 feet. It primarily supports annual grassland plant communities and scattered oaks. The unit consists of approximately 40% Auburn soil, 35% Argonaut soil, and 10% Rock outcrop. Included in this mapping unit are small area of Mokelumne soils at the bases of slopes, soils that have slopes of greater than 30%, and soils that have bedrock at a depth of 10 inches or less. The Argonaut and Auburn soils are each described above.

### **Argonaut-Auburn complex, 3 to 8% slopes**

This soil unit is on foothills at elevations ranging from 160 to 660 feet. It primarily supports annual grassland with some scattered oaks. The unit consists of 45% Argonaut soil and 35% Auburn soil. Included in this mapping unit are small areas of Creviscreek, Hicksville, and Mokelumne soils and also Xerothents and Rock outcrop. Creviscreek soils occur along drainages, Hicksville soils are on low stream terraces, and Mokelumne soils are on

hills, and Xerothents are in dredge tailings. Also included are soils that have a clay surface layer and occur in swales, moderately deep soils that do not have a claypan, and areas that have 0 to 3 or 8 to 15% slopes. The Argonaut and Auburn soils are each described above.

## DELINEATION RESULTS

Sites qualifying as waters of the United States according to Section 404 of the CWA are depicted on the map in Appendix A. The locations of delineation sample sites are also depicted in Appendix A and are cross-referenced to the wetland determination data forms provided in Appendix C. Habitat descriptions for waters of the United States and non-jurisdictional habitats are included below. Representative photographs of the habitat types described below are provided in Appendix D.

A total of 5.899 acres of jurisdictional waters of the United States occur within the approximately 189-acre project site (Table 1). Wetlands in the project site consist of 0.625 acre of seasonal wetland, 2.214 acres of seep, 1.840 acres of swale, and 0.114 acre of willow scrub. The project site also includes approximately 1.106 acres of intermittent drainage. The remaining 183.483 acres in the project site consist of annual grassland, a non-jurisdictional habitat, as listed in Table 2.

Table 1 Acreages of Potentially Jurisdictional Waters of the United States				
Habitat	Wetlands	Hydrological Connectivity	Adjacency *	Acreage
<b>Seasonal Wetland (SW)</b>				
	SW1	Carson Creek (D)		0.473
	SW2	Carson Creek (D)	ID1	0.131
	SW3	Carson Creek (D)	ID4	0.021
	<b>SW Total</b>			<b>0.625</b>
<b>Seep (SP)</b>				
	SP1	Carson Creek (D)	ID2	0.416
	SP2	Carson Creek (D)	S5	0.297
	SP3	ID3 (F)	ID3	0.151
	SP4	Carson Creek (D)	ID3	0.330
	SP5	Carson Creek (D)		0.058
	SP6	Carson Creek (D)		0.843
	SP7	ID3 (F)	ID3, SP3	0.119
	<b>SP Total</b>			<b>2.214</b>
<b>Swale (S)</b>				
	S1	Carson Creek (D)	ID2	0.121
	S2	Carson Creek (D)		0.815
	S3	Carson Creek (D)		0.078
	S4	Carson Creek (D)		0.414
	S5	Carson Creek (D)		0.412
	<b>S Total</b>			<b>1.840</b>

Table 1 Acreages of Potentially Jurisdictional Waters of the United States				
Habitat	Wetlands	Hydrological Connectivity	Adjacency *	Acreage
<b>Willow Scrub (WS)</b>				
	WS1	Carson Creek (D)	ID2	0.114
	<b>WS Total</b>			<b>0.114</b>
<b>Intermittent Drainage (ID)</b>				
	ID1	Carson Creek (D)		0.148
	ID2	Carson Creek (C)		0.729
	ID3	Carson Creek (D)		0.198
	ID4	Carson Creek (D)		0.030
	<b>ID Total</b>			<b>1.106</b>
	<b>Total</b>			<b>5.899</b>
<b>Total- Potentially Jurisdictional Waters of the United States</b>				
* Adjacency / Hydrological Connectivity to USACE Jurisdictional Waters of the U.S. (see Jurisdictional Determination section for rationale). F = Connects, or potentially connects, by surface flow during flood or heavy rain events C = Confluent with, contiguous with, or located within, the listed feature D = Connected by ditch or other drainage feature CV = Connected by culvert				

## JURISDICTIONAL HABITAT TYPES

### Seasonal Wetlands

Three seasonal wetlands (SW) totaling 0.625 acre were mapped on the project site. Seasonal wetlands are wetlands that pond or remain flooded for long periods during a portion of the year, generally the rainy winter season, then dry up, typically in the spring or early summer.

The seasonal wetlands on the project site are located in natural depressions or low flood terraces along intermittent drainages (ID1, ID2, and ID4). Plant species present include common yellow monkeyflower (*Mimulus guttatus*, OBL), Baltic rush (*Juncus balticus*, OBL), rabbitsfoot grass (*Polypogon monspeliensis*, FACW+), dense-flowered willowherb (*Epilobium densiflorum*, OBL), and iris-leaved rush (*Juncus xiphioides*, OBL).

Hydric soil indicators including gleyed and low chroma color with mottles were observed in seasonal wetlands SW1 and SW2. A soil pit could not be dug deeper than 6 inches in SW3 due to the presence of cobbles but the soil was presumed to be hydric based on saturated soil conditions and dominance by an obligate perennial plant species. Soils in the seasonal wetlands were saturated to the surface with areas of inundation. Inundation and saturation in the upper 12 inches are primary indicators of wetland hydrology.

The boundaries of the seasonal wetlands were determined based upon abrupt changes in vegetation composition and topography. Data forms 1, 18, and 22 in Appendix C contain information on the seasonal wetlands and data forms 2 and 19 contain information on the upland habitat immediately adjacent to the seasonal wetlands. All three seasonal wetlands on the project site are located on unnamed intermittent drainages that are tributaries to Carson Creek. Carson Creek is ultimately connected to the Cosumnes River, a jurisdictional water of the United States. Therefore, the seasonal wetlands were delineated as jurisdictional wetlands based upon the presence of

hydrophytic vegetation, wetland hydrology, and hydric soils and connectivity to jurisdictional waters of the United States.

### Seeps

Seven seeps (SP1-SP7) totaling approximately 2.214 acres are present on the project site. A seep is a wetland plant community characterized by dense cover of perennial herb species usually dominated by rushes, sedges, and grasses. Seep communities occur on sites with permanently moist or wet soils resulting from daylighting groundwater. Dominant species identified in the seeps include Baltic rush, iris-leaved rush, common spikerush (*Eleocharis macrostachya*, OBL), and white hedge-nettle (*Stachys albens*, OBL). Hydric soil indicators including gleyed or low chroma colors were observed in the seeps. Primary indicators of wetland hydrology observed in the seeps include saturation in the upper 12 inches, inundation, and drainage patterns in wetlands.

The boundaries of the seeps were determined based upon abrupt changes in vegetation composition. Data forms 9, 10, 14, 15, 20, and 21 in Appendix C provide information about the seeps on the project site. Data forms 11 and 13 in Appendix C provide information about the upland habitat immediately adjacent to the seeps. All of the seeps with the exception of SP3 and SP7 are directly connected to intermittent drainage channels that are tributary to Carson Creek. While not directly connected to any drainage features, SP3 and SP7 are adjacent within 50 feet or less of an intermittent drainage channel that is tributary to Carson Creek and are connected to the intermittent drainage channel by surface flow during flood or heavy rain events. Carson Creek is ultimately connected to the Cosumnes River, a jurisdictional water of the United States. The seeps were delineated as jurisdictional wetlands based on the presence of hydrophytic vegetation, wetland hydrology, and hydric soils and connectivity to jurisdictional waters of the United States.

### Swales

Five swales (S1-S5) totaling approximately 1.840 acres are present on the project site. Swales are seasonal wetlands that have a drainage pattern but do not typically have a well-defined channel. Swales differ from seeps because they are supported by direct precipitation and runoff, not by groundwater. Dominant plant species observed in the on-site swales include hyssop loosestrife (*Lythum hyssopifolium*, FACW), foothill meadowfoam (*Limnanthes striata*, OBL), iris-leaved juncus, rabbitsfoot grass, common spikerush, and Italian ryegrass (*Lolium multiflorum*, FAC). Hydric soil indicators including gleyed or low chroma colors were observed in the seeps. Primary indicators of wetland hydrology observed in the seeps include saturation in the upper 12 inches, drift lines, and drainage patterns in wetlands.

The boundaries of the swales were determined based upon abrupt changes in vegetation composition and topography. Data forms 6, 8, 16, and 23 in Appendix C provide information about the swales on the project site. Data forms 7 and 17 in Appendix C provide information about the upland habitat immediately adjacent to the swales. All of the swales on the project site are directly connected to intermittent drainage channels that are tributary to Carson Creek. Therefore, the swales were delineated as jurisdictional wetlands based upon the presence of hydrophytic vegetation, wetland hydrology, and hydric soils and connectivity to jurisdictional waters of the United States.

### Willow Scrub

A small area (0.114 acre) of willow scrub is present on the project site at the point where ID2 enters the project site via culvert beneath Highway 50. The willow scrub habitat is characterized by black willow (*Salix goodingii*, OBL) and arroyo willow (*Salix lasiolepis*, FACW) with a sparse herbaceous understory that includes tall flatsedge (*Cyperus eragrostis*, FACW), dense-flowered willowherb, and fiddle dock (*Rumex pulcher*, FAC+). Soil at sample point 5 in the willow scrub habitat had a gleyed color indicating hydric soil and primary indicators of wetland hydrology observed include water marks, drift lines, and drainage patterns in wetlands. The willow scrub is contiguous with ID2, a tributary of Carson Creek. Therefore, the willow scrub habitat was delineated as a

jurisdictional wetland based upon the presence of hydrophytic vegetation, wetland hydrology, and hydric soils and connectivity to jurisdictional waters of the United States.

### Intermittent Drainages

A total of approximately 1.106 acres of intermittent drainage occur on the project site. Intermittent drainages are supported by both groundwater sources and rainwater runoff and only flow for part of the year, typically during the winter rainy season. Four intermittent drainages (ID1-ID4) that range from approximately 5 to 50 feet in width at the ordinary high water mark (OHWM) were mapped on the project site.

ID1 and ID2 are located in the northeast corner of the project site. ID1 flows from north to south and converges with ID2 inside the project boundary. ID2 flows in a southeasterly direction and converges with Carson Creek approximately 1.75 miles from the point where it flows off the project site. ID3 is located in the southeastern portion of the project site and flows in an easterly direction, converging with ID2 approximately 0.17 mile east of the project boundary. ID4 traverses the southwest corner of the site and flows in a southeasterly direction, converging with ID2 approximately 1.20 miles southeast of the project boundary. Hydrophytic vegetation occurs within the OHWM of the on-site intermittent drainage channels and becomes dense in flatter portions of the drainages where the channels are wide and relatively shallow. Dominant species observed within the OHWM include dense sedge (*Carex densa*, OBL), slender rush (*Juncus tenuis*, FACW), white hedge-nettle, and rabbitsfoot grass. The beds of the drainages contain rock and cobble. All of the intermittent drainages, with the exception of ID4, supported shallow water in the low flow channel during the time this delineation was conducted in April 2006.

Hydric soil indicators (low chroma color with mottles) were observed at sample point 3 in ID2 and ID1 was presumed to exhibit hydric soil indicators due to its similarity to and immediate connectivity with ID2. Soils in ID3 are presumed hydric based on an aquic moisture regime (i.e., saturated to the surface five weeks after the last precipitation event). ID4 does not exhibit hydric soil indicators within the OHWM.

Data forms 3 and 12 in Appendix C contain information about the intermittent drainages on the project site. Data forms 4 and 13 in Appendix C contain information about the upland habitat immediately adjacent to the intermittent drainages. All of the on-site intermittent drainages are hydrologically connected to Carson Creek, which is connected to the Cosumnes River via Deer Creek. The intermittent drainages were delineated as jurisdictional waters of the United States based upon connectivity to other jurisdictional waters of the United States.

### NON-JURISDICTIONAL HABITATS

#### Annual Grassland

Annual grassland characterized primarily by non-native grasses and weedy forbs covers the majority of the project site. This habitat type is characterized by a dense cover of nonnative annual grasses with numerous species of nonnative annual forbs, as well as native wildflowers. The annual grassland within the project site is not currently grazed or subject to any maintenance such as mowing. Grass species observed in the annual grassland include ripgut (*Bromus diandrus*, NL), soft chess (*Bromus hordeaceus*, FACU-), Italian ryegrass (*Lolium multiflorum*, FAC\*), purple needlegrass (*Nassella pulchra*, NL), and medusahead (*Taeniatherum caput-medusae*, NL). Stands of purple needlegrass (*Nassella pulchra*, NL) are present in the northeast corner of the project site, adjacent to ID2. Additional stands of purple needlegrass are present in the southeast portion of the project site along ID3. Common nonnative forbs include cut-leaved geranium (*Geranium dissectum*, FAC), Klamath weed (*Hypericum perforatum*), prickly sow thistle (*Sonchus asper*, FAC), and Italian thistle (*Carduus pycnocephalus*). Native wildflowers observed in the annual grassland within the project site include wild hyacinth (*Triteleia hyacinthine*, FACW\*), Ithuriel's spear (*Triteleia laxa*, NL), purple owl's-clover (*Castilleja exserta*, NL), harvest brodiaea (*Brodiaea elegans*, FACU), and Spanish lotus (*Lotus purshianus*, UPL).

## JURISDICTIONAL DETERMINATION

The project site contains 5.899 acres of potentially jurisdictional waters of the United States. These potentially jurisdictional waters of the United States consist of 0.625 acre of seasonal wetland, 2.214 acres of seep, 1.840 acres of swale, 0.114 acre of willow scrub, and 1.106 acres of intermittent drainage. Because these features are all hydrologically connected to Carson Creek, a feature that is connected to the Cosumnes River, a navigatable water, it was determined that these features are subject to USACE jurisdiction under Section 404 of the CWA. This jurisdictional determination is considered preliminary until verified by the USACE.

## REFERENCES

- Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. (Technical Report Y-87-1.) U.S. Army Engineer Waterways Experiment Station.
- Foothill Associates. 2005. *Preliminary Biological Constraints Analysis for the 185-acre Folsom Heights Parcels*. Letter Report Prepared for Centex Homes.
- Natural Resources Conservation Service (NRCS). 1993. *Soil Survey of Sacramento County*. U.S. Department of Agriculture in cooperation with Regents of the University of California (Agricultural Experiment Station). Washington, DC.
- Natural Resources Conservation Service (NRCS). 1974. *Soil Survey of El Dorado County*. U.S. Department of Agriculture in cooperation with Regents of the University of California (Agricultural Experiment Station). Washington, DC.
- Reed, P.B., Jr. 1988. *National List of Plant Species That Occur In Wetlands: California (Region 0)*. (Biological report 88[26.10].) U.S. Fish and Wildlife Service. Fort Collins, CO.
- Reed, P.B., Jr. 1997. *Draft Revisions to the National List of Plant Species That Occur In Wetlands: California (Region 0)*. (Biological report 88[26.10].) U.S. Fish and Wildlife Service. Fort Collins, CO.
- U.S. Soil Conservation Service (SCS). 1991. *Hydric Soils List of the United States*. U.S. Department of Agriculture. Washington, DC.
- Vepraskas, M. J. 1992. *Redoximorphic Features for Identifying Aquic Conditions*. (Technical bulletin 301.) North Carolina Agricultural Research Service, North Carolina State University. Raleigh, NC.

# **APPENDIX A**

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## Wetland Delineation Map



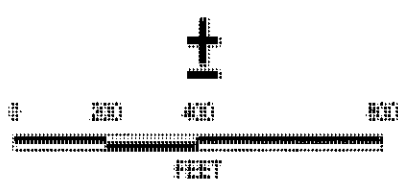
**Centex Homes - Folsom Heights Property**  
**Delineation of Waters of the U.S.**

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LEEND

- Sample Point
- Study Area
- Potentially Jurisdictional Habitat Type
- Seasonal Wetland
- Scrub
- Intermittent Drainage
- Swale
- Wetland Scrub
- Non-Jurisdictional Habitat Type
- Arctic Grassland

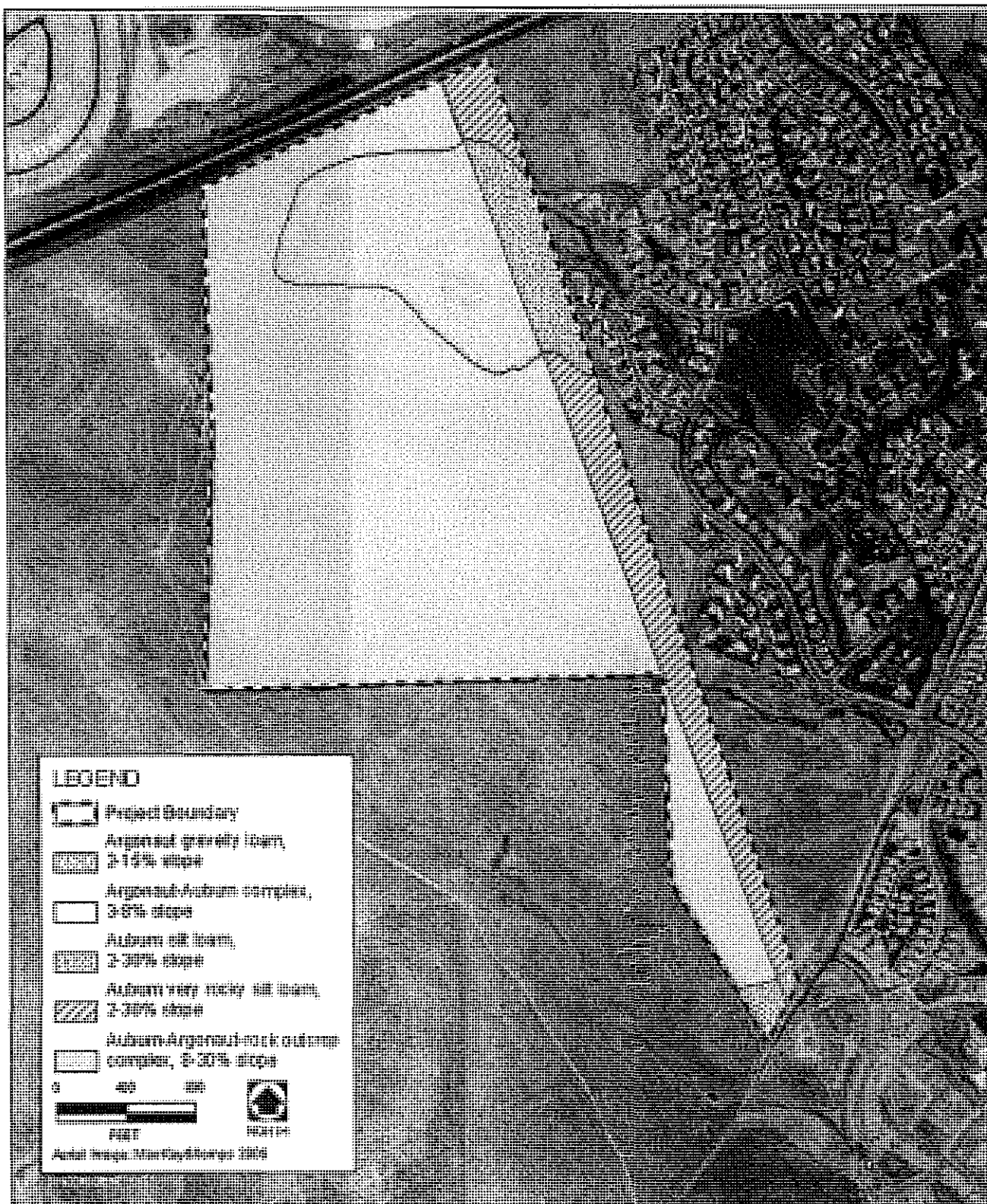




## **APPENDIX B**

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Soils Map



## Soils Map

## Appendix B

# APPENDIX C

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## Wetland Delineation Data Forms

**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/11/06
APPLICANT/OWNER:	Center	COUNTY:	Sac
INVESTIGATOR:	T. Beyerl, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?		Yes <input checked="" type="radio"/> NO <input type="radio"/>	COMMUNITY ID: ID ①
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?		Yes <input type="radio"/> NO <input checked="" type="radio"/>	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)		yes <input type="radio"/> NO <input checked="" type="radio"/>	PLOT ID: ①

SW2

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Limulus guttatus</i>	H	60	OBL	9. <i>Beta minor</i>	
2. <i>Polygonum monspeliense</i>	H	20	FACW+	10. <i>Potentilla glandulosa</i>	
3. <i>Epilobium densifl.</i>	H	20	OBL	11. <i>Rorippa nasturtium aquaticum</i>	
4.				12. <i>Juncus xiphioides</i>	
5.				13. <i>Typha latifolia</i>	
6.				14.	
7.				15.	
8.				16.	

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: dominated by hydrophytes - total cover = 95%

**HYDROLOGY**

✓	RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS:
	STREAM, LAKE OR TIDE GAUGE	PRIMARY INDICATORS:
	AERIAL PHOTOGRAPHS	✓ INUNDATED
	OTHER	SATURATED IN UPPER 12 INCHES
	NO RECORDED DATA AVAILABLE	WATER MARKS
		✓ DRIFT LINES
FIELD OBSERVATIONS:		SEDIMENT DEPOSITS
DEPTH OF SURFACE WATER	— in.	DRAINAGE PATTERNS IN WETLANDS
DEPTH TO FREE WATER IN PIT	6 in.	SECONDARY INDICATORS (2 OR MORE REQUIRED)
DEPTH TO SATURATED SOIL	0 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
site is on low terrace immediately adjacent to intermittent drainage in gently sloping terrain		WATER-STAINED LEAVES
		LOCAL SOIL SURVEY DATA
		FAC-NEUTRAL TEST
		OTHER (EXPLAIN IN REMARKS)
Remarks:		

[illegible]

HYDROPHYTIC VEGETATION PRESENT?	<u>YES</u>	NO	IS THIS SAMPLING POINT WITHIN A WETLAND? <u>YES</u> (CIRCLE) NO
WETLAND HYDROLOGY PRESENT?	<u>YES</u>	NO	
HYDRIC SOILS PRESENT?	<u>YES</u>	NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights		DATE:	5/11/06
APPLICANT/OWNER:	Center		COUNTY:	Sac
INVESTIGATOR:	T. Beyerl, P. Unger		STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?			<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID:
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?			Yes <input type="radio"/> <input checked="" type="radio"/> no	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)			yes <input type="radio"/> <input checked="" type="radio"/> no	PLOT ID:
				③

**VEGETATION**

other

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Carex densa</i>	H	50% OBL	9. <i>Typha latifolia</i>		
2. <i>Juncus tenuis</i>	H	50% FACW	10. <i>Epilobium densiflorum</i>		
3.			11. <i>Conium maculatum</i>		
4.			12. <i>Poa pratensis</i>		
5.			13. <i>Potentilla glandulose</i>		
6.			14. <i>Lactuca scariola</i>		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: total cover 100%  
 site is dominated by hydrophytes

**HYDROLOGY**

<input checked="" type="checkbox"/>	RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS:
	STREAM, LAKE OR TIDE GAUGE	PRIMARY INDICATORS:
		INUNDATED
<input checked="" type="checkbox"/>	AERIAL PHOTOGRAPHS	<input checked="" type="checkbox"/> SATURATED IN UPPER 12 INCHES
	OTHER	WATER MARKS
	NO RECORDED DATA AVAILABLE	DRIFT LINES
FIELD OBSERVATIONS:		SEDIMENT DEPOSITS
DEPTH OF SURFACE WATER	— in.	<input checked="" type="checkbox"/> DRAINAGE PATTERNS IN WETLANDS
DEPTH TO FREE WATER IN PIT	712 in.	SECONDARY INDICATORS (2 OR MORE REQUIRED)
DEPTH TO SATURATED SOIL	0 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
point is on low lying terrace		WATER-STAINED LEAVES
		LOCAL SOIL SURVEY DATA
		FAC-NEUTRAL TEST
		OTHER (EXPLAIN IN REMARKS)
Remarks:		

[illegible]

HYDROPHYTIC VEGETATION PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	IS THIS SAMPLING POINT WITHIN A WETLAND? <input checked="" type="radio"/> YES <input type="radio"/> NO
WETLAND HYDROLOGY PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
HYDRIC SOILS PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Height	DATE:	5/11/06
APPLICANT/OWNER:	Center	COUNTY:	Sac
INVESTIGATOR:	T. Bayol, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?		<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID: Willow Scrub
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?		Yes <input type="radio"/> <input checked="" type="radio"/> no	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)		yes <input type="radio"/> <input checked="" type="radio"/> no	PLOT ID: 5

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Salix goodingii</i>	50% T	OBL	9. <i>Cyperus eragrostis</i>		
2. <i>Salix lasiolepis</i>	50% T	FACW	10. <i>Epilobium densiflorum</i>		
3.			11. <i>Rhamnus tomentosa</i>		
4.			12. <i>Rumex pulcher</i>		
5.			13. <i>Polygonum sp</i>		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks:

**HYDROLOGY**

<input checked="" type="checkbox"/>	RECORDED DATA (DESCRIBE IN REMARKS):	WETLAND HYDROLOGY INDICATORS:
	STREAM, LAKE OR TIDE GAUGE	PRIMARY INDICATORS:
	AERIAL PHOTOGRAPHS	INUNDATED
	OTHER	<input checked="" type="checkbox"/> SATURATED IN UPPER 12 INCHES
	NO RECORDED DATA AVAILABLE	<input checked="" type="checkbox"/> WATER MARKS
	FIELD OBSERVATIONS:	<input checked="" type="checkbox"/> DRIFT LINES
	DEPTH OF SURFACE WATER	<input checked="" type="checkbox"/> SEDIMENT DEPOSITS
	— in.	<input checked="" type="checkbox"/> DRAINAGE PATTERNS IN WETLANDS
	DEPTH TO FREE WATER IN PIT	SECONDARY INDICATORS (2 OR MORE REQUIRED)
	3 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
	DEPTH TO SATURATED SOIL	WATER-STAINED LEAVES
	0 in.	LOCAL SOIL SURVEY DATA
on sand/gravel bar immediately adjacent to intermittent drainage		FAC-NEUTRAL TEST
		OTHER (EXPLAIN IN REMARKS)
Remarks:		



[illegible]

HYDROPHYTIC VEGETATION PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	IS THIS SAMPLING POINT WITHIN A WETLAND? <input checked="" type="radio"/> YES <input type="radio"/> NO
WETLAND HYDROLOGY PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
HYDRIC SOILS PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/11/06
APPLICANT/OWNER:	Center	COUNTY:	Sac
INVESTIGATOR:	T. Bayol, P. Ungr	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?		<input checked="" type="radio"/> Yes <input type="radio"/> NO	COMMUNITY ID:
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?		Yes <input type="radio"/> <input checked="" type="radio"/> NO	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)		yes <input type="radio"/> <input checked="" type="radio"/> NO	PLOT ID: 6

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. Eleocharis macrostachya	80%	OBL	9. Rumex pulcherr		
2. Lythrum hyssopifolium	20%	FACW	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: total covr = 40-60%

**HYDROLOGY**

<input checked="" type="checkbox"/>	RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS:
	STREAM, LAKE OR TIDE GAUGE	PRIMARY INDICATORS:
	AERIAL PHOTOGRAPHS	INUNDATED
	OTHER	SATURATED IN UPPER 12 INCHES
	NO RECORDED DATA AVAILABLE	WATER MARKS
	FIELD OBSERVATIONS:	<input checked="" type="checkbox"/> DRIFT LINES
	DEPTH OF SURFACE WATER	<input checked="" type="checkbox"/> SEDIMENT DEPOSITS
	DEPTH TO FREE WATER IN PIT	<input checked="" type="checkbox"/> DRAINAGE PATTERNS IN WETLANDS
	DEPTH TO SATURATED SOIL	SECONDARY INDICATORS (2 OR MORE REQUIRED)
	Swale is in low lying landscape position connected to intermittent drainage	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
		WATER-STAINED LEAVES
		LOCAL SOIL SURVEY DATA
		FAC-NEUTRAL TEST
	Remarks:	OTHER (EXPLAIN IN REMARKS)

[illegible]

HYDROPHYTIC VEGETATION PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	IS THIS SAMPLING POINT WITHIN A WETLAND? <input checked="" type="radio"/> YES <input type="radio"/> NO (CIRCLE)
WETLAND HYDROLOGY PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
HYDRIC SOILS PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Height	DATE:	5/11/06
APPLICANT/OWNER:	Lentex	COUNTY:	Sac
INVESTIGATOR:	T. Bayot, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?		<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID:
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?		Yes <input type="radio"/> <input checked="" type="radio"/> no	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)		yes <input type="radio"/> <input checked="" type="radio"/> no	PLOT ID: (8)

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Juncus xiphioides</i>	H 20%	OBL	9. <i>Trifolium luteo-venosum</i>		
2. <i>Limnolobos striata</i>	H 80%	OBL	10. <i>Bromus hordeaceus</i>		
3.			11. <i>Lactuca seticola</i>		
4.			12. <i>Hordeum murinum</i> ssp. <i>leporinum</i>		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: total cover ~ 75%, site is dominated by hydrophytes

**HYDROLOGY**

<input checked="" type="checkbox"/> RECORDED DATA (DESCRIBE IN REMARKS) <div style="border: 1px solid black; padding: 2px; margin-top: 5px;"> <input type="checkbox"/> STREAM, LAKE OR TIDE GAUGE  <input checked="" type="checkbox"/> AERIAL PHOTOGRAPHS  <input type="checkbox"/> OTHER  <input type="checkbox"/> NO RECORDED DATA AVAILABLE         </div>	<b>WETLAND HYDROLOGY INDICATORS:</b> <b>PRIMARY INDICATORS:</b> <input type="checkbox"/> INUNDATED <input type="checkbox"/> SATURATED IN UPPER 12 INCHES <input type="checkbox"/> WATER MARKS <input checked="" type="checkbox"/> DRIFT LINES <input checked="" type="checkbox"/> SEDIMENT DEPOSITS <input checked="" type="checkbox"/> DRAINAGE PATTERNS IN WETLANDS
<b>FIELD OBSERVATIONS:</b> DEPTH OF SURFACE WATER: — in. DEPTH TO FREE WATER IN PIT: > 8 in. DEPTH TO SATURATED SOIL: > 8 in. in broad shallow depression in landscape	<b>SECONDARY INDICATORS (2 OR MORE REQUIRED)</b> <input type="checkbox"/> OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES <input type="checkbox"/> WATER-STAINED LEAVES <input type="checkbox"/> LOCAL SOIL SURVEY DATA <input type="checkbox"/> FAC-NEUTRAL TEST <input type="checkbox"/> OTHER (EXPLAIN IN REMARKS)
Remarks:	

MAP UNIT NAME (SERIES AND PHASE):		DRAINAGE CLASS:	
TAXONOMY (SUBGROUP)		FIELD OBSERVATIONS CONFIRM MAPPED TYPE?      YES    NO	
PROFILE DESCRIPTION			
DEPTH (IN.)	HORIZON	MATRIX COLOR (MUNSELL MOIST)	MOTTLE COLORS (MUNSELL MOIST)
0-3		10YR4/2	
		10YR4/2	10YR4/6
			distinct abundant
HYDRIC SOIL INDICATORS			
HISTOSOL HISTIC EPIPEDON SULFIDIC ODOR AQUIC MOISTURE REGIME REDUCING CONDITIONS GLEYED OR LOW-CHROMA COLORS		CONCRETIONS HIGH ORGANIC CONTENT IN SURFACE LAYER IN SANDY SOILS ORGANIC STREAKING IN SANDY SOILS LISTED ON LOCAL HYDRIC SOILS LIST LISTED ON NATIONAL HYDRIC SOILS LIST OTHER (EXPLAIN IN REMARKS)	
REMARKS:			

HYDROPHYTIC VEGETATION PRESENT?	YES	NO	IS THIS SAMPLING POINT WITHIN A WETLAND? YES NO	(CIRCLE)
WETLAND HYDROLOGY PRESENT?	YES	NO		
HYDRIC SOILS PRESENT?	YES	NO		
REMARKS:				

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/11/06
APPLICANT/OWNER:	Certex	COUNTY:	Sac
INVESTIGATOR:	T. Beyerl, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?		<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID:
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?		Yes <input type="radio"/> no <input checked="" type="radio"/>	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)		yes <input type="radio"/> no <input checked="" type="radio"/>	PLOT ID: 9

**VEGETATION**

Other

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Juncus tenuis</i>	50 %	FACW	9. <i>Lactuca scariola</i>		
2. <i>Juncus xiphioides</i>	50 %	OBL	10. <i>Stachys albens</i>		
3.			11. <i>Polypogon monspeliensis</i>		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks:

**HYDROLOGY**

<input checked="" type="checkbox"/>	RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS:
	STREAM, LAKE OR TIDE GAUGE	PRIMARY INDICATORS:
	<input checked="" type="checkbox"/> AERIAL PHOTOGRAPHS	<input checked="" type="checkbox"/> INUNDATED
	OTHER	<input checked="" type="checkbox"/> SATURATED IN UPPER 12 INCHES
	NO RECORDED DATA AVAILABLE	<input checked="" type="checkbox"/> WATER MARKS
		<input checked="" type="checkbox"/> DRIFT LINES
FIELD OBSERVATIONS:		SEDIMENT DEPOSITS
DEPTH OF SURFACE WATER	0 in.	DRAINAGE PATTERNS IN WETLANDS
DEPTH TO FREE WATER IN PIT	0 in.	SECONDARY INDICATORS (2 OR MORE REQUIRED)
DEPTH TO SATURATED SOIL	0 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
Site is in broad depression, soils are saturated to surface		WATER-STAINED LEAVES
		LOCAL SOIL SURVEY DATA
		FAC-NEUTRAL TEST
		OTHER (EXPLAIN IN REMARKS)
Remarks:		

## SOILS

[illegible]

## WETLAND DETERMINATION

HYDROPHYTIC VEGETATION PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	IS THIS SAMPLING POINT WITHIN A WETLAND? <input checked="" type="radio"/> YES <input type="radio"/> NO
WETLAND HYDROLOGY PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
HYDRIC SOILS PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/11/06
APPLICANT/OWNER:	Center	COUNTY:	Sac
INVESTIGATOR:	T. Bayes, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?	<input checked="" type="radio"/> Yes <input type="radio"/> NO	COMMUNITY ID:	seep
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?	<input type="radio"/> Yes <input checked="" type="radio"/> NO	TRANSECT ID:	
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)	<input type="radio"/> yes <input checked="" type="radio"/> NO	PLOT ID:	10

**VEGETATION**

okur

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. Eleocharis macrospora	H	OBL	9. Rumex pulchrum		
2. Cyperus doctylus	H	FAC	10. Carex prae-gracilis		
3.			11. Polypogon monsp.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks:

**HYDROLOGY**

<input checked="" type="checkbox"/> RECORDED DATA (DESCRIBE IN REMARKS)	<b>WETLAND HYDROLOGY INDICATORS:</b> <b>PRIMARY INDICATORS:</b>
<input type="checkbox"/> STREAM, LAKE OR TIDE GAUGE	INUNDATED
<input checked="" type="checkbox"/> AERIAL PHOTOGRAPHS	SATURATED IN UPPER 12 INCHES
<input type="checkbox"/> OTHER	WATER MARKS
<input type="checkbox"/> NO RECORDED DATA AVAILABLE	DRIFT LINES
<b>FIELD OBSERVATIONS:</b>	<input checked="" type="checkbox"/> SEDIMENT DEPOSITS
DEPTH OF SURFACE WATER      — in.	<input checked="" type="checkbox"/> DRAINAGE PATTERNS IN WETLANDS
DEPTH TO FREE WATER IN PIT      78 in.	<b>SECONDARY INDICATORS (2 OR MORE REQUIRED)</b>
DEPTH TO SATURATED SOIL      78 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
in shallow depression in landscape on gentle hillside	WATER-STAINED LEAVES
	LOCAL SOIL SURVEY DATA
	FAC-NEUTRAL TEST
	OTHER (EXPLAIN IN REMARKS)
Remarks:	



MAP UNIT NAME (SERIES AND PHASE):		DRAINAGE CLASS:					
TAXONOMY (SUBGROUP)		FIELD OBSERVATIONS CONFIRM MAPPED TYPE?      YES    NO					
PROFILE DESCRIPTION							
DEPTH (IN.)	HORIZON	MATRIX COLOR (MUNSELL MOIST)	MOTTLE COLORS (MUNSELL MOIST)	MOTTLE ABUNDANCE/CONTRAST	TEXTURE CONCRETIONS STRUCTURE ETC.		
0-8"		10 YR 4/3	7.5 YR 4/6	abundant L			
			Gray / 4N	abundant			
HYDRIC SOIL INDICATORS							
HISTOSOL HISTIC EPIPEDON SULFIDIC ODOR AQUIC MOISTURE REGIME REDUCING CONDITIONS GLEYED OR LOW-CHROMA COLORS				CONCRETIONS HIGH ORGANIC CONTENT IN SURFACE LAYER IN SANDY SOILS ORGANIC STREAKING IN SANDY SOILS LISTED ON LOCAL HYDRIC SOILS LIST LISTED ON NATIONAL HYDRIC SOILS LIST OTHER (EXPLAIN IN REMARKS)			
REMARKS:							

HYDROPHYTIC VEGETATION PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	IS THIS SAMPLING POINT WITHIN A WETLAND? <input checked="" type="radio"/> YES <input type="radio"/> NO
WETLAND HYDROLOGY PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
HYDRIC SOILS PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/18/06
APPLICANT/OWNER:	Center	COUNTY:	Sac
INVESTIGATOR:	T. Bayerl, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?	<input checked="" type="radio"/> Yes <input type="radio"/> No	COMMUNITY ID:	I.D.3
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?	Yes <input type="radio"/> <input checked="" type="radio"/> No	TRANSECT ID:	
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)	yes <input type="radio"/> <input checked="" type="radio"/> no	PLOT ID:	(12)

**VEGETATION**

other

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Polypogon monspeliensis</i>	H	35% FACW+	9. <i>Rumex pulcher</i>		
2. <i>Stachys albens</i>	H	35% OBL	10. <i>Humulus guttarius</i>		
3. <i>Potentilla glandulosa</i>	H	30% FAC	11. <i>Cirsium arvense</i>		
4.			12. <i>Lolium multiflorum</i>		
5.			13. <i>Carex praeacutis</i>		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: total cover 100%

**HYDROLOGY**

<input checked="" type="checkbox"/>	RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS:
	STREAM, LAKE OR TIDE GAUGE	PRIMARY INDICATORS:
		INUNDATED
<input checked="" type="checkbox"/>	AERIAL PHOTOGRAPHS	<input checked="" type="checkbox"/> SATURATED IN UPPER 12 INCHES
	OTHER	WATER MARKS
	NO RECORDED DATA AVAILABLE	<input checked="" type="checkbox"/> DRIFT LINES
	FIELD OBSERVATIONS:	SEDIMENT DEPOSITS
	DEPTH OF SURFACE WATER: — in.	<input checked="" type="checkbox"/> DRAINAGE PATTERNS IN WETLANDS
	DEPTH TO FREE WATER IN PIT: 0 in.	SECONDARY INDICATORS (2 OR MORE REQUIRED)
	DEPTH TO SATURATED SOIL: 0 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
incised drainage in gently rolling hills algal matting on surface		WATER-STAINED LEAVES
		LOCAL SOIL SURVEY DATA
		FAC-NEUTRAL TEST
		OTHER (EXPLAIN IN REMARKS)
Remarks:	Soil pit filled w/ water after several minutes	

MAP UNIT NAME (SERIES AND PHASE):		DRAINAGE CLASS:			
TAXONOMY (SUBGROUP)		FIELD OBSERVATIONS CONFIRM MAPPED TYPE?      YES    NO			
PROFILE DESCRIPTION					
DEPTH (IN.)	HORIZON	MATRIX COLOR (MUNSELL MOIST)	MOTTLE COLORS (MUNSELL MOIST)	MOTTLE ABUNDANCE/CONTRAST	TEXTURE CONCRETIONS STRUCTURE, ETC.
0-8"		10YR 3/3	-		gravelly loam
HYDRIC SOIL INDICATORS					
HISTOSOL HISTIC EPIPEDON <input checked="" type="checkbox"/> SULFIDIC ODOR <input checked="" type="checkbox"/> AQUIC MOISTURE REGIME REDUCING CONDITIONS GLEYED OR LOW-CHROMA COLORS			CONCRETIONS HIGH ORGANIC CONTENT IN SURFACE LAYER IN SANDY SOILS ORGANIC STREAKING IN SANDY SOILS LISTED ON LOCAL HYDRIC SOILS LIST LISTED ON NATIONAL HYDRIC SOILS LIST <input checked="" type="checkbox"/> OTHER (EXPLAIN IN REMARKS)		
REMARKS: see below					

HYDROPHYTIC VEGETATION PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	IS THIS SAMPLING POINT WITHIN A WETLAND? <input checked="" type="radio"/> YES <input type="radio"/> NO (CIRCLE)
WETLAND HYDROLOGY PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
HYDRIC SOILS PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
REMARKS:			

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Soil does not have low chrome colors or mottles, but qualifies as hydric based on MRCR criterion # 4 (flooding for long durations) as it is saturated to the surface long after the last rainfall events. Standing water observed in occasional pools in drainage.

**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/16/06
APPLICANT/OWNER:	Center	COUNTY:	Sac
INVESTIGATOR:	T. Bayet, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?		<input checked="" type="radio"/> Yes <input type="radio"/> No	COMMUNITY ID:
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?		Yes <input type="radio"/> No <input checked="" type="radio"/>	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)		yes <input type="radio"/> no <input checked="" type="radio"/>	PLOT ID:
			(14)

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. Juncus zosterifolius	H	50%	OBL	9. Rumex crispus	
2. Juncus balticus	H	30%	OBL	10. Lolium multiflorum	
3. Pilobolus densiflorus	H	20%	OBL	11. Trifolium lucayanum	
4.			12. Vulpia sp		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: total cover ~ 80 %, remaining surface area mostly w/ dead vegetation

**HYDROLOGY**

RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS:																																
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;"></td> <td style="width: 80%;">STREAM, LAKE OR TIDE GAUGE</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>AERIAL PHOTOGRAPHS</td> </tr> <tr> <td></td> <td>OTHER</td> </tr> </table>		STREAM, LAKE OR TIDE GAUGE	<input checked="" type="checkbox"/>	AERIAL PHOTOGRAPHS		OTHER	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">PRIMARY INDICATORS:</td> </tr> <tr> <td colspan="2">INUNDATED</td> </tr> <tr> <td colspan="2">SATURATED IN UPPER 12 INCHES</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>WATER MARKS</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>DRIFT LINES</td> </tr> <tr> <td colspan="2">SEDIMENT DEPOSITS</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>DRAINAGE PATTERNS IN WETLANDS</td> </tr> <tr> <td colspan="2">SECONDARY INDICATORS (2 OR MORE REQUIRED)</td> </tr> <tr> <td colspan="2">OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES</td> </tr> <tr> <td colspan="2">WATER-STAINED LEAVES</td> </tr> <tr> <td colspan="2">LOCAL SOIL SURVEY DATA</td> </tr> <tr> <td colspan="2">FAC-NEUTRAL TEST</td> </tr> <tr> <td colspan="2">OTHER (EXPLAIN IN REMARKS)</td> </tr> </table>	PRIMARY INDICATORS:		INUNDATED		SATURATED IN UPPER 12 INCHES		<input checked="" type="checkbox"/>	WATER MARKS	<input checked="" type="checkbox"/>	DRIFT LINES	SEDIMENT DEPOSITS		<input checked="" type="checkbox"/>	DRAINAGE PATTERNS IN WETLANDS	SECONDARY INDICATORS (2 OR MORE REQUIRED)		OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES		WATER-STAINED LEAVES		LOCAL SOIL SURVEY DATA		FAC-NEUTRAL TEST		OTHER (EXPLAIN IN REMARKS)	
	STREAM, LAKE OR TIDE GAUGE																																
<input checked="" type="checkbox"/>	AERIAL PHOTOGRAPHS																																
	OTHER																																
PRIMARY INDICATORS:																																	
INUNDATED																																	
SATURATED IN UPPER 12 INCHES																																	
<input checked="" type="checkbox"/>	WATER MARKS																																
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SEDIMENT DEPOSITS																																	
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OTHER (EXPLAIN IN REMARKS)																																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">FIELD OBSERVATIONS:</td> </tr> <tr> <td style="width: 30%;">DEPTH OF SURFACE WATER</td> <td>&gt; 10 in.</td> </tr> <tr> <td>DEPTH TO FREE WATER IN PIT</td> <td>&gt; 10 in.</td> </tr> <tr> <td>DEPTH TO SATURATED SOIL</td> <td>&gt; 10 in.</td> </tr> </table>	FIELD OBSERVATIONS:		DEPTH OF SURFACE WATER	> 10 in.	DEPTH TO FREE WATER IN PIT	> 10 in.	DEPTH TO SATURATED SOIL	> 10 in.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" rowspan="4">Soil slightly moist but not saturated; site is on gently sloping hillside; water appears to seep out of hillside -</td> </tr> <tr> <td></td> </tr> <tr> <td></td> </tr> <tr> <td></td> </tr> </table>	Soil slightly moist but not saturated; site is on gently sloping hillside; water appears to seep out of hillside -																							
FIELD OBSERVATIONS:																																	
DEPTH OF SURFACE WATER	> 10 in.																																
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DEPTH TO SATURATED SOIL	> 10 in.																																
Soil slightly moist but not saturated; site is on gently sloping hillside; water appears to seep out of hillside -																																	
Remarks:	seep is connected to intermittent drainage																																

[illegible]

HYDROPHYTIC VEGETATION PRESENT?	<u>YES</u>	NO	IS THIS SAMPLING POINT WITHIN A WETLAND? <u>YES</u> (CIRCLE) NO
WETLAND HYDROLOGY PRESENT?	<u>YES</u>	NO	
HYDRIC SOILS PRESENT?	<u>YES</u>	NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights		DATE:	5/18/06
APPLICANT/OWNER:	Centex		COUNTY:	Sac
INVESTIGATOR:	T. Beyerl, P. Unger		STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?			Yes <input checked="" type="radio"/> no <input type="radio"/>	COMMUNITY ID:
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?			Yes <input type="radio"/> no <input checked="" type="radio"/>	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)			yes <input type="radio"/> no <input checked="" type="radio"/>	PLOT ID: 15

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Juncus balticus</i>	80%	OBL	9. <i>Cordus pygmaecephalus</i>		
2.			10. <i>Potentilla glandulose</i>		
3.			11. <i>Stachys alba</i>		
4.			12. <i>Juncus</i> sp.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: Total cover 95%

**HYDROLOGY**

<input checked="" type="checkbox"/> RECORDED DATA (DESCRIBE IN REMARKS)		WETLAND HYDROLOGY INDICATORS: PRIMARY INDICATORS:	
<input type="checkbox"/> STREAM, LAKE OR TIDE GAUGE		INUNDATED	
<input checked="" type="checkbox"/> AERIAL PHOTOGRAPHS		SATURATED IN UPPER 12 INCHES	
<input type="checkbox"/> OTHER		WATER MARKS	
<input type="checkbox"/> NO RECORDED DATA AVAILABLE		DRIFT LINES	
FIELD OBSERVATIONS:		SEDIMENT DEPOSITS	
DEPTH OF SURFACE WATER	— in.	<input checked="" type="checkbox"/> DRAINAGE PATTERNS IN WETLANDS	
DEPTH TO FREE WATER IN PIT	> 10 in.	SECONDARY INDICATORS (2 OR MORE REQUIRED)	
DEPTH TO SATURATED SOIL	> 10 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES	
seep is on gently sloping hillside; evidence of surface flow from matted vegetation; soil is moist to surface, but not saturated		WATER-STAINED LEAVES	
		LOCAL SOIL SURVEY DATA	
		FAC-NEUTRAL TEST	
		OTHER (EXPLAIN IN REMARKS)	
Remarks: seep is directly connected to intermittent drainage			

[illegible]

HYDROPHYTIC VEGETATION PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	IS THIS SAMPLING POINT WITHIN A WETLAND? <input checked="" type="radio"/> YES <input type="radio"/> NO (CIRCLE)
WETLAND HYDROLOGY PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
HYDRIC SOILS PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/18/06
APPLICANT/OWNER:	Center	COUNTY:	Sac
INVESTIGATOR:	T. Beyerl, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?		<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID:
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?		Yes <input type="radio"/> <input checked="" type="radio"/> no	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)		yes <input type="radio"/> <input checked="" type="radio"/> no	PLOT ID:
			(16)

**VEGETATION**

*other*

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Juncus roemerianus</i>	60%	OBL	9. <i>Carex lasiocarpa</i>		
2. <i>Polypogon monspeliensis</i>	20%	FACW+	10. <i>Sarcocornus asper</i>		
3. <i>Eleocharis macrostachya</i>	20%	OBL	11. <i>Rumex crispus</i>		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks:

**HYDROLOGY**

<input checked="" type="checkbox"/> RECORDED DATA (DESCRIBE IN REMARKS): <table style="width: 100%;"> <tr> <td style="width: 30%;">STREAM, LAKE OR TIDE GAUGE</td> <td></td> </tr> <tr> <td><input checked="" type="checkbox"/> AERIAL PHOTOGRAPHS</td> <td></td> </tr> <tr> <td>OTHER</td> <td></td> </tr> <tr> <td colspan="2"><input type="checkbox"/> NO RECORDED DATA AVAILABLE</td> </tr> </table>	STREAM, LAKE OR TIDE GAUGE		<input checked="" type="checkbox"/> AERIAL PHOTOGRAPHS		OTHER		<input type="checkbox"/> NO RECORDED DATA AVAILABLE		<b>WETLAND HYDROLOGY INDICATORS:</b> <b>PRIMARY INDICATORS:</b> <input type="checkbox"/> INUNDATED <input checked="" type="checkbox"/> SATURATED IN UPPER 12 INCHES <input type="checkbox"/> WATER MARKS <input type="checkbox"/> DRIFT LINES <input type="checkbox"/> SEDIMENT DEPOSITS <input checked="" type="checkbox"/> DRAINAGE PATTERNS IN WETLANDS
STREAM, LAKE OR TIDE GAUGE									
<input checked="" type="checkbox"/> AERIAL PHOTOGRAPHS									
OTHER									
<input type="checkbox"/> NO RECORDED DATA AVAILABLE									
<b>FIELD OBSERVATIONS:</b> <table style="width: 100%;"> <tr> <td style="width: 35%;">DEPTH OF SURFACE WATER</td> <td style="width: 10%;">— in.</td> <td style="width: 55%;"><input checked="" type="checkbox"/></td> </tr> <tr> <td>DEPTH TO FREE WATER IN PIT</td> <td>0 in.</td> <td rowspan="3">           SECONDARY INDICATORS (2 OR MORE REQUIRED)  <input type="checkbox"/> OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES  <input type="checkbox"/> WATER-STAINED LEAVES  <input type="checkbox"/> LOCAL SOIL SURVEY DATA  <input type="checkbox"/> FAC-NEUTRAL TEST  <input type="checkbox"/> OTHER (EXPLAIN IN REMARKS)         </td> </tr> <tr> <td>DEPTH TO SATURATED SOIL</td> <td>0 in.</td> </tr> </table>	DEPTH OF SURFACE WATER	— in.	<input checked="" type="checkbox"/>	DEPTH TO FREE WATER IN PIT	0 in.	SECONDARY INDICATORS (2 OR MORE REQUIRED) <input type="checkbox"/> OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES <input type="checkbox"/> WATER-STAINED LEAVES <input type="checkbox"/> LOCAL SOIL SURVEY DATA <input type="checkbox"/> FAC-NEUTRAL TEST <input type="checkbox"/> OTHER (EXPLAIN IN REMARKS)	DEPTH TO SATURATED SOIL	0 in.	
DEPTH OF SURFACE WATER	— in.	<input checked="" type="checkbox"/>							
DEPTH TO FREE WATER IN PIT	0 in.	SECONDARY INDICATORS (2 OR MORE REQUIRED) <input type="checkbox"/> OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES <input type="checkbox"/> WATER-STAINED LEAVES <input type="checkbox"/> LOCAL SOIL SURVEY DATA <input type="checkbox"/> FAC-NEUTRAL TEST <input type="checkbox"/> OTHER (EXPLAIN IN REMARKS)							
DEPTH TO SATURATED SOIL	0 in.								
Seep is on gently sloping hillside, fed by ground seepage									
Remarks: Soils are saturated to surface									



**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/18/06
APPLICANT/OWNER:	Centex	COUNTY:	Sac
INVESTIGATOR:	T. Beyers, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?	<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID:	Swale 4
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?	Yes <input type="radio"/> <input checked="" type="radio"/> no	TRANSECT ID:	
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)	yes <input type="radio"/> <input checked="" type="radio"/> no	PLOT ID:	16

**VEGETATION**

okw

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Juncus roemerianus</i>	6%	OBL	9. <i>Carex densa</i>		
2. <i>Polygonum monspeliense</i>	20%	FACW	10. <i>Sandus asper</i>		
3. <i>Eleocharis macrostachya</i>	20%	OBL	11. <i>Rumex pulcher</i>		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks:

**HYDROLOGY**

<input checked="" type="checkbox"/>	RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS:
	STREAM, LAKE OR TIDE GAUGE	PRIMARY INDICATORS:
		INUNDATED
<input checked="" type="checkbox"/>	AERIAL PHOTOGRAPHS	<input checked="" type="checkbox"/> SATURATED IN UPPER 12 INCHES
	OTHER	WATER MARKS
	NO RECORDED DATA AVAILABLE	DRIFT LINES
	FIELD OBSERVATIONS:	SEDIMENT DEPOSITS
	DEPTH OF SURFACE WATER — in.	<input checked="" type="checkbox"/> DRAINAGE PATTERNS IN WETLANDS
	DEPTH TO FREE WATER IN PIT 0 in.	SECONDARY INDICATORS (2 OR MORE REQUIRED)
	DEPTH TO SATURATED SOIL 0 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
Seep is on gently sloping hillside, fed by ground seepage		WATER-STAINED LEAVES
		LOCAL SOIL SURVEY DATA
		FAC-NEUTRAL TEST
		OTHER (EXPLAIN IN REMARKS)
Remarks:	Soils are saturated to surface	

[illegible]

HYDROPHYTIC VEGETATION PRESENT?	YES	NO	IS THIS SAMPLING POINT WITHIN A WETLAND? (CIRCLE) YES NO
WETLAND HYDROLOGY PRESENT?	YES	NO	
HYDRIC SOILS PRESENT?	YES	NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/18/06
APPLICANT/OWNER:	Center	COUNTY:	Sac
INVESTIGATOR:	T. Beyers, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?		<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID:
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?		Yes <input type="radio"/> <input checked="" type="radio"/> no	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)		yes <input type="radio"/> <input checked="" type="radio"/> no	PLOT ID: (18)

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	other DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Juncus roemerianus</i>	90%	OBL	9. <i>Rumex pulcher</i>		
2.			10. <i>Lotus multiflorus</i>		
3.			11. <i>Lactuca scariola</i>		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: narrow intermittent drainage - channel bottom is vegetated with hydrophytic vegetation; total cover 90%

**HYDROLOGY**

RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS:
STREAM, LAKE OR TIDE GAUGE	PRIMARY INDICATORS:
<input checked="" type="checkbox"/> AERIAL PHOTOGRAPHS	INUNDATED
OTHER	SATURATED IN UPPER 12 INCHES
NO RECORDED DATA AVAILABLE	WATER MARKS
FIELD OBSERVATIONS:	DRIFT LINES
DEPTH OF SURFACE WATER	SEDIMENT DEPOSITS
— in.	<input checked="" type="checkbox"/> DRAINAGE PATTERNS IN WETLANDS
DEPTH TO FREE WATER IN PIT	SECONDARY INDICATORS (2 OR MORE REQUIRED)
> 8 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
DEPTH TO SATURATED SOIL	WATER-STAINED LEAVES
> 8 in.	LOCAL SOIL SURVEY DATA
Soil is moist to surface	FAC-NEUTRAL TEST
drainage is slightly incised	OTHER (EXPLAIN IN REMARKS)
an meander through low	
spot in gently	
Remarks: sloping terrain	

## SOILS

[illegible]

## WETLAND DETERMINATION

HYDROPHYTIC VEGETATION PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	IS THIS SAMPLING POINT WITHIN A WETLAND? <input checked="" type="radio"/> YES <input type="radio"/> NO (CIRCLE)
WETLAND HYDROLOGY PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
HYDRIC SOILS PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/18/06
APPLICANT/OWNER:	Center	COUNTY:	Sac
INVESTIGATOR:	T. Beyer, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?		<input checked="" type="radio"/> Yes <input type="radio"/> No	COMMUNITY ID:
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?		<input type="radio"/> Yes <input checked="" type="radio"/> No	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)		<input type="radio"/> yes <input checked="" type="radio"/> no	PLOT ID: (20)

**VEGETATION**

other

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Juncus beltricus</i>	80%	OBL	9. <i>Potentilla glandulosa</i>		
2. <i>Stachys albens</i>	20%	OBL	10. <i>Carex densa</i>		
3.			11. <i>Polypogon monspeliensis</i>		
4.			12. <i>Salix gooddingii</i>		
5.			13. <i>Sonchus asper</i>		
6.			14. <i>Rorippa nast. aquatica</i>		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: site is dominated by hydrophytes; dominants vary locally from *Juncus* to *Stachys* to *Carex* to *Polypogon*

**HYDROLOGY**

<input checked="" type="checkbox"/>	RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS:
	STREAM, LAKE OR TIDE GAUGE	PRIMARY INDICATORS:
	AERIAL PHOTOGRAPHS	INUNDATED
	OTHER	<input checked="" type="checkbox"/> SATURATED IN UPPER 12 INCHES
	NO RECORDED DATA AVAILABLE	WATER MARKS
		DRIFT LINES
	FIELD OBSERVATIONS:	SEDIMENT DEPOSITS
	DEPTH OF SURFACE WATER — in.	<input checked="" type="checkbox"/> DRAINAGE PATTERNS IN WETLANDS
	DEPTH TO FREE WATER IN PIT 0 in.	SECONDARY INDICATORS (2 OR MORE REQUIRED)
	DEPTH TO SATURATED SOIL 0 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
seep on gently sloping hillside, soils saturated to surface		WATER-STAINED LEAVES
		LOCAL SOIL SURVEY DATA
		FAC-NEUTRAL TEST
		OTHER (EXPLAIN IN REMARKS)
Remarks:		

# SOILS

MAP UNIT NAME (SERIES AND PHASE):		DRAINAGE CLASS:			
TAXONOMY (SUBGROUP)		FIELD OBSERVATIONS CONFIRM MAPPED TYPE? YES NO			
PROFILE DESCRIPTION					
DEPTH (IN.)	HORIZON	MATRIX COLOR (MUNSELL MOIST)	MOTTLE COLORS (MUNSELL MOIST)	MOTTLE ABUNDANCE/CONTRAST	TEXTURE/CONCRETIONS STRUCTURE, ETC.
	not investigated but observed saturation ponding on surface - see data pt. 21 for soils data re same wetland feature				
HYDRIC SOIL INDICATORS					
HISTOSOL HISTIC EPIPEDON SULFIDIC ODOR AQUIC MOISTURE REGIME REDUCING CONDITIONS GLEYED OR LOW-CHROMA COLORS			CONCRETIONS HIGH ORGANIC CONTENT IN SURFACE LAYER IN SANDY SOILS ORGANIC STREAKING IN SANDY SOILS LISTED ON LOCAL HYDRIC SOILS LIST LISTED ON NATIONAL HYDRIC SOILS LIST OTHER (EXPLAIN IN REMARKS)		
REMARKS:					

## WETLAND DETERMINATION

HYDROPHYTIC VEGETATION PRESENT?	<input checked="" type="radio"/> YES <input type="radio"/> NO	IS THIS SAMPLING POINT WITHIN A WETLAND? <input checked="" type="radio"/> YES <input type="radio"/> NO (CIRCLE)
WETLAND HYDROLOGY PRESENT?	<input checked="" type="radio"/> YES <input type="radio"/> NO	
HYDRIC SOILS PRESENT?	<input checked="" type="radio"/> YES <input type="radio"/> NO	
REMARKS:		

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/18/06
APPLICANT/OWNER:	Center	COUNTY:	Sec
INVESTIGATOR:	T. Beigel, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	COMMUNITY ID:	seep 6
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?	Yes <input type="checkbox"/> NO <input checked="" type="checkbox"/>	TRANSECT ID:	
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)	yes <input type="checkbox"/> NO <input checked="" type="checkbox"/>	PLOT ID:	(21)

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Limnanthus striata</i>	50%	OBL	9. <i>Rumex pulcher</i>		
2. <i>Elaeagnus macrocarpa</i>	50%	OBL	10. <i>Sandwich asper</i>		
3. <i>Stachys</i>			11. <i>Hardium murrayi</i> ssp. <i>geniculatum</i>		
4.			12. <i>Lolium multiflorum</i>		
5.			13. <i>Epilobium densiflorum</i>		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks:

**HYDROLOGY**

<input checked="" type="checkbox"/> <b>RECORDED DATA (DESCRIBE IN REMARKS)</b> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;"> <input type="checkbox"/> STREAM, LAKE OR TIDE GAUGE         </div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;"> <input checked="" type="checkbox"/> AERIAL PHOTOGRAPHS         </div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;"> <input type="checkbox"/> OTHER         </div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;"> <input type="checkbox"/> NO RECORDED DATA AVAILABLE         </div>	<b>WETLAND HYDROLOGY INDICATORS:</b> <b>PRIMARY INDICATORS:</b> <input type="checkbox"/> INUNDATED <input checked="" type="checkbox"/> SATURATED IN UPPER 12 INCHES <input checked="" type="checkbox"/> WATER MARKS <input type="checkbox"/> DRIFT LINES <input type="checkbox"/> SEDIMENT DEPOSITS <input checked="" type="checkbox"/> DRAINAGE PATTERNS IN WETLANDS <b>SECONDARY INDICATORS (2 OR MORE REQUIRED)</b> <input type="checkbox"/> OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES <input type="checkbox"/> WATER-STAINED LEAVES <input type="checkbox"/> LOCAL SOIL SURVEY DATA <input type="checkbox"/> FAC-NEUTRAL TEST <input type="checkbox"/> OTHER (EXPLAIN IN REMARKS)
<b>FIELD OBSERVATIONS:</b> DEPTH OF SURFACE WATER: — in. DEPTH TO FREE WATER IN PIT: 78 in. DEPTH TO SATURATED SOIL: 0 in. seep on gently sloping hillside. Soils are saturated to surface	
Remarks:	

[illegible]

HYDROPHYTIC VEGETATION PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	IS THIS SAMPLING POINT WITHIN A WETLAND? <input checked="" type="radio"/> YES <input type="radio"/> NO (CIRCLE)
WETLAND HYDROLOGY PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
HYDRIC SOILS PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/18/06
APPLICANT/OWNER:	Center	COUNTY:	Sac
INVESTIGATOR:	T. Beyerl, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?		<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID:
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?		Yes <input type="radio"/> <input checked="" type="radio"/> no	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)		yes <input type="radio"/> <input checked="" type="radio"/> no	PLOT ID:
			(22)

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Tuncus torvus</i>	100%	FACW	9. <i>Sarcocornis espar</i>		
2.			10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: site dominated by hydrophytes, over 100%

**HYDROLOGY**

<input checked="" type="checkbox"/> RECORDED DATA (DESCRIBE IN REMARKS) <input type="checkbox"/> STREAM, LAKE OR TIDE GAUGE <input checked="" type="checkbox"/> AERIAL PHOTOGRAPHS <input type="checkbox"/> OTHER <input type="checkbox"/> NO RECORDED DATA AVAILABLE	<b>WETLAND HYDROLOGY INDICATORS:</b> <b>PRIMARY INDICATORS:</b> <input type="checkbox"/> INUNDATED <input checked="" type="checkbox"/> SATURATED IN UPPER 12 INCHES <input type="checkbox"/> WATER MARKS <input type="checkbox"/> DRIFT LINES <input type="checkbox"/> SEDIMENT DEPOSITS <input checked="" type="checkbox"/> DRAINAGE PATTERNS IN WETLANDS <b>SECONDARY INDICATORS (2 OR MORE REQUIRED)</b> <input type="checkbox"/> OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES <input type="checkbox"/> WATER-STAINED LEAVES <input type="checkbox"/> LOCAL SOIL SURVEY DATA <input type="checkbox"/> FAC-NEUTRAL TEST <input type="checkbox"/> OTHER (EXPLAIN IN REMARKS)
<b>FIELD OBSERVATIONS:</b> DEPTH OF SURFACE WATER: — in. DEPTH TO FREE WATER IN PIT: > 0 in. DEPTH TO SATURATED SOIL: 0 in.	
wetland in low landscape position; also fed by runoff from surrounding upland areas	
Remarks: located at the head of a tributary of ID 2	

[illegible]

HYDROPHYTIC VEGETATION PRESENT? <u>YES</u> NO WETLAND HYDROLOGY PRESENT? <u>YES</u> NO HYDRIC SOILS PRESENT? <u>YES</u> NO	IS THIS SAMPLING POINT WITHIN A WETLAND? <u>(CIRCLE) YES</u> NO
REMARKS:	

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/16/06
APPLICANT/OWNER:	Cenker	COUNTY:	Sac
INVESTIGATOR:	T. Basel, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?		<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID:
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?		Yes <input type="radio"/> <input checked="" type="radio"/> DO	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)		yes <input type="radio"/> <input checked="" type="radio"/> DO	PLOT ID:
			(23)

**VEGETATION**

DOMINANT PLANT SPECIES	STRAUTUM	INDICATOR	DOMINANT PLANT SPECIES	STRAUTUM	INDICATOR
1. <i>Lolium multiflorum</i>	30 ft	FAC*	9. <i>Leptocarpus</i>		
2. <i>Comarostaphylis striata</i>	30 ft	OBL	10. <i>Lycium keiskei</i>		
3. <i>Elaeagnus macrocarpa</i>	30 ft	OBL	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: total cover 40%

**HYDROLOGY**

<input checked="" type="checkbox"/> RECORDED DATA (DESCRIBE IN REMARKS)		WETLAND HYDROLOGY INDICATORS: PRIMARY INDICATORS:	
<input type="checkbox"/> STREAM, LAKE OR TIDE GAUGE		INUNDATED	
<input checked="" type="checkbox"/> AERIAL PHOTOGRAPHS		SATURATED IN UPPER 12 INCHES	
<input type="checkbox"/> OTHER		WATER MARKS	
<input type="checkbox"/> NO RECORDED DATA AVAILABLE		<input checked="" type="checkbox"/> DRIFT LINES	
FIELD OBSERVATIONS:		<input checked="" type="checkbox"/> SEDIMENT DEPOSITS	
DEPTH OF SURFACE WATER	— in.	<input checked="" type="checkbox"/> DRAINAGE PATTERNS IN WETLANDS	
DEPTH TO FREE WATER IN PIT	> 8 in.	SECONDARY INDICATORS (2 OR MORE REQUIRED)	
DEPTH TO SATURATED SOIL	> 8 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES	
Soil moist to surface — Swale is in low-lying landscape position		WATER-STAINED LEAVES	
		LOCAL SOIL SURVEY DATA	
		FAC-NEUTRAL TEST	
		OTHER (EXPLAIN IN REMARKS)	
Remarks:			

[illegible]

HYDROPHYTIC VEGETATION PRESENT?	<u>YES</u>	NO	IS THIS SAMPLING POINT WITHIN A WETLAND? <u>YES</u> (CIRCLE) NO
WETLAND HYDROLOGY PRESENT?	<u>YES</u>	NO	
HYDRIC SOILS PRESENT?	<u>YES</u>	NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/11/06
APPLICANT/OWNER:	Center	COUNTY:	Sac
INVESTIGATOR:	T. Bayest, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?		<input checked="" type="radio"/> Yes <input type="radio"/> No	COMMUNITY ID:
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?		Yes <input type="radio"/> No <input checked="" type="radio"/>	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)		yes <input type="radio"/> no <input checked="" type="radio"/>	PLOT ID: 2

**VEGETATION**

OK

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Bromus hordeaceus</i>	A 60	FACU-	9. <i>Cerium dissectum</i>		
2. <i>Hypericum perforatum</i>	H 20	NL	10. <i>Colium multiflorum</i>		
3. <i>Lactuca serriola</i>	H 20	FAC	11. <i>Tamethium caput-medusae</i>		
4.			12. <i>Beta maritima</i>		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: total cover 80% - site is clearly dominated by upland vegetation

**HYDROLOGY**

<input checked="" type="checkbox"/> RECORDED DATA (DESCRIBE IN REMARKS)	<b>WETLAND HYDROLOGY INDICATORS:</b> <b>PRIMARY INDICATORS:</b>
<input type="checkbox"/> STREAM, LAKE OR TIDE GAUGE	INUNDATED
<input checked="" type="checkbox"/> AERIAL PHOTOGRAPHS	SATURATED IN UPPER 12 INCHES
<input type="checkbox"/> OTHER	WATER MARKS
<input type="checkbox"/> NO RECORDED DATA AVAILABLE	DRIFT LINES
<b>FIELD OBSERVATIONS:</b>	SEDIMENT DEPOSITS
DEPTH OF SURFACE WATER: — in.	DRAINAGE PATTERNS IN WETLANDS
DEPTH TO FREE WATER IN PIT: >12 in.	<b>SECONDARY INDICATORS (2 OR MORE REQUIRED)</b>
DEPTH TO SATURATED SOIL: >12 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
site is on gently sloping hillside above intermittent drainage	WATER-STAINED LEAVES
	LOCAL SOIL SURVEY DATA
	FAC-NEUTRAL TEST
	OTHER (EXPLAIN IN REMARKS)
Remarks:	

[illegible]

## WETLAND DETERMINATION

HYDROPHYTIC VEGETATION PRESENT?	YES	NO	IS THIS SAMPLING POINT WITHIN A WETLAND? YES NO
WETLAND HYDROLOGY PRESENT?	YES	NO	
HYDRIC SOILS PRESENT?	YES	NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	T. Bayert, P. Unger	DATE:	5/11/06
APPLICANT/OWNER:	Cenker	COUNTY:	Sac
INVESTIGATOR:	T. Bayert, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?		<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID:
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?		Yes <input type="radio"/> <input checked="" type="radio"/> no	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)		yes <input type="radio"/> <input checked="" type="radio"/> no	PLOT ID:
			④

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Bomus hordeaceus</i>	H 50%	FACU-	9. <i>Taraxacum officinale</i>		
2. <i>Nasella pulchra</i>	H 30%	IX	10. <i>Vulpia myuros</i>		
3.			11. <i>Triteleia hyacinthina</i>		
4.			12. <i>Avena fatua</i>		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: site is dominated by upland vegetation

**HYDROLOGY**

<input checked="" type="checkbox"/> <b>RECORDED DATA (DESCRIBE IN REMARKS)</b> <div style="border: 1px solid black; padding: 2px; margin-top: 5px;"> <input type="checkbox"/> STREAM, LAKE OR TIDE GAUGE  <input checked="" type="checkbox"/> AERIAL PHOTOGRAPHS  <input type="checkbox"/> OTHER  <input type="checkbox"/> NO RECORDED DATA AVAILABLE         </div>	<b>WETLAND HYDROLOGY INDICATORS:</b> <b>PRIMARY INDICATORS:</b> <input type="checkbox"/> INUNDATED <input type="checkbox"/> SATURATED IN UPPER 12 INCHES <input type="checkbox"/> WATER MARKS <input type="checkbox"/> DRIFT LINES <input type="checkbox"/> SEDIMENT DEPOSITS <input type="checkbox"/> DRAINAGE PATTERNS IN WETLANDS
<b>FIELD OBSERVATIONS:</b> DEPTH OF SURFACE WATER: — in. DEPTH TO FREE WATER IN PIT: 712 in. DEPTH TO SATURATED SOIL: 712 in.	<b>SECONDARY INDICATORS (2 OR MORE REQUIRED)</b> <input type="checkbox"/> OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES <input type="checkbox"/> WATER-STAINED LEAVES <input type="checkbox"/> LOCAL SOIL SURVEY DATA <input type="checkbox"/> FAC-NEUTRAL TEST <input type="checkbox"/> OTHER (EXPLAIN IN REMARKS)
on gently sloping hillside above intermittent drainage	
Remarks: —	

## SOILS

[illegible]

## WETLAND DETERMINATION

HYDROPHYTIC VEGETATION PRESENT?	YES	<input checked="" type="radio"/> NO	IS THIS SAMPLING POINT WITHIN A WETLAND?	YES	<input checked="" type="radio"/> NO
WETLAND HYDROLOGY PRESENT?	YES	<input checked="" type="radio"/> NO			
HYDRIC SOILS PRESENT?	YES	<input checked="" type="radio"/> NO			
REMARKS:					

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/11/06
APPLICANT/OWNER:	Center	COUNTY:	Sac
INVESTIGATOR:	T. Bayol, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?	<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID:	AG
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?	<input type="radio"/> Yes <input checked="" type="radio"/> no	TRANSECT ID:	
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)	<input type="radio"/> yes <input checked="" type="radio"/> no	PLOT ID:	①

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Tamietum caput-medusae</i>	40 %	NL	9. <i>Vulpia myuros</i>		
2.			10. <i>Geranium dissectum</i>		
3. <i>Bromus hordeaceus</i>	30 %	FACU-	11. <i>Triteleia hyacanthina</i>		
4. <i>Lolium multiflorum</i>	30 %	FAC*	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: total cover = 75%

**HYDROLOGY**

<input checked="" type="checkbox"/>	RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS:
	STREAM, LAKE OR TIDE GAUGE	PRIMARY INDICATORS:
<input checked="" type="checkbox"/>	AERIAL PHOTOGRAPHS	INUNDATED
	OTHER	SATURATED IN UPPER 12 INCHES
	NO RECORDED DATA AVAILABLE	WATER MARKS
		DRIFT LINES
	FIELD OBSERVATIONS:	SEDIMENT DEPOSITS
	DEPTH OF SURFACE WATER - in.	DRAINAGE PATTERNS IN WETLANDS
	DEPTH TO FREE WATER IN PIT 78 in.	SECONDARY INDICATORS (2 OR MORE REQUIRED)
	DEPTH TO SATURATED SOIL 78 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
Site is on gently sloping hill side		WATER-STAINED LEAVES
		LOCAL SOIL SURVEY DATA
		FAC-NEUTRAL TEST
		OTHER (EXPLAIN IN REMARKS)
Remarks: —		

[illegible]

HYDROPHYTIC VEGETATION PRESENT?	YES	<input checked="" type="radio"/> NO	IS THIS SAMPLING POINT WITHIN A WETLAND? YES <input checked="" type="radio"/> NO
WETLAND HYDROLOGY PRESENT?	YES	<input checked="" type="radio"/> NO	
HYDRIC SOILS PRESENT?	YES	<input checked="" type="radio"/> NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/11/06
APPLICANT/OWNER:	Center	COUNTY:	Sac
INVESTIGATOR:	T. Beyers, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?	<input checked="" type="radio"/> Yes <input type="radio"/> No	COMMUNITY ID:	AG
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?	Yes <input type="radio"/> <input checked="" type="radio"/> No	TRANSECT ID:	
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)	yes <input type="radio"/> <input checked="" type="radio"/> no	PLOT ID:	11

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. Bromus hordeaceus	H	FACU-	9. Triteleia hyacinth.		
2. Bromus diandrus	H	NL	10. Sonchus asper		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: site dominated by upland vegetation

**HYDROLOGY**

<input checked="" type="checkbox"/> RECORDED DATA (DESCRIBE IN REMARKS)	<b>WETLAND HYDROLOGY INDICATORS:</b> <b>PRIMARY INDICATORS:</b>
<input type="checkbox"/> STREAM, LAKE OR TIDE GAUGE	INUNDATED
<input checked="" type="checkbox"/> AERIAL PHOTOGRAPHS	SATURATED IN UPPER 12 INCHES
<input type="checkbox"/> OTHER	WATER MARKS
<input type="checkbox"/> NO RECORDED DATA AVAILABLE	DRIFT LINES
<b>FIELD OBSERVATIONS:</b>	SEDIMENT DEPOSITS
DEPTH OF SURFACE WATER: — in.	DRAINAGE PATTERNS IN WETLANDS
DEPTH TO FREE WATER IN PIT: > 8 in.	<b>SECONDARY INDICATORS (2 OR MORE REQUIRED)</b>
DEPTH TO SATURATED SOIL: > 8 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
on gently sloping hillside above seep	WATER-STAINED LEAVES
	LOCAL SOIL SURVEY DATA
	FAC-NEUTRAL TEST
	OTHER (EXPLAIN IN REMARKS)
Remarks:	

[illegible]

HYDROPHYTIC VEGETATION PRESENT?	YES	NO	IS THIS SAMPLING POINT WITHIN A WETLAND? YES	(CIRCLE)
WETLAND HYDROLOGY PRESENT?	YES	NO		NO
HYDRIC SOILS PRESENT?	YES	NO		
REMARKS:				

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/18/06
APPLICANT/OWNER:	Centex	COUNTY:	Sac
INVESTIGATOR:	T. Bayerl, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?		<input checked="" type="radio"/> Yes <input type="radio"/> NO	COMMUNITY ID:
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?		Yes <input type="radio"/> <input checked="" type="radio"/> NO	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)		yes <input type="radio"/> <input checked="" type="radio"/> NO	PLOT ID:
			(13)

**VEGETATION**

*other*

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Taraxacum officinale</i>	70%	NL	9. <i>Bromus hordeaceus</i>		
2.	H		10. <i>Lolium multiflorum</i>		
3.			11. <i>Cerastium pycnanthum</i>		
4.			12. <i>Hypericum perforatum</i>		
5.			13. <i>Bromus diandrus</i>		
6.			14. <i>Nasella pulchra</i>		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: total cover 100% - site is dominated by dense annual grassland vegetation

**HYDROLOGY**

RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS:								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; text-align: center;">✓</td> <td>STREAM, LAKE OR TIDE GAUGE</td> </tr> <tr> <td style="text-align: center;">✓</td> <td>AERIAL PHOTOGRAPHS</td> </tr> <tr> <td></td> <td>OTHER</td> </tr> <tr> <td colspan="2">NO RECORDED DATA AVAILABLE</td> </tr> </table>	✓	STREAM, LAKE OR TIDE GAUGE	✓	AERIAL PHOTOGRAPHS		OTHER	NO RECORDED DATA AVAILABLE		<b>PRIMARY INDICATORS:</b> INUNDATED SATURATED IN UPPER 12 INCHES WATER MARKS DRIFT LINES SEDIMENT DEPOSITS DRAINAGE PATTERNS IN WETLANDS
✓	STREAM, LAKE OR TIDE GAUGE								
✓	AERIAL PHOTOGRAPHS								
	OTHER								
NO RECORDED DATA AVAILABLE									
<b>FIELD OBSERVATIONS:</b> DEPTH OF SURFACE WATER > 8 in. DEPTH TO FREE WATER IN PIT > 8 in. DEPTH TO SATURATED SOIL > 8 in. site is on gently sloped hillside above intermittent drainage	<b>SECONDARY INDICATORS (2 OR MORE REQUIRED)</b> OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES WATER-STAINED LEAVES LOCAL SOIL SURVEY DATA FAC-NEUTRAL TEST OTHER (EXPLAIN IN REMARKS)								
Remarks:									

[illegible]

HYDROPHYTIC VEGETATION PRESENT?	YES	<u>NO</u>	IS THIS SAMPLING POINT WITHIN A WETLAND? YES <u>NO</u> (CIRCLE)
WETLAND HYDROLOGY PRESENT?	YES	<u>NO</u>	
HYDRIC SOILS PRESENT?	YES	<u>NO</u>	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/18/06
APPLICANT/OWNER:	Center	COUNTY:	Sac
INVESTIGATOR:	T. Bayol, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?	Yes <input checked="" type="radio"/> no <input type="radio"/>	COMMUNITY ID:	AG
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?	Yes <input type="radio"/> no <input checked="" type="radio"/>	TRANSECT ID:	
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)	yes <input type="radio"/> no <input checked="" type="radio"/>	PLOT ID:	(17)

**VEGETATION**

*other*

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Lolium multiflorum</i>	80%	FAC*	9. <i>Xyrene Patue</i>		
2. <i>...</i>			10. <i>Carduus pycnocephalus</i>		
3. <i>...</i>			11. <i>Bromus hordeaceus</i>		
4. <i>...</i>			12. <i>Bromus diandrus</i>		
5. <i>...</i>			13. <i>...</i>		
6. <i>...</i>			14. <i>...</i>		
7. <i>...</i>			15. <i>...</i>		
8. <i>...</i>			16. <i>...</i>		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: dense cover (100%) of annual grasses + rustles

**HYDROLOGY**

<p><input checked="" type="checkbox"/> RECORDED DATA (DESCRIBE IN REMARKS)</p> <p><input type="checkbox"/> STREAM, LAKE OR TIDE GAUGE</p> <p><input checked="" type="checkbox"/> AERIAL PHOTOGRAPHS</p> <p><input type="checkbox"/> OTHER</p> <p><input type="checkbox"/> NO RECORDED DATA AVAILABLE</p> <p>FIELD OBSERVATIONS:</p> <p>DEPTH OF SURFACE WATER: — in.</p> <p>DEPTH TO FREE WATER IN PIT: &gt; 8 in.</p> <p>DEPTH TO SATURATED SOIL: &gt; 9 in.</p> <p>Site is on gently sloping hillside above adjacent seep</p>	<p>WETLAND HYDROLOGY INDICATORS:</p> <p>PRIMARY INDICATORS:</p> <p>INUNDATED</p> <p>SATURATED IN UPPER 12 INCHES</p> <p>WATER MARKS</p> <p>DRIFT LINES</p> <p>SEDIMENT DEPOSITS</p> <p>DRAINAGE PATTERNS IN WETLANDS</p> <p>SECONDARY INDICATORS (2 OR MORE REQUIRED)</p> <p>OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES</p> <p>WATER-STAINED LEAVES</p> <p>LOCAL SOIL SURVEY DATA</p> <p>FAC-NEUTRAL TEST</p> <p>OTHER (EXPLAIN IN REMARKS)</p>
<p>Remarks:</p>	

[illegible]

HYDROPHYTIC VEGETATION PRESENT?	YES	NO	IS THIS SAMPLING POINT WITHIN A WETLAND? YES	(CIRCLE)
WETLAND HYDROLOGY PRESENT?	YES	NO		NO
HYDRIC SOILS PRESENT?	YES	NO		
REMARKS:				

G:\... \OBS\BIO\BCM\WETLANDS.FRM



**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/18/02
APPLICANT/OWNER:	Center	COUNTY:	Sac
INVESTIGATOR:	T. Bayert, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?		<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID:
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?		Yes <input type="radio"/> <input checked="" type="radio"/> no	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)		yes <input type="radio"/> <input checked="" type="radio"/> no	PLOT ID: (19)

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Bromus hordeaceus</i>	50%	FACW-	9. <i>Taraxacum officinale</i>		
2. <i>Lolium multiflorum</i>	50%	FAC*	10. <i>Trifolium hyemum</i>		
3.			11. <i>Lotus purshianus</i>		
4.			12. <i>Beta vulgaris</i>		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: total cover 100%; dense annual grass and vegetation

**HYDROLOGY**

<input checked="" type="checkbox"/>	RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS:
	STREAM, LAKE OR TIDE GAUGE	PRIMARY INDICATORS:
<input checked="" type="checkbox"/>	AERIAL PHOTOGRAPHS	INUNDATED
	OTHER	SATURATED IN UPPER 12 INCHES
	NO RECORDED DATA AVAILABLE	WATER MARKS
	FIELD OBSERVATIONS:	DRIFT LINES
	DEPTH OF SURFACE WATER — in.	SEDIMENT DEPOSITS
	DEPTH TO FREE WATER IN PIT > 4 in.	DRAINAGE PATTERNS IN WETLANDS
	DEPTH TO SATURATED SOIL > 4 in.	SECONDARY INDICATORS (2 OR MORE REQUIRED)
on gently sloping hillside about intermittent drainage		OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
		WATER-STAINED LEAVES
		LOCAL SOIL SURVEY DATA
		FAC-NEUTRAL TEST
Remarks:		OTHER (EXPLAIN IN REMARKS)

[illegible]

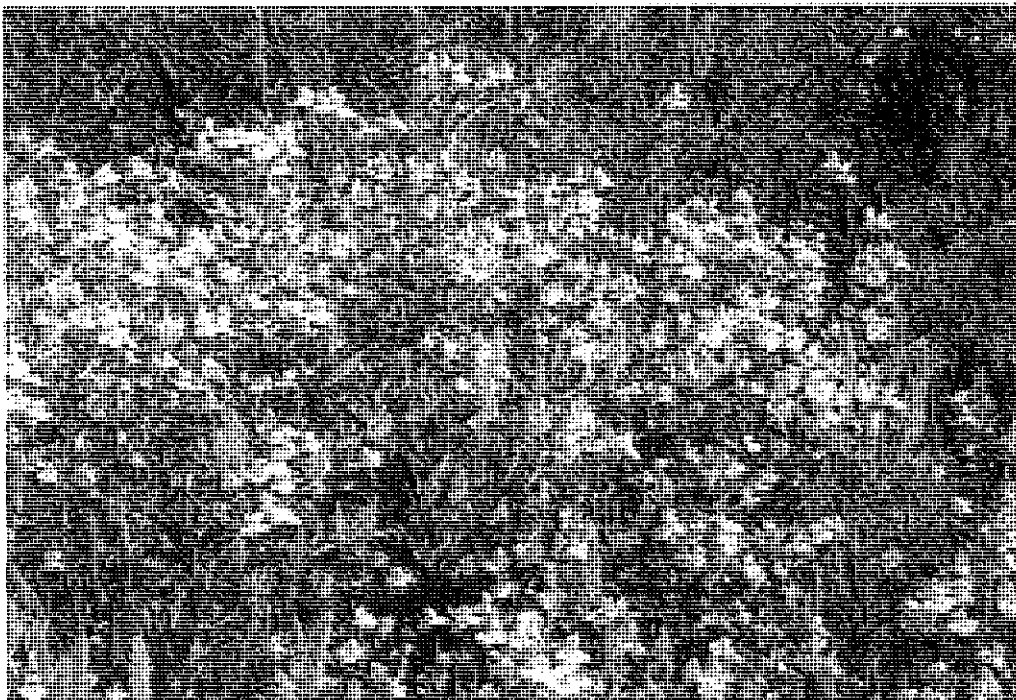
HYDROPHYTIC VEGETATION PRESENT?	YES	<input checked="" type="radio"/> NO	IS THIS SAMPLING POINT WITHIN A WETLAND? YES <input checked="" type="radio"/> NO
WETLAND HYDROLOGY PRESENT?	YES	<input checked="" type="radio"/> NO	
HYDRIC SOILS PRESENT?	YES	<input checked="" type="radio"/> NO	
REMARKS:			

G:\..JOBS\BIO\BCM\WETLANDS.FRM

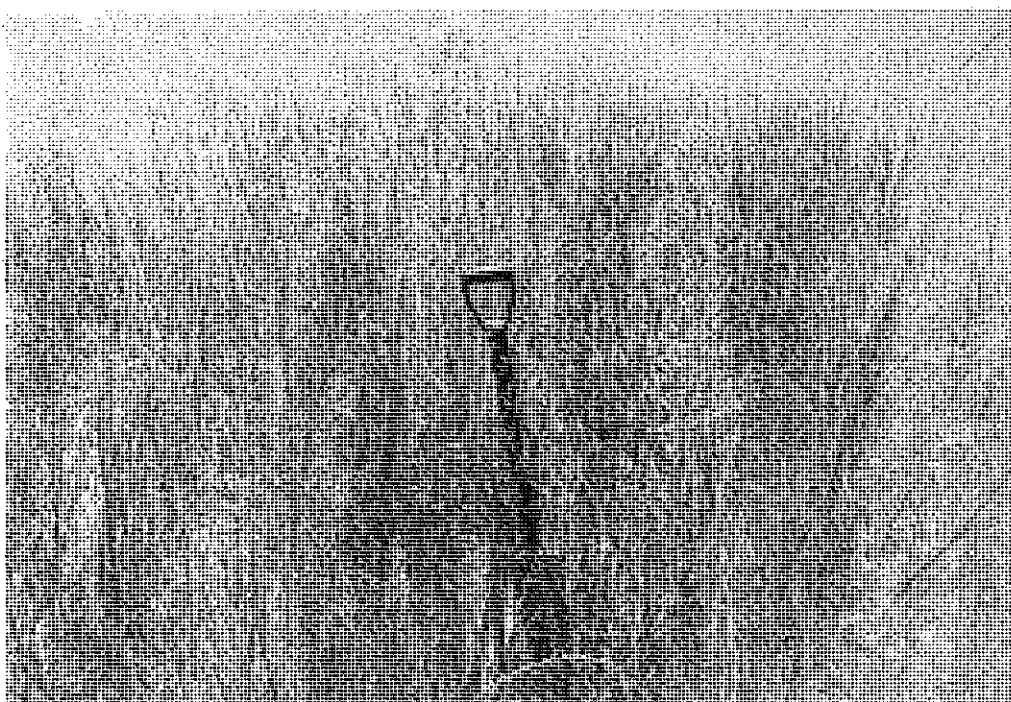
## **APPENDIX D**

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### Representative Photographs



Seasonal wetland 2 at sample point 1



Seasonal wetland 3 at sample point 18

## Representative Photographs

## Appendix D



Seep 1 at sample point 9



Seep 3

## Representative Photographs

## Appendix D



Seep 4 at sample point 15



Seep 6 at sample point 20

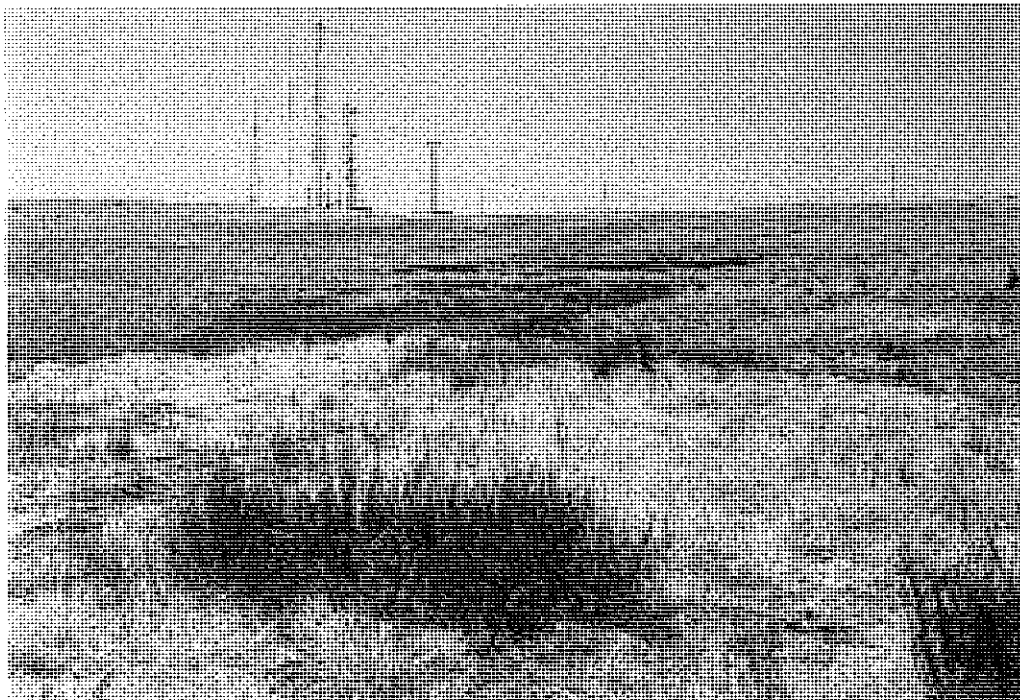
## Representative Photographs

## Appendix D





Swale 1



Swale 2 at sample point 8

## Representative Photographs

## Appendix D



Swale 4 looking north from sample point 16



Willow scrub habitat

## Representative Photographs

## Appendix D





Intermittent drainage 1 looking downstream (south)



Intermittent drainage 2 looking upstream (northwest)

## Representative Photographs

## Appendix D



Intermittent drainage 3 looking downstream (east)



Annual grassland habitat

## Representative Photographs

## Appendix D

EDAW INC

2022 J STREET

SACRAMENTO, CALIFORNIA

95814

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FAX 916 414-5850

www.edaw.com

June 29, 2006

Mr. John Jarecki  
Centex Home  
3700 Douglas Boulevard, Suite 150  
Roseville, CA 95661

**Subject: Tree Survey for the Centex – Folsom Heights Property**

Dear Mr. Jarecki;

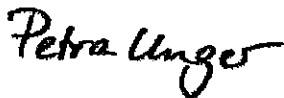
This letter report presents the results of a tree survey of the Centex – Folsom Heights property located on the Sacramento El Dorado County line (Exhibits 1 and 2) conducted by EDAW on June 23, 2006. During the survey an EDAW botanist inventoried all trees present on the project site. Each tree was identified by species and assigned a unique identification number. The location of each tree was mapped onto an aerial photograph of the site provided by Centex. The locations were then digitized into a GIS shape file. Data taken for each tree included the approximate height, diameter at breast height (dbh), and overall health.

Table 1 below summarizes the results of the tree survey. A total of 5 willows (*Salix goodingii*, *S. laevigata*) and 5 cottonwood (*Populus fremontii*) trees were mapped on the project site. The location of each tree is shown in Exhibit 3.

None of the trees present on the project site would be subject to protection under the Sacramento County tree ordinance, as the ordinance pertains only to native oak trees greater than 6 inches dbh. No native oak trees are present on the project site.

If you have any questions regarding the methods or results of the tree survey or its implications for future project planning, please do not hesitate to contact me at (916) 414-5800 or [ungerp@edaw.com](mailto:ungerp@edaw.com).

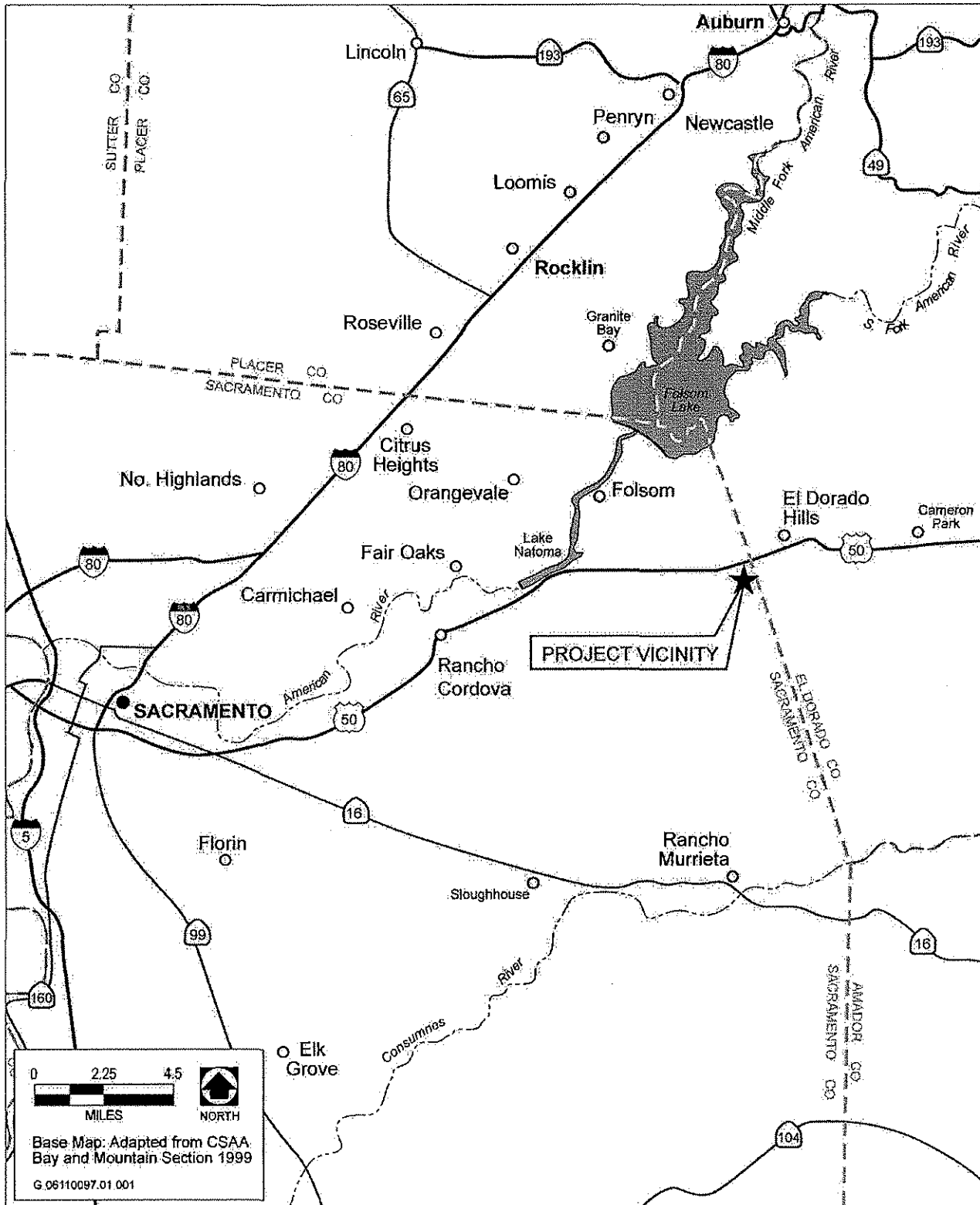
Sincerely,



Petra Unger  
Botany Practice Leader/Senior Project Manager  
06110097.01

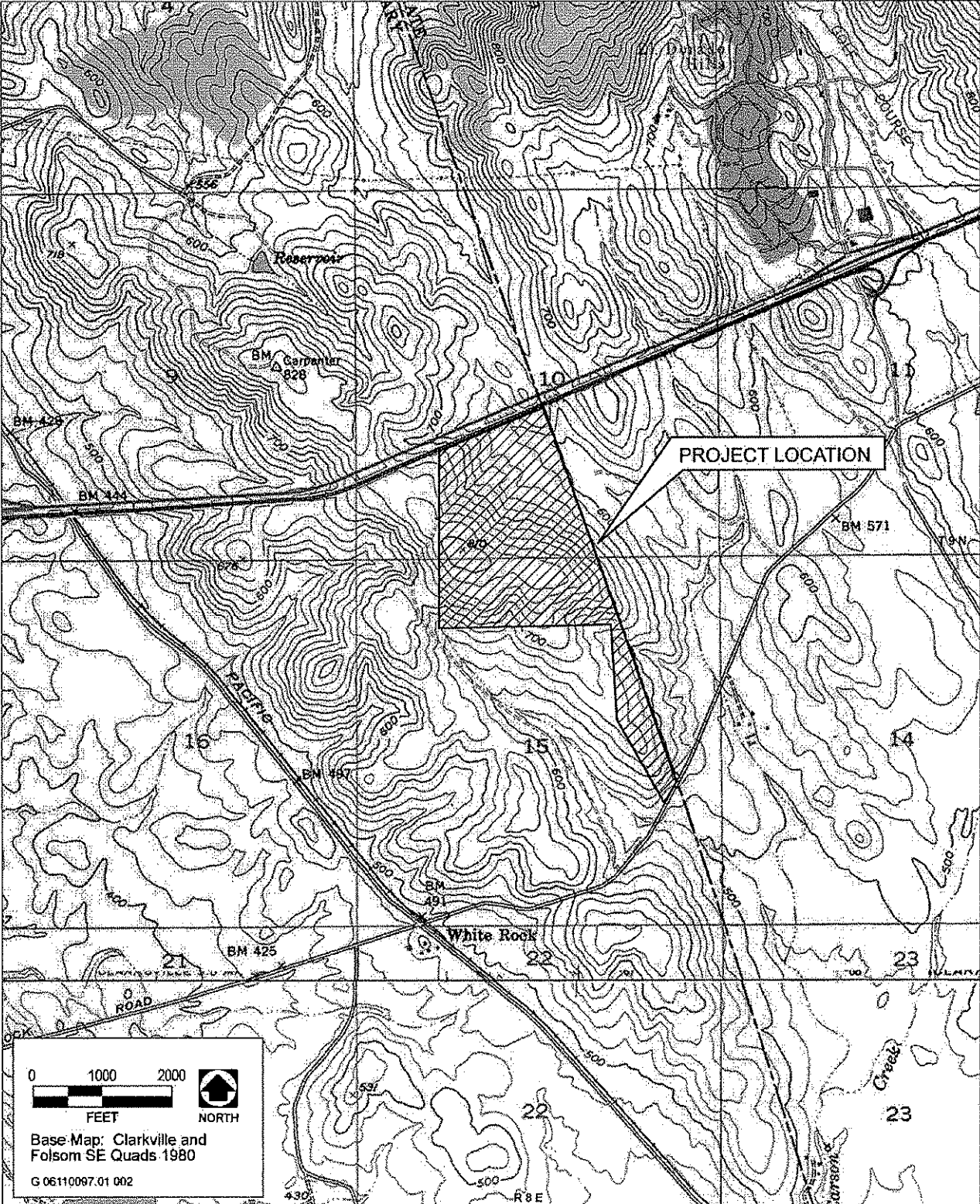
Enclosures: Exhibit 1. Project Vicinity Map  
Exhibit 2. Project Location Map  
Exhibit 3. Tree Location Map

Table 1 Trees Inventory for the Centex – Folsom Heights Project Site					
Code	Species	dbh	height	Overall health	notes
Co1	<i>Populus fremontii</i>	16"	24'	very good	
Co2	<i>Populus fremontii</i>	10"	12'	very good	multitrunk tree (2 trunks), branching at base; growing in a clump with Co3.
Co3	<i>Populus fremontii</i>	16"	24'	very good	multitrunk tree (2 trunks); branching at 2 feet from the ground; growing in a clump with Co2.
Co4	<i>Populus fremontii</i>	8"	10'	very good	multitrunk tree (2 trunks), branching at base.
Co5	<i>Populus fremontii</i>	14"	20'	very good	
Wi1	<i>Salix goodingii</i>	24"	30'	very good	primary branching just below breast height; three primary branches are very large (12" – 18" diameter).
Wi2	<i>Salix laevigata</i>	10"	14'	very good	multitrunk tree (2 trunks); branching at base.
Wi3	<i>Salix goodingii</i>	12"	12'	very good	primary branching is very low; almost a multitrunk tree.
Wi4	<i>Salix goodingii</i>	8"	20'	very good	multitrunk tree (2 trunks); branching at base.
Wi5	<i>Salix goodingii</i>	20"	24'	very good	multitrunk tree from the base (4 trunks); branching at base.



Project Vicinity Map

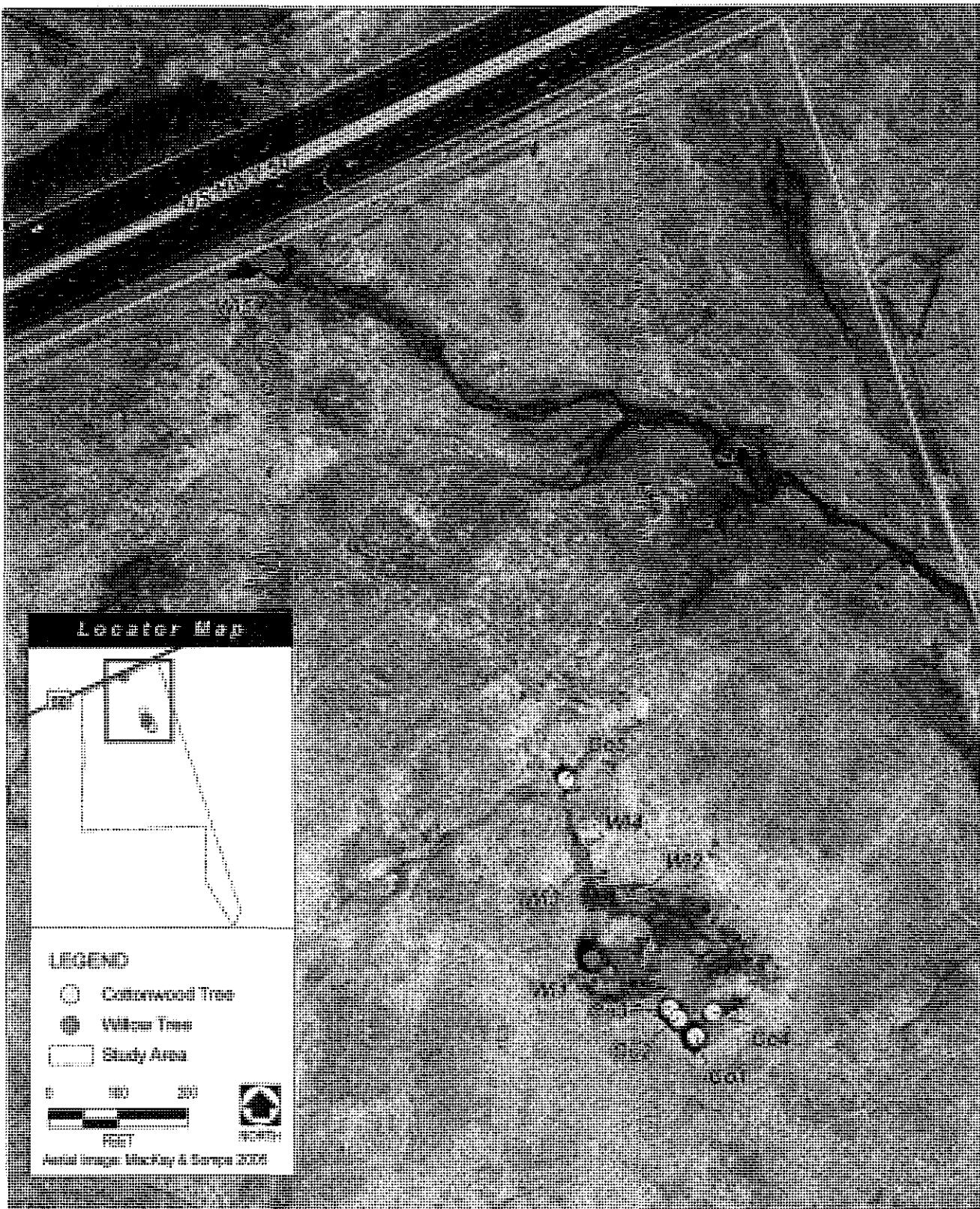
Exhibit 1



### Project Location Map

## Exhibit 2





Tree Location Map

Exhibit 3

EDAW INC

2022 J STREET

SACRAMENTO, CALIFORNIA

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June 29, 2006

Mr. John Jarecki  
Centex Home  
3700 Douglas Boulevard, Suite 150  
Roseville, CA 95661

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Dear Mr. Jarecki;

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Sincerely,



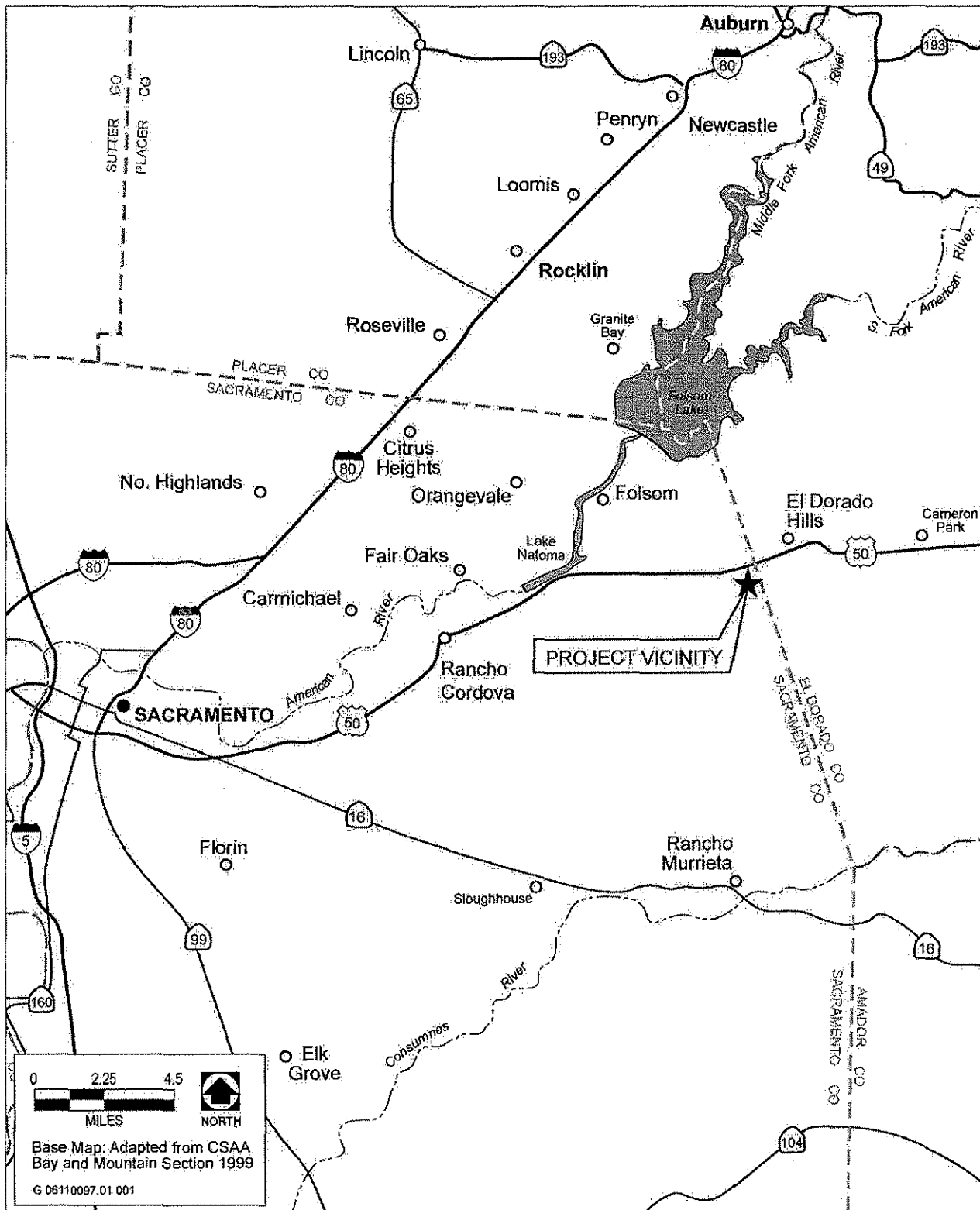
Petra Unger  
Botany Practice Leader/Senior Project Manager  
06110097.01

Enclosures: Exhibit 1. Project Vicinity Map  
Exhibit 2. Project Location Map  
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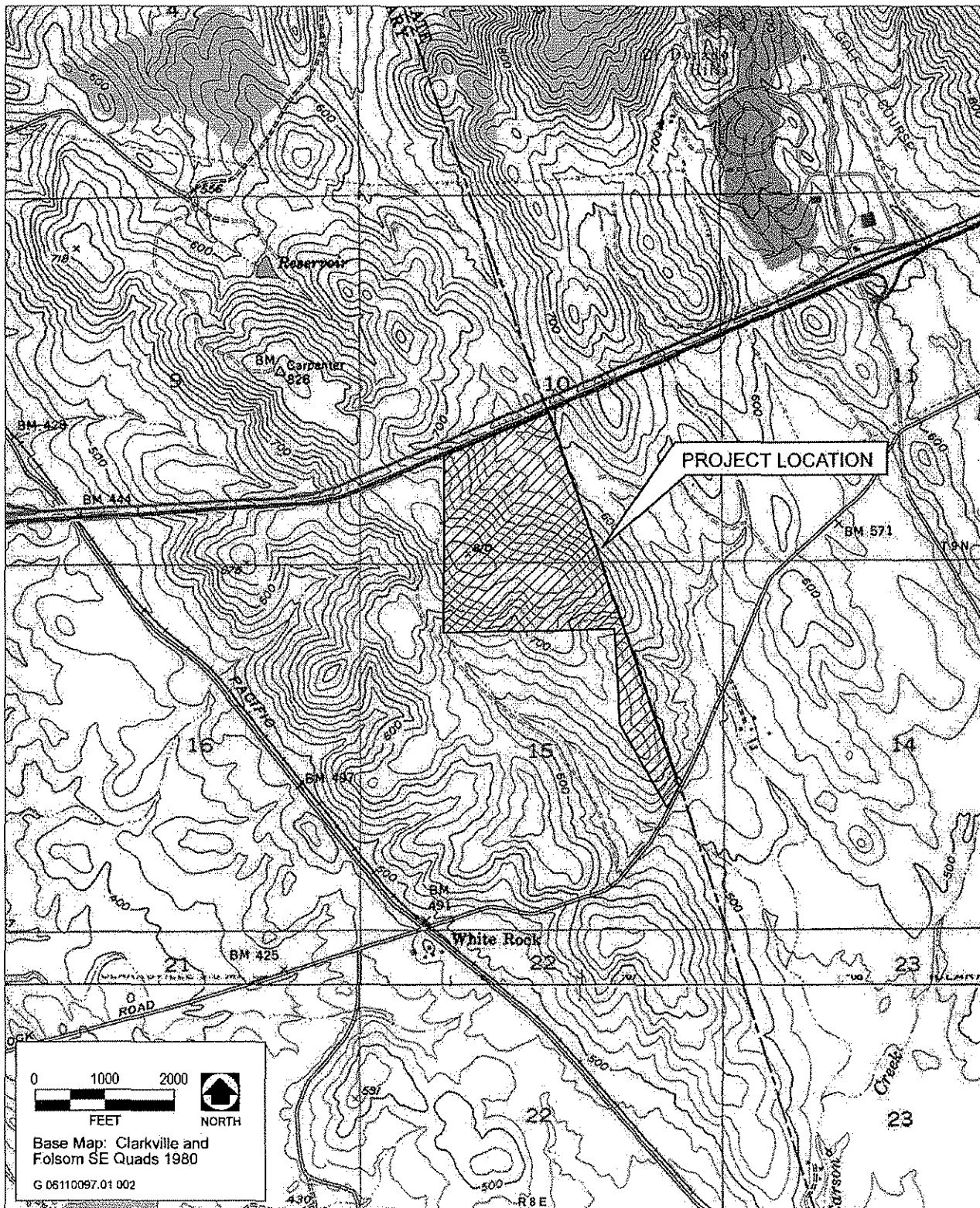
**Table 1**  
**Trees Inventory for the Centex – Folsom Heights Project Site**

Code	Species	dbh	height	Overall health	notes
Co1	<i>Populus fremontii</i>	16"	24'	very good	
Co2	<i>Populus fremontii</i>	10"	12'	very good	multitrunk tree (2 trunks), branching at base; growing in a clump with Co3.
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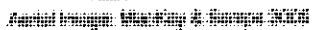
Project Vicinity Map

Exhibit 1



Project Location Map

Exhibit 2



### Exhibit 3

# ENVIRONMENTAL SITE ASSESSMENT

## FOLSOM HEIGHTS PROPERTY

WKA No.  
6744.01



WALLACE • KUHL & ASSOCIATES INC.

*Environmental Site Assessment*  
**FOLSOM HEIGHTS PROPERTY**  
Eastern Sacramento County, California

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**WALLACE • KUHL  
& ASSOCIATES INC.**

Geotechnical Engineering

Engineering Geology

Environmental Consulting

Remediation Services

Construction Inspection

Materials Testing

*Environmental Site Assessment*

**FOLSOM HEIGHTS PROPERTY**

South of Highway 50, east of Old Placerville Road

Eastern Sacramento County, California

WKA No. 6744.01

August 26, 2005

**INTRODUCTION**

**Purpose and Scope**

We have completed a Phase 1 Environmental Site Assessment for the subject property identified as the Folsom Heights Property shown on Plates 1 through 3. The purpose of our work was to evaluate the property for evidence of potential soil and groundwater contamination resulting from current and/or former site activities. Our work was authorized August 1, 2005 by Ms. Kim McCarley of Centex Homes, Sacramento Division. This report has been prepared in accordance with the American Society of Testing and Materials (ASTM) *Standard E 1527-00 for Environmental Assessments*.

- a field reconnaissance of the subject property to look for evidence of surface and potential subsurface sources of contamination
- personal interviews with persons familiar with site history
- a review of the U.S. Department of Agriculture, Soil Conservation Service *Soil Survey of Sacramento County* and the Sacramento County Department of Agriculture records for historical agricultural pesticide use permits
- an evaluation of monoscopic aerial photographic coverage of the property and vicinity, as well as review of historic topographic maps, as available, in order to establish a reasonably continuous 50-year history as required by the ASTM standard.

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3050 Industrial Boulevard  
West Sacramento  
CA 95691  
Tel 916.372.1434  
Fax 916.372.2565

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STOCKTON OFFICE  
3410 West Hammer Lane  
Suite F  
Stockton, CA 95219  
Tel 209.234.7722  
Fax 209.234.7727

- a review of federal, state and county lists indicating known instances of hazardous materials contamination or registered underground and aboveground storage tanks (USTs/ASTs) on or near the property (Plate 4)
- a discussion of the low likelihood for radon to be problematic at the property
- color photography of the property (Plate 5).

## FINDINGS

### Site Description

The subject property is generally located on the north side of White Rock Road, south of Highway 50, and just west of the El Dorado County/ Sacramento County line, in Sacramento County, California (see Plate No. 1). At the time of our site reconnaissance, the site was undeveloped and covered with native weeds and grasses with a topographically high point (810 feet mean sea level elevation) in the west-central portion of the property. Cattle fencing enclosed the subject property. The subject property was accessed from a gate located along White Rock Road beyond which leads to an old partially-paved road traversing to the north to a series of radio broadcasting towers located adjacent to the property (off site) to the west. The radio towers are utilized by area radio stations such as KNCI-FM 105.1, KZZO-FM 100.5 and KWOD-FM 106.5, along with other users/companies. The radio broadcasting complex consists of four separate towers and associated equipment rooms (locked). The subject property consists of approximately 186-acres of undeveloped rangeland located within the County of Sacramento, California (Plates 1 and 2). The property has Sacramento County Assessor's Parcel Numbers (APN) 072-0070-001 and 072-0270-028 (Plate 3).

Currently no municipal provisions for wastewater management, potable water or stormwater management exist on the subject parcel. The subject property is bounded by undeveloped land to the west and south, Highway 50 to the north, commercial and residential development to the east, and White Rock Road to the south. The eastern portion of the property is bounded by the Sacramento/El Dorado County border.





We did not observe any farm operations hubs, farm or earthwork equipment staging areas, tractor maintenance areas, chemical mixing or storage locations, evidence of USTs, sumps, catch basins, mechanic's pits, oil/water separators, hydraulic lifts or drain inlets on the subject property at the time of our field reconnaissance. Similarly, we observed no leaking pipes, hydraulic hoists, mechanic's pits, stained or discolored soils (where the soil was visible) or stressed vegetation.

### Site History

Based on review of historical aerial photographs, the site has been vacant, undeveloped land since at least 1944.

We reviewed a cultural resources assessment prepared by Peak & Associates in 1993 for historical information relative to the subject property area in general (vicinity of White Rock Road and Placerville Road). According to the report, the subject property area:

“is associated with events of recognized importance in California history in that it was a major feature on the wagon route between Sacramento and Placerville, a major transportation corridor in the Gold Rush and one of the primary routes for overland emigrant travel...”

“The early emigrant road via Carson Pass continued to Placerville, then through Diamond Springs, Shingle Springs, Clarksville, and on to Sacramento via the White Rock Road. This road became an important road for freighting goods from Sacramento into the mining region in the 1850's and early 1860's. The first steep hill in the foothills encountered on the road was known as White Rock Hill. It was on the side of this hill that the White Rock Springs House was constructed [southwest corner of Section 15. This property is not part of the subject property]. The first known proprietor was Henry Jacobs. In the early 1850's, a large house and barn were constructed on the property that became a popular stopping place for minors traveling on the Mills-Hangtown Road.

In approximately 1856, farming activities and cattle raising were started on the property. By 1860, the ranch (known then as the Chapman-Wilkinson ranch) was a sprawling 480 acres. It included five horses, nine dairy cows, 20 steers and two pigs. In addition to the animals, the ranch also produced 60 bushels of wheat, 250 bushels of barley and 75 tons of hay. The extension of the Sacramento Valley Railroad from Folsom to Latrobe in 1864 probably brought



an end to the hostelry the White Rock Springs site. Even without the hotel business, the ranch continued to prosper in the 1860's."

### **Utility Features**

No municipal utility services for potable water, sanitary sewer or stormwater run-off exist on or adjacent to the subject property.

### **Site History**

### **Ownership**

According to information obtained from the Preliminary Title Report for the two subject property parcels, the property ownership entity is listed as Russell & Marjorie Knauer.

### **Interviews**

We interviewed Mr. Rob Robinson, the broker for the subject property regarding historical aspects of the property. Mr. Robinson was unaware of any hazardous waste encumbrances on the subject property.

### **Archived Permit Records and Business Directories**

Inquiry with the Sacramento County Assessor's office revealed that a street number has not been assigned to the subject property. The Assessor's representative explained that individual parcels are not assigned a street number until a building permit has been issued for the property under consideration. Since no street number has been assigned to the property, we did not review historic business directories, as these documents contain listings based on street number identifiers. The lack of street number assignments to the property also corroborates our experience with archived building permits as discussed above.



### **Building Department Records**

We contacted the County of Sacramento, Building Inspection Division regarding historical building permits or use permits for the subject property. No building permits were issued for the parcel numbers assigned to the subject property.

### **Sanborn Maps**

According to a search conducted by EDR, Sanborn Map coverage for the subject property was not available.

### **Topographic Maps Review**

Topography of the property is undulating to moderately and steeply rolling terrain with surface elevations ranging between approximately +580 feet to +810 feet relative to mean sea level (msl) based on review of a USGS *Topographic Map of the Clarksville, Buffalo Creek, Folsom and Folsom SE Quadrangles, California* as shown on Plate 2. The topographic maps do not depict any roads, structures, creeks or other mapped features on the property. An unimproved road is mapped just west of the property. This road is accessed from White Rock Road to the south and provides access to the radio towers adjacent to the west of the property. In general, the reviewed topographic maps reveal minimal changes on the subject property during the past 50 years.

### **Aerial Photographic Review**

Review of available aerial photographs taken in 1962, 1971, 1976, 1989 and 2001 indicates the property has been undeveloped land during at least this period of time. The telecommunication towers to the west of the property have been in existence since before 1962. Prior to 1962 the towers were accessed by a road entering from Highway 50 and from the existing road accessing from White Rock Road some time prior to 1971. No other significant site features worth noting were observed on the aerial photographs.



### **Hydrogeologic and Soils Settings**

#### **Regional Geology**

The property is predominately underlain by metavolcanic and pyroclastic rock formations as identified by the California Department of Conservation: Mines and Geology publication, "Generalized Geologic Map of the Folsom 15-Minute Quadrangle." Based on the map, the Copper Hill Volcanic formation appears to cover the majority of the property, consisting of mostly mafic to andesitic pyroclastic rocks, lava, and pillow lava, with subordinate felsic porphyritic and pyroclastic rocks.

#### **Soil Survey**

Review of the June 1972 U.S. Department of Agriculture, Soil Conservation Service (SCS) *Soil Survey of Sacramento County, California* indicates the near-surface soils on the subject property consist primarily of the *Auburn-Argonaut-Rock Complex (Unit 110)*. The Argonaut-Auburn Complex is characterized by native vegetation such as annual greases and forbs and a few scattered oaks. The Argonaut soil formed in material weathered from meta-andesite and metamorphic rocks. Typically, the surface layer is reddish yellow and light yellowish brown loam about 8-inches thick. Water is perched above the claypan for short periods after heavy rainfall in winter and early spring. The effective rooting depth and the depth to bedrock are 10 to 28 inches. Run-off is medium. The hazard of water erosion is slight. SCS reports the predominant land use of this unit as rangeland. The *Auburn-Argonaut-Rock Complex* is formed in material weathered from metabasic and metasedimentary rocks. Typically, the surface layer and subsoil are strong brown, reddish yellow, and yellowish red loam.

#### **Regional Groundwater**

Free groundwater was not encountered in the test pits excavated during our geotechnical investigation of an adjacent property (conducted in February 2005). Groundwater elevations in the vicinity of the property are estimated using depth-to-groundwater measurements obtained from geologic borings drilled on the adjacent property during an October 2003 Phase 2 investigation. Based on the drilling, the depth to groundwater beneath the adjacent property ranged from approximately 20 to greater than 45 feet below ground surface, depending on ground surface elevation.



### Agency Records Review

We have reviewed databases obtained by Environmental Data Resources, Inc. (EDR) regarding hazardous materials handling or contamination on or near the subject property that are prepared by the following agencies:

- United States Environmental Protection Agency (EPA)
- California Environmental Protection Agency (Cal-EPA)
- Cal-EPA Department of Toxic Substances Control (DTSC)
- Cal-EPA Office of Environmental Health Hazard Assessment (OEHHA)
- Cal-EPA Regional Water Quality Control Board (RWQCB)
- Cal-EPA Integrated Waste Management Board (CIWMB)
- California State Water Resources Control Board (SWRCB)
- California Department of Health Services (DHS)
- Cal-DHS Office of Drinking Water (ODW)
- California Division of Oil and Gas (DOG)
- Sacramento County Environmental Management Department (EMD)

EDR, Inc. used the ASTM-designated search radii during review of the regulatory agency databases shown on Plate 4. In summary, we identified one confirmed state or federal "Superfund" site on or within one mile of the subject property during review of the former DHS's *Bond Expenditure Plan*, the U.S. EPA's *National Priorities List (NPL)* and the Cal-EPA's *Active Annual Workplan Sites* list. This facility is referred to as the Aerojet General Corporation. No potential federal Superfund sites appeared on or within one-half mile of the property during review of U.S. EPA's *Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)*.

Additionally, the subject property and adjacent land areas are not listed as *Resource Conservation and Recovery Act (RCRA) Generators*, nor does the property appear in U.S. EPA's *Emergency Response Notification System (ERNS)* database. No RCRA *Treatment, Storage or Disposal (TSD)* facilities are located on or within one-half mile of the property. The subject property does not appear in any of the agency databases reviewed during preparation of this report.



### State and County Databases

EDR's search of various state and county databases that are shown on Plate 4 using the ASTM-designated search radii revealed no known contaminated municipal ground water wells, or active or inactive landfills located on, adjacent to, or within one-half mile of the subject property. The EDR database search reveals no known contaminated sites on or within one-half mile of the property. Similarly, no businesses or facilities with registered UST or AST are located on, adjacent to or within one-half mile of the subject property. The subject property itself does not appear on any of the reviewed databases.

### CONCLUSIONS

Our historic land use research, which included review of topographic maps and aerial photographs as well as other published documents, reveals that the subject property has been undeveloped rangeland since the early 1940's. According to information presented in the Peak & Associates cultural resources assessment, the area in the vicinity of the subject property "is associated with events of recognized importance in California history in that it was a major feature on the wagon route between Sacramento and Placerville, a major transportation corridor in the Gold Rush and one of the primary routes for overland emigrant travel. An adjacent site (parcel 072-0070-006) served as an inn on this road from at least 1849 until about 1865 and was continuously occupied as a ranch house from this period through the 1930's. It is also associated with the Mormon presence in early California, which was very important during and just after the Gold Rush,"

Our field reconnaissance and review of agency records indicate no evidence of hazardous materials contamination on the subject property. We observed no obvious evidence of bulk storage of hazardous materials, or of industrial facilities during our windshield survey of the immediate property. No agency-listed contaminated municipal water wells are located within one-half mile of the subject property.

In summary, we have performed a Phase 1 Environmental Site Assessment in conformance with the scope and limitations of ASTM Standard Practice E 1527-00 for the subject property described above. We have made no exceptions to, or deletions from, the Standard Practice. This assessment has revealed no evidence of Recognized Environmental Conditions in connection



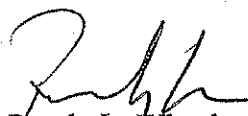
with the subject property. We do not recommend further investigation of the subject property at this time.

### LIMITATIONS

The statements and conclusions in this report are based upon the scope of work described above and on observations made only on the date of our field reconnaissance. Our work was performed using a degree of skill consistent with that of competent environmental consulting firms performing similar work in the area. We have attempted to obtain information regarding the property that is *publicly available* and *practically reviewable*, as described in the ASTM standard. Additional research or receipt of information regarding the property that was not disclosed or available to us during our assessment may result in revision of our conclusions.

The conclusions in this report should be reevaluated if site conditions change. No recommendation is made as to the suitability of the property for any purpose. The results of our assessment do not preclude the possibility that materials currently or in the future defined as hazardous are present on the property. This report is applicable only to the investigated property and should not be used for any other property. No warranty is expressed or implied.

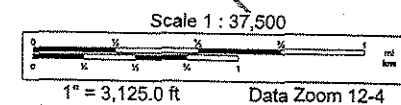
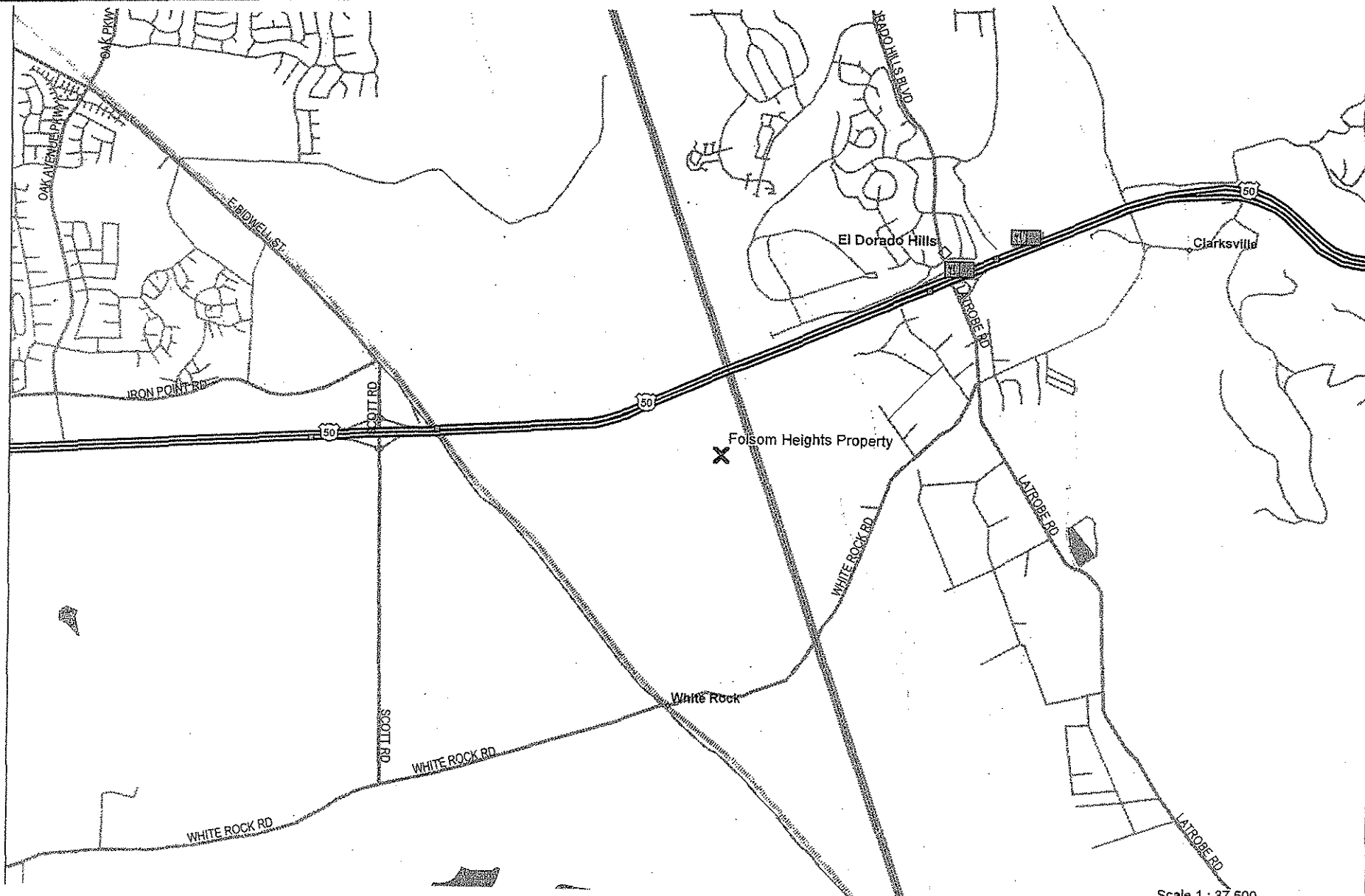
Wallace ■ Kuhl & Associates, Inc.

  
Randy L. Wheeler  
Project Geologist



RLW:DVA:lmb





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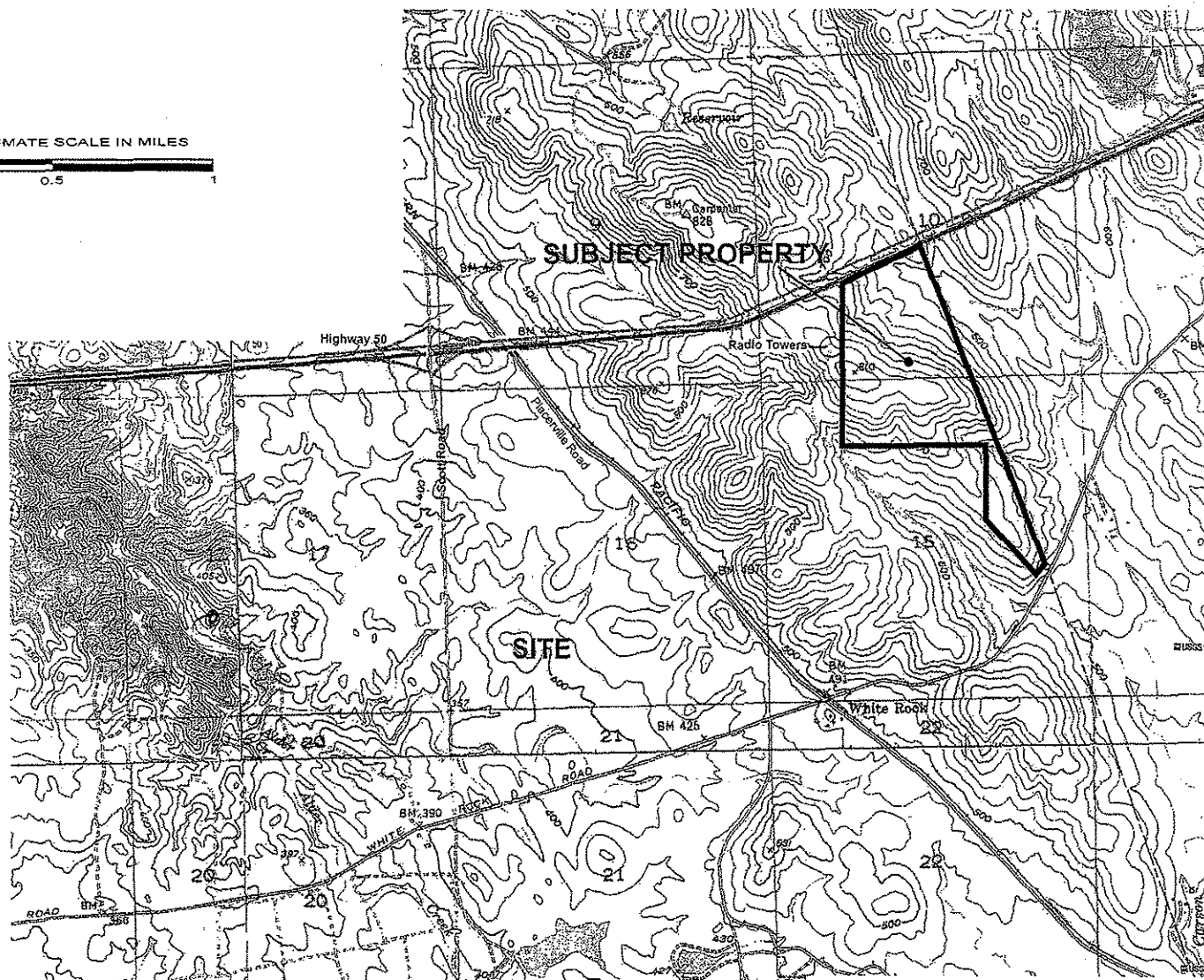
**VICINITY MAP**  
**FOLSOM HEIGHTS PROPERTY**  
 Sacramento, California

WKA NO: 6744.01  
 DATE: 8/05  
 PLATE NO: 1





APPROXIMATE SCALE IN MILES  
0 0.5 1



Adapted from USGS Quadrangle Maps - 7.5 Minute Series:  
Clarksville, Buffalo Creek, Folsom and Folsom SE

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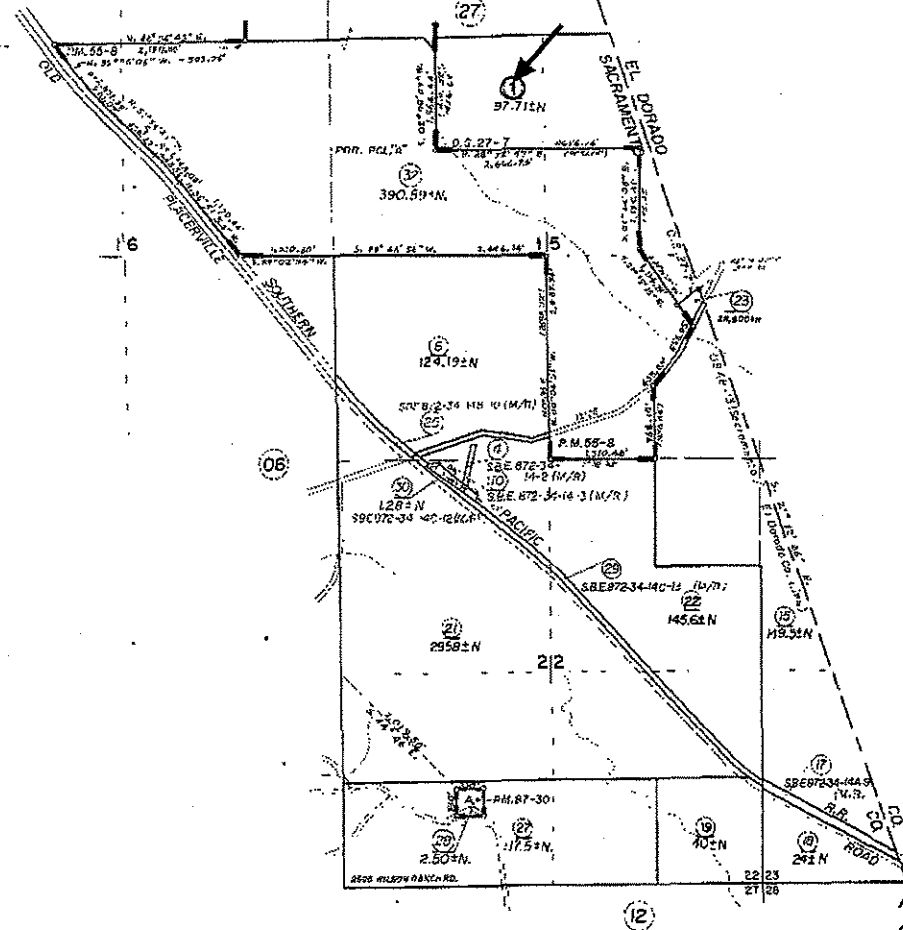
**TOPOGRAPHIC MAP**  
**FOLSOM HEIGHTS PROPERTY**  
Sacramento, California

WKA NO: 6744.01  
DATE: 8/05  
PLATE NO: 2

POR. T.9N., R.8E., M.D.B. & M.

Tax Area Code

72-07



Record of Survey, O.S. Bk. 18 Pg. 13 (10-31-60)  
O.S. Bk. 27 Pg. 7 (9-23-60)

NOTE Assessor's Block Numbers Shown in Ellipses.  
Assessor's Parcel Numbers Shown in Circles.

Assessor's Map Bk. 72 - Pg. 07  
County of Sacramento, Calif.

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**ASSESSOR PARCEL MAP**  
**FOLSOM HEIGHTS PROPERTY**  
Sacramento, California

WKA NO: 6744.01  
DATE: 8/05  
PLATE NO: 3



**FEDERAL ASTM STANDARD RECORDS**

**NATIONAL PRIORITIES LIST (EPA)**

*(Run Date April 28, 2005)*  
*(Updated by EDR contact of May 4, 2005)*

None Listed

**CERCLIS LIST (EPA)**

*(Run Date February 15, 2005)*  
*(Updated by EDR contact of March 22, 2005)*

None Listed

**FEDERAL RESOURCE CONSERVATION AND RECOVERY ACT INFO (RCRA)**

**[TSD Facilities and RCRA Generators ]**  
*(Run Date May 20, 2005)*  
*(Updated by EDR contact of May 24, 2005)*

None Listed

**EMERGENCY RESPONSE NOTIFICATION SYSTEM (ERNS-EPA)**

*(Run Date December 31, 2004)*  
*(Updated by EDR contact of July 25, 2005)*

None Listed

**STATE OF CALIFORNIA ASTM STANDARD RECORDS**

**ACTIVE ANNUAL WORKPLAN SITES, FY 2002-2003 (DTSC)**

*(Run Date May 4, 2005)*  
*(Updated by EDR contact of June 1, 2005)*

None Listed

**CALSITES DATABASE (DTSC)**

*(Run Date May 4, 2005)*  
*(Updated by EDR contact of June 1, 2005)*

None Listed

**"CORTESE" HAZARDOUS WASTE AND SUBSTANCES SITES LIST**

*(Run Date April 1, 2001)*  
*(Updated by EDR contact of April 25, 2005)*

None Listed

**TOXIC PITS CLEANUP ACT (SWRCB)**

*(Run Date July 1, 1995)*  
*(Updated by EDR contact of February 1, 2005)*

None Listed



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AGENCY LISTS  
FOLSOM HEIGHTS PROPERTY  
Folsom  
California

WKA NO: 6744.01  
DATE: 8/05  
PLATE NO: 4

**SOLID WASTE INFORMATION SYSTEM (SWIS) (CIWMB)**

**Closed and Inactive Sites**  
(Run Date March 14, 2005)  
(EDR Update contact March 15, 2005)

None Listed

**RANKED SOLID WASTE DISPOSAL LIST (SWRCB)**

**Solid Waste Assessment Test (SWAT) Program**  
(Run Date April 1, 2000)  
(Updated by EDR contact of March 7, 2005)

None Listed

**GEOTRACKER'S LEAKING UNDERGROUND FUEL TANK REPORT (LUST)**  
**(SWRCB)**

(Run Date May 12, 2005)  
(Updated by EDR contact of April 13, 2005)

None Listed

**CA BOND EXPENDITURE PLAN (DHS)**

(Run Date May 31, 1994)  
(No update Planned)

None Listed

**ACTIVE UST FACILITIES (SWRCB)**

(Run Date April 12, 2005)  
(Updated by EDR contact of April 13, 2005)

None Listed

**SPILLS, LEAKS, INVESTIGATIONS & CLEANUPS LIST (SLIC -RWQCB)**

(Run Date April 1, 2005)  
(Updated by EDR contact of April 5, 2005)

None Listed

**HAZARDOUS WASTE INFORMATION SYSTEM - HAZNET (CAL-EPA)**

[Manifest-derived Information]  
(Run Date December 31, 2002)  
(Updated by EDR contact of February 17, 2005)

None Listed



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**AGENCY LISTS**  
**FOLSOM HEIGHTS PROPERTY**Folsom  
California

WKA NO: 6744.01

DATE: 8/05

PLATE NO: 4

**CALIFORNIA DIVISION OF OIL AND GAS (DOG)**

*(Map Published October 21, 2003)*

No wells listed

**LOCAL RECORDS**

**SACRAMENTO COUNTY CONTAMINATED SITES -CS\***

*(Run Date December 30, 2004)*

*(Updated by EDR contact of February 4, 2005)*

None Listed

**REGULATORY COMPLIANCE MASTER LIST - ML\*\***

*(Run Date December 30, 2004)*

*(Updated by EDR contact of February 4, 2005)*

Sacramento Cellular – 14751 White Rock Road  
American Tower Corp Site 8105-81 – 15125 White Rock Road

**NOTES:**

The ASTM-required search radius for NPL, Bond Expenditure, and Active Annual Workplan sites is one mile from the subject property; it is one-half mile for CERCLIS, TSD and for most other facilities; and, the search radius for RCRA Large and Small Generators and HAZNET is the subject and adjacent properties.

- \* Facilities listed include sites where unauthorized hazardous materials release(s) are known to have occurred. The ASTM-required search radius for these sites is one-half mile.
- \*\* Facilities listed include sites where underground storage tanks are registered as present or registered as removed. The ASTM-required search radius for these sites is one-quarter mile.



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**AGENCY LISTS**

FOLSOM HEIGHTS PROPERTYSFolsom  
California

WKA NO: 6744.01

DATE: 8/05

PLATE NO: 4



Photo 1: View looking southeast across the northern portion of the property.

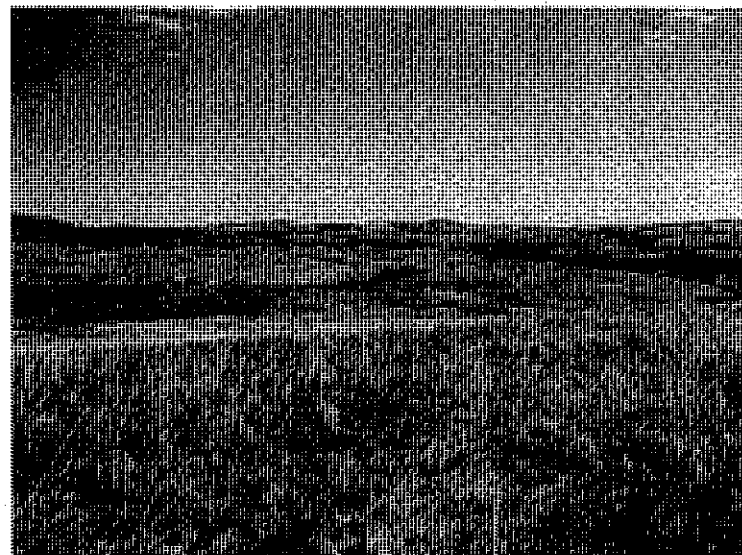


Photo 2: View looking northeast toward Highway 50 / El Dorado Hills.



Photo 4: View looking east towards El Dorado County.



Photo 4: View looking west across the property towards Sacramento.

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GEOLOGIC & ENVIRONMENTAL SERVICES



DRAWN BY: RLW

**SITE PHOTOGRAPHS**  
**FOLSOM HEIGHTS PROPERTY**  
Sacramento, California

WKA NO: 6744.01

DATE: 8/05

PLATE NO: 5

## **APPENDIX D10**

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Listed Vernal Pool Branchiopod Wet Season  
Survey 90-Day Report, Carpenter Ranch



***LISTED VERNAL POOL  
BRANCHIOPOD  
WET SEASON SURVEY  
90-Day Report***

***CARPENTER RANCH***

***GIBSON & SKORDAL, LLC  
Wetland Consultants  
2277 Fair Oaks Blvd., Suite 105  
Sacramento, California 95825***

***LISTED VERNAL POOL  
BRANCHIOPOD  
WET SEASON SURVEY  
90-Day Report***

***CARPENTER RANCH***

***SACRAMENTO COUNTY,  
CALIFORNIA***

***August 2007***

***Prepared For:***

***Colliers International  
1610 Arden Way, Suite 240  
Sacramento, California 95814***

***Prepared By:***

***GIBSON & SKORDAL, LLC  
Wetland Consultants  
2277 Fair Oaks Blvd., Suite 105  
Sacramento, California 95825***

## OBJECTIVE

The purpose of this report is to summarize the results of protocol surveys for listed vernal pool branchiopods conducted on Carpenter Ranch during the 2006-07 wet season. Survey target species included the federally endangered conservancy fairy shrimp (*Branchinecta conservatio*), longhorn fairy shrimp (*Branchinecta longiantenna*), and vernal pool tadpole shrimp (*Lepidurus packardii*), and the federally threatened vernal pool fairy shrimp (*Branchinecta lynchi*).

Field surveys were conducted under the authorization of U.S. Fish and Wildlife Service (FWS) pursuant to Endangered/Threatened Species Take Permit No. PRT-795935-3.

## LOCATION

The approximately 1,054-acre study area is located in Sections 9, 16, 17, and 18, Township 9 North, Range 8 East, MDB&M, Sacramento County, California. The parcel can be found at UTM 661,695.75 M E; 4,278,082.56 M N (Zone 10) and is portrayed on the Clarksville and Folsom, California 7.5 Minute Series Quadrangles. Figure 1 is a vicinity map.

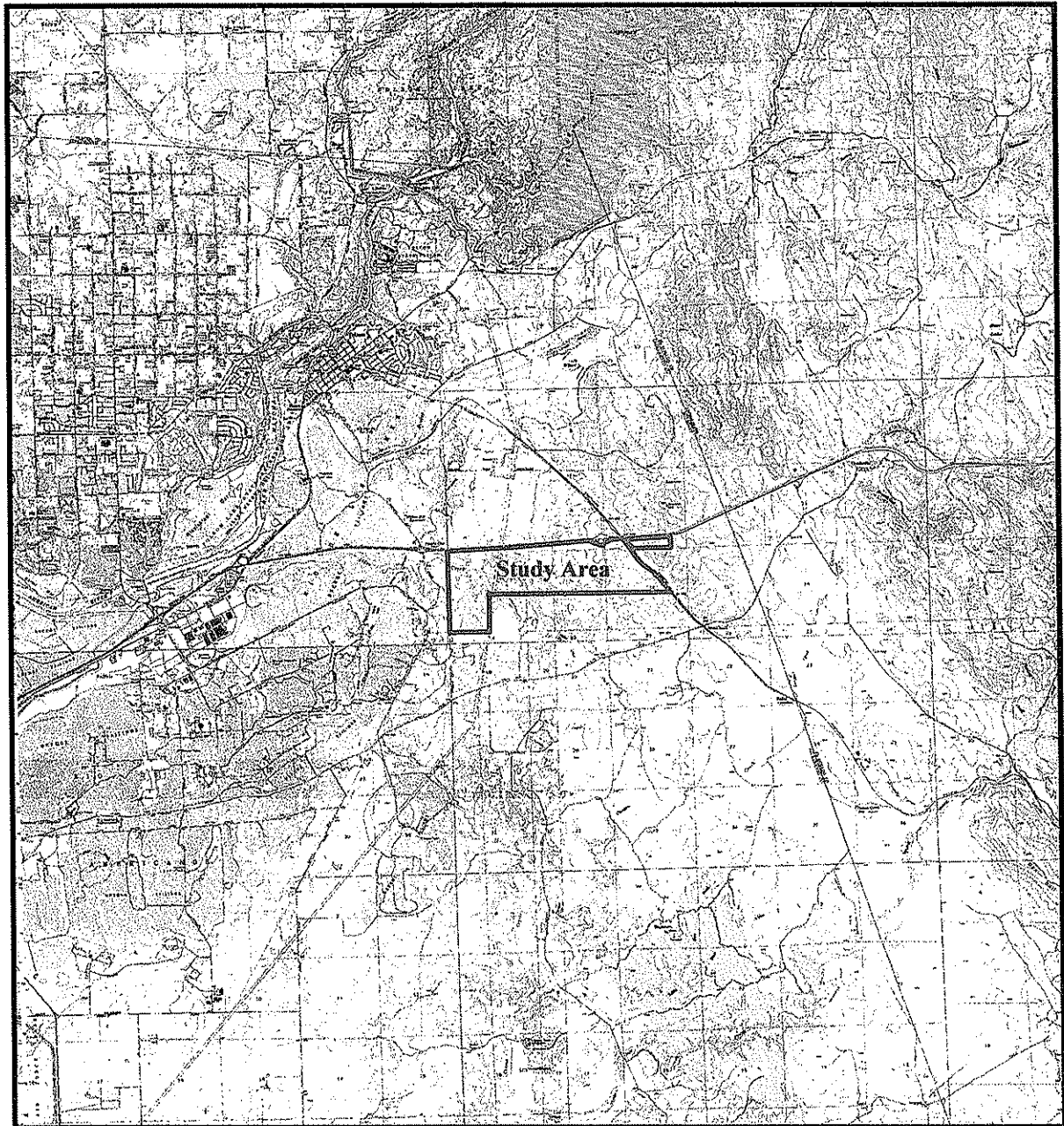
To access the site from Sacramento drive east on US 50 and exit at the East Bidwell Street/Scott Road exit. Drive south on Scott Road for approximately two hundred yards. The study area is located directly to the east and west of Scott Road.

## METHODS AND MATERIALS

Field surveys began on December 21, 2006, and were conducted in accordance with the terms and conditions outlined in FWS vernal pool crustacean survey guidelines dated April 1996, and special terms and conditions of our permit dated November 6, 2003 (amended November 15, 2005).

The surveyed features were sampled with a 5-foot long dip net with a 12-inch D-ring and 650 micron mesh. Representative portions of a given feature's bottom, edges, and vertical water column were sampled for target branchiopods. Sampling involved making a series of pulls by extending the net out and pulling it back in a sweeping motion. The net was examined for the presence of branchiopods and then cleaned of debris between pulls. The number of pulls made in each seasonal wetland was commensurate to feature size and ponding depth. In addition, the survey wetlands were visually scanned for the presence of branchiopods prior to each net pull. Air temperature, water temperature, and approximate maximum depth of ponding was measured and recorded during each sampling session. Abundance categories were assigned in an attempt

**Carpenter Ranch Vicinity Map**  
**Sections 16, 17, 18; Township 9 North;**  
**Range 8 East, MDB&M.**  
**UTM 661,695.75 M E; 4,278,082.56 M N (Zone 10)**



Source: USGS Folsom, Folsom S.E., Buffalo Creek, Roseville,  
Shingle Springs, Citrus Heights, Latrobe, Carmichael, and  
Clarksville, California 7.5 Minute Quadrangles. N.T.S.



0 500 1,000 2,000  
Feet

to quantify species concentration within a given features. They are as follows: Low (L) indicates less than 1 individual per net pull; Medium (M) indicates 1 to 4 individuals per net pull; and High (H) indicates 5 or greater individuals per net pull. Appendix B contains data sheets with the above described field data.

## GENERAL SITE CONDITIONS AND HABITAT

The study area consists of two discrete sections which abut the south side of US 50 and are situated in the foothills on rolling to relatively flat terrain at an elevation of approximately 300 to 400 feet. The 1,000-acre west section is separated from the 54-acre east parcel by Placerville Road and a segment of the South Pacific Railroad. The study area supports no habitable structures except for an abandoned trailer. Various relic pits, tailing piles, and channels from historic gold mining operations are scattered throughout the site, and a power line right of way traverses the property from north to south. The western-most boundary is bracketed by Prairie City Road which divides the study area from property owned by Aerojet. Lands to the south and east are sparsely developed rangelands while areas north of Highway 50 support various commercial and residential developments. The parcel was moderately grazed at the time of field surveys.

The majority of the study area supports two general habitat types: disturbed, non-native annual grasslands and oak woodlands. The eastern portion, including the disjoint eastern parcel, in general is flatter and dominated by wild oats (*Avena fatua*), tarweed (*Holocarpha virgata*), and medusa-head (*Taeniatherum caput-medusae*). Common grasses and forbs include perennial rye grass (*Lolium perenne*), little quacking grass (*Briza minor*), soft chess (*Bromus mollis*), and prickly lettuce (*Lactuca serriola*). The western half supports an overstory primarily composed of live oak (*Quercus wislizenii*), valley oak (*Quercus lobata*), and blue oak (*Quercus douglasii*). The understory consists of dogtail (*Cynosurus echinatus*), tarweed, soft chess, hairy hawkbit (*Leontodon leysleri*), and perennial rye grass.

The study area supports a relatively large drainage associated with Alder Creek which spans the properties from east to west. Several other water features are also present and include vernal pools, swales, emergent marsh, seeps, and ditches.

## SURVEYED WETLANDS

A wetland delineation was prepared by Gibson & Skordal in November 2006, and was submitted to the U.S. Army Corps of Engineers for review on December 7, 2006. The Corps subsequently issued a verification letter on July 23, 2007. A total of 27.7656 acres of water features were

mapped in the study area including 1.1607 acres of vernal pools, 0.1211 acre of depressional seasonal wetlands, 1.4948 acres of seeps, 0.0917 acre of emergent marsh, 1.4674 acres of ditches, 8.9226 acres of wet swales, and 14.5072 acres of channels and associated riparian wetlands. A set of the verified delineation maps with the acreage table is enclosed in Appendix A.

The proposed survey features appear to sustain long-term ponding and/or saturated soil conditions during and following periods of heavy precipitation in the winter and early spring. Additional water is likely provided by surface sheet flow and subsurface discharge onto the perched water-tables or impermeable surfaces which underlie vernal pools and seasonal wetlands. Indicators of wetland hydrology observed during our site visits included the presence of detritus, hoof prints, rhizospheres, and algal matting. The soils recorded were sandy loams and typically displayed a 10YR 4/2 matrix with common, distinct 10YR 5/6 mottles. Plants surveyed within vernal pools included coyote thistle (*Eryngium vaseyi*), rabbits foot grass (*Polypogon monspeliensis*), perennial rye, manna grass (*Glyceria sp.*), dove weed (*Eremocarpus setigerus*), toad rush (*Juncus bufonius*), and slender popcorn flower (*Plagiobothrys stipitatus*).

The majority of the site's wetlands and other water features appear to drain to Alder Creek, the largest feature mapped within the study area. Alder Creek drains to the west and is directly tributary to Lake Natoma, which empties into the American River.

## FINDINGS

No target branchiopod species, listed or otherwise, were found within the surveyed water features. Appendix C contains photographic documentation of representative landscapes and habitats in the survey area. A table summarizing collected field data is attached in Appendix B.

## REFERENCES

- Eng. L.L., D. Belk, and C.H. Erikson. 1990. California Anostraca: Distribution, Habitat and Status. *Journal of Crustacean Biology* 10(2): 247-277.
- Eriksen, C.H., and D. Belk. 1999. *Fairy Shrimps of California's Puddles, Pools, and Playas*. Mad River Press, Inc., Eureka, California.
- Hickman, J.C. 1993. *The Jepson Manual: Higher Plants of California*. University of California Press, Berkeley and Los Angeles, California.

Mason, H.L. 1957. A Flora of the Marshes of California. University of California Press, Berkeley and Los Angeles, California.

Munz, P.A. 1973. A California Flora and Supplement. University of California Press, Berkeley and Los Angeles, California.

Patton, S.E. 1984. The Life History Patterns and the Distribution of Two Anostraca, *Linderiella occidentalis* and *Branchinecta* sp. MS Thesis, California University, Chico. 50 pp.

United States Department of the Interior, Fish and Wildlife Service. 1999. Endangered Species Take Permit No. TE-795935-3. November 2003.

United States Department of the Interior, Fish and Wildlife Service. April 1996. Interim Survey Guidelines to Permittees for Recovery Permits under Section 10(a) (1) (A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods.

# APPENDIX A

## WETLAND DELINEATION MAP



# **APPENDIX B**

## **WET SEASON SURVEY DATA**

**2006-7 WET-SEASON LISTED BRANCHIOPOD SURVEY**

**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V1	12/21/06	Rainy	18	N/A	0	N/A	109	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.626,979/ W 121.143,513	Jim Gibson	No
V2	12/21/06	Rainy	18	N/A	0	N/A	39	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,026/ W 121.142,983	Jim Gibson	No
V3	12/21/06	Rainy	18	N/A	0	N/A	25	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,370 W 121.142,839	Jim Gibson	No
V4	12/21/06	Rainy	18	N/A	0	N/A	285	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,495/W 121.142,844	Jim Gibson	No
V5	12/21/06	Rainy	18	N/A	0	N/A	338	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,652/ W 121.143,464	Jim Gibson	No
V6	12/21/06	Rainy	18	N/A	0	N/A	75	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,722/ W 121.143,127	Jim Gibson	No
V7	12/21/06	Rainy	18	N/A	0	N/A	554	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.628,128/ W 121.142,577	Jim Gibson	No
V8	12/21/06	Rainy	18	N/A	0	N/A	748	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.628,456/ W 121.143,176	Jim Gibson	No
V9	12/21/06	Rainy	18	N/A	0	N/A	116	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.628,637/ W 121.149,062	Jim Gibson	No
V10	12/21/06	Rainy	18	N/A	0	N/A	622	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,227/ W 121.147,166	Jim Gibson	No
V11	12/21/06	Rainy	18	N/A	0	N/A	3,460	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,122/ W 121.150,259	Jim Gibson	No
V12	12/21/06	Rainy	18	N/A	0	N/A	48	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,502/ W 121.144,620	Jim Gibson	No
V13	12/21/06	Rainy	18	N/A	0	N/A	653	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,607/ W 121.144,563	Jim Gibson	No
V14	12/21/06	Rainy	18	N/A	0	N/A	812	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,659/ W 121.144,171	Jim Gibson	No
V15	12/21/06	Rainy	18	N/A	0	N/A	40	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,576/ W 121.149,429	Jim Gibson	No
V16	12/21/06	Rainy	18	N/A	0	N/A	82	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,659/ W 121.149,845	Jim Gibson	No
V17	12/21/06	Rainy	18	N/A	0	N/A	102	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,810/ W 121.149,707	Jim Gibson	No
V18	12/21/06	Rainy	18	N/A	0	N/A	160	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,855/ W 121.149,778	Jim Gibson	No
V19	12/21/06	Rainy	18	N/A	0	N/A	1,060	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,914/ W 121.149,563	Jim Gibson	No
V20	12/21/06	Rainy	18	N/A	0	N/A	735	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,995/ W 121.149,398	Jim Gibson	No
V21	12/21/06	Rainy	18	N/A	0	N/A	511	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,900/ W 121.150,149	Jim Gibson	No
V22	12/21/06	Rainy	18	N/A	0	N/A	45	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,134/ W 121.149,845	Jim Gibson	No
V23	12/21/06	Rainy	18	N/A	0	N/A	444	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,269/ W 121.149,264	Jim Gibson	No

Note: Branchinecta lynchi = BRLY; Branchinecta conservatio = BRCO; Branchinecta mesovallensis = BRME; Lepidurus packardi = LEPA; and Linderiella occidentalis = LIOC.

**2006-7 WET-SEASON LISTED BRANCHIOPOD SURVEY**

**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V48	12/21/06	Rainy	18	N/A	0	N/A	34	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,789/ W 121.140,747	Jim Gibson	No
V49	12/21/06	Rainy	18	N/A	0	N/A	140	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,758/ W 121.140,862	Jim Gibson	No
V50	12/21/06	Rainy	18	N/A	0	N/A	169	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,696/ W 121.140,848	Jim Gibson	No
V51	12/21/06	Rainy	18	N/A	0	N/A	228	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,359/ W 121.136,387	Jim Gibson	No
V52	12/21/06	Rainy	18	N/A	0	N/A	112	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,129/ W 121.134,332	Jim Gibson	No
V53	12/21/06	Rainy	18	N/A	0	N/A	223	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,297/ W 121.133,725	Jim Gibson	No
V54	12/21/06	Rainy	18	N/A	0	N/A	97	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,387/ W 121.133,153	Jim Gibson	No
V55	12/21/06	Rainy	18	N/A	0	N/A	284	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,617/ W 121.130,389	Jim Gibson	No
V56	12/21/06	Rainy	18	N/A	0	N/A	216	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,218/ W 121.130,494	Jim Gibson	No
V57	12/21/06	Rainy	18	N/A	0	N/A	207	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,249/ W 121.128,841	Jim Gibson	No
V58	12/21/06	Rainy	18	N/A	0	N/A	279	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,158/ W 121.130,726	Jim Gibson	No
V59	12/21/06	Rainy	18	N/A	0	N/A	55	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,189/ W 121.130,666	Jim Gibson	No
V60	12/21/06	Rainy	18	N/A	0	N/A	67	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,231/ W 121.130,580	Jim Gibson	No
V61	12/21/06	Rainy	18	N/A	0	N/A	17	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,224/ W 121.130,536	Jim Gibson	No
V62	12/21/06	Rainy	18	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,197/ W 121.130,459	Jim Gibson	No
V63	12/21/06	Rainy	18	N/A	0	N/A	101	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,166/ W 121.136,238	Jim Gibson	No
V64	12/21/06	Rainy	18	N/A	0	N/A	223	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,115/ W 121.130,233	Jim Gibson	No
V65	12/21/06	Rainy	18	N/A	0	N/A	453	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,157/ W 121.130,361	Jim Gibson	No
V66	12/21/06	Rainy	18	N/A	0	N/A	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,195/ W 121.130,620	Jim Gibson	No
V67	12/21/06	Rainy	18	N/A	0	N/A	367	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,575/ W 121.126,738	Jim Gibson	No
V68	12/21/06	Rainy	18	N/A	0	N/A	2,790	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,097/ W 121.125,894	Jim Gibson	No
V69	12/21/06	Rainy	18	N/A	0	N/A	3,983	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,718/ W 121.125,575	Jim Gibson	No
V70	12/21/06	Rainy	18	N/A	0	N/A	317	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,369/ W 121.124,252	Jim Gibson	No
V71	12/21/06	Rainy	18	N/A	0	N/A	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,363/ W 121.123,978	Jim Gibson	No

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**2006-7 WET-SEASON LISTED BRANCHIOPOD SURVEY**

**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V72	12/21/06	Rainy	18	N/A	0	N/A	386	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,982/ W 121.126,253	Jim Gibson	No
V73	12/21/06	Rainy	18	N/A	0	N/A	458	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,638/ W 121.126,190	Jim Gibson	No
V74	12/21/06	Rainy	18	N/A	0	N/A	317	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,479/ W 121.125,902	Jim Gibson	No
V75	12/21/06	Rainy	18	N/A	0	N/A	140	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,375/ W 121.125,628	Jim Gibson	No
V76	12/21/06	Rainy	18	N/A	0	N/A	126	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,320/ W 121.125,537	Jim Gibson	No
V77	12/21/06	Rainy	18	N/A	0	N/A	165	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,131/ W 121.125,135	Jim Gibson	No
V78	12/21/06	Rainy	18	N/A	0	N/A	104	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,866/ W 121.124,927	Jim Gibson	No
V79	12/21/06	Rainy	18	N/A	0	N/A	122	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,471/ W 121.125,369	Jim Gibson	No
V80	12/21/06	Rainy	18	N/A	0	N/A	42	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,343/ W 121.125,162	Jim Gibson	No
V81	12/21/06	Rainy	18	N/A	0	N/A	163	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,232/ W 121.124,216	Jim Gibson	No
V82	12/21/06	Rainy	18	N/A	0	N/A	48	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,195/ W 121.126,036	Jim Gibson	No
V83	12/21/06	Rainy	18	N/A	0	N/A	201	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,624/ W 121.122,236	Jim Gibson	No
V84	12/21/06	Rainy	18	N/A	0	N/A	182	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,177/ W 121.122,553	Jim Gibson	No
V85	12/21/06	Rainy	18	N/A	0	N/A	190	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,113/ W 121.121,226	Jim Gibson	No
V86	12/21/06	Rainy	18	N/A	0	N/A	73	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,385/ W 121.120,128	Jim Gibson	No
V87	12/21/06	Rainy	18	N/A	0	N/A	21	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,269/ W 121.121,934	Jim Gibson	No
V88	12/21/06	Rainy	18	N/A	0	N/A	70	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,134/ W 121.120,118	Jim Gibson	No
V89	12/21/06	Rainy	18	N/A	0	N/A	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,010/ W 121.119,775	Jim Gibson	No
V90	12/21/06	Rainy	18	N/A	0	N/A	229	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,095/ W 121.116,589	Jim Gibson	No
V91	12/21/06	Rainy	18	N/A	0	N/A	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,997/ W 121.112,988	Jim Gibson	No
V92	12/21/06	Rainy	18	N/A	0	N/A	170	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,490/ W 121.112,464	Jim Gibson	No
V93	12/21/06	Rainy	18	N/A	0	N/A	178	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,324/ W 121.112,342	Jim Gibson	No
V94	12/21/06	Rainy	18	N/A	0	N/A	50	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,066/ W 121.111,799	Jim Gibson	No
V95	12/21/06	Rainy	18	N/A	0	N/A	192	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,989/ W 121.111,704	Jim Gibson	No

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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V96	12/21/06	Rainy	18	N/A	0	N/A	34	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,081/ W 121.111,673	Jim Gibson	No
V97	12/21/06	Rainy	18	N/A	0	N/A	14	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,079/ W 121.111,376	Jim Gibson	No
V98	12/21/06	Rainy	18	N/A	0	N/A	93	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,150/ W 121.111,448	Jim Gibson	No
V99	12/21/06	Rainy	18	N/A	0	N/A	29	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,138/ W 121.111,263	Jim Gibson	No
V100	12/21/06	Rainy	18	N/A	0	N/A	390	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,227/ W 121.111,149	Jim Gibson	No
V101	12/21/06	Rainy	18	N/A	0	N/A	106	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,321/ W 121.110,991	Jim Gibson	No
V102	12/21/06	Rainy	18	N/A	0	N/A	1,396	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,085/ W 121.109,415	Jim Gibson	No
V103	12/21/06	Rainy	18	N/A	0	N/A	411	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,680/ W 121.190,333	Jim Gibson	No
V104	12/21/06	Rainy	18	N/A	0	N/A	87	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,797/ W 121.108,328	Jim Gibson	No
V105	12/21/06	Rainy	18	N/A	0	N/A	263	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,789/ W 121.108,390	Jim Gibson	No
V106	12/21/06	Rainy	18	N/A	0	N/A	56	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,725/ W 121.108,403	Jim Gibson	No
V107	12/21/06	Rainy	18	N/A	0	N/A	216	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,746/ W 121.107,826	Jim Gibson	No
V108	12/21/06	Rainy	18	N/A	0	N/A	106	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,871/ W 121.107,693	Jim Gibson	No
V109	12/21/06	Rainy	18	N/A	0	N/A	781	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,818/ W 121.107,530	Jim Gibson	No
V110	12/21/06	Rainy	18	N/A	0	N/A	266	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,975/ W 121.107,414	Jim Gibson	No
V111	12/21/06	Rainy	18	N/A	0	N/A	13	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,375/ W 121.107,478	Jim Gibson	No
V112	12/21/06	Rainy	18	N/A	0	N/A	68	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,451/ W 121.107,435	Jim Gibson	No
V113	12/21/06	Rainy	18	N/A	0	N/A	33	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,532/ W 121.107,448	Jim Gibson	No
V114	12/21/06	Rainy	18	N/A	0	N/A	386	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,492/ W 121.107,241	Jim Gibson	No
V115	12/21/06	Rainy	18	N/A	0	N/A	158	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,530/ W 121.107,142	Jim Gibson	No
V116	12/21/06	Rainy	18	N/A	0	N/A	221	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,418/ W 121.107,200	Jim Gibson	No
V117	12/21/06	Rainy	18	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,387/ W 121.107,156	Jim Gibson	No
V118	12/21/06	Rainy	18	N/A	0	N/A	90	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,244/ W 121.107,111	Jim Gibson	No
V119	12/21/06	Rainy	18	N/A	0	N/A	77	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,171/ W 121.107,024	Jim Gibson	No

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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V120	12/21/06	Rainy	18	N/A	0	N/A	121	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,163/ W 121.106,906	Jim Gibson	No
V121	12/21/06	Rainy	18	N/A	0	N/A	185	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,708/ W 121.105,461	Jim Gibson	No
V122	12/21/06	Rainy	18	N/A	0	N/A	79	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,914/ W 121.103,812	Jim Gibson	No
V123	12/21/06	Rainy	18	N/A	0	N/A	1,083	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,029/ W 121.103,409	Jim Gibson	No
V124	12/21/06	Rainy	18	N/A	0	N/A	49	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,511/ W 121.143,333	Jim Gibson	No
V125	12/21/06	Rainy	18	N/A	0	N/A	627	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,632/ W 121.140,697	Jim Gibson	No
V126	12/21/06	Rainy	18	N/A	0	N/A	593	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,299/ W 121.140,255	Jim Gibson	No
V127	12/21/06	Rainy	18	N/A	0	N/A	28	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,212/ W 121.148,631	Jim Gibson	No
V128	12/21/06	Rainy	18	N/A	0	N/A	19	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,050/ W 121.147,861	Jim Gibson	No
V129	12/21/06	Rainy	18	N/A	0	N/A	63	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,229/ W 121.141,698	Jim Gibson	No
V130	12/21/06	Rainy	18	N/A	0	N/A	438	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,082/ W 121.141,984	Jim Gibson	No
V131	12/21/06	Rainy	18	N/A	0	N/A	159	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,192/ W 121.141,803	Jim Gibson	No
V132	12/21/06	Rainy	18	N/A	0	N/A	102	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,142/ W 121.141,815	Jim Gibson	No
V133	12/21/06	Rainy	18	N/A	0	N/A	208	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,191/ W 121.149,359	Jim Gibson	No
V134	12/21/06	Rainy	18	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,135/ W 121.149,385	Jim Gibson	No
V135	12/21/06	Rainy	18	N/A	0	N/A	49	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,498/ W 121.130,283	Jim Gibson	No
V136	12/21/06	Rainy	18	N/A	0	N/A	46	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,745/ W 121.124,120	Jim Gibson	No
V137	12/21/06	Rainy	18	N/A	0	N/A	90	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,064/ W 121.111,989	Jim Gibson	No
V138	12/21/06	Rainy	18	N/A	0	N/A	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,224/ W 121.103,399	Jim Gibson	No
V139	12/21/06	Rainy	18	N/A	0	N/A	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,702/ W 121.107,367	Jim Gibson	No
WS1	12/21/06	Rainy	18	N/A	0	N/A	56,720	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,281/ W 121.145,209	Jim Gibson	No
WS2	12/21/06	Rainy	18	N/A	0	N/A	685	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,854/ W 121.150,169	Jim Gibson	No
WS3	12/21/06	Rainy	18	N/A	0	N/A	5,168	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,602/ W 121.150,234	Jim Gibson	No
WS4	12/21/06	Rainy	18	N/A	0	N/A	580	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.629,117/ W 121.149,265	Jim Gibson	No

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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
WS5	12/21/06	Rainy	18	N/A	0	N/A	434	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,181/ W 121.147,132	Jim Gibson	No
WS6	12/21/06	Rainy	18	N/A	0	N/A	3,258	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,258/ W 121.143,895	Jim Gibson	No
WS7	12/21/06	Rainy	18	N/A	0	N/A	710	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,207/ W 121.143,309	Jim Gibson	No
WS8	12/21/06	Rainy	18	N/A	0	N/A	3,520	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,398/ W 121.144,535	Jim Gibson	No
WS9	12/21/06	Rainy	18	N/A	0	N/A	74	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,269/ W 121.144,546	Jim Gibson	No
WS10	12/21/06	Rainy	18	N/A	0	N/A	1,139	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,647/ W 121.143,854	Jim Gibson	No
WS11	12/21/06	Rainy	18	N/A	0	N/A	1,265	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,495/ W 121.142,243	Jim Gibson	No
WS12	12/21/06	Rainy	18	N/A	0	N/A	891	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,956/ W 121.142,008	Jim Gibson	No
WS13	12/21/06	Rainy	18	N/A	0	N/A	246	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,402/ W 121.141,164	Jim Gibson	No
WS14	12/21/06	Rainy	18	N/A	0	N/A	440	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,712/ W 121.140,424	Jim Gibson	No
WS15	12/21/06	Rainy	18	N/A	0	N/A	2,122	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,465/ W 121.140,384	Jim Gibson	No
WS16	12/21/06	Rainy	18	N/A	0	N/A	687	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,149/ W 121.137,922	Jim Gibson	No
WS17	12/21/06	Rainy	18	N/A	0	N/A	906	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,403/ W 121.137,678	Jim Gibson	No
WS18	12/21/06	Rainy	18	N/A	0	N/A	206	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,570/ W 121.136,903	Jim Gibson	No
WS19	12/21/06	Rainy	18	N/A	0	N/A	258	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,111/ W 121.136,231	Jim Gibson	No
WS20	12/21/06	Rainy	18	N/A	0	N/A	2,914	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,790/ W 121.131,670	Jim Gibson	No
WS21	12/21/06	Rainy	18	N/A	0	N/A	147	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,692/ W 121.131,050	Jim Gibson	No
WS22	12/21/06	Rainy	18	N/A	0	N/A	50,855	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,305/ W 121.130,886	Jim Gibson	No
WS23	12/21/06	Rainy	18	N/A	0	N/A	840	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,672/ W 121.130,561	Jim Gibson	No
WS24	12/21/06	Rainy	18	N/A	0	N/A	32,380	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,356/ W 121.128,646	Jim Gibson	No
WS25	12/21/06	Rainy	18	N/A	0	N/A	4,310	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,768/ W 121.125,839	Jim Gibson	No
WS26	12/21/06	Rainy	18	N/A	0	N/A	1,793	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,157/ W 121.126,772	Jim Gibson	No
WS27	12/21/06	Rainy	18	N/A	0	N/A	9,434	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,450/ W 121.127,846	Jim Gibson	No
WS28	12/21/06	Rainy	18	N/A	0	N/A	243	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,916/ W 121.124,907	Jim Gibson	No

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**2006-7 WET-SEASON LISTED BRANCHIOPOD SURVEY**

**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
WS29	12/21/06	Rainy	18	N/A	0	N/A	624	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,246/ W 121.121,939	Jim Gibson	No
WS30	12/21/06	Rainy	18	N/A	0	N/A	109,636	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,894/ W 121.117,339	Jim Gibson	No
WS31	12/21/06	Rainy	18	N/A	0	N/A	3,336	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,577/ W 121.124,827	Jim Gibson	No
WS32	12/21/06	Rainy	18	N/A	0	N/A	17,886	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,701/ W 121.119,339	Jim Gibson	No
WS33	12/21/06	Rainy	18	N/A	0	N/A	1,626	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,996/ W 121.118,711	Jim Gibson	No
WS34	12/21/06	Rainy	18	N/A	0	N/A	1,267	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,612/ W 121.117,705	Jim Gibson	No
WS35	12/21/06	Rainy	18	N/A	0	N/A	740	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,842/ W 121.124,438	Jim Gibson	No
WS36	12/21/06	Rainy	18	N/A	0	N/A	1,112	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,048/ W 121.117,778	Jim Gibson	No
WS37	12/21/06	Rainy	18	N/A	0	N/A	1,055	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,363/ W 121.117,492	Jim Gibson	No
WS38	12/21/06	Rainy	18	N/A	0	N/A	8,026	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,309/ W 121.114,599	Jim Gibson	No
WS39	12/21/06	Rainy	18	N/A	0	N/A	21,599	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,722, W 121.109,500	Jim Gibson	No
WS40	12/21/06	Rainy	18	N/A	0	N/A	755	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,237/ W 121.108,976	Jim Gibson	No
WS41	12/21/06	Rainy	18	N/A	0	N/A	724	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,862/ W 121.108,886	Jim Gibson	No
WS42	12/21/06	Rainy	18	N/A	0	N/A	15,637	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,463/ W 121.110,623	Jim Gibson	No
WS43	12/21/06	Rainy	18	N/A	0	N/A	1,290	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,887/ W 121.111,387	Jim Gibson	No
WS44	12/21/06	Rainy	18	N/A	0	N/A	1,896	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,773/ W 121.105,162	Jim Gibson	No
WS45	12/21/06	Rainy	18	N/A	0	N/A	4,404	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,469/ W 121.109,077	Jim Gibson	No
WS46	12/21/06	Rainy	18	N/A	0	N/A	3,118	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,674/ W 121.106,319	Jim Gibson	No
WS47	12/21/06	Rainy	18	N/A	0	N/A	144	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,902/ W 121.106,163	Jim Gibson	No
WS48	12/21/06	Rainy	18	N/A	0	N/A	4,719	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,091/ W 121.104,113	Jim Gibson	No
WS49	12/21/06	Rainy	18	N/A	0	N/A	294	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,157/ W 121.113,577	Jim Gibson	No
WS50	12/21/06	Rainy	18	N/A	0	N/A	173	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,264/ W 121.116,688	Jim Gibson	No
WS51	12/21/06	Rainy	18	N/A	0	N/A	687	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,011/ W 121.108,181	Jim Gibson	No
WS52	12/21/06	Rainy	18	N/A	0	N/A	1,351	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,196/ W 121.106,955	Jim Gibson	No

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Sacramento County**

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Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
WS53	12/21/06	Rainy	18	N/A	0	N/A	302	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,889/ W 121.105,371	Jim Gibson	No
WS54	12/21/06	Rainy	18	N/A	0	N/A	169	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,672/ W 121.105,430	Jim Gibson	No
WS55	12/21/06	Rainy	18	N/A	0	N/A	3,066	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.643,315/ W 121.103,643	Jim Gibson	No
WS56	12/21/06	Rainy	18	N/A	0	N/A	809	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.643,273/ W 121.102,064	Jim Gibson	No
D1	12/21/06	Rainy	18	N/A	0	N/A	39	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,140/ W 121.158,164	Jim Gibson	No
D2	12/21/06	Rainy	18	N/A	0	N/A	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,596/ W 121.146,475	Jim Gibson	No
D3	12/21/06	Rainy	18	N/A	0	N/A	3,342	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,527/ W 121.143,076	Jim Gibson	No
D4	12/21/06	Rainy	18	N/A	0	N/A	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,638/ W 121.142,970	Jim Gibson	No
D5	12/21/06	Rainy	18	N/A	0	N/A	1,183	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,180/ W 121.143,480	Jim Gibson	No
D6	12/21/06	Rainy	18	N/A	0	N/A	137	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.631,188/ W 121.144,122	Jim Gibson	No
D7	12/21/06	Rainy	18	N/A	0	N/A	75	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,461/ W 121.144,913	Jim Gibson	No
D8	12/21/06	Rainy	18	N/A	0	N/A	78	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,384/ W 121.100,188	Jim Gibson	No
D9	12/21/06	Rainy	18	N/A	0	N/A	141	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,289/ W 121.130,220	Jim Gibson	No
D10	12/21/06	Rainy	18	N/A	0	N/A	55	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,729/ W 121.130,626	Jim Gibson	No
D11	12/21/06	Rainy	18	N/A	0	N/A	135	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,693/ W 121.143,250	Jim Gibson	No
DD1	12/21/06	Rainy	18	N/A	0	N/A	13,653	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,493/ W 121.147,360	Jim Gibson	No
DD2	12/21/06	Rainy	18	N/A	0	N/A	775	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,734/ W 121.144,304	Jim Gibson	No
DD3	12/21/06	Rainy	18	N/A	0	N/A	40	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,084/ W 121.144,292	Jim Gibson	No
DD4	12/21/06	Rainy	18	N/A	0	N/A	864	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,516/ W 121.142,162	Jim Gibson	No
DD5	12/21/06	Rainy	18	N/A	0	N/A	3,375	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,226/ W 121.142,937	Jim Gibson	No
DD6	12/21/06	Rainy	18	N/A	0	N/A	807	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,168/ W 121.137,312	Jim Gibson	No
DD7	12/21/06	Rainy	18	N/A	0	N/A	23,391	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,402/ W 121.126,707	Jim Gibson	No
DD8	12/21/06	Rainy	18	N/A	0	N/A	10,885	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,712/ W 121.143,735	Jim Gibson	No
DD9	12/21/06	Rainy	18	N/A	0	N/A	450	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.631,620/ W 121.149,816	Jim Gibson	No

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Per. #: PRT-795935-3  
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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
DD10	12/21/06	Rainy	18	N/A	0	N/A	1,626	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,401/ W 121.108,320	Jim Gibson	No
DD11	12/21/06	Rainy	18	N/A	0	N/A	825	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,917/ W 121.105,829	Jim Gibson	No
DD12	12/21/06	Rainy	18	N/A	0	N/A	1,233	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,663/ W 121.107,437	Jim Gibson	No
DD13	12/21/06	Rainy	18	N/A	0	N/A	3,408	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,535/ W 121.104,505	Jim Gibson	No
DD14	12/21/06	Rainy	18	N/A	0	N/A	2,586	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,068/ W 121.102,645	Jim Gibson	No
V1	1/5/07	Clear	10	N/A	0	N/A	109	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.626,979/ W 121.143,513	Jim Gibson	No
V2	1/5/07	Clear	10	N/A	0	N/A	39	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,026/ W 121.142,983	Jim Gibson	No
V3	1/5/07	Clear	10	N/A	0	N/A	25	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,370 W 121.142,839	Jim Gibson	No
V4	1/5/07	Clear	10	N/A	0	N/A	285	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,495/W 121.142,844	Jim Gibson	No
V5	1/5/07	Clear	10	N/A	0	N/A	338	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,652/ W 121.143,464	Jim Gibson	No
V6	1/5/07	Clear	10	N/A	0	N/A	75	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,722/ W 121.143,127	Jim Gibson	No
V7	1/5/07	Clear	10	10	6	475	554	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.628,128/ W 121.142,577	Jim Gibson	No
V8	1/5/07	Clear	10	N/A	0	N/A	748	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.628,456/ W 121.143,176	Jim Gibson	No
V9	1/5/07	Clear	10	N/A	0	N/A	116	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.628,637/ W 121.149,062	Jim Gibson	No
V10	1/5/07	Clear	10	N/A	0	N/A	622	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,227/ W 121.147,166	Jim Gibson	No
V11	1/5/07	Clear	10	N/A	0	N/A	3,460	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,122/ W 121.150,259	Jim Gibson	No
V12	1/5/07	Clear	10	N/A	0	N/A	48	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,502/ W 121.144,620	Jim Gibson	No
V13	1/5/07	Clear	10	N/A	0	N/A	653	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,607/ W 121.144,563	Jim Gibson	No
V14	1/5/07	Clear	10	N/A	0	N/A	812	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,659/ W 121.144,171	Jim Gibson	No
V15	1/5/07	Clear	10	N/A	0	N/A	40	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,576/ W 121.149,429	Jim Gibson	No
V16	1/5/07	Clear	10	N/A	0	N/A	82	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,659/ W 121.149,845	Jim Gibson	No
V17	1/5/07	Clear	10	N/A	0	N/A	102	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,810/ W 121.149,707	Jim Gibson	No
V18	1/5/07	Clear	10	N/A	0	N/A	160	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,855/ W 121.149,778	Jim Gibson	No
V19	1/5/07	Clear	10	N/A	0	N/A	1,060	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,914/ W 121.149,563	Jim Gibson	No

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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V20	1/5/07	Clear	10	N/A	0	N/A	735	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,995/ W 121.149,398	Jim Gibson	No
V21	1/5/07	Clear	10	N/A	0	N/A	511	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,900/ W 121.150,149	Jim Gibson	No
V22	1/5/07	Clear	10	N/A	0	N/A	45	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,134/ W 121.149,845	Jim Gibson	No
V23	1/5/07	Clear	10	N/A	0	N/A	444	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,269/ W 121.149,264	Jim Gibson	No
V24	1/5/07	Clear	10	N/A	0	N/A	105	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,232/ W 121.149,201	Jim Gibson	No
V25	1/5/07	Clear	10	N/A	0	N/A	151	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,211/ W 121.149,076	Jim Gibson	No
V26	1/5/07	Clear	10	N/A	0	N/A	12,794	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,027/ W 121.148,723	Jim Gibson	No
V27	1/5/07	Clear	10	N/A	0	N/A	389	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,211/ W 121.148,609	Jim Gibson	No
V28	1/5/07	Clear	10	N/A	0	N/A	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,309/ W 121.148,191	Jim Gibson	No
V29	1/5/07	Clear	10	N/A	0	N/A	135	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,424/ W 121.148,231	Jim Gibson	No
V30	1/5/07	Clear	10	N/A	0	N/A	125	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,016/ W 121.143,684	Jim Gibson	No
V31	1/5/07	Clear	10	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,099/ W 121.143,566	Jim Gibson	No
V32	1/5/07	Clear	10	N/A	0	N/A	80	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,019/ W 121.143,486	Jim Gibson	No
V33	1/5/07	Clear	10	N/A	0	N/A	63	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,191/ W 121.145,012	Jim Gibson	No
V34	1/5/07	Clear	10	N/A	0	N/A	110	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,291/ W 121.144,919	Jim Gibson	No
V35	1/5/07	Clear	10	N/A	0	N/A	95	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,156/ W 121.144,895	Jim Gibson	No
V36	1/5/07	Clear	10	N/A	0	N/A	100	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,078/ W 121.144,686	Jim Gibson	No
V37	1/5/07	Clear	10	N/A	0	N/A	267	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,175/ W 121.144,540	Jim Gibson	No
V38	1/5/07	Clear	10	N/A	0	N/A	60	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,433/ W 121.143,433	Jim Gibson	No
V39	1/5/07	Clear	10	N/A	0	N/A	114	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,744/ W 121.141,023	Jim Gibson	No
V40	1/5/07	Clear	10	N/A	0	N/A	42	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,187/ W 121.141,023	Jim Gibson	No
V41	1/5/07	Clear	10	N/A	0	N/A	78	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,113/ W 121.141,058	Jim Gibson	No
V42	1/5/07	Clear	10	N/A	0	N/A	73	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,025/ W 121.141,001	Jim Gibson	No
V43	1/5/07	Clear	10	N/A	0	N/A	106	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,948/ W 121.140,966	Jim Gibson	No

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**2006-7 WET-SEASON LISTED BRANCHIOPOD SURVEY**

**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V44	1/5/07	Clear	10	N/A	0	N/A	135	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,901/ W 121.140,996	Jim Gibson	No
V45	1/5/07	Clear	10	N/A	0	N/A	228	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,041/ W 121.141,097	Jim Gibson	No
V46	1/5/07	Clear	10	N/A	0	N/A	200	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,954/ W 121.141,077	Jim Gibson	No
V47	1/5/07	Clear	10	N/A	0	N/A	47	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,819/ W 121.140,994	Jim Gibson	No
V48	1/5/07	Clear	10	10	8	30	34	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,789/ W 121.140,747	Jim Gibson	No
V49	1/5/07	Clear	10	N/A	0	N/A	140	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,758/ W 121.140,862	Jim Gibson	No
V50	1/5/07	Clear	10	N/A	0	N/A	169	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,696/ W 121.140,848	Jim Gibson	No
V51	1/5/07	Clear	10	N/A	0	N/A	228	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,359/ W 121.136,387	Jim Gibson	No
V52	1/5/07	Clear	10	N/A	0	N/A	112	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,129/ W 121.134,332	Jim Gibson	No
V53	1/5/07	Clear	10	N/A	0	N/A	223	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,297/ W 121.133,725	Jim Gibson	No
V54	1/5/07	Clear	10	N/A	0	N/A	97	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,387/ W 121.133,153	Jim Gibson	No
V55	1/5/07	Clear	10	N/A	0	N/A	284	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,617/ W 121.130,389	Jim Gibson	No
V56	1/5/07	Clear	10	N/A	0	N/A	216	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,218/ W 121.130,494	Jim Gibson	No
V57	1/5/07	Clear	10	N/A	0	N/A	207	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,249/ W 121.128,841	Jim Gibson	No
V58	1/5/07	Clear	10	N/A	0	N/A	279	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,158/ W 121.130,726	Jim Gibson	No
V59	1/5/07	Clear	10	N/A	0	N/A	55	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,189/ W 121.130,666	Jim Gibson	No
V60	1/5/07	Clear	10	N/A	0	N/A	67	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,231/ W 121.130,580	Jim Gibson	No
V61	1/5/07	Clear	10	N/A	0	N/A	17	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,224/ W 121.130,536	Jim Gibson	No
V62	1/5/07	Clear	10	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,197/ W 121.130,459	Jim Gibson	No
V63	1/5/07	Clear	10	N/A	0	N/A	101	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,166/ W 121.136,238	Jim Gibson	No
V64	1/5/07	Clear	10	N/A	0	N/A	223	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,115/ W 121.130,233	Jim Gibson	No
V65	1/5/07	Clear	10	N/A	0	N/A	453	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,157/ W 121.130,361	Jim Gibson	No
V66	1/5/07	Clear	10	N/A	0	N/A	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,195/ W 121.130,620	Jim Gibson	No
V67	1/5/07	Clear	10	N/A	0	N/A	367	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,575/ W 121.126,738	Jim Gibson	No

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Sacramento County**

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Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V68	1/5/07	Clear	10	N/A	0	N/A	2,790	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,097/ W 121.125,894	Jim Gibson	No
V69	1/5/07	Clear	10	N/A	0	N/A	3,983	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,718/ W 121.125,575	Jim Gibson	No
V70	1/5/07	Clear	10	N/A	0	N/A	317	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,369/ W 121.124,252	Jim Gibson	No
V71	1/5/07	Clear	10	N/A	0	N/A	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,363/ W 121.123,978	Jim Gibson	No
V72	1/5/07	Clear	10	N/A	0	N/A	386	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,982/ W 121.126,253	Jim Gibson	No
V73	1/5/07	Clear	10	N/A	0	N/A	458	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,638/ W 121.126,190	Jim Gibson	No
V74	1/5/07	Clear	10	N/A	0	N/A	317	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,479/ W 121.125,902	Jim Gibson	No
V75	1/5/07	Clear	10	N/A	0	N/A	140	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,375/ W 121.125,628	Jim Gibson	No
V76	1/5/07	Clear	10	N/A	0	N/A	126	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,320/ W 121.125,537	Jim Gibson	No
V77	1/5/07	Clear	10	N/A	0	N/A	165	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,131/ W 121.125,135	Jim Gibson	No
V78	1/5/07	Clear	10	N/A	0	N/A	104	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,866/ W 121.124,927	Jim Gibson	No
V79	1/5/07	Clear	10	N/A	0	N/A	122	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,471/ W 121.125,369	Jim Gibson	No
V80	1/5/07	Clear	10	N/A	0	N/A	42	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,343/ W 121.125,162	Jim Gibson	No
V81	1/5/07	Clear	10	N/A	0	N/A	163	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,232/ W 121.124,216	Jim Gibson	No
V82	1/5/07	Clear	10	N/A	0	N/A	48	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,195/ W 121.126,036	Jim Gibson	No
V83	1/5/07	Clear	10	N/A	0	N/A	201	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,624/ W 121.122,236	Jim Gibson	No
V84	1/5/07	Clear	10	N/A	0	N/A	182	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,177/ W 121.122,553	Jim Gibson	No
V85	1/5/07	Clear	10	N/A	0	N/A	190	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,113/ W 121.121,226	Jim Gibson	No
V86	1/5/07	Clear	10	N/A	0	N/A	73	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,385/ W 121.120,128	Jim Gibson	No
V87	1/5/07	Clear	10	N/A	0	N/A	21	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,269/ W 121.121,934	Jim Gibson	No
V88	1/5/07	Clear	10	N/A	0	N/A	70	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,134/ W 121.120,118	Jim Gibson	No
V89	1/5/07	Clear	10	N/A	0	N/A	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,010/ W 121.119,775	Jim Gibson	No
V90	1/5/07	Clear	10	N/A	0	N/A	229	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,095/ W 121.116,589	Jim Gibson	No
V91	1/5/07	Clear	10	N/A	0	N/A	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,997/ W 121.112,988	Jim Gibson	No

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**Carpenter Ranch  
Sacramento County**

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Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V116	1/5/07	Clear	10	N/A	0	N/A	221	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,418/ W 121.107,200	Jim Gibson	No
V117	1/5/07	Clear	10	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,387/ W 121.107,156	Jim Gibson	No
V118	1/5/07	Clear	10	N/A	0	N/A	90	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,244/ W 121.107,111	Jim Gibson	No
V119	1/5/07	Clear	10	N/A	0	N/A	77	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,171/ W 121.107,024	Jim Gibson	No
V120	1/5/07	Clear	10	N/A	0	N/A	121	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,163/ W 121.106,906	Jim Gibson	No
V121	1/5/07	Clear	10	N/A	0	N/A	185	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,708/ W 121.105,461	Jim Gibson	No
V122	1/5/07	Clear	10	N/A	0	N/A	79	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,914/ W 121.103,812	Jim Gibson	No
V123	1/5/07	Clear	10	N/A	0	N/A	1,083	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,029/ W 121.103,409	Jim Gibson	No
V124	1/5/07	Clear	10	N/A	0	N/A	49	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,511/ W 121.143,333	Jim Gibson	No
V125	1/5/07	Clear	10	N/A	0	N/A	627	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,632/ W 121.140,697	Jim Gibson	No
V126	1/5/07	Clear	10	N/A	0	N/A	593	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,299/ W 121.140,255	Jim Gibson	No
V127	1/5/07	Clear	10	N/A	0	N/A	28	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,212/ W 121.148,631	Jim Gibson	No
V128	1/5/07	Clear	10	N/A	0	N/A	19	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,050/ W 121.147,861	Jim Gibson	No
V129	1/5/07	Clear	10	N/A	0	N/A	63	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,229/ W 121.141,698	Jim Gibson	No
V130	1/5/07	Clear	10	10	4	400	438	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,082/ W 121.141,984	Jim Gibson	No
V131	1/5/07	Clear	10	N/A	0	N/A	159	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,192/ W 121.141,803	Jim Gibson	No
V132	1/5/07	Clear	10	N/A	0	N/A	102	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,142/ W 121.141,815	Jim Gibson	No
V133	1/5/07	Clear	10	N/A	0	N/A	208	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,191/ W 121.149,359	Jim Gibson	No
V134	1/5/07	Clear	10	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,135/ W 121.149,385	Jim Gibson	No
V135	1/5/07	Clear	10	N/A	0	N/A	49	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,498/ W 121.130,283	Jim Gibson	No
V136	1/5/07	Clear	10	N/A	0	N/A	46	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,745/ W 121.124,120	Jim Gibson	No
V137	1/5/07	Clear	10	N/A	0	N/A	90	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,064/ W 121.111,989	Jim Gibson	No
V138	1/5/07	Clear	10	N/A	0	N/A	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,224/ W 121.103,399	Jim Gibson	No
V139	1/5/07	Clear	10	N/A	0	N/A	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,702/ W 121.107,367	Jim Gibson	No

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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
WS1	1/5/07	Clear	10	N/A	0	N/A	56,720	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,281/ W 121.145,209	Jim Gibson	No
WS2	1/5/07	Clear	10	N/A	0	N/A	685	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,854/ W 121.150,169	Jim Gibson	No
WS3	1/5/07	Clear	10	N/A	0	N/A	5,168	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,602/ W 121.150,234	Jim Gibson	No
WS4	1/5/07	Clear	10	N/A	0	N/A	580	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.629,117/ W 121.149,265	Jim Gibson	No
WS5	1/5/07	Clear	10	N/A	0	N/A	434	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,181/ W 121.147,132	Jim Gibson	No
WS6	1/5/07	Clear	10	N/A	0	N/A	3,258	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,258/ W 121.143,895	Jim Gibson	No
WS7	1/5/07	Clear	10	N/A	0	N/A	710	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,207/ W 121.143,309	Jim Gibson	No
WS8	1/5/07	Clear	10	N/A	0	N/A	3,520	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,398/ W 121.144,535	Jim Gibson	No
WS9	1/5/07	Clear	10	N/A	0	N/A	74	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,269/ W 121.144,546	Jim Gibson	No
WS10	1/5/07	Clear	10	N/A	0	N/A	1,139	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,647/ W 121.143,854	Jim Gibson	No
WS11	1/5/07	Clear	10	N/A	0	N/A	1,265	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,495/ W 121.142,243	Jim Gibson	No
WS12	1/5/07	Clear	10	N/A	0	N/A	891	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,956/ W 121.142,008	Jim Gibson	No
WS13	1/5/07	Clear	10	N/A	0	N/A	246	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,402/ W 121.141,164	Jim Gibson	No
WS14	1/5/07	Clear	10	N/A	0	N/A	440	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,712/ W 121.140,424	Jim Gibson	No
WS15	1/5/07	Clear	10	N/A	0	N/A	2,122	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,465/ W 121.140,384	Jim Gibson	No
WS16	1/5/07	Clear	10	N/A	0	N/A	687	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	38.640,149/ W 121.137,922	Jim Gibson	No
WS17	1/5/07	Clear	10	N/A	0	N/A	906	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,403/ W 121.137,678	Jim Gibson	No
WS18	1/5/07	Clear	10	N/A	0	N/A	206	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,570/ W 121.136,903	Jim Gibson	No
WS19	1/5/07	Clear	10	N/A	0	N/A	258	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,111/ W 121.136,231	Jim Gibson	No
WS20	1/5/07	Clear	10	N/A	0	N/A	2,914	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,790/ W 121.131,670	Jim Gibson	No
WS21	1/5/07	Clear	10	N/A	0	N/A	147	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,692/ W 121.131,050	Jim Gibson	No
WS22	1/5/07	Clear	10	N/A	0	N/A	50,855	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,305/ W 121.130,886	Jim Gibson	No
WS23	1/5/07	Clear	10	N/A	0	N/A	840	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,672/ W 121.130,561	Jim Gibson	No
WS24	1/5/07	Clear	10	N/A	0	N/A	32,380	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,356/ W 121.128,646	Jim Gibson	No

Note: Branchinecta lynchi = BRLY; Branchinecta conservatio = BRCO; Branchinecta mesovallensis = BRME; Lepidurus packardi = LEPA; and Linderiella occidentalis = LIOC.

**2006-7 WET-SEASON LISTED BRANCHIOPOD SURVEY**

**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
WS25	1/5/07	Clear	10	N/A	0	N/A	4,310	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,768/ W 121.125,839	Jim Gibson	No
WS26	1/5/07	Clear	10	N/A	0	N/A	1,793	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,157/ W 121.126,772	Jim Gibson	No
WS27	1/5/07	Clear	10	N/A	0	N/A	9,434	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,450/ W 121.127,846	Jim Gibson	No
WS28	1/5/07	Clear	10	N/A	0	N/A	243	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,916/ W 121.124,907	Jim Gibson	No
WS29	1/5/07	Clear	10	N/A	0	N/A	624	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,246/ W 121.121,939	Jim Gibson	No
WS30	1/5/07	Clear	10	N/A	0	N/A	109,636	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,894/ W 121.117,339	Jim Gibson	No
WS31	1/5/07	Clear	10	N/A	0	N/A	3,336	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,577/ W 121.124,827	Jim Gibson	No
WS32	1/5/07	Clear	10	N/A	0	N/A	17,886	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,701/ W 121.119,339	Jim Gibson	No
WS33	1/5/07	Clear	10	N/A	0	N/A	1,626	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,996/ W 121.118,711	Jim Gibson	No
WS34	1/5/07	Clear	10	N/A	0	N/A	1,267	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,612/ W 121.117,705	Jim Gibson	No
WS35	1/5/07	Clear	10	N/A	0	N/A	740	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,842/ W 121.124,438	Jim Gibson	No
WS36	1/5/07	Clear	10	N/A	0	N/A	1,112	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,048/ W 121.117,778	Jim Gibson	No
WS37	1/5/07	Clear	10	N/A	0	N/A	1,055	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,363/ W 121.117,492	Jim Gibson	No
WS38	1/5/07	Clear	10	N/A	0	N/A	8,026	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,309/ W 121.114,599	Jim Gibson	No
WS39	1/5/07	Clear	10	N/A	0	N/A	21,599	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,722, W 121.109,500	Jim Gibson	No
WS40	1/5/07	Clear	10	N/A	0	N/A	755	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,237/ W 121.108,976	Jim Gibson	No
WS41	1/5/07	Clear	10	N/A	0	N/A	724	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,862/ W 121.108,886	Jim Gibson	No
WS42	1/5/07	Clear	10	N/A	0	N/A	15,637	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,463/ W 121.110,623	Jim Gibson	No
WS43	1/5/07	Clear	10	N/A	0	N/A	1,290	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,887/ W 121.111,387	Jim Gibson	No
WS44	1/5/07	Clear	10	N/A	0	N/A	1,896	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,773/ W 121.105,162	Jim Gibson	No
WS45	1/5/07	Clear	10	N/A	0	N/A	4,404	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,469/ W 121.109,077	Jim Gibson	No
WS46	1/5/07	Clear	10	N/A	0	N/A	3,118	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,674/ W 121.106,319	Jim Gibson	No
WS47	1/5/07	Clear	10	N/A	0	N/A	144	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,902/ W 121.106,163	Jim Gibson	No
WS48	1/5/07	Clear	10	N/A	0	N/A	4,719	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,091/ W 121.104,113	Jim Gibson	No

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**2006-7 WET-SEASON LISTED BRANCHIOPOD SURVEY**

**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
WS49	1/5/07	Clear	10	N/A	0	N/A	294	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,157/ W 121.113,577	Jim Gibson	No
WS50	1/5/07	Clear	10	N/A	0	N/A	173	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,264/ W 121.116,688	Jim Gibson	No
WS51	1/5/07	Clear	10	N/A	0	N/A	687	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,011/ W 121.108,181	Jim Gibson	No
WS52	1/5/07	Clear	10	N/A	0	N/A	1,351	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,196/ W 121.106,955	Jim Gibson	No
WS53	1/5/07	Clear	10	N/A	0	N/A	302	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,889/ W 121.105,371	Jim Gibson	No
WS54	1/5/07	Clear	10	N/A	0	N/A	169	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,672/ W 121.105,430	Jim Gibson	No
WS55	1/5/07	Clear	10	N/A	0	N/A	3,066	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.643,315/ W 121.103,643	Jim Gibson	No
WS56	1/5/07	Clear	10	N/A	0	N/A	809	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.643,273/ W 121.102,064	Jim Gibson	No
D1	1/5/07	Clear	10	N/A	0	N/A	39	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,140/ W 121.158,164	Jim Gibson	No
D2	1/5/07	Clear	10	N/A	0	N/A	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,596/ W 121.146,475	Jim Gibson	No
D3	1/5/07	Clear	10	N/A	0	N/A	3,342	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,527/ W 121.143,076	Jim Gibson	No
D4	1/5/07	Clear	10	N/A	0	N/A	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,638/ W 121.142,970	Jim Gibson	No
D5	1/5/07	Clear	10	N/A	0	N/A	1,183	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,180/ W 121.143,480	Jim Gibson	No
D6	1/5/07	Clear	10	N/A	0	N/A	137	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.631,188/ W 121.144,122	Jim Gibson	No
D7	1/5/07	Clear	10	N/A	0	N/A	75	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,461/ W 121.144,913	Jim Gibson	No
D8	1/5/07	Clear	10	N/A	0	N/A	78	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,384/ W 121.100,188	Jim Gibson	No
D9	1/5/07	Clear	10	N/A	0	N/A	141	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,289/ W 121.130,220	Jim Gibson	No
D10	1/5/07	Clear	10	N/A	0	N/A	55	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,729/ W 121.130,626	Jim Gibson	No
D11	1/5/07	Clear	10	N/A	0	N/A	135	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,693/ W 121.143,250	Jim Gibson	No
DD1	1/5/07	Clear	10	N/A	0	N/A	13,653	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,493/ W 121.147,360	Jim Gibson	No
DD2	1/5/07	Clear	10	N/A	0	N/A	775	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,734/ W 121.144,304	Jim Gibson	No
DD3	1/5/07	Clear	10	N/A	0	N/A	40	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,084/ W 121.144,292	Jim Gibson	No
DD4	1/5/07	Clear	10	N/A	0	N/A	864	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,516/ W 121.142,162	Jim Gibson	No
DD5	1/5/07	Clear	10	N/A	0	N/A	3,375	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,226/ W 121.142,937	Jim Gibson	No

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**2006-7 WET-SEASON LISTED BRANCHIOPOD SURVEY**

**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
DD6	1/5/07	Clear	10	N/A	0	N/A	807	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,168/ W 121.137,312	Jim Gibson	No
DD7	1/5/07	Clear	10	N/A	0	N/A	23,391	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,402/ W 121.126,707	Jim Gibson	No
DD8	1/5/07	Clear	10	N/A	0	N/A	10,885	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,712/ W 121.143,735	Jim Gibson	No
DD9	1/5/07	Clear	10	N/A	0	N/A	450	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.631,620/ W 121.149,816	Jim Gibson	No
DD10	1/5/07	Clear	10	N/A	0	N/A	1,626	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,401/ W 121.108,320	Jim Gibson	No
DD11	1/5/07	Clear	10	N/A	0	N/A	825	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,917/ W 121.105,829	Jim Gibson	No
DD12	1/5/07	Clear	10	N/A	0	N/A	1,233	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,663/ W 121.107,437	Jim Gibson	No
DD13	1/5/07	Clear	10	N/A	0	N/A	3,408	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,535/ W 121.104,505	Jim Gibson	No
DD14	1/5/07	Clear	10	N/A	0	N/A	2,586	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,068/ W 121.102,645	Jim Gibson	No
V1	1/18/07	Clear	10	N/A	0	N/A	109	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.626,979/ W 121.143,513	Jim Gibson	No
V2	1/18/07	Clear	10	N/A	0	N/A	39	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,026/ W 121.142,983	Jim Gibson	No
V3	1/18/07	Clear	10	N/A	0	N/A	25	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,370 W 121.142,839	Jim Gibson	No
V4	1/18/07	Clear	10	N/A	0	N/A	285	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,495/W 121.142,844	Jim Gibson	No
V5	1/18/07	Clear	10	N/A	0	N/A	338	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,652/ W 121.143,464	Jim Gibson	No
V6	1/18/07	Clear	10	N/A	0	N/A	75	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,722/ W 121.143,127	Jim Gibson	No
V7	1/18/07	Clear	10	10	0	500	554	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.628,128/ W 121.142,577	Jim Gibson	No
V8	1/18/07	Clear	10	N/A	0	N/A	748	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.628,456/ W 121.143,176	Jim Gibson	No
V9	1/18/07	Clear	10	N/A	0	N/A	116	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.628,637/ W 121.149,062	Jim Gibson	No
V10	1/18/07	Clear	10	N/A	0	N/A	622	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,227/ W 121.147,166	Jim Gibson	No
V11	1/18/07	Clear	10	N/A	0	N/A	3,460	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,122/ W 121.150,259	Jim Gibson	No
V12	1/18/07	Clear	10	N/A	0	N/A	48	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,502/ W 121.144,620	Jim Gibson	No
V13	1/18/07	Clear	10	N/A	0	N/A	653	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,607/ W 121.144,563	Jim Gibson	No
V14	1/18/07	Clear	10	N/A	0	N/A	812	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,659/ W 121.144,171	Jim Gibson	No
V15	1/18/07	Clear	10	N/A	0	N/A	40	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,576/ W 121.149,429	Jim Gibson	No

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**2006-7 WET-SEASON LISTED BRANCHIOPOD SURVEY**

**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V16	1/18/07	Clear	10	N/A	0	N/A	82	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,659/ W 121.149,845	Jim Gibson	No
V17	1/18/07	Clear	10	N/A	0	N/A	102	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,810/ W 121.149,707	Jim Gibson	No
V18	1/18/07	Clear	10	N/A	0	N/A	160	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,855/ W 121.149,778	Jim Gibson	No
V19	1/18/07	Clear	10	N/A	0	N/A	1,060	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,914/ W 121.149,563	Jim Gibson	No
V20	1/18/07	Clear	10	N/A	0	N/A	735	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,995/ W 121.149,398	Jim Gibson	No
V21	1/18/07	Clear	10	N/A	0	N/A	511	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,900/ W 121.150,149	Jim Gibson	No
V22	1/18/07	Clear	10	N/A	0	N/A	45	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,134/ W 121.149,845	Jim Gibson	No
V23	1/18/07	Clear	10	N/A	0	N/A	444	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,269/ W 121.149,264	Jim Gibson	No
V24	1/18/07	Clear	10	N/A	0	N/A	105	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,232/ W 121.149,201	Jim Gibson	No
V25	1/18/07	Clear	10	N/A	0	N/A	151	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,211/ W 121.149,076	Jim Gibson	No
V26	1/18/07	Clear	10	N/A	0	N/A	12,794	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,027/ W 121.148,723	Jim Gibson	No
V27	1/18/07	Clear	10	N/A	0	N/A	389	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,211/ W 121.148,609	Jim Gibson	No
V28	1/18/07	Clear	10	N/A	0	N/A	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,309/ W 121.148,191	Jim Gibson	No
V29	1/18/07	Clear	10	N/A	0	N/A	135	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,424/ W 121.148,231	Jim Gibson	No
V30	1/18/07	Clear	10	N/A	0	N/A	125	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,016/ W 121.143,684	Jim Gibson	No
V31	1/18/07	Clear	10	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,099/ W 121.143,566	Jim Gibson	No
V32	1/18/07	Clear	10	N/A	0	N/A	80	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,019/ W 121.143,486	Jim Gibson	No
V33	1/18/07	Clear	10	N/A	0	N/A	63	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,191/ W 121.145,012	Jim Gibson	No
V34	1/18/07	Clear	10	N/A	0	N/A	110	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,291/ W 121.144,919	Jim Gibson	No
V35	1/18/07	Clear	10	N/A	0	N/A	95	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,156/ W 121.144,895	Jim Gibson	No
V36	1/18/07	Clear	10	N/A	0	N/A	100	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,078/ W 121.144,686	Jim Gibson	No
V37	1/18/07	Clear	10	N/A	0	N/A	267	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,175/ W 121.144,540	Jim Gibson	No
V38	1/18/07	Clear	10	N/A	0	N/A	60	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,433/ W 121.143,433	Jim Gibson	No
V39	1/18/07	Clear	10	N/A	0	N/A	114	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,744/ W 121.141,023	Jim Gibson	No

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**2006-7 WET-SEASON LISTED BRANCHIOPOD SURVEY**

**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V40	1/18/07	Clear	10	N/A	0	N/A	42	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,187/ W 121.141,023	Jim Gibson	No
V41	1/18/07	Clear	10	N/A	0	N/A	78	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,113/ W 121.141,058	Jim Gibson	No
V42	1/18/07	Clear	10	N/A	0	N/A	73	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,025/ W 121.141,001	Jim Gibson	No
V43	1/18/07	Clear	10	N/A	0	N/A	106	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,948/ W 121.140,966	Jim Gibson	No
V44	1/18/07	Clear	10	N/A	0	N/A	135	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,901/ W 121.140,996	Jim Gibson	No
V45	1/18/07	Clear	10	N/A	0	N/A	228	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,041/ W 121.141,097	Jim Gibson	No
V46	1/18/07	Clear	10	N/A	0	N/A	200	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,954/ W 121.141,077	Jim Gibson	No
V47	1/18/07	Clear	10	N/A	0	N/A	47	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,819/ W 121.140,994	Jim Gibson	No
V48	1/18/07	Clear	10	10	0	30	34	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,789/ W 121.140,747	Jim Gibson	No
V49	1/18/07	Clear	10	N/A	0	N/A	140	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,758/ W 121.140,862	Jim Gibson	No
V50	1/18/07	Clear	10	N/A	0	N/A	169	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,696/ W 121.140,848	Jim Gibson	No
V51	1/18/07	Clear	10	N/A	0	N/A	228	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,359/ W 121.136,387	Jim Gibson	No
V52	1/18/07	Clear	10	N/A	0	N/A	112	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,129/ W 121.134,332	Jim Gibson	No
V53	1/18/07	Clear	10	N/A	0	N/A	223	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,297/ W 121.133,725	Jim Gibson	No
V54	1/18/07	Clear	10	N/A	0	N/A	97	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,387/ W 121.133,153	Jim Gibson	No
V55	1/18/07	Clear	10	N/A	0	N/A	284	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,617/ W 121.130,389	Jim Gibson	No
V56	1/18/07	Clear	10	N/A	0	N/A	216	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,218/ W 121.130,494	Jim Gibson	No
V57	1/18/07	Clear	10	N/A	0	N/A	207	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,249/ W 121.128,841	Jim Gibson	No
V58	1/18/07	Clear	10	N/A	0	N/A	279	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,158/ W 121.130,726	Jim Gibson	No
V59	1/18/07	Clear	10	N/A	0	N/A	55	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,189/ W 121.130,666	Jim Gibson	No
V60	1/18/07	Clear	10	N/A	0	N/A	67	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,231/ W 121.130,580	Jim Gibson	No
V61	1/18/07	Clear	10	N/A	0	N/A	17	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,224/ W 121.130,536	Jim Gibson	No
V62	1/18/07	Clear	10	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,197/ W 121.130,459	Jim Gibson	No
V63	1/18/07	Clear	10	N/A	0	N/A	101	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,166/ W 121.136,238	Jim Gibson	No

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**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V64	1/18/07	Clear	10	N/A	0	N/A	223	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,115/ W 121.130,233	Jim Gibson	No
V65	1/18/07	Clear	10	N/A	0	N/A	453	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,157/ W 121.130,361	Jim Gibson	No
V66	1/18/07	Clear	10	N/A	0	N/A	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,195/ W 121.130,620	Jim Gibson	No
V67	1/18/07	Clear	10	N/A	0	N/A	367	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,575/ W 121.126,738	Jim Gibson	No
V68	1/18/07	Clear	10	N/A	0	N/A	2,790	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,097/ W 121.125,894	Jim Gibson	No
V69	1/18/07	Clear	10	N/A	0	N/A	3,983	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,718/ W 121.125,575	Jim Gibson	No
V70	1/18/07	Clear	10	N/A	0	N/A	317	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,369/ W 121.124,252	Jim Gibson	No
V71	1/18/07	Clear	10	N/A	0	N/A	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,363/ W 121.123,978	Jim Gibson	No
V72	1/18/07	Clear	10	N/A	0	N/A	386	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,982/ W 121.126,253	Jim Gibson	No
V73	1/18/07	Clear	10	N/A	0	N/A	458	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,638/ W 121.126,190	Jim Gibson	No
V74	1/18/07	Clear	10	N/A	0	N/A	317	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,479/ W 121.125,902	Jim Gibson	No
V75	1/18/07	Clear	10	N/A	0	N/A	140	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,375/ W 121.125,628	Jim Gibson	No
V76	1/18/07	Clear	10	N/A	0	N/A	126	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,320/ W 121.125,537	Jim Gibson	No
V77	1/18/07	Clear	10	N/A	0	N/A	165	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,131/ W 121.125,135	Jim Gibson	No
V78	1/18/07	Clear	10	N/A	0	N/A	104	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,866/ W 121.124,927	Jim Gibson	No
V79	1/18/07	Clear	10	N/A	0	N/A	122	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,471/ W 121.125,369	Jim Gibson	No
V80	1/18/07	Clear	10	N/A	0	N/A	42	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,343/ W 121.125,162	Jim Gibson	No
V81	1/18/07	Clear	10	N/A	0	N/A	163	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,232/ W 121.124,216	Jim Gibson	No
V82	1/18/07	Clear	10	N/A	0	N/A	48	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,195/ W 121.126,036	Jim Gibson	No
V83	1/18/07	Clear	10	N/A	0	N/A	201	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,624/ W 121.122,236	Jim Gibson	No
V84	1/18/07	Clear	10	N/A	0	N/A	182	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,177/ W 121.122,553	Jim Gibson	No
V85	1/18/07	Clear	10	N/A	0	N/A	190	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,113/ W 121.121,226	Jim Gibson	No
V86	1/18/07	Clear	10	N/A	0	N/A	73	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,385/ W 121.120,128	Jim Gibson	No
V87	1/18/07	Clear	10	N/A	0	N/A	21	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,269/ W 121.121,934	Jim Gibson	No

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**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V88	1/18/07	Clear	10	N/A	0	N/A	70	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,134/ W 121.120,118	Jim Gibson	No
V89	1/18/07	Clear	10	N/A	0	N/A	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,010/ W 121.119,775	Jim Gibson	No
V90	1/18/07	Clear	10	N/A	0	N/A	229	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,095/ W 121.116,589	Jim Gibson	No
V91	1/18/07	Clear	10	N/A	0	N/A	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,997/ W 121.112,988	Jim Gibson	No
V92	1/18/07	Clear	10	N/A	0	N/A	170	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,490/ W 121.112,464	Jim Gibson	No
V93	1/18/07	Clear	10	N/A	0	N/A	178	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,324/ W 121.112,342	Jim Gibson	No
V94	1/18/07	Clear	10	N/A	0	N/A	50	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,066/ W 121.111,799	Jim Gibson	No
V95	1/18/07	Clear	10	N/A	0	N/A	192	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,989/ W 121.111,704	Jim Gibson	No
V96	1/18/07	Clear	10	N/A	0	N/A	34	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,081/ W 121.111,673	Jim Gibson	No
V97	1/18/07	Clear	10	N/A	0	N/A	14	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,079/ W 121.111,376	Jim Gibson	No
V98	1/18/07	Clear	10	N/A	0	N/A	93	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,150/ W 121.111,448	Jim Gibson	No
V99	1/18/07	Clear	10	N/A	0	N/A	29	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,138/ W 121.111,263	Jim Gibson	No
V100	1/18/07	Clear	10	N/A	0	N/A	390	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,227/ W 121.111,149	Jim Gibson	No
V101	1/18/07	Clear	10	N/A	0	N/A	106	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,321/ W 121.110,991	Jim Gibson	No
V102	1/18/07	Clear	10	N/A	0	N/A	1,396	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,085/ W 121.109,415	Jim Gibson	No
V103	1/18/07	Clear	10	N/A	0	N/A	411	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,680/ W 121.190,333	Jim Gibson	No
V104	1/18/07	Clear	10	N/A	0	N/A	87	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,797/ W 121.108,328	Jim Gibson	No
V105	1/18/07	Clear	10	N/A	0	N/A	263	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,789/ W 121.108,390	Jim Gibson	No
V106	1/18/07	Clear	10	N/A	0	N/A	56	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,725/ W 121.108,403	Jim Gibson	No
V107	1/18/07	Clear	10	N/A	0	N/A	216	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,746/ W 121.107,826	Jim Gibson	No
V108	1/18/07	Clear	10	N/A	0	N/A	106	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,871/ W 121.107,693	Jim Gibson	No
V109	1/18/07	Clear	10	N/A	0	N/A	781	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,818/ W 121.107,530	Jim Gibson	No
V110	1/18/07	Clear	10	N/A	0	N/A	266	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,975/ W 121.107,414	Jim Gibson	No
V111	1/18/07	Clear	10	N/A	0	N/A	13	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,375/ W 121.107,478	Jim Gibson	No

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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V112	1/18/07	Clear	10	N/A	0	N/A	68	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,451/ W 121.107,435	Jim Gibson	No
V113	1/18/07	Clear	10	N/A	0	N/A	33	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,532/ W 121.107,448	Jim Gibson	No
V114	1/18/07	Clear	10	N/A	0	N/A	386	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,492/ W 121.107,241	Jim Gibson	No
V115	1/18/07	Clear	10	N/A	0	N/A	158	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,530/ W 121.107,142	Jim Gibson	No
V116	1/18/07	Clear	10	N/A	0	N/A	221	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,418/ W 121.107,200	Jim Gibson	No
V117	1/18/07	Clear	10	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,387/ W 121.107,156	Jim Gibson	No
V118	1/18/07	Clear	10	N/A	0	N/A	90	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,244/ W 121.107,111	Jim Gibson	No
V119	1/18/07	Clear	10	N/A	0	N/A	77	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,171/ W 121.107,024	Jim Gibson	No
V120	1/18/07	Clear	10	N/A	0	N/A	121	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,163/ W 121.106,906	Jim Gibson	No
V121	1/18/07	Clear	10	N/A	0	N/A	185	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,708/ W 121.105,461	Jim Gibson	No
V122	1/18/07	Clear	10	N/A	0	N/A	79	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,914/ W 121.103,812	Jim Gibson	No
V123	1/18/07	Clear	10	N/A	0	N/A	1,083	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,029/ W 121.103,409	Jim Gibson	No
V124	1/18/07	Clear	10	N/A	0	N/A	49	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,511/ W 121.143,333	Jim Gibson	No
V125	1/18/07	Clear	10	N/A	0	N/A	627	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,632/ W 121.140,697	Jim Gibson	No
V126	1/18/07	Clear	10	N/A	0	N/A	593	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,299/ W 121.140,255	Jim Gibson	No
V127	1/18/07	Clear	10	N/A	0	N/A	28	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,212/ W 121.148,631	Jim Gibson	No
V128	1/18/07	Clear	10	N/A	0	N/A	19	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,050/ W 121.147,861	Jim Gibson	No
V129	1/18/07	Clear	10	N/A	0	N/A	63	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,229/ W 121.141,698	Jim Gibson	No
V130	1/18/07	Clear	10	10	0	400	438	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,082/ W 121.141,984	Jim Gibson	No
V131	1/18/07	Clear	10	N/A	0	N/A	159	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,192/ W 121.141,803	Jim Gibson	No
V132	1/18/07	Clear	10	N/A	0	N/A	102	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,142/ W 121.141,815	Jim Gibson	No
V133	1/18/07	Clear	10	N/A	0	N/A	208	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,191/ W 121.149,359	Jim Gibson	No
V134	1/18/07	Clear	10	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,135/ W 121.149,385	Jim Gibson	No
V135	1/18/07	Clear	10	N/A	0	N/A	49	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,498/ W 121.130,283	Jim Gibson	No

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**2006-7 WET-SEASON LISTED BRANCHIOPOD SURVEY**

**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V136	1/18/07	Clear	10	N/A	0	N/A	46	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,745/ W 121.124,120	Jim Gibson	No
V137	1/18/07	Clear	10	N/A	0	N/A	90	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,064/ W 121.111,989	Jim Gibson	No
V138	1/18/07	Clear	10	N/A	0	N/A	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,224/ W 121.103,399	Jim Gibson	No
V139	1/18/07	Clear	10	N/A	0	N/A	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,702/ W 121.107,367	Jim Gibson	No
WS1	1/18/07	Clear	10	N/A	0	N/A	56,720	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,281/ W 121.145,209	Jim Gibson	No
WS2	1/18/07	Clear	10	N/A	0	N/A	685	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,854/ W 121.150,169	Jim Gibson	No
WS3	1/18/07	Clear	10	N/A	0	N/A	5,168	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,602/ W 121.150,234	Jim Gibson	No
WS4	1/18/07	Clear	10	N/A	0	N/A	580	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.629,117/ W 121.149,265	Jim Gibson	No
WS5	1/18/07	Clear	10	N/A	0	N/A	434	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,181/ W 121.147,132	Jim Gibson	No
WS6	1/18/07	Clear	10	N/A	0	N/A	3,258	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,258/ W 121.143,895	Jim Gibson	No
WS7	1/18/07	Clear	10	N/A	0	N/A	710	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,207/ W 121.143,309	Jim Gibson	No
WS8	1/18/07	Clear	10	N/A	0	N/A	3,520	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,398/ W 121.144,535	Jim Gibson	No
WS9	1/18/07	Clear	10	N/A	0	N/A	74	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,269/ W 121.144,546	Jim Gibson	No
WS10	1/18/07	Clear	10	N/A	0	N/A	1,139	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,647/ W 121.143,854	Jim Gibson	No
WS11	1/18/07	Clear	10	N/A	0	N/A	1,265	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,495/ W 121.142,243	Jim Gibson	No
WS12	1/18/07	Clear	10	N/A	0	N/A	891	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,956/ W 121.142,008	Jim Gibson	No
WS13	1/18/07	Clear	10	N/A	0	N/A	246	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,402/ W 121.141,164	Jim Gibson	No
WS14	1/18/07	Clear	10	N/A	0	N/A	440	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,712/ W 121.140,424	Jim Gibson	No
WS15	1/18/07	Clear	10	N/A	0	N/A	2,122	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,465/ W 121.140,384	Jim Gibson	No
WS16	1/18/07	Clear	10	N/A	0	N/A	687	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	38.640,149/ W 121.137,922	Jim Gibson	No
WS17	1/18/07	Clear	10	N/A	0	N/A	906	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,403/ W 121.137,678	Jim Gibson	No
WS18	1/18/07	Clear	10	N/A	0	N/A	206	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,570/ W 121.136,903	Jim Gibson	No
WS19	1/18/07	Clear	10	N/A	0	N/A	258	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,111/ W 121.136,231	Jim Gibson	No
WS20	1/18/07	Clear	10	N/A	0	N/A	2,914	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,790/ W 121.131,670	Jim Gibson	No

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**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
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Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
WS21	1/18/07	Clear	10	N/A	0	N/A	147	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,692/ W 121.131,050	Jim Gibson	No
WS22	1/18/07	Clear	10	N/A	0	N/A	50,855	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,305/ W 121.130,886	Jim Gibson	No
WS23	1/18/07	Clear	10	N/A	0	N/A	840	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,672/ W 121.130,561	Jim Gibson	No
WS24	1/18/07	Clear	10	N/A	0	N/A	32,380	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,356/ W 121.128,646	Jim Gibson	No
WS25	1/18/07	Clear	10	N/A	0	N/A	4,310	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,768/ W 121.125,839	Jim Gibson	No
WS26	1/18/07	Clear	10	N/A	0	N/A	1,793	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,157/ W 121.126,772	Jim Gibson	No
WS27	1/18/07	Clear	10	N/A	0	N/A	9,434	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,450/ W 121.127,846	Jim Gibson	No
WS28	1/18/07	Clear	10	N/A	0	N/A	243	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,916/ W 121.124,907	Jim Gibson	No
WS29	1/18/07	Clear	10	N/A	0	N/A	624	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,246/ W 121.121,939	Jim Gibson	No
WS30	1/18/07	Clear	10	N/A	0	N/A	109,636	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,894/ W 121.117,339	Jim Gibson	No
WS31	1/18/07	Clear	10	N/A	0	N/A	3,336	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,577/ W 121.124,827	Jim Gibson	No
WS32	1/18/07	Clear	10	N/A	0	N/A	17,886	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,701/ W 121.119,339	Jim Gibson	No
WS33	1/18/07	Clear	10	N/A	0	N/A	1,626	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,996/ W 121.118,711	Jim Gibson	No
WS34	1/18/07	Clear	10	N/A	0	N/A	1,267	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,612/ W 121.117,705	Jim Gibson	No
WS35	1/18/07	Clear	10	N/A	0	N/A	740	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,842/ W 121.124,438	Jim Gibson	No
WS36	1/18/07	Clear	10	N/A	0	N/A	1,112	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,048/ W 121.117,778	Jim Gibson	No
WS37	1/18/07	Clear	10	N/A	0	N/A	1,055	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,363/ W 121.117,492	Jim Gibson	No
WS38	1/18/07	Clear	10	N/A	0	N/A	8,026	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,309/ W 121.114,599	Jim Gibson	No
WS39	1/18/07	Clear	10	N/A	0	N/A	21,599	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,722, W 121.109,500	Jim Gibson	No
WS40	1/18/07	Clear	10	N/A	0	N/A	755	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,237/ W 121.108,976	Jim Gibson	No
WS41	1/18/07	Clear	10	N/A	0	N/A	724	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,862/ W 121.108,886	Jim Gibson	No
WS42	1/18/07	Clear	10	N/A	0	N/A	15,637	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,463/ W 121.110,623	Jim Gibson	No
WS43	1/18/07	Clear	10	N/A	0	N/A	1,290	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,887/ W 121.111,387	Jim Gibson	No
WS44	1/18/07	Clear	10	N/A	0	N/A	1,896	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,773/ W 121.105,162	Jim Gibson	No

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**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
WS45	1/18/07	Clear	10	N/A	0	N/A	4,404	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,469/ W 121.109,077	Jim Gibson	No
WS46	1/18/07	Clear	10	N/A	0	N/A	3,118	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,674/ W 121.106,319	Jim Gibson	No
WS47	1/18/07	Clear	10	N/A	0	N/A	144	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,902/ W 121.106,163	Jim Gibson	No
WS48	1/18/07	Clear	10	N/A	0	N/A	4,719	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,091/ W 121.104,113	Jim Gibson	No
WS49	1/18/07	Clear	10	N/A	0	N/A	294	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,157/ W 121.113,577	Jim Gibson	No
WS50	1/18/07	Clear	10	N/A	0	N/A	173	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,264/ W 121.116,688	Jim Gibson	No
WS51	1/18/07	Clear	10	N/A	0	N/A	687	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,011/ W 121.108,181	Jim Gibson	No
WS52	1/18/07	Clear	10	N/A	0	N/A	1,351	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,196/ W 121.106,955	Jim Gibson	No
WS53	1/18/07	Clear	10	N/A	0	N/A	302	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,889/ W 121.105,371	Jim Gibson	No
WS54	1/18/07	Clear	10	N/A	0	N/A	169	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,672/ W 121.105,430	Jim Gibson	No
WS55	1/18/07	Clear	10	N/A	0	N/A	3,066	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.643,315/ W 121.103,643	Jim Gibson	No
WS56	1/18/07	Clear	10	N/A	0	N/A	809	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.643,273/ W 121.102,064	Jim Gibson	No
D1	1/18/07	Clear	10	N/A	0	N/A	39	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,140/ W 121.158,164	Jim Gibson	No
D2	1/18/07	Clear	10	N/A	0	N/A	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,596/ W 121.146,475	Jim Gibson	No
D3	1/18/07	Clear	10	N/A	0	N/A	3,342	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,527/ W 121.143,076	Jim Gibson	No
D4	1/18/07	Clear	10	N/A	0	N/A	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,638/ W 121.142,970	Jim Gibson	No
D5	1/18/07	Clear	10	N/A	0	N/A	1,183	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,180/ W 121.143,480	Jim Gibson	No
D6	1/18/07	Clear	10	N/A	0	N/A	137	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.631,188/ W 121.144,122	Jim Gibson	No
D7	1/18/07	Clear	10	N/A	0	N/A	75	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,461/ W 121.144,913	Jim Gibson	No
D8	1/18/07	Clear	10	N/A	0	16	78	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,384/ W 121.100,188	Jim Gibson	No
D9	1/18/07	Clear	10	N/A	0	N/A	141	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,289/ W 121.130,220	Jim Gibson	No
D10	1/18/07	Clear	10	N/A	0	N/A	55	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,729/ W 121.130,626	Jim Gibson	No
D11	1/18/07	Clear	10	N/A	0	N/A	135	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,693/ W 121.143,250	Jim Gibson	No
DD1	1/18/07	Clear	10	N/A	0	N/A	13,653	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,493/ W 121.147,360	Jim Gibson	No

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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
DD2	1/18/07	Clear	10	N/A	0	N/A	775	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,734/ W 121.144,304	Jim Gibson	No
DD3	1/18/07	Clear	10	N/A	0	N/A	40	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,084/ W 121.144,292	Jim Gibson	No
DD4	1/18/07	Clear	10	N/A	0	N/A	864	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,516/ W 121.142,162	Jim Gibson	No
DD5	1/18/07	Clear	10	N/A	0	N/A	3,375	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,226/ W 121.142,937	Jim Gibson	No
DD6	1/18/07	Clear	10	N/A	0	N/A	807	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,168/ W 121.137,312	Jim Gibson	No
DD7	1/18/07	Clear	10	N/A	0	N/A	23,391	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,402/ W 121.126,707	Jim Gibson	No
DD8	1/18/07	Clear	10	N/A	0	N/A	10,885	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,712/ W 121.143,735	Jim Gibson	No
DD9	1/18/07	Clear	10	N/A	0	N/A	450	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.631,620/ W 121.149,816	Jim Gibson	No
DD10	1/18/07	Clear	10	N/A	0	N/A	1,626	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,401/ W 121.108,320	Jim Gibson	No
DD11	1/18/07	Clear	10	N/A	0	N/A	825	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,917/ W 121.105,829	Jim Gibson	No
DD12	1/18/07	Clear	10	N/A	0	N/A	1,233	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,663/ W 121.107,437	Jim Gibson	No
DD13	1/18/07	Clear	10	N/A	0	N/A	3,408	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,535/ W 121.104,505	Jim Gibson	No
DD14	1/18/07	Clear	10	N/A	0	N/A	2,586	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,068/ W 121.102,645	Jim Gibson	No
V1	2/16/07	Clear	20	N/A	0	N/A	109	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.626,979/ W 121.143,513	Jim Gibson	No
V2	2/16/07	Clear	20	N/A	0	N/A	39	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,026/ W 121.142,983	Jim Gibson	No
V3	2/16/07	Clear	20	N/A	0	N/A	25	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,370 W 121.142,839	Jim Gibson	No
V4	2/16/07	Clear	20	N/A	0	N/A	285	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,495/W 121.142,844	Jim Gibson	No
V5	2/16/07	Clear	20	N/A	0	N/A	338	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,652/ W 121.143,464	Jim Gibson	No
V6	2/16/07	Clear	20	N/A	0	N/A	75	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,722/ W 121.143,127	Jim Gibson	No
V7	2/16/07	Clear	6	5	12	525	554	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.628,128/ W 121.142,577	Jim Gibson	No
V8	2/16/07	Clear	6	5	3	700	748	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.628,456/ W 121.143,176	Jim Gibson	No
V9	2/16/07	Clear	20	N/A	0	N/A	116	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.628,637/ W 121.149,062	Jim Gibson	No
V10	2/16/07	Clear	20	N/A	0	N/A	622	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,227/ W 121.147,166	Jim Gibson	No
V11	2/16/07	Clear	6	5	5	3,000	3,460	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,122/ W 121.150,259	Jim Gibson	No

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**2006-7 WET-SEASON LISTED BRANCHIOPOD SURVEY**

**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V12	2/16/07	Clear	20	N/A	0	N/A	48	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,502/ W 121.144,620	Jim Gibson	No
V13	2/16/07	Clear	20	N/A	0	N/A	653	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,607/ W 121.144,563	Jim Gibson	No
V14	2/16/07	Clear	20	N/A	0	N/A	812	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,659/ W 121.144,171	Jim Gibson	No
V15	2/16/07	Clear	20	N/A	0	N/A	40	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,576/ W 121.149,429	Jim Gibson	No
V16	2/16/07	Clear	20	N/A	0	N/A	82	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,659/ W 121.149,845	Jim Gibson	No
V17	2/16/07	Clear	20	N/A	0	N/A	102	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,810/ W 121.149,707	Jim Gibson	No
V18	2/16/07	Clear	6	5	7	120	160	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,855/ W 121.149,778	Jim Gibson	No
V19	2/16/07	Clear	20	N/A	0	N/A	1,060	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,914/ W 121.149,563	Jim Gibson	No
V20	2/16/07	Clear	20	N/A	0	N/A	735	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,995/ W 121.149,398	Jim Gibson	No
V21	2/16/07	Clear	6	5	4	475	511	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,900/ W 121.150,149	Jim Gibson	No
V22	2/16/07	Clear	20	N/A	0	N/A	45	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,134/ W 121.149,845	Jim Gibson	No
V23	2/16/07	Clear	20	N/A	0	N/A	444	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,269/ W 121.149,264	Jim Gibson	No
V24	2/16/07	Clear	20	N/A	0	N/A	105	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,232/ W 121.149,201	Jim Gibson	No
V25	2/16/07	Clear	20	N/A	0	N/A	151	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,211/ W 121.149,076	Jim Gibson	No
V26	2/16/07	Clear	6	5	12	10,000	12,794	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,027/ W 121.148,723	Jim Gibson	No
V27	2/16/07	Clear	20	N/A	0	N/A	389	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,211/ W 121.148,609	Jim Gibson	No
V28	2/16/07	Clear	20	N/A	0	N/A	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,309/ W 121.148,191	Jim Gibson	No
V29	2/16/07	Clear	6	5	3	100	135	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,424/ W 121.148,231	Jim Gibson	No
V30	2/16/07	Clear	20	N/A	0	N/A	125	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,016/ W 121.143,684	Jim Gibson	No
V31	2/16/07	Clear	20	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,099/ W 121.143,566	Jim Gibson	No
V32	2/16/07	Clear	20	N/A	0	N/A	80	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,019/ W 121.143,486	Jim Gibson	No
V33	2/16/07	Clear	20	N/A	0	N/A	63	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,191/ W 121.145,012	Jim Gibson	No
V34	2/16/07	Clear	18	8	2	80	110	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,291/ W 121.144,919	Jim Gibson	No
V35	2/16/07	Clear	20	N/A	0	N/A	95	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640.156/ W 121.144,895	Jim Gibson	No

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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V36	2/16/07	Clear	20	N/A	0	N/A	100	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,078/ W 121.144,686	Jim Gibson	No
V37	2/16/07	Clear	20	N/A	0	N/A	267	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,175/ W 121.144,540	Jim Gibson	No
V38	2/16/07	Clear	17	7	9	50	60	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,433/ W 121.143,433	Jim Gibson	No
V39	2/16/07	Clear	17	7	2	50	114	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,744/ W 121.141,023	Jim Gibson	No
V40	2/16/07	Clear	20	N/A	0	N/A	42	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,187/ W 121.141,023	Jim Gibson	No
V41	2/16/07	Clear	17	9	3	55	78	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,113/ W 121.141,058	Jim Gibson	No
V42	2/16/07	Clear	17	9	4	60	73	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,025/ W 121.141,001	Jim Gibson	No
V43	2/16/07	Clear	17	9	7	75	106	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,948/ W 121.140,966	Jim Gibson	No
V44	2/16/07	Clear	17	9	4	100	135	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,901/ W 121.140,996	Jim Gibson	No
V45	2/16/07	Clear	17	9	17	200	228	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,041/ W 121.141,097	Jim Gibson	No
V46	2/16/07	Clear	17	9	3	150	200	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,954/ W 121.141,077	Jim Gibson	No
V47	2/16/07	Clear	17	9	3	40	47	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,819/ W 121.140,994	Jim Gibson	No
V48	2/16/07	Clear	17	9	12	32	34	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,789/ W 121.140,747	Jim Gibson	No
V49	2/16/07	Clear	17	9	5	100	140	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,758/ W 121.140,862	Jim Gibson	No
V50	2/16/07	Clear	17	9	12	125	169	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,696/ W 121.140,848	Jim Gibson	No
V51	2/16/07	Clear	18	8	2	150	228	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,359/ W 121.136,387	Jim Gibson	No
V52	2/16/07	Clear	20	N/A	0	N/A	112	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,129/ W 121.134,332	Jim Gibson	No
V53	2/16/07	Clear	26	11	2	50	223	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,297/ W 121.133,725	Jim Gibson	No
V54	2/16/07	Clear	20	N/A	0	N/A	97	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,387/ W 121.133,153	Jim Gibson	No
V55	2/16/07	Clear	20	N/A	0	N/A	284	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,617/ W 121.130,389	Jim Gibson	No
V56	2/16/07	Clear	20	N/A	0	N/A	216	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,218/ W 121.130,494	Jim Gibson	No
V57	2/16/07	Clear	26	16	6	170	207	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,249/ W 121.128,841	Jim Gibson	No
V58	2/16/07	Clear	20	N/A	0	N/A	279	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,158/ W 121.130,726	Jim Gibson	No
V59	2/16/07	Clear	20	N/A	0	N/A	55	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,189/ W 121.130,666	Jim Gibson	No

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Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V60	2/16/07	Clear	20	N/A	0	N/A	67	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,231/ W 121.130,580	Jim Gibson	No
V61	2/16/07	Clear	20	N/A	0	N/A	17	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,224/ W 121.130,536	Jim Gibson	No
V62	2/16/07	Clear	20	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,197/ W 121.130,459	Jim Gibson	No
V63	2/16/07	Clear	20	N/A	0	N/A	101	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,166/ W 121.136,238	Jim Gibson	No
V64	2/16/07	Clear	20	N/A	0	N/A	223	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,115/ W 121.130,233	Jim Gibson	No
V65	2/16/07	Clear	20	N/A	0	N/A	453	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,157/ W 121.130,361	Jim Gibson	No
V66	2/16/07	Clear	20	N/A	0	N/A	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,195/ W 121.130,620	Jim Gibson	No
V67	2/16/07	Clear	26	16	7	300	367	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,575/ W 121.126,738	Jim Gibson	No
V68	2/16/07	Clear	20	20	6	2,000	2,790	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,097/ W 121.125,894	Jim Gibson	No
V69	2/16/07	Clear	20	N/A	0	N/A	3,983	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,718/ W 121.125,575	Jim Gibson	No
V70	2/16/07	Clear	20	N/A	0	N/A	317	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,369/ W 121.124,252	Jim Gibson	No
V71	2/16/07	Clear	20	N/A	0	N/A	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,363/ W 121.123,978	Jim Gibson	No
V72	2/16/07	Clear	26	16	8	300	386	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,982/ W 121.126,253	Jim Gibson	No
V73	2/16/07	Clear	26	16	13	350	458	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,638/ W 121.126,190	Jim Gibson	No
V74	2/16/07	Clear	26	16	5	275	317	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,479/ W 121.125,902	Jim Gibson	No
V75	2/16/07	Clear	20	N/A	0	N/A	140	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,375/ W 121.125,628	Jim Gibson	No
V76	2/16/07	Clear	26	16	2	50	126	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,320/ W 121.125,537	Jim Gibson	No
V77	2/16/07	Clear	20	N/A	0	N/A	165	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,131/ W 121.125,135	Jim Gibson	No
V78	2/16/07	Clear	20	N/A	0	N/A	104	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,866/ W 121.124,927	Jim Gibson	No
V79	2/16/07	Clear	26	16	15	110	122	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,471/ W 121.125,369	Jim Gibson	No
V80	2/16/07	Clear	20	N/A	0	N/A	42	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,343/ W 121.125,162	Jim Gibson	No
V81	2/16/07	Clear	26	16	4	125	163	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,232/ W 121.124,216	Jim Gibson	No
V82	2/16/07	Clear	20	N/A	0	N/A	48	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,195/ W 121.126,036	Jim Gibson	No
V83	2/16/07	Clear	20	N/A	0	N/A	201	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,624/ W 121.122,236	Jim Gibson	No

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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V84	2/16/07	Clear	19	19	2	80	182	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,177/ W 121.122,553	Jim Gibson	No
V85	2/16/07	Clear	19	19	3	100	190	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,113/ W 121.121,226	Jim Gibson	No
V86	2/16/07	Clear	20	N/A	0	N/A	73	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,385/ W 121.120,128	Jim Gibson	No
V87	2/16/07	Clear	20	N/A	0	N/A	21	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,269/ W 121.121,934	Jim Gibson	No
V88	2/16/07	Clear	19	19	6	50	70	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,134/ W 121.120,118	Jim Gibson	No
V89	2/16/07	Clear	20	N/A	0	N/A	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,010/ W 121.119,775	Jim Gibson	No
V90	2/16/07	Clear	19	19	6	200	229	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,095/ W 121.116,589	Jim Gibson	No
V91	2/16/07	Clear	20	N/A	0	N/A	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,997/ W 121.112,988	Jim Gibson	No
V92	2/16/07	Clear	20	N/A	0	N/A	170	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,490/ W 121.112,464	Jim Gibson	No
V93	2/16/07	Clear	20	N/A	0	N/A	178	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,324/ W 121.112,342	Jim Gibson	No
V94	2/16/07	Clear	20	N/A	0	N/A	50	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,066/ W 121.111,799	Jim Gibson	No
V95	2/16/07	Clear	22	15	12	192	192	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,989/ W 121.111,704	Jim Gibson	No
V96	2/16/07	Clear	22	15	7	25	34	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,081/ W 121.111,673	Jim Gibson	No
V97	2/16/07	Clear	20	N/A	0	N/A	14	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,079/ W 121.111,376	Jim Gibson	No
V98	2/16/07	Clear	20	N/A	0	N/A	93	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,150/ W 121.111,448	Jim Gibson	No
V99	2/16/07	Clear	20	N/A	0	N/A	29	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,138/ W 121.111,263	Jim Gibson	No
V100	2/16/07	Clear	20	N/A	0	N/A	390	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,227/ W 121.111,149	Jim Gibson	No
V101	2/16/07	Clear	20	N/A	0	N/A	106	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,321/ W 121.110,991	Jim Gibson	No
V102	2/16/07	Clear	20	20	7	1,000	1,396	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,085/ W 121.109,415	Jim Gibson	No
V103	2/16/07	Clear	20	N/A	0	N/A	411	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,680/ W 121.190,333	Jim Gibson	No
V104	2/16/07	Clear	20	N/A	0	N/A	87	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,797/ W 121.108,328	Jim Gibson	No
V105	2/16/07	Clear	20	N/A	0	N/A	263	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,789/ W 121.108,390	Jim Gibson	No
V106	2/16/07	Clear	20	N/A	0	N/A	56	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,725/ W 121.108,403	Jim Gibson	No
V107	2/16/07	Clear	20	N/A	0	N/A	216	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,746/ W 121.107,826	Jim Gibson	No

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Per. #: PRT-795935-3  
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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V108	2/16/07	Clear	20	N/A	0	N/A	106	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,871/ W 121.107,693	Jim Gibson	No
V109	2/16/07	Clear	20	N/A	0	N/A	781	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,818/ W 121.107,530	Jim Gibson	No
V110	2/16/07	Clear	20	N/A	0	N/A	266	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,975/ W 121.107,414	Jim Gibson	No
V111	2/16/07	Clear	20	N/A	0	N/A	13	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,375/ W 121.107,478	Jim Gibson	No
V112	2/16/07	Clear	20	N/A	0	N/A	68	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,451/ W 121.107,435	Jim Gibson	No
V113	2/16/07	Clear	20	N/A	0	N/A	33	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,532/ W 121.107,448	Jim Gibson	No
V114	2/16/07	Clear	20	20	24	386	386	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,492/ W 121.107,241	Jim Gibson	No
V115	2/16/07	Clear	20	20	25	158	158	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,530/ W 121.107,142	Jim Gibson	No
V116	2/16/07	Clear	20	16	17	220	221	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,418/ W 121.107,200	Jim Gibson	No
V117	2/16/07	Clear	20	20	9	53	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,387/ W 121.107,156	Jim Gibson	No
V118	2/16/07	Clear	20	N/A	0	N/A	90	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,244/ W 121.107,111	Jim Gibson	No
V119	2/16/07	Clear	20	N/A	0	N/A	77	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,171/ W 121.107,024	Jim Gibson	No
V120	2/16/07	Clear	20	N/A	0	N/A	121	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,163/ W 121.106,906	Jim Gibson	No
V121	2/16/07	Clear	22	15	12	155	185	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,708/ W 121.105,461	Jim Gibson	No
V122	2/16/07	Clear	20	N/A	0	N/A	79	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,914/ W 121.103,812	Jim Gibson	No
V123	2/16/07	Clear	20	19	8	900	1,083	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,029/ W 121.103,409	Jim Gibson	No
V124	2/16/07	Clear	17	7	2	20	49	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,511/ W 121.143,333	Jim Gibson	No
V125	2/16/07	Clear	20	N/A	0	N/A	627	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,632/ W 121.140,697	Jim Gibson	No
V126	2/16/07	Clear	20	N/A	0	N/A	593	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,299/ W 121.140,255	Jim Gibson	No
V127	2/16/07	Clear	20	N/A	0	N/A	28	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,212/ W 121.148,631	Jim Gibson	No
V128	2/16/07	Clear	6	5	4	15	19	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,050/ W 121.147,861	Jim Gibson	No
V129	2/16/07	Clear	20	N/A	0	N/A	63	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,229/ W 121.141,698	Jim Gibson	No
V130	2/16/07	Clear	11	9	6	400	438	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,082/ W 121.141,984	Jim Gibson	No
V131	2/16/07	Clear	20	N/A	0	N/A	159	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,192/ W 121.141,803	Jim Gibson	No

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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V132	2/16/07	Clear	20	N/A	0	N/A	102	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,142/ W 121.141,815	Jim Gibson	No
V133	2/16/07	Clear	6	5	2	150	208	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,191/ W 121.149,359	Jim Gibson	No
V134	2/16/07	Clear	6	5	3	45	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,135/ W 121.149,385	Jim Gibson	No
V135	2/16/07	Clear	20	N/A	0	N/A	49	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,498/ W 121.130,283	Jim Gibson	No
V136	2/16/07	Clear	20	N/A	0	N/A	46	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,745/ W 121.124,120	Jim Gibson	No
V137	2/16/07	Clear	20	N/A	0	N/A	90	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,064/ W 121.111,989	Jim Gibson	No
V138	2/16/07	Clear	20	N/A	0	N/A	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,224/ W 121.103,399	Jim Gibson	No
V139	2/16/07	Clear	20	N/A	0	N/A	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,702/ W 121.107,367	Jim Gibson	No
WS1	2/16/07	Clear	20	N/A	0	N/A	56,720	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,281/ W 121.145,209	Jim Gibson	No
WS2	2/16/07	Clear	20	N/A	0	N/A	685	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,854/ W 121.150,169	Jim Gibson	No
WS3	2/16/07	Clear	6	5	5	4,500	5,168	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,602/ W 121.150,234	Jim Gibson	No
WS4	2/16/07	Clear	20	N/A	0	N/A	580	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.629,117/ W 121.149,265	Jim Gibson	No
WS5	2/16/07	Clear	20	N/A	0	N/A	434	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,181/ W 121.147,132	Jim Gibson	No
WS6	2/16/07	Clear	20	N/A	0	N/A	3,258	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,258/ W 121.143,895	Jim Gibson	No
WS7	2/16/07	Clear	20	N/A	0	N/A	710	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,207/ W 121.143,309	Jim Gibson	No
WS8	2/16/07	Clear	20	N/A	0	N/A	3,520	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,398/ W 121.144,535	Jim Gibson	No
WS9	2/16/07	Clear	20	N/A	0	N/A	74	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,269/ W 121.144,546	Jim Gibson	No
WS10	2/16/07	Clear	20	N/A	0	N/A	1,139	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,647/ W 121.143,854	Jim Gibson	No
WS11	2/16/07	Clear	20	N/A	0	N/A	1,265	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,495/ W 121.142,243	Jim Gibson	No
WS12	2/16/07	Clear	11	9	8	700	891	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,956/ W 121.142,008	Jim Gibson	No
WS13	2/16/07	Clear	20	N/A	0	N/A	246	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,402/ W 121.141,164	Jim Gibson	No
WS14	2/16/07	Clear	20	N/A	0	N/A	440	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,712/ W 121.140,424	Jim Gibson	No
WS15	2/16/07	Clear	17	7	17	2,000	2,122	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,465/ W 121.140,384	Jim Gibson	No
WS16	2/16/07	Clear	20	N/A	0	N/A	687	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,149/ W 121.137,922	Jim Gibson	No

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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
WS17	2/16/07	Clear	20	N/A	0	N/A	906	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,403/ W 121.137,678	Jim Gibson	No
WS18	2/16/07	Clear	20	N/A	0	N/A	206	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,570/ W 121.136,903	Jim Gibson	No
WS19	2/16/07	Clear	20	N/A	0	N/A	258	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,111/ W 121.136,231	Jim Gibson	No
WS20	2/16/07	Clear	20	N/A	0	N/A	2,914	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,790/ W 121.131,670	Jim Gibson	No
WS21	2/16/07	Clear	20	N/A	0	N/A	147	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,692/ W 121.131,050	Jim Gibson	No
WS22	2/16/07	Clear	20	N/A	0	N/A	50,855	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,305/ W 121.130,886	Jim Gibson	No
WS23	2/16/07	Clear	20	N/A	0	N/A	840	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,672/ W 121.130,561	Jim Gibson	No
WS24	2/16/07	Clear	20	N/A	0	N/A	32,380	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,356/ W 121.128,646	Jim Gibson	No
WS25	2/16/07	Clear	20	N/A	0	N/A	4,310	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,768/ W 121.125,839	Jim Gibson	No
WS26	2/16/07	Clear	20	N/A	0	N/A	1,793	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,157/ W 121.126,772	Jim Gibson	No
WS27	2/16/07	Clear	20	20	7	8,000	9,434	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,450/ W 121.127,846	Jim Gibson	No
WS28	2/16/07	Clear	20	N/A	0	N/A	243	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,916/ W 121.124,907	Jim Gibson	No
WS29	2/16/07	Clear	19	19	6	550	624	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,246/ W 121.121,939	Jim Gibson	No
WS30	2/16/07	Clear	20	N/A	0	N/A	109,636	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,894/ W 121.117,339	Jim Gibson	No
WS31	2/16/07	Clear	20	N/A	0	N/A	3,336	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,577/ W 121.124,827	Jim Gibson	No
WS32	2/16/07	Clear	20	N/A	0	N/A	17,886	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,701/ W 121.119,339	Jim Gibson	No
WS33	2/16/07	Clear	20	N/A	0	N/A	1,626	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,996/ W 121.118,711	Jim Gibson	No
WS34	2/16/07	Clear	20	N/A	0	N/A	1,267	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,612/ W 121.117,705	Jim Gibson	No
WS35	2/16/07	Clear	20	N/A	0	N/A	740	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,842/ W 121.124,438	Jim Gibson	No
WS36	2/16/07	Clear	20	N/A	0	N/A	1,112	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,048/ W 121.117,778	Jim Gibson	No
WS37	2/16/07	Clear	20	N/A	0	N/A	1,055	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,363/ W 121.117,492	Jim Gibson	No
WS38	2/16/07	Clear	20	N/A	0	N/A	8,026	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,309/ W 121.114,599	Jim Gibson	No
WS39	2/16/07	Clear	20	N/A	0	N/A	21,599	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,722, W 121.109,500	Jim Gibson	No
WS40	2/16/07	Clear	20	N/A	0	N/A	755	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,237/ W 121.108,976	Jim Gibson	No

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WS41	2/16/07	Clear	20	N/A	0	N/A	724	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,862/ W 121.108,886	Jim Gibson	No
WS42	2/16/07	Clear	22	19	8	13,000	15,637	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,463/ W 121.110,623	Jim Gibson	No
WS43	2/16/07	Clear	20	N/A	0	N/A	1,290	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,887/ W 121.111,387	Jim Gibson	No
WS44	2/16/07	Clear	20	N/A	0	N/A	1,896	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,773/ W 121.105,162	Jim Gibson	No
WS45	2/16/07	Clear	20	N/A	0	N/A	4,404	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,469/ W 121.109,077	Jim Gibson	No
WS46	2/16/07	Clear	20	N/A	0	N/A	3,118	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,674/ W 121.106,319	Jim Gibson	No
WS47	2/16/07	Clear	20	N/A	0	N/A	144	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,902/ W 121.106,163	Jim Gibson	No
WS48	2/16/07	Clear	20	N/A	0	N/A	4,719	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,091/ W 121.104,113	Jim Gibson	No
WS49	2/16/07	Clear	20	N/A	0	N/A	294	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,157/ W 121.113,577	Jim Gibson	No
WS50	2/16/07	Clear	20	N/A	0	N/A	173	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,264/ W 121.116,688	Jim Gibson	No
WS51	2/16/07	Clear	20	N/A	0	N/A	687	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,011/ W 121.108,181	Jim Gibson	No
WS52	2/16/07	Clear	20	N/A	0	N/A	1,351	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,196/ W 121.106,955	Jim Gibson	No
WS53	2/16/07	Clear	20	N/A	0	N/A	302	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,889/ W 121.105,371	Jim Gibson	No
WS54	2/16/07	Clear	20	N/A	0	N/A	169	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,672/ W 121.105,430	Jim Gibson	No
WS55	2/16/07	Clear	20	N/A	0	N/A	3,066	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.643,315/ W 121.103,643	Jim Gibson	No
WS56	2/16/07	Clear	20	N/A	0	N/A	809	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.643,273/ W 121.102,064	Jim Gibson	No
D1	2/16/07	Clear	18	8	13	30	39	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,140/ W 121.158,164	Jim Gibson	No
D2	2/16/07	Clear	20	N/A	0	N/A	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,596/ W 121.146,475	Jim Gibson	No
D3	2/16/07	Clear	17	7	17	3,000	3,342	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,527/ W 121.143,076	Jim Gibson	No
D4	2/16/07	Clear	17	7	12	25	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,638/ W 121.142,970	Jim Gibson	No
D5	2/16/07	Clear	17	7	8	1,000	1,183	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,180/ W 121.143,480	Jim Gibson	No
D6	2/16/07	Clear	20	N/A	0	N/A	137	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.631,188/ W 121.144,122	Jim Gibson	No
D7	2/16/07	Clear	20	N/A	0	N/A	75	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,461/ W 121.144,913	Jim Gibson	No
D8	2/16/07	Clear	26	11	7	60	78	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,384/ W 121.100,188	Jim Gibson	No

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**2006-7 WET-SEASON LISTED BRANCHIOPOD SURVEY**

**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
D9	2/16/07	Clear	26	11	20	120	141	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,289/ W 121.130,220	Jim Gibson	No
D10	2/16/07	Clear	20	N/A	0	N/A	55	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,729/ W 121.130,626	Jim Gibson	No
D11	2/16/07	Clear	20	N/A	0	N/A	135	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,693/ W 121.143,250	Jim Gibson	No
DD1	2/16/07	Clear	6	5	7	10,000	13,653	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,493/ W 121.147,360	Jim Gibson	No
DD2	2/16/07	Clear	18	8	2	500	775	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,734/ W 121.144,304	Jim Gibson	No
DD3	2/16/07	Clear	20	N/A	0	N/A	40	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,084/ W 121.144,292	Jim Gibson	No
DD4	2/16/07	Clear	20	N/A	0	N/A	864	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,516/ W 121.142,162	Jim Gibson	No
DD5	2/16/07	Clear	20	N/A	0	N/A	3,375	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,226/ W 121.142,937	Jim Gibson	No
DD6	2/16/07	Clear	18	8	4	500	807	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,168/ W 121.137,312	Jim Gibson	No
DD7	2/16/07	Clear	26	16	4	10,000	23,391	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,402/ W 121.126,707	Jim Gibson	No
DD8	2/16/07	Clear	20	N/A	0	N/A	10,885	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,712/ W 121.143,735	Jim Gibson	No
DD9	2/16/07	Clear	20	N/A	0	N/A	450	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.631,620/ W 121.149,816	Jim Gibson	No
DD10	2/16/07	Clear	20	N/A	0	N/A	1,626	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,401/ W 121.108,320	Jim Gibson	No
DD11	2/16/07	Clear	20	N/A	0	N/A	825	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,917/ W 121.105,829	Jim Gibson	No
DD12	2/16/07	Clear	20	N/A	0	N/A	1,233	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,663/ W 121.107,437	Jim Gibson	No
DD13	2/16/07	Clear	20	19	7	2,500	3,408	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,535/ W 121.104,505	Jim Gibson	No
DD14	2/16/07	Clear	20	N/A	0	N/A	2,586	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,068/ W 121.102,645	Jim Gibson	No
V1	3/1/07	Partly cloudy	20	N/A	0	N/A	109	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.626,979/ W 121.143,513	Jim Gibson	No
V2	3/1/07	Partly cloudy	20	N/A	0	N/A	39	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,026/ W 121.142,983	Jim Gibson	No
V3	3/1/07	Partly cloudy	20	N/A	0	N/A	25	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,370 W 121.142,839	Jim Gibson	No
V4	3/1/07	Partly cloudy	10	9	3	200	285	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,495/W 121.142,844	Jim Gibson	No
V5	3/1/07	Partly cloudy	10	9	5	300	338	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,652/ W 121.143,464	Jim Gibson	No
V6	3/1/07	Partly cloudy	20	N/A	0	N/A	75	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,722/ W 121.143,127	Jim Gibson	No
V7	3/1/07	Partly cloudy	10	7	9	500	554	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.628,128/ W 121.142,577	Jim Gibson	No

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**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V8	3/1/07	Partly cloudy	10	9	4	725	748	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.628,456/ W 121.143,176	Jim Gibson	No
V9	3/1/07	Partly cloudy	20	N/A	0	N/A	116	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.628,637/ W 121.149,062	Jim Gibson	No
V10	3/1/07	Partly cloudy	10	7	4	600	622	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,227/ W 121.147,166	Jim Gibson	No
V11	3/1/07	Partly cloudy	10	7	6	3,200	3,460	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,122/ W 121.150,259	Jim Gibson	No
V12	3/1/07	Partly cloudy	20	N/A	0	N/A	48	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,502/ W 121.144,620	Jim Gibson	No
V13	3/1/07	Partly cloudy	20	N/A	0	N/A	653	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,607/ W 121.144,563	Jim Gibson	No
V14	3/1/07	Partly cloudy	20	N/A	0	N/A	812	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,659/ W 121.144,171	Jim Gibson	No
V15	3/1/07	Partly cloudy	20	N/A	0	N/A	40	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,576/ W 121.149,429	Jim Gibson	No
V16	3/1/07	Partly cloudy	20	N/A	0	N/A	82	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,659/ W 121.149,845	Jim Gibson	No
V17	3/1/07	Partly cloudy	8	7	5	85	102	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,810/ W 121.149,707	Jim Gibson	No
V18	3/1/07	Partly cloudy	8	7	8	130	160	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,855/ W 121.149,778	Jim Gibson	No
V19	3/1/07	Partly cloudy	8	7	5	900	1,060	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,914/ W 121.149,563	Jim Gibson	No
V20	3/1/07	Partly cloudy	8	7	5	650	735	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,995/ W 121.149,398	Jim Gibson	No
V21	3/1/07	Partly cloudy	8	7	5	485	511	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,900/ W 121.150,149	Jim Gibson	No
V22	3/1/07	Partly cloudy	8	7	2	35	45	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,134/ W 121.149,845	Jim Gibson	No
V23	3/1/07	Partly cloudy	8	7	4	400	444	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,269/ W 121.149,264	Jim Gibson	No
V24	3/1/07	Partly cloudy	8	7	3	90	105	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,232/ W 121.149,201	Jim Gibson	No
V25	3/1/07	Partly cloudy	8	7	3	100	151	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,211/ W 121.149,076	Jim Gibson	No
V26	3/1/07	Partly cloudy	8	7	15	11,000	12,794	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,027/ W 121.148,723	Jim Gibson	No
V27	3/1/07	Partly cloudy	8	7	4	300	389	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,211/ W 121.148,609	Jim Gibson	No
V28	3/1/07	Partly cloudy	10	7	5	120	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,309/ W 121.148,191	Jim Gibson	No
V29	3/1/07	Partly cloudy	10	7	4	120	135	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,424/ W 121.148,231	Jim Gibson	No
V30	3/1/07	Partly cloudy	10	9	6	100	125	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,016/ W 121.143,684	Jim Gibson	No
V31	3/1/07	Partly cloudy	10	9	4	45	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,099/ W 121.143,566	Jim Gibson	No

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**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V32	3/1/07	Partly cloudy	10	9	4	70	80	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,019/ W 121.143,486	Jim Gibson	No
V33	3/1/07	Partly cloudy	14	12	5	55	63	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,191/ W 121.145,012	Jim Gibson	No
V34	3/1/07	Partly cloudy	14	12	5	100	110	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,291/ W 121.144,919	Jim Gibson	No
V35	3/1/07	Partly cloudy	14	12	4	80	95	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,156/ W 121.144,895	Jim Gibson	No
V36	3/1/07	Partly cloudy	14	12	4	180	100	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,078/ W 121.144,686	Jim Gibson	No
V37	3/1/07	Partly cloudy	14	12	4	200	267	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,175/ W 121.144,540	Jim Gibson	No
V38	3/1/07	Partly cloudy	14	10	13	55	60	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,433/ W 121.143,433	Jim Gibson	No
V39	3/1/07	Partly cloudy	12	10	6	80	114	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,744/ W 121.141,023	Jim Gibson	No
V40	3/1/07	Partly cloudy	10	12	3	25	42	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,187/ W 121.141,023	Jim Gibson	No
V41	3/1/07	Partly cloudy	10	12	7	70	78	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,113/ W 121.141,058	Jim Gibson	No
V42	3/1/07	Partly cloudy	10	12	8	65	73	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,025/ W 121.141,001	Jim Gibson	No
V43	3/1/07	Partly cloudy	10	12	13	100	106	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,948/ W 121.140,966	Jim Gibson	No
V44	3/1/07	Partly cloudy	10	12	8	120	135	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,901/ W 121.140,996	Jim Gibson	No
V45	3/1/07	Partly cloudy	10	12	19	228	228	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,041/ W 121.141,097	Jim Gibson	No
V46	3/1/07	Partly cloudy	10	12	6	170	200	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,954/ W 121.141,077	Jim Gibson	No
V47	3/1/07	Partly cloudy	10	12	12	47	47	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,819/ W 121.140,994	Jim Gibson	No
V48	3/1/07	Partly cloudy	10	12	14	32	34	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,789/ W 121.140,747	Jim Gibson	No
V49	3/1/07	Partly cloudy	10	12	18	140	140	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,758/ W 121.140,862	Jim Gibson	No
V50	3/1/07	Partly cloudy	10	9	18	169	169	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,696/ W 121.140,848	Jim Gibson	No
V51	3/1/07	Partly cloudy	10	12	10	220	228	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,359/ W 121.136,387	Jim Gibson	No
V52	3/1/07	Partly cloudy	10	10	4	85	112	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,129/ W 121.134,332	Jim Gibson	No
V53	3/1/07	Partly cloudy	10	10	6	223	223	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,297/ W 121.133,725	Jim Gibson	No
V54	3/1/07	Partly cloudy	10	10	3	45	97	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,387/ W 121.133,153	Jim Gibson	No
V55	3/1/07	Partly cloudy	20	18	3	200	284	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,617/ W 121.130,389	Jim Gibson	No

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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V56	3/1/07	Partly cloudy	20	20	5	200	216	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,218/ W 121.130,494	Jim Gibson	No
V57	3/1/07	Partly cloudy	20	18	9	200	207	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,249/ W 121.128,841	Jim Gibson	No
V58	3/1/07	Partly cloudy	20	20	9	250	279	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,158/ W 121.130,726	Jim Gibson	No
V59	3/1/07	Partly cloudy	20	2	5	50	55	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,189/ W 121.130,666	Jim Gibson	No
V60	3/1/07	Partly cloudy	20	20	7	55	67	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,231/ W 121.130,580	Jim Gibson	No
V61	3/1/07	Partly cloudy	20	N/A	0	N/A	17	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,224/ W 121.130,536	Jim Gibson	No
V62	3/1/07	Partly cloudy	20	20	4	40	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,197/ W 121.130,459	Jim Gibson	No
V63	3/1/07	Partly cloudy	20	18	8	101	101	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,166/ W 121.136,238	Jim Gibson	No
V64	3/1/07	Partly cloudy	20	18	7	200	223	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,115/ W 121.130,233	Jim Gibson	No
V65	3/1/07	Partly cloudy	20	18	5	400	453	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,157/ W 121.130,361	Jim Gibson	No
V66	3/1/07	Partly cloudy	20	20	6	120	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,195/ W 121.130,620	Jim Gibson	No
V67	3/1/07	Partly cloudy	20	18	9	325	367	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,575/ W 121.126,738	Jim Gibson	No
V68	3/1/07	Partly cloudy	20	18	7	2,100	2,790	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,097/ W 121.125,894	Jim Gibson	No
V69	3/1/07	Partly cloudy	20	18	4	2,000	3,983	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,718/ W 121.125,575	Jim Gibson	No
V70	3/1/07	Partly cloudy	20	N/A	0	N/A	317	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,369/ W 121.124,252	Jim Gibson	No
V71	3/1/07	Partly cloudy	20	18	4	50	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,363/ W 121.123,978	Jim Gibson	No
V72	3/1/07	Partly cloudy	22	18	10	350	386	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,982/ W 121.126,253	Jim Gibson	No
V73	3/1/07	Partly cloudy	22	18	13	350	458	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,638/ W 121.126,190	Jim Gibson	No
V74	3/1/07	Partly cloudy	22	18	7	300	317	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,479/ W 121.125,902	Jim Gibson	No
V75	3/1/07	Partly cloudy	22	18	6	140	140	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,375/ W 121.125,628	Jim Gibson	No
V76	3/1/07	Partly cloudy	22	18	5	100	126	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,320/ W 121.125,537	Jim Gibson	No
V77	3/1/07	Partly cloudy	22	18	6	165	165	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,131/ W 121.125,135	Jim Gibson	No
V78	3/1/07	Partly cloudy	20	N/A	0	N/A	104	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,866/ W 121.124,927	Jim Gibson	No
V79	3/1/07	Partly cloudy	22	18	22	120	122	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,471/ W 121.125,369	Jim Gibson	No

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**2006-7 WET-SEASON LISTED BRANCHIOPOD SURVEY**

**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V80	3/1/07	Partly cloudy	22	18	2	35	42	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,343/ W 121.125,162	Jim Gibson	No
V81	3/1/07	Partly cloudy	22	18	5	150	163	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,232/ W 121.124,216	Jim Gibson	No
V82	3/1/07	Partly cloudy	22	21	4	40	48	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,195/ W 121.126,036	Jim Gibson	No
V83	3/1/07	Partly cloudy	22	21	4	175	201	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,624/ W 121.122,236	Jim Gibson	No
V84	3/1/07	Partly cloudy	20	16	5	120	182	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,177/ W 121.122,553	Jim Gibson	No
V85	3/1/07	Partly cloudy	20	16	5	140	190	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,113/ W 121.121,226	Jim Gibson	No
V86	3/1/07	Partly cloudy	20	N/A	0	N/A	73	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,385/ W 121.120,128	Jim Gibson	No
V87	3/1/07	Partly cloudy	20	N/A	0	N/A	21	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,269/ W 121.121,934	Jim Gibson	No
V88	3/1/07	Partly cloudy	20	N/A	0	N/A	70	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,134/ W 121.120,118	Jim Gibson	No
V89	3/1/07	Partly cloudy	20	N/A	0	N/A	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,010/ W 121.119,775	Jim Gibson	No
V90	3/1/07	Partly cloudy	20	16	9	210	229	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,095/ W 121.116,589	Jim Gibson	No
V91	3/1/07	Partly cloudy	20	N/A	0	N/A	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,997/ W 121.112,988	Jim Gibson	No
V92	3/1/07	Partly cloudy	22	20	4	150	170	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,490/ W 121.112,464	Jim Gibson	No
V93	3/1/07	Partly cloudy	20	N/A	0	N/A	178	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,324/ W 121.112,342	Jim Gibson	No
V94	3/1/07	Partly cloudy	22	20	4	40	50	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,066/ W 121.111,799	Jim Gibson	No
V95	3/1/07	Partly cloudy	22	20	16	192	192	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,989/ W 121.111,704	Jim Gibson	No
V96	3/1/07	Partly cloudy	22	20	5	20	34	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,081/ W 121.111,673	Jim Gibson	No
V97	3/1/07	Partly cloudy	22	20	2	10	14	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,079/ W 121.111,376	Jim Gibson	No
V98	3/1/07	Partly cloudy	22	20	3	80	93	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,150/ W 121.111,448	Jim Gibson	No
V99	3/1/07	Partly cloudy	22	20	8	29	29	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,138/ W 121.111,263	Jim Gibson	No
V100	3/1/07	Partly cloudy	22	20	4	300	390	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,227/ W 121.111,149	Jim Gibson	No
V101	3/1/07	Partly cloudy	20	N/A	0	N/A	106	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,321/ W 121.110,991	Jim Gibson	No
V102	3/1/07	Partly cloudy	22	21	8	1,100	1,396	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,085/ W 121.109,415	Jim Gibson	No
V103	3/1/07	Partly cloudy	20	N/A	0	N/A	411	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,680/ W 121.190,333	Jim Gibson	No

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Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V104	3/1/07	Partly cloudy	22	20	3	70	87	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,797/ W 121.108,328	Jim Gibson	No
V105	3/1/07	Partly cloudy	22	20	4	200	263	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,789/ W 121.108,390	Jim Gibson	No
V106	3/1/07	Partly cloudy	20	N/A	0	N/A	56	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,725/ W 121.108,403	Jim Gibson	No
V107	3/1/07	Partly cloudy	22	20	3	200	216	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,746/ W 121.107,826	Jim Gibson	No
V108	3/1/07	Partly cloudy	20	N/A	0	N/A	106	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,871/ W 121.107,693	Jim Gibson	No
V109	3/1/07	Partly cloudy	22	20	5	700	781	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,818/ W 121.107,530	Jim Gibson	No
V110	3/1/07	Partly cloudy	22	20	3	200	266	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,975/ W 121.107,414	Jim Gibson	No
V111	3/1/07	Partly cloudy	20	N/A	0	N/A	13	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,375/ W 121.107,478	Jim Gibson	No
V112	3/1/07	Partly cloudy	22	20	6	68	68	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,451/ W 121.107,435	Jim Gibson	No
V113	3/1/07	Partly cloudy	20	N/A	0	N/A	33	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,532/ W 121.107,448	Jim Gibson	No
V114	3/1/07	Partly cloudy	22	20	26	386	386	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,492/ W 121.107,241	Jim Gibson	No
V115	3/1/07	Partly cloudy	22	20	26	158	158	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,530/ W 121.107,142	Jim Gibson	No
V116	3/1/07	Partly cloudy	22	20	20	221	221	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,418/ W 121.107,200	Jim Gibson	No
V117	3/1/07	Partly cloudy	22	20	14	53	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,387/ W 121.107,156	Jim Gibson	No
V118	3/1/07	Partly cloudy	22	17	8	80	90	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,244/ W 121.107,111	Jim Gibson	No
V119	3/1/07	Partly cloudy	22	17	3	70	77	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,171/ W 121.107,024	Jim Gibson	No
V120	3/1/07	Partly cloudy	22	17	9	110	121	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,163/ W 121.106,906	Jim Gibson	No
V121	3/1/07	Partly cloudy	22	17	15	180	185	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,708/ W 121.105,461	Jim Gibson	No
V122	3/1/07	Partly cloudy	22	17	4	70	79	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,914/ W 121.103,812	Jim Gibson	No
V123	3/1/07	Partly cloudy	22	17	12	1,083	1,083	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,029/ W 121.103,409	Jim Gibson	No
V124	3/1/07	Partly cloudy	14	10	5	40	49	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,511/ W 121.143,333	Jim Gibson	No
V125	3/1/07	Partly cloudy	20	N/A	0	N/A	627	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,632/ W 121.140,697	Jim Gibson	No
V126	3/1/07	Partly cloudy	20	N/A	0	N/A	593	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,299/ W 121.140,255	Jim Gibson	No
V127	3/1/07	Partly cloudy	20	N/A	0	N/A	28	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,212/ W 121.148,631	Jim Gibson	No

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**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V128	3/1/07	Partly cloudy	8	7	8	19	19	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,050/ W 121.147,861	Jim Gibson	No
V129	3/1/07	Partly cloudy	20	N/A	0	N/A	63	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,229/ W 121.141,698	Jim Gibson	No
V130	3/1/07	Partly cloudy	10	9	8	438	438	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,082/ W 121.141,984	Jim Gibson	No
V131	3/1/07	Partly cloudy	20	N/A	0	N/A	159	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,192/ W 121.141,803	Jim Gibson	No
V132	3/1/07	Partly cloudy	20	N/A	0	N/A	102	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,142/ W 121.141,815	Jim Gibson	No
V133	3/1/07	Partly cloudy	8	7	5	195	208	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,191/ W 121.149,359	Jim Gibson	No
V134	3/1/07	Partly cloudy	8	7	5	50	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,135/ W 121.149,385	Jim Gibson	No
V135	3/1/07	Partly cloudy	20	18	6	40	49	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,498/ W 121.130,283	Jim Gibson	No
V136	3/1/07	Partly cloudy	22	21	6	40	46	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,745/ W 121.124,120	Jim Gibson	No
V137	3/1/07	Partly cloudy	22	20	3	80	90	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,064/ W 121.111,989	Jim Gibson	No
V138	3/1/07	Partly cloudy	20	N/A	0	N/A	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,224/ W 121.103,399	Jim Gibson	No
V139	3/1/07	Partly cloudy	22	20	26	130	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,702/ W 121.107,367	Jim Gibson	No
WS1	3/1/07	Partly cloudy	20	N/A	0	N/A	56,720	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,281/ W 121.145,209	Jim Gibson	No
WS2	3/1/07	Partly cloudy	20	N/A	0	N/A	685	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,854/ W 121.150,169	Jim Gibson	No
WS3	3/1/07	Partly cloudy	10	7	6	5,000	5,168	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,602/ W 121.150,234	Jim Gibson	No
WS4	3/1/07	Partly cloudy	10	7	4	500	580	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.629,117/ W 121.149,265	Jim Gibson	No
WS5	3/1/07	Partly cloudy	20	N/A	0	N/A	434	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,181/ W 121.147,132	Jim Gibson	No
WS6	3/1/07	Partly cloudy	20	N/A	0	N/A	3,258	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,258/ W 121.143,895	Jim Gibson	No
WS7	3/1/07	Partly cloudy	20	N/A	0	N/A	710	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,207/ W 121.143,309	Jim Gibson	No
WS8	3/1/07	Partly cloudy	20	N/A	0	N/A	3,520	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,398/ W 121.144,535	Jim Gibson	No
WS9	3/1/07	Partly cloudy	20	N/A	0	N/A	74	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,269/ W 121.144,546	Jim Gibson	No
WS10	3/1/07	Partly cloudy	20	N/A	0	N/A	1,139	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,647/ W 121.143,854	Jim Gibson	No
WS11	3/1/07	Partly cloudy	20	N/A	0	N/A	1,265	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,495/ W 121.142,243	Jim Gibson	No
WS12	3/1/07	Partly cloudy	10	9	9	800	891	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,956/ W 121.142,008	Jim Gibson	No

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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
WS13	3/1/07	Partly cloudy	20	N/A	0	N/A	246	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,402/ W 121.141,164	Jim Gibson	No
WS14	3/1/07	Partly cloudy	20	N/A	0	N/A	440	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,712/ W 121.140,424	Jim Gibson	No
WS15	3/1/07	Partly cloudy	20	N/A	0	N/A	2,122	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,465/ W 121.140,384	Jim Gibson	No
WS16	3/1/07	Partly cloudy	20	N/A	0	N/A	687	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	38.640,149/ W 121.137,922	Jim Gibson	No
WS17	3/1/07	Partly cloudy	20	N/A	0	N/A	906	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,403/ W 121.137,678	Jim Gibson	No
WS18	3/1/07	Partly cloudy	20	N/A	0	N/A	206	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,570/ W 121.136,903	Jim Gibson	No
WS19	3/1/07	Partly cloudy	20	N/A	0	N/A	258	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,111/ W 121.136,231	Jim Gibson	No
WS20	3/1/07	Partly cloudy	20	N/A	0	N/A	2,914	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,790/ W 121.131,670	Jim Gibson	No
WS21	3/1/07	Partly cloudy	20	N/A	0	N/A	147	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,692/ W 121.131,050	Jim Gibson	No
WS22	3/1/07	Partly cloudy	20	18	15	40,000	50,855	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,305/ W 121.130,886	Jim Gibson	No
WS23	3/1/07	Partly cloudy	20	N/A	0	N/A	840	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,672/ W 121.130,561	Jim Gibson	No
WS24	3/1/07	Partly cloudy	20	18	7	28,000	32,380	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,356/ W 121.128,646	Jim Gibson	No
WS25	3/1/07	Partly cloudy	20	N/A	0	N/A	4,310	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,768/ W 121.125,839	Jim Gibson	No
WS26	3/1/07	Partly cloudy	20	N/A	0	N/A	1,793	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,157/ W 121.126,772	Jim Gibson	No
WS27	3/1/07	Partly cloudy	20	18	9	9,000	9,434	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,450/ W 121.127,846	Jim Gibson	No
WS28	3/1/07	Partly cloudy	20	N/A	0	N/A	243	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,916/ W 121.124,907	Jim Gibson	No
WS29	3/1/07	Partly cloudy	20	16	7	600	624	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,246/ W 121.121,939	Jim Gibson	No
WS30	3/1/07	Partly cloudy	20	N/A	0	N/A	109,636	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,894/ W 121.117,339	Jim Gibson	No
WS31	3/1/07	Partly cloudy	22	18	8	3,000	3,336	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,577/ W 121.124,827	Jim Gibson	No
WS32	3/1/07	Partly cloudy	20	N/A	0	N/A	17,886	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,701/ W 121.119,339	Jim Gibson	No
WS33	3/1/07	Partly cloudy	20	N/A	0	N/A	1,626	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,996/ W 121.118,711	Jim Gibson	No
WS34	3/1/07	Partly cloudy	20	N/A	0	N/A	1,267	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,612/ W 121.117,705	Jim Gibson	No
WS35	3/1/07	Partly cloudy	20	N/A	0	N/A	740	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,842/ W 121.124,438	Jim Gibson	No
WS36	3/1/07	Partly cloudy	20	N/A	0	N/A	1,112	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,048/ W 121.117,778	Jim Gibson	No

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**2006-7 WET-SEASON LISTED BRANCHIOPOD SURVEY**

**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
WS37	3/1/07	Partly cloudy	20	N/A	0	N/A	1,055	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,363/ W 121.117,492	Jim Gibson	No
WS38	3/1/07	Partly cloudy	20	N/A	0	N/A	8,026	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,309/ W 121.114,599	Jim Gibson	No
WS39	3/1/07	Partly cloudy	20	N/A	0	N/A	21,599	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,722/ W 121.109,500	Jim Gibson	No
WS40	3/1/07	Partly cloudy	20	N/A	0	N/A	755	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,237/ W 121.108,976	Jim Gibson	No
WS41	3/1/07	Partly cloudy	20	N/A	0	N/A	724	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,862/ W 121.108,886	Jim Gibson	No
WS42	3/1/07	Partly cloudy	22	20	15	14,000	15,637	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,463/ W 121.110,623	Jim Gibson	No
WS43	3/1/07	Partly cloudy	20	N/A	0	N/A	1,290	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,887/ W 121.111,387	Jim Gibson	No
WS44	3/1/07	Partly cloudy	20	N/A	0	N/A	1,896	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,773/ W 121.105,162	Jim Gibson	No
WS45	3/1/07	Partly cloudy	20	N/A	0	N/A	4,404	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,469/ W 121.109,077	Jim Gibson	No
WS46	3/1/07	Partly cloudy	20	N/A	0	N/A	3,118	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,674/ W 121.106,319	Jim Gibson	No
WS47	3/1/07	Partly cloudy	20	N/A	0	N/A	144	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,902/ W 121.106,163	Jim Gibson	No
WS48	3/1/07	Partly cloudy	20	N/A	0	N/A	4,719	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,091/ W 121.104,113	Jim Gibson	No
WS49	3/1/07	Partly cloudy	20	N/A	0	N/A	294	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,157/ W 121.113,577	Jim Gibson	No
WS50	3/1/07	Partly cloudy	20	N/A	0	N/A	173	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,264/ W 121.116,688	Jim Gibson	No
WS51	3/1/07	Partly cloudy	20	N/A	0	N/A	687	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,011/ W 121.108,181	Jim Gibson	No
WS52	3/1/07	Partly cloudy	20	N/A	0	N/A	1,351	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,196/ W 121.106,955	Jim Gibson	No
WS53	3/1/07	Partly cloudy	20	N/A	0	N/A	302	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,889/ W 121.105,371	Jim Gibson	No
WS54	3/1/07	Partly cloudy	20	N/A	0	N/A	169	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,672/ W 121.105,430	Jim Gibson	No
WS55	3/1/07	Partly cloudy	20	N/A	0	N/A	3,066	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.643,315/ W 121.103,643	Jim Gibson	No
WS56	3/1/07	Partly cloudy	20	N/A	0	N/A	809	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.643,273/ W 121.102,064	Jim Gibson	No
D1	3/1/07	Partly cloudy	14	12	36	39	39	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,140/ W 121.158,164	Jim Gibson	No
D2	3/1/07	Partly cloudy	20	N/A	0	N/A	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,596/ W 121.146,475	Jim Gibson	No
D3	3/1/07	Partly cloudy	12	10	26	3,100	3,342	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,527/ W 121.143,076	Jim Gibson	No
D4	3/1/07	Partly cloudy	12	10	17	30	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,638/ W 121.142,970	Jim Gibson	No

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**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
D5	3/1/07	Partly cloudy	14	10	12	1,100	1,183	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,180/ W 121.143,480	Jim Gibson	No
D6	3/1/07	Partly cloudy	20	N/A	0	N/A	137	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.631,188/ W 121.144,122	Jim Gibson	No
D7	3/1/07	Partly cloudy	20	N/A	0	N/A	75	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,461/ W 121.144,913	Jim Gibson	No
D8	3/1/07	Partly cloudy	20	18	14	70	78	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,384/ W 121.100,188	Jim Gibson	No
D9	3/1/07	Partly cloudy	20	18	17	120	141	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,289/ W 121.130,220	Jim Gibson	No
D10	3/1/07	Partly cloudy	20	N/A	0	N/A	55	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,729/ W 121.130,626	Jim Gibson	No
D11	3/1/07	Partly cloudy	12	10	26	135	135	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,693/ W 121.143,250	Jim Gibson	No
DD1	3/1/07	Partly cloudy	10	9	9	12,000	13,653	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,493/ W 121.147,360	Jim Gibson	No
DD2	3/1/07	Partly cloudy	14	12	4	700	775	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,734/ W 121.144,304	Jim Gibson	No
DD3	3/1/07	Partly cloudy	20	N/A	0	N/A	40	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,084/ W 121.144,292	Jim Gibson	No
DD4	3/1/07	Partly cloudy	20	N/A	0	N/A	864	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,516/ W 121.142,162	Jim Gibson	No
DD5	3/1/07	Partly cloudy	20	N/A	0	N/A	3,375	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,226/ W 121.142,937	Jim Gibson	No
DD6	3/1/07	Partly cloudy	10	12	7	750	807	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,168/ W 121.137,312	Jim Gibson	No
DD7	3/1/07	Partly cloudy	22	18	3	10,000	23,391	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,402/ W 121.126,707	Jim Gibson	No
DD8	3/1/07	Partly cloudy	20	N/A	0	N/A	10,885	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,712/ W 121.143,735	Jim Gibson	No
DD9	3/1/07	Partly cloudy	20	N/A	0	N/A	450	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.631,620/ W 121.149,816	Jim Gibson	No
DD10	3/1/07	Partly cloudy	22	21	5	1,200	1,626	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,401/ W 121.108,320	Jim Gibson	No
DD11	3/1/07	Partly cloudy	20	N/A	0	N/A	825	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,917/ W 121.105,829	Jim Gibson	No
DD12	3/1/07	Partly cloudy	20	N/A	0	N/A	1,233	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,663/ W 121.107,437	Jim Gibson	No
DD13	3/1/07	Partly cloudy	20	N/A	0	N/A	3,408	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,535/ W 121.104,505	Jim Gibson	No
DD14	3/1/07	Partly cloudy	20	N/A	0	N/A	2,586	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,068/ W 121.102,645	Jim Gibson	No
V1	3/15/07	Clear	20	N/A	0	N/A	109	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.626,979/ W 121.143,513	Jim Gibson	No
V2	3/15/07	Clear	20	N/A	0	N/A	39	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,026/ W 121.142,983	Jim Gibson	No
V3	3/15/07	Clear	20	N/A	0	N/A	25	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,370 W 121.142,839	Jim Gibson	No

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**Carpenter Ranch  
Sacramento County**

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Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V4	3/15/07	Clear	10	N/A	0	N/A	285	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,495/W 121.142,844	Jim Gibson	No
V5	3/15/07	Clear	10	N/A	0	N/A	338	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,652/ W 121.143,464	Jim Gibson	No
V6	3/15/07	Clear	20	N/A	0	N/A	75	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,722/ W 121.143,127	Jim Gibson	No
V7	3/15/07	Clear	9	12	5	250	554	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.628,128/ W 121.142,577	Jim Gibson	No
V8	3/15/07	Clear	10	N/A	0	725	748	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.628,456/ W 121.143,176	Jim Gibson	No
V9	3/15/07	Clear	20	N/A	0	N/A	116	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.628,637/ W 121.149,062	Jim Gibson	No
V10	3/15/07	Clear	10	N/A	0	600	622	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,227/ W 121.147,166	Jim Gibson	No
V11	3/15/07	Clear	10	N/A	0	3,200	3,460	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,122/ W 121.150,259	Jim Gibson	No
V12	3/15/07	Clear	17	15	4	25	48	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,502/ W 121.144,620	Jim Gibson	No
V13	3/15/07	Clear	17	15	3	200	653	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,607/ W 121.144,563	Jim Gibson	No
V14	3/15/07	Clear	20	N/A	0	N/A	812	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,659/ W 121.144,171	Jim Gibson	No
V15	3/15/07	Clear	20	N/A	0	N/A	40	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,576/ W 121.149,429	Jim Gibson	No
V16	3/15/07	Clear	20	N/A	0	N/A	82	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,659/ W 121.149,845	Jim Gibson	No
V17	3/15/07	Clear	8	N/A	0	N/A	102	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,810/ W 121.149,707	Jim Gibson	No
V18	3/15/07	Clear	8	N/A	0	N/A	160	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,855/ W 121.149,778	Jim Gibson	No
V19	3/15/07	Clear	8	N/A	0	N/A	1,060	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,914/ W 121.149,563	Jim Gibson	No
V20	3/15/07	Clear	8	N/A	0	N/A	735	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,995/ W 121.149,398	Jim Gibson	No
V21	3/15/07	Clear	8	N/A	0	N/A	511	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,900/ W 121.150,149	Jim Gibson	No
V22	3/15/07	Clear	8	N/A	0	N/A	45	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,134/ W 121.149,845	Jim Gibson	No
V23	3/15/07	Clear	8	N/A	0	N/A	444	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,269/ W 121.149,264	Jim Gibson	No
V24	3/15/07	Clear	8	N/A	0	N/A	105	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,232/ W 121.149,201	Jim Gibson	No
V25	3/15/07	Clear	8	N/A	0	N/A	151	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,211/ W 121.149,076	Jim Gibson	No
V26	3/15/07	Clear	8	12	9	8,000	12,794	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,027/ W 121.148,723	Jim Gibson	No
V27	3/15/07	Clear	8	12	5	300	389	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,211/ W 121.148,609	Jim Gibson	No

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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V28	3/15/07	Clear	10	N/A	0	N/A	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,309/ W 121.148,191	Jim Gibson	No
V29	3/15/07	Clear	10	N/A	0	N/A	135	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,424/ W 121.148,231	Jim Gibson	No
V30	3/15/07	Clear	10	N/A	0	N/A	125	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,016/ W 121.143,684	Jim Gibson	No
V31	3/15/07	Clear	10	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,099/ W 121.143,566	Jim Gibson	No
V32	3/15/07	Clear	10	N/A	0	N/A	80	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,019/ W 121.143,486	Jim Gibson	No
V33	3/15/07	Clear	14	N/A	0	N/A	63	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,191/ W 121.145,012	Jim Gibson	No
V34	3/15/07	Clear	14	N/A	0	N/A	110	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,291/ W 121.144,919	Jim Gibson	No
V35	3/15/07	Clear	14	N/A	0	N/A	95	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,156/ W 121.144,895	Jim Gibson	No
V36	3/15/07	Clear	14	N/A	0	N/A	100	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,078/ W 121.144,686	Jim Gibson	No
V37	3/15/07	Clear	14	N/A	0	N/A	267	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,175/ W 121.144,540	Jim Gibson	No
V38	3/15/07	Clear	12	13	8	40	60	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,433/ W 121.143,433	Jim Gibson	No
V39	3/15/07	Clear	12	13	13	114	114	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,744/ W 121.141,023	Jim Gibson	No
V40	3/15/07	Clear	10	N/A	0	N/A	42	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,187/ W 121.141,023	Jim Gibson	No
V41	3/15/07	Clear	10	N/A	0	N/A	78	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,113/ W 121.141,058	Jim Gibson	No
V42	3/15/07	Clear	10	N/A	0	N/A	73	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,025/ W 121.141,001	Jim Gibson	No
V43	3/15/07	Clear	10	N/A	0	N/A	106	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,948/ W 121.140,966	Jim Gibson	No
V44	3/15/07	Clear	10	N/A	0	N/A	135	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,901/ W 121.140,996	Jim Gibson	No
V45	3/15/07	Clear	12	13	11	175	228	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,041/ W 121.141,097	Jim Gibson	No
V46	3/15/07	Clear	10	N/A	0	N/A	200	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,954/ W 121.141,077	Jim Gibson	No
V47	3/15/07	Clear	10	N/A	0	N/A	47	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,819/ W 121.140,994	Jim Gibson	No
V48	3/15/07	Clear	12	13	5	10	34	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,789/ W 121.140,747	Jim Gibson	No
V49	3/15/07	Clear	10	13	3	30	140	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,758/ W 121.140,862	Jim Gibson	No
V50	3/15/07	Clear	10	13	8	80	169	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,696/ W 121.140,848	Jim Gibson	No
V51	3/15/07	Clear	10	N/A	0	N/A	228	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,359/ W 121.136,387	Jim Gibson	No

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**2006-7 WET-SEASON LISTED BRANCHIOPOD SURVEY**

**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
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Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V52	3/15/07	Clear	10	N/A	0	N/A	112	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,129/ W 121.134,332	Jim Gibson	No
V53	3/15/07	Clear	10	N/A	0	N/A	223	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,297/ W 121.133,725	Jim Gibson	No
V54	3/15/07	Clear	10	N/A	0	N/A	97	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,387/ W 121.133,153	Jim Gibson	No
V55	3/15/07	Clear	20	N/A	0	N/A	284	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,617/ W 121.130,389	Jim Gibson	No
V56	3/15/07	Clear	20	N/A	0	N/A	216	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,218/ W 121.130,494	Jim Gibson	No
V57	3/15/07	Clear	20	17	6	150	207	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,249/ W 121.128,841	Jim Gibson	No
V58	3/15/07	Clear	20	N/A	0	N/A	279	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,158/ W 121.130,726	Jim Gibson	No
V59	3/15/07	Clear	20	N/A	0	N/A	55	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,189/ W 121.130,666	Jim Gibson	No
V60	3/15/07	Clear	20	N/A	0	N/A	67	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,231/ W 121.130,580	Jim Gibson	No
V61	3/15/07	Clear	20	N/A	0	N/A	17	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,224/ W 121.130,536	Jim Gibson	No
V62	3/15/07	Clear	20	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,197/ W 121.130,459	Jim Gibson	No
V63	3/15/07	Clear	20	N/A	0	N/A	101	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,166/ W 121.136,238	Jim Gibson	No
V64	3/15/07	Clear	20	N/A	0	N/A	223	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,115/ W 121.130,233	Jim Gibson	No
V65	3/15/07	Clear	20	N/A	0	N/A	453	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,157/ W 121.130,361	Jim Gibson	No
V66	3/15/07	Clear	20	N/A	0	N/A	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,195/ W 121.130,620	Jim Gibson	No
V67	3/15/07	Clear	20	N/A	0	N/A	367	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,575/ W 121.126,738	Jim Gibson	No
V68	3/15/07	Clear	20	N/A	0	N/A	2,790	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,097/ W 121.125,894	Jim Gibson	No
V69	3/15/07	Clear	20	N/A	0	N/A	3,983	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,718/ W 121.125,575	Jim Gibson	No
V70	3/15/07	Clear	20	N/A	0	N/A	317	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,369/ W 121.124,252	Jim Gibson	No
V71	3/15/07	Clear	20	N/A	0	N/A	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,363/ W 121.123,978	Jim Gibson	No
V72	3/15/07	Clear	20	17	4	150	386	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,982/ W 121.126,253	Jim Gibson	No
V73	3/15/07	Clear	20	16	6	150	458	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,638/ W 121.126,190	Jim Gibson	No
V74	3/15/07	Clear	22	18	0	300	317	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,479/ W 121.125,902	Jim Gibson	No
V75	3/15/07	Clear	22	N/A	0	N/A	140	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,375/ W 121.125,628	Jim Gibson	No

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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)						Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V76	3/15/07	Clear	22	N/A	0	N/A	126	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,320/ W 121.125,537	Jim Gibson	No
V77	3/15/07	Clear	22	N/A	0	N/A	165	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,131/ W 121.125,135	Jim Gibson	No
V78	3/15/07	Clear	20	N/A	0	N/A	104	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,866/ W 121.124,927	Jim Gibson	No
V79	3/15/07	Clear	22	N/A	0	N/A	122	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,471/ W 121.125,369	Jim Gibson	No
V80	3/15/07	Clear	22	N/A	0	N/A	42	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,343/ W 121.125,162	Jim Gibson	No
V81	3/15/07	Clear	22	N/A	0	N/A	163	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,232/ W 121.124,216	Jim Gibson	No
V82	3/15/07	Clear	22	N/A	0	N/A	48	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,195/ W 121.126,036	Jim Gibson	No
V83	3/15/07	Clear	22	N/A	0	N/A	201	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,624/ W 121.122,236	Jim Gibson	No
V84	3/15/07	Clear	20	N/A	0	N/A	182	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,177/ W 121.122,553	Jim Gibson	No
V85	3/15/07	Clear	20	N/A	0	N/A	190	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,113/ W 121.121,226	Jim Gibson	No
V86	3/15/07	Clear	20	N/A	0	N/A	73	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,385/ W 121.120,128	Jim Gibson	No
V87	3/15/07	Clear	20	N/A	0	N/A	21	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,269/ W 121.121,934	Jim Gibson	No
V88	3/15/07	Clear	20	N/A	0	N/A	70	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,134/ W 121.120,118	Jim Gibson	No
V89	3/15/07	Clear	20	N/A	0	N/A	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,010/ W 121.119,775	Jim Gibson	No
V90	3/15/07	Clear	20	N/A	0	N/A	229	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,095/ W 121.116,589	Jim Gibson	No
V91	3/15/07	Clear	20	N/A	0	N/A	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,997/ W 121.112,988	Jim Gibson	No
V92	3/15/07	Clear	22	N/A	0	N/A	170	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,490/ W 121.112,464	Jim Gibson	No
V93	3/15/07	Clear	20	N/A	0	N/A	178	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,324/ W 121.112,342	Jim Gibson	No
V94	3/15/07	Clear	22	N/A	0	N/A	50	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,066/ W 121.111,799	Jim Gibson	No
V95	3/15/07	Clear	22	N/A	0	N/A	192	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,989/ W 121.111,704	Jim Gibson	No
V96	3/15/07	Clear	22	N/A	0	N/A	34	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,081/ W 121.111,673	Jim Gibson	No
V97	3/15/07	Clear	22	N/A	0	N/A	14	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,079/ W 121.111,376	Jim Gibson	No
V98	3/15/07	Clear	22	N/A	0	N/A	93	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,150/ W 121.111,448	Jim Gibson	No
V99	3/15/07	Clear	22	N/A	0	N/A	29	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,138/ W 121.111,263	Jim Gibson	No

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V100	3/15/07	Clear	22	N/A	0	N/A	390	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,227/ W 121.111,149	Jim Gibson	No
V101	3/15/07	Clear	20	N/A	0	N/A	106	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,321/ W 121.110,991	Jim Gibson	No
V102	3/15/07	Clear	22	N/A	0	N/A	1,396	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,085/ W 121.109,415	Jim Gibson	No
V103	3/15/07	Clear	20	N/A	0	N/A	411	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,680/ W 121.190,333	Jim Gibson	No
V104	3/15/07	Clear	22	N/A	0	N/A	87	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,797/ W 121.108,328	Jim Gibson	No
V105	3/15/07	Clear	22	N/A	0	N/A	263	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,789/ W 121.108,390	Jim Gibson	No
V106	3/15/07	Clear	20	N/A	0	N/A	56	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,725/ W 121.108,403	Jim Gibson	No
V107	3/15/07	Clear	22	N/A	0	N/A	216	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,746/ W 121.107,826	Jim Gibson	No
V108	3/15/07	Clear	20	N/A	0	N/A	106	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,871/ W 121.107,693	Jim Gibson	No
V109	3/15/07	Clear	22	N/A	0	N/A	781	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,818/ W 121.107,530	Jim Gibson	No
V110	3/15/07	Clear	22	N/A	0	N/A	266	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,975/ W 121.107,414	Jim Gibson	No
V111	3/15/07	Clear	20	N/A	0	N/A	13	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,375/ W 121.107,478	Jim Gibson	No
V112	3/15/07	Clear	22	N/A	0	N/A	68	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,451/ W 121.107,435	Jim Gibson	No
V113	3/15/07	Clear	20	N/A	0	N/A	33	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,532/ W 121.107,448	Jim Gibson	No
V114	3/15/07	Clear	21	19	18	250	386	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,492/ W 121.107,241	Jim Gibson	No
V115	3/15/07	Clear	21	19	20	100	158	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,530/ W 121.107,142	Jim Gibson	No
V116	3/15/07	Clear	21	19	12	100	221	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,418/ W 121.107,200	Jim Gibson	No
V117	3/15/07	Clear	22	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,387/ W 121.107,156	Jim Gibson	No
V118	3/15/07	Clear	22	N/A	0	N/A	90	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,244/ W 121.107,111	Jim Gibson	No
V119	3/15/07	Clear	22	N/A	0	N/A	77	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,171/ W 121.107,024	Jim Gibson	No
V120	3/15/07	Clear	22	N/A	0	N/A	121	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,163/ W 121.106,906	Jim Gibson	No
V121	3/15/07	Clear	22	N/A	0	N/A	185	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,708/ W 121.105,461	Jim Gibson	No
V122	3/15/07	Clear	22	N/A	0	N/A	79	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,914/ W 121.103,812	Jim Gibson	No
V123	3/15/07	Clear	21	19	4	250	1,083	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,029/ W 121.103,409	Jim Gibson	No

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V124	3/15/07	Clear	14	N/A	0	N/A	49	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,511/ W 121.143,333	Jim Gibson	No
V125	3/15/07	Clear	20	N/A	0	N/A	627	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,632/ W 121.140,697	Jim Gibson	No
V126	3/15/07	Clear	20	N/A	0	N/A	593	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,299/ W 121.140,255	Jim Gibson	No
V127	3/15/07	Clear	20	N/A	0	N/A	28	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,212/ W 121.148,631	Jim Gibson	No
V128	3/15/07	Clear	8	N/A	0	N/A	19	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,050/ W 121.147,861	Jim Gibson	No
V129	3/15/07	Clear	20	N/A	0	N/A	63	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,229/ W 121.141,698	Jim Gibson	No
V130	3/15/07	Clear	10	13	3	200	438	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,082/ W 121.141,984	Jim Gibson	No
V131	3/15/07	Clear	20	N/A	0	N/A	159	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,192/ W 121.141,803	Jim Gibson	No
V132	3/15/07	Clear	20	N/A	0	N/A	102	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,142/ W 121.141,815	Jim Gibson	No
V133	3/15/07	Clear	8	N/A	0	N/A	208	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,191/ W 121.149,359	Jim Gibson	No
V134	3/15/07	Clear	8	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,135/ W 121.149,385	Jim Gibson	No
V135	3/15/07	Clear	20	N/A	0	N/A	49	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,498/ W 121.130,283	Jim Gibson	No
V136	3/15/07	Clear	22	N/A	0	N/A	46	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,745/ W 121.124,120	Jim Gibson	No
V137	3/15/07	Clear	22	N/A	0	N/A	90	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,064/ W 121.111,989	Jim Gibson	No
V138	3/15/07	Clear	20	N/A	0	N/A	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,224/ W 121.103,399	Jim Gibson	No
V139	3/15/07	Clear	22	N/A	0	N/A	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,702/ W 121.107,367	Jim Gibson	No
WS1	3/15/07	Clear	20	N/A	0	N/A	56,720	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,281/ W 121.145,209	Jim Gibson	No
WS2	3/15/07	Clear	20	N/A	0	N/A	685	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,854/ W 121.150,169	Jim Gibson	No
WS3	3/15/07	Clear	10	N/A	0	N/A	5,168	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,602/ W 121.150,234	Jim Gibson	No
WS4	3/15/07	Clear	10	N/A	0	N/A	580	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.629,117/ W 121.149,265	Jim Gibson	No
WS5	3/15/07	Clear	20	N/A	0	N/A	434	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,181/ W 121.147,132	Jim Gibson	No
WS6	3/15/07	Clear	20	N/A	0	N/A	3,258	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,258/ W 121.143,895	Jim Gibson	No
WS7	3/15/07	Clear	20	N/A	0	N/A	710	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,207/ W 121.143,309	Jim Gibson	No
WS8	3/15/07	Clear	20	N/A	0	N/A	3,520	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,398/ W 121.144,535	Jim Gibson	No

Note: Branchinecta lynchi = BRLY; Branchinecta conservatio = BRCO; Branchinecta mesovallensis = BRME; Lepidurus packardii = LEPA; and Linderiella occidentalis = LIOC.

**2006-7 WET-SEASON LISTED BRANCHIOPOD SURVEY**

**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
WS9	3/15/07	Clear	20	N/A	0	N/A	74	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,269/ W 121.144,546	Jim Gibson	No
WS10	3/15/07	Clear	20	N/A	0	N/A	1,139	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,647/ W 121.143,854	Jim Gibson	No
WS11	3/15/07	Clear	20	N/A	0	N/A	1,265	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,495/ W 121.142,243	Jim Gibson	No
WS12	3/15/07	Clear	10	N/A	0	N/A	891	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,956/ W 121.142,008	Jim Gibson	No
WS13	3/15/07	Clear	20	N/A	0	N/A	246	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,402/ W 121.141,164	Jim Gibson	No
WS14	3/15/07	Clear	20	N/A	0	N/A	440	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,712/ W 121.140,424	Jim Gibson	No
WS15	3/15/07	Clear	20	N/A	0	N/A	2,122	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,465/ W 121.140,384	Jim Gibson	No
WS16	3/15/07	Clear	20	N/A	0	N/A	687	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	38.640,149/ W 121.137,922	Jim Gibson	No
WS17	3/15/07	Clear	20	N/A	0	N/A	906	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,403/ W 121.137,678	Jim Gibson	No
WS18	3/15/07	Clear	20	N/A	0	N/A	206	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,570/ W 121.136,903	Jim Gibson	No
WS19	3/15/07	Clear	20	N/A	0	N/A	258	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,111/ W 121.136,231	Jim Gibson	No
WS20	3/15/07	Clear	20	N/A	0	N/A	2,914	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,790/ W 121.131,670	Jim Gibson	No
WS21	3/15/07	Clear	20	N/A	0	N/A	147	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,692/ W 121.131,050	Jim Gibson	No
WS22	3/15/07	Clear	20	N/A	0	N/A	50,855	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,305/ W 121.130,886	Jim Gibson	No
WS23	3/15/07	Clear	20	N/A	0	N/A	840	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,672/ W 121.130,561	Jim Gibson	No
WS24	3/15/07	Clear	20	N/A	0	N/A	32,380	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,356/ W 121.128,646	Jim Gibson	No
WS25	3/15/07	Clear	20	N/A	0	N/A	4,310	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,768/ W 121.125,839	Jim Gibson	No
WS26	3/15/07	Clear	20	N/A	0	N/A	1,793	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,157/ W 121.126,772	Jim Gibson	No
WS27	3/15/07	Clear	20	N/A	0	N/A	9,434	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,450/ W 121.127,846	Jim Gibson	No
WS28	3/15/07	Clear	20	N/A	0	N/A	243	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,916/ W 121.124,907	Jim Gibson	No
WS29	3/15/07	Clear	20	N/A	0	N/A	624	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,246/ W 121.121,939	Jim Gibson	No
WS30	3/15/07	Clear	20	N/A	0	N/A	109,636	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,894/ W 121.117,339	Jim Gibson	No
WS31	3/15/07	Clear	22	N/A	0	N/A	3,336	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,577/ W 121.124,827	Jim Gibson	No
WS32	3/15/07	Clear	20	N/A	0	N/A	17,886	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,701/ W 121.119,339	Jim Gibson	No

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Sacramento County**

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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
WS33	3/15/07	Clear	20	N/A	0	N/A	1,626	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,996/ W 121.118,711	Jim Gibson	No
WS34	3/15/07	Clear	20	N/A	0	N/A	1,267	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,612/ W 121.117,705	Jim Gibson	No
WS35	3/15/07	Clear	20	N/A	0	N/A	740	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,842/ W 121.124,438	Jim Gibson	No
WS36	3/15/07	Clear	20	N/A	0	N/A	1,112	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,048/ W 121.117,778	Jim Gibson	No
WS37	3/15/07	Clear	20	N/A	0	N/A	1,055	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,363/ W 121.117,492	Jim Gibson	No
WS38	3/15/07	Clear	20	N/A	0	N/A	8,026	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,309/ W 121.114,599	Jim Gibson	No
WS39	3/15/07	Clear	20	N/A	0	N/A	21,599	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,722, W 121.109,500	Jim Gibson	No
WS40	3/15/07	Clear	20	N/A	0	N/A	755	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,237/ W 121.108,976	Jim Gibson	No
WS41	3/15/07	Clear	20	N/A	0	N/A	724	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,862/ W 121.108,886	Jim Gibson	No
WS42	3/15/07	Clear	22	20	15	14,000	15,637	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,463/ W 121.110,623	Jim Gibson	No
WS43	3/15/07	Clear	20	N/A	0	N/A	1,290	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,887/ W 121.111,387	Jim Gibson	No
WS44	3/15/07	Clear	20	N/A	0	N/A	1,896	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,773/ W 121.105,162	Jim Gibson	No
WS45	3/15/07	Clear	20	N/A	0	N/A	4,404	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,469/ W 121.109,077	Jim Gibson	No
WS46	3/15/07	Clear	20	N/A	0	N/A	3,118	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,674/ W 121.106,319	Jim Gibson	No
WS47	3/15/07	Clear	20	N/A	0	N/A	144	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,902/ W 121.106,163	Jim Gibson	No
WS48	3/15/07	Clear	21	19	8	4,000	4,719	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,091/ W 121.104,113	Jim Gibson	No
WS49	3/15/07	Clear	20	N/A	0	N/A	294	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,157/ W 121.113,577	Jim Gibson	No
WS50	3/15/07	Clear	20	N/A	0	N/A	173	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,264/ W 121.116,688	Jim Gibson	No
WS51	3/15/07	Clear	20	N/A	0	N/A	687	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,011/ W 121.108,181	Jim Gibson	No
WS52	3/15/07	Clear	20	N/A	0	N/A	1,351	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,196/ W 121.106,955	Jim Gibson	No
WS53	3/15/07	Clear	20	N/A	0	N/A	302	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,889/ W 121.105,371	Jim Gibson	No
WS54	3/15/07	Clear	20	N/A	0	N/A	169	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,672/ W 121.105,430	Jim Gibson	No
WS55	3/15/07	Clear	20	N/A	0	N/A	3,066	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.643,315/ W 121.103,643	Jim Gibson	No
WS56	3/15/07	Clear	20	N/A	0	N/A	809	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.643,273/ W 121.102,064	Jim Gibson	No

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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
D1	3/15/07	Clear	14	13	3	20	39	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,140/ W 121.158,164	Jim Gibson	No
D2	3/15/07	Clear	20	N/A	0	N/A	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,596/ W 121.146,475	Jim Gibson	No
D3	3/15/07	Clear	12	N/A	0	N/A	3,342	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,527/ W 121.143,076	Jim Gibson	No
D4	3/15/07	Clear	12	N/A	0	N/A	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,638/ W 121.142,970	Jim Gibson	No
D5	3/15/07	Clear	14	N/A	0	N/A	1,183	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,180/ W 121.143,480	Jim Gibson	No
D6	3/15/07	Clear	20	N/A	0	N/A	137	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.631,188/ W 121.144,122	Jim Gibson	No
D7	3/15/07	Clear	20	N/A	0	N/A	75	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,461/ W 121.144,913	Jim Gibson	No
D8	3/15/07	Clear	20	N/A	0	N/A	78	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,384/ W 121.100,188	Jim Gibson	No
D9	3/15/07	Clear	20	17	15	100	141	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,289/ W 121.130,220	Jim Gibson	No
D10	3/15/07	Clear	20	N/A	0	N/A	55	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,729/ W 121.130,626	Jim Gibson	No
D11	3/15/07	Clear	16	13	18	80	135	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,693/ W 121.143,250	Jim Gibson	No
DD1	3/15/07	Clear	16	15	9	12,000	13,653	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,493/ W 121.147,360	Jim Gibson	No
DD2	3/15/07	Clear	14	N/A	0	N/A	775	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,734/ W 121.144,304	Jim Gibson	No
DD3	3/15/07	Clear	20	N/A	0	N/A	40	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,084/ W 121.144,292	Jim Gibson	No
DD4	3/15/07	Clear	20	N/A	0	N/A	864	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,516/ W 121.142,162	Jim Gibson	No
DD5	3/15/07	Clear	20	N/A	0	N/A	3,375	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,226/ W 121.142,937	Jim Gibson	No
DD6	3/15/07	Clear	10	N/A	0	N/A	807	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,168/ W 121.137,312	Jim Gibson	No
DD7	3/15/07	Clear	22	N/A	0	N/A	23,391	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,402/ W 121.126,707	Jim Gibson	No
DD8	3/15/07	Clear	20	N/A	0	N/A	10,885	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,712/ W 121.143,735	Jim Gibson	No
DD9	3/15/07	Clear	20	N/A	0	N/A	450	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.631,620/ W 121.149,816	Jim Gibson	No
DD10	3/15/07	Clear	22	N/A	0	N/A	1,626	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,401/ W 121.108,320	Jim Gibson	No
DD11	3/15/07	Clear	20	N/A	0	N/A	825	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,917/ W 121.105,829	Jim Gibson	No
DD12	3/15/07	Clear	20	N/A	0	N/A	1,233	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,663/ W 121.107,437	Jim Gibson	No
DD13	3/15/07	Clear	20	N/A	0	N/A	3,408	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,535/ W 121.104,505	Jim Gibson	No

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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
DD14	3/15/07	Clear	20	N/A	0	N/A	2,586	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,068/ W 121.102,645	Jim Gibson	No
V1	3/28/07	Sunny/Breezy	14	N/A	0	N/A	109	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.626,979/ W 121.143,513	Jim Gibson	No
V2	3/28/07	Sunny/Breezy	14	N/A	0	N/A	39	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,026/ W 121.142,983	Jim Gibson	No
V3	3/28/07	Sunny/Breezy	14	N/A	0	N/A	25	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,370 W 121.142,839	Jim Gibson	No
V4	3/28/07	Sunny/Breezy	14	N/A	0	N/A	285	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,495/W 121.142,844	Jim Gibson	No
V5	3/28/07	Sunny/Breezy	14	N/A	0	N/A	338	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,652/ W 121.143,464	Jim Gibson	No
V6	3/28/07	Sunny/Breezy	14	N/A	0	N/A	75	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,722/ W 121.143,127	Jim Gibson	No
V7	3/28/07	Sunny/Breezy	14	N/A	0	250	554	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.628,128/ W 121.142,577	Jim Gibson	No
V8	3/28/07	Sunny/Breezy	14	N/A	0	725	748	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.628,456/ W 121.143,176	Jim Gibson	No
V9	3/28/07	Sunny/Breezy	14	N/A	0	N/A	116	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.628,637/ W 121.149,062	Jim Gibson	No
V10	3/28/07	Sunny/Breezy	14	N/A	0	600	622	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,227/ W 121.147,166	Jim Gibson	No
V11	3/28/07	Sunny/Breezy	14	N/A	0	N/A	3,460	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,122/ W 121.150,259	Jim Gibson	No
V12	3/28/07	Sunny/Breezy	14	N/A	0	N/A	48	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,502/ W 121.144,620	Jim Gibson	No
V13	3/28/07	Sunny/Breezy	12	15	3	200	653	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,607/ W 121.144,563	Jim Gibson	No
V14	3/28/07	Sunny/Breezy	14	N/A	0	N/A	812	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,659/ W 121.144,171	Jim Gibson	No
V15	3/28/07	Sunny/Breezy	14	N/A	0	N/A	40	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,576/ W 121.149,429	Jim Gibson	No
V16	3/28/07	Sunny/Breezy	14	N/A	0	N/A	82	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,659/ W 121.149,845	Jim Gibson	No
V17	3/28/07	Sunny/Breezy	14	N/A	0	N/A	102	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,810/ W 121.149,707	Jim Gibson	No
V18	3/28/07	Sunny/Breezy	14	N/A	0	N/A	160	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,855/ W 121.149,778	Jim Gibson	No
V19	3/28/07	Sunny/Breezy	14	N/A	0	N/A	1,060	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,914/ W 121.149,563	Jim Gibson	No
V20	3/28/07	Sunny/Breezy	14	N/A	0	N/A	735	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,995/ W 121.149,398	Jim Gibson	No
V21	3/28/07	Sunny/Breezy	14	N/A	0	N/A	511	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,900/ W 121.150,149	Jim Gibson	No
V22	3/28/07	Sunny/Breezy	14	N/A	0	N/A	45	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,134/ W 121.149,845	Jim Gibson	No
V23	3/28/07	Sunny/Breezy	14	N/A	0	N/A	444	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,269/ W 121.149,264	Jim Gibson	No

Note: Branchinecta lynchi = BRLY; Branchinecta conservatio = BRCO; Branchinecta mesoallensis = BRME; Lepidurus packardii = LEPA; and Linderiella occidentalis = LIOC.

**2006-7 WET-SEASON LISTED BRANCHIOPOD SURVEY**

**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V24	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	105	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,232/ W 121.149,201	Jim Gibson	No
V25	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	151	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,211/ W 121.149,076	Jim Gibson	No
V26	3/28/07	Sunny/ Breezy	9	11	6	5,000	12,794	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,027/ W 121.148,723	Jim Gibson	No
V27	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	389	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,211/ W 121.148,609	Jim Gibson	No
V28	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,309/ W 121.148,191	Jim Gibson	No
V29	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	135	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,424/ W 121.148,231	Jim Gibson	No
V30	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	125	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,016/ W 121.143,684	Jim Gibson	No
V31	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,099/ W 121.143,566	Jim Gibson	No
V32	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	80	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,019/ W 121.143,486	Jim Gibson	No
V33	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	63	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,191/ W 121.145,012	Jim Gibson	No
V34	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	110	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,291/ W 121.144,919	Jim Gibson	No
V35	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	95	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640.156/ W 121.144,895	Jim Gibson	No
V36	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	100	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,078/ W 121.144,686	Jim Gibson	No
V37	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	267	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,175/ W 121.144,540	Jim Gibson	No
V38	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	60	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,433/ W 121.143,433	Jim Gibson	No
V39	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	114	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,744/ W 121.141,023	Jim Gibson	No
V40	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	42	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,187/ W 121.141,023	Jim Gibson	No
V41	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	78	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,113/ W 121.141,058	Jim Gibson	No
V42	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	73	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,025/ W 121.141,001	Jim Gibson	No
V43	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	106	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,948/ W 121.140,966	Jim Gibson	No
V44	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	135	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,901/ W 121.140,996	Jim Gibson	No
V45	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	228	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,041/ W 121.141,097	Jim Gibson	No
V46	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	200	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,954/ W 121.141,077	Jim Gibson	No
V47	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	47	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,819/ W 121.140,994	Jim Gibson	No

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Sacramento County**

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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V48	3/28/07	Sunny/Breezy	14	N/A	0	N/A	34	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,789/ W 121.140,747	Jim Gibson	No
V49	3/28/07	Sunny/Breezy	14	N/A	0	N/A	140	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,758/ W 121.140,862	Jim Gibson	No
V50	3/28/07	Sunny/Breezy	13	16	3	25	169	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,696/ W 121.140,848	Jim Gibson	No
V51	3/28/07	Sunny/Breezy	14	N/A	0	N/A	228	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,359/ W 121.136,387	Jim Gibson	No
V52	3/28/07	Sunny/Breezy	14	N/A	0	N/A	112	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,129/ W 121.134,332	Jim Gibson	No
V53	3/28/07	Sunny/Breezy	14	N/A	0	N/A	223	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,297/ W 121.133,725	Jim Gibson	No
V54	3/28/07	Sunny/Breezy	14	N/A	0	N/A	97	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,387/ W 121.133,153	Jim Gibson	No
V55	3/28/07	Sunny/Breezy	14	N/A	0	N/A	284	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,617/ W 121.130,389	Jim Gibson	No
V56	3/28/07	Sunny/Breezy	14	N/A	0	N/A	216	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,218/ W 121.130,494	Jim Gibson	No
V57	3/28/07	Sunny/Breezy	18	20	4	100	207	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,249/ W 121.128,841	Jim Gibson	No
V58	3/28/07	Sunny/Breezy	14	N/A	0	N/A	279	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,158/ W 121.130,726	Jim Gibson	No
V59	3/28/07	Sunny/Breezy	14	N/A	0	N/A	55	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,189/ W 121.130,666	Jim Gibson	No
V60	3/28/07	Sunny/Breezy	14	N/A	0	N/A	67	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,231/ W 121.130,580	Jim Gibson	No
V61	3/28/07	Sunny/Breezy	14	N/A	0	N/A	17	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,224/ W 121.130,536	Jim Gibson	No
V62	3/28/07	Sunny/Breezy	14	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,197/ W 121.130,459	Jim Gibson	No
V63	3/28/07	Sunny/Breezy	14	N/A	0	N/A	101	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,166/ W 121.136,238	Jim Gibson	No
V64	3/28/07	Sunny/Breezy	14	N/A	0	N/A	223	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,115/ W 121.130,233	Jim Gibson	No
V65	3/28/07	Sunny/Breezy	14	N/A	0	N/A	453	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,157/ W 121.130,361	Jim Gibson	No
V66	3/28/07	Sunny/Breezy	14	N/A	0	N/A	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,195/ W 121.130,620	Jim Gibson	No
V67	3/28/07	Sunny/Breezy	14	N/A	0	N/A	367	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,575/ W 121.126,738	Jim Gibson	No
V68	3/28/07	Sunny/Breezy	14	N/A	0	N/A	2,790	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,097/ W 121.125,894	Jim Gibson	No
V69	3/28/07	Sunny/Breezy	14	N/A	0	N/A	3,983	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,718/ W 121.125,575	Jim Gibson	No
V70	3/28/07	Sunny/Breezy	14	N/A	0	N/A	317	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,369/ W 121.124,252	Jim Gibson	No
V71	3/28/07	Sunny/Breezy	14	N/A	0	N/A	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,363/ W 121.123,978	Jim Gibson	No

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V72	3/28/07	Sunny/Breezy	14	N/A	0	N/A	386	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,982/ W 121.126,253	Jim Gibson	No
V73	3/28/07	Sunny/Breezy	14	N/A	0	N/A	458	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,638/ W 121.126,190	Jim Gibson	No
V74	3/28/07	Sunny/Breezy	14	N/A	0	N/A	317	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,479/ W 121.125,902	Jim Gibson	No
V75	3/28/07	Sunny/Breezy	14	N/A	0	N/A	140	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,375/ W 121.125,628	Jim Gibson	No
V76	3/28/07	Sunny/Breezy	14	N/A	0	N/A	126	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,320/ W 121.125,537	Jim Gibson	No
V77	3/28/07	Sunny/Breezy	14	N/A	0	N/A	165	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,131/ W 121.125,135	Jim Gibson	No
V78	3/28/07	Sunny/Breezy	14	N/A	0	N/A	104	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,866/ W 121.124,927	Jim Gibson	No
V79	3/28/07	Sunny/Breezy	14	N/A	0	N/A	122	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,471/ W 121.125,369	Jim Gibson	No
V80	3/28/07	Sunny/Breezy	14	N/A	0	N/A	42	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,343/ W 121.125,162	Jim Gibson	No
V81	3/28/07	Sunny/Breezy	14	N/A	0	N/A	163	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,232/ W 121.124,216	Jim Gibson	No
V82	3/28/07	Sunny/Breezy	14	N/A	0	N/A	48	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,195/ W 121.126,036	Jim Gibson	No
V83	3/28/07	Sunny/Breezy	14	N/A	0	N/A	201	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,624/ W 121.122,236	Jim Gibson	No
V84	3/28/07	Sunny/Breezy	14	N/A	0	N/A	182	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,177/ W 121.122,553	Jim Gibson	No
V85	3/28/07	Sunny/Breezy	14	N/A	0	N/A	190	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,113/ W 121.121,226	Jim Gibson	No
V86	3/28/07	Sunny/Breezy	14	N/A	0	N/A	73	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,385/ W 121.120,128	Jim Gibson	No
V87	3/28/07	Sunny/Breezy	14	N/A	0	N/A	21	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,269/ W 121.121,934	Jim Gibson	No
V88	3/28/07	Sunny/Breezy	14	N/A	0	N/A	70	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,134/ W 121.120,118	Jim Gibson	No
V89	3/28/07	Sunny/Breezy	14	N/A	0	N/A	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,010/ W 121.119,775	Jim Gibson	No
V90	3/28/07	Sunny/Breezy	14	N/A	0	N/A	229	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,095/ W 121.116,589	Jim Gibson	No
V91	3/28/07	Sunny/Breezy	14	N/A	0	N/A	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,997/ W 121.112,988	Jim Gibson	No
V92	3/28/07	Sunny/Breezy	14	N/A	0	N/A	170	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,490/ W 121.112,464	Jim Gibson	No
V93	3/28/07	Sunny/Breezy	14	N/A	0	N/A	178	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,324/ W 121.112,342	Jim Gibson	No
V94	3/28/07	Sunny/Breezy	14	N/A	0	N/A	50	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,066/ W 121.111,799	Jim Gibson	No
V95	3/28/07	Sunny/Breezy	14	N/A	0	N/A	192	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,989/ W 121.111,704	Jim Gibson	No

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V96	3/28/07	Sunny/Breezy	14	N/A	0	N/A	34	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,081/ W 121.111,673	Jim Gibson	No
V97	3/28/07	Sunny/Breezy	14	N/A	0	N/A	14	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,079/ W 121.111,376	Jim Gibson	No
V98	3/28/07	Sunny/Breezy	14	N/A	0	N/A	93	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,150/ W 121.111,448	Jim Gibson	No
V99	3/28/07	Sunny/Breezy	14	N/A	0	N/A	29	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,138/ W 121.111,263	Jim Gibson	No
V100	3/28/07	Sunny/Breezy	14	N/A	0	N/A	390	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,227/ W 121.111,149	Jim Gibson	No
V101	3/28/07	Sunny/Breezy	14	N/A	0	N/A	106	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,321/ W 121.110,991	Jim Gibson	No
V102	3/28/07	Sunny/Breezy	14	N/A	0	N/A	1,396	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,085/ W 121.109,415	Jim Gibson	No
V103	3/28/07	Sunny/Breezy	14	N/A	0	N/A	411	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,680/ W 121.190,333	Jim Gibson	No
V104	3/28/07	Sunny/Breezy	14	N/A	0	N/A	87	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,797/ W 121.108,328	Jim Gibson	No
V105	3/28/07	Sunny/Breezy	14	N/A	0	N/A	263	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,789/ W 121.108,390	Jim Gibson	No
V106	3/28/07	Sunny/Breezy	14	N/A	0	N/A	56	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,725/ W 121.108,403	Jim Gibson	No
V107	3/28/07	Sunny/Breezy	14	N/A	0	N/A	216	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,746/ W 121.107,826	Jim Gibson	No
V108	3/28/07	Sunny/Breezy	14	N/A	0	N/A	106	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,871/ W 121.107,693	Jim Gibson	No
V109	3/28/07	Sunny/Breezy	14	N/A	0	N/A	781	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,818/ W 121.107,530	Jim Gibson	No
V110	3/28/07	Sunny/Breezy	14	N/A	0	N/A	266	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,975/ W 121.107,414	Jim Gibson	No
V111	3/28/07	Sunny/Breezy	14	N/A	0	N/A	13	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,375/ W 121.107,478	Jim Gibson	No
V112	3/28/07	Sunny/Breezy	14	N/A	0	N/A	68	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,451/ W 121.107,435	Jim Gibson	No
V113	3/28/07	Sunny/Breezy	14	N/A	0	N/A	33	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,532/ W 121.107,448	Jim Gibson	No
V114	3/28/07	Sunny/Breezy	17	19	9	200	386	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,492/ W 121.107,241	Jim Gibson	No
V115	3/28/07	Sunny/Breezy	17	17	12	75	158	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,530/ W 121.107,142	Jim Gibson	No
V116	3/28/07	Sunny/Breezy	17	20	2	40	221	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,418/ W 121.107,200	Jim Gibson	No
V117	3/28/07	Sunny/Breezy	14	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,387/ W 121.107,156	Jim Gibson	No
V118	3/28/07	Sunny/Breezy	14	N/A	0	N/A	90	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,244/ W 121.107,111	Jim Gibson	No
V119	3/28/07	Sunny/Breezy	14	N/A	0	N/A	77	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,171/ W 121.107,024	Jim Gibson	No

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**2006-7 WET-SEASON LISTED BRANCHIOPOD SURVEY**

**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V120	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	121	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,163/ W 121.106,906	Jim Gibson	No
V121	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	185	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,708/ W 121.105,461	Jim Gibson	No
V122	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	79	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,914/ W 121.103,812	Jim Gibson	No
V123	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	1,083	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,029/ W 121.103,409	Jim Gibson	No
V124	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	49	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,511/ W 121.143,333	Jim Gibson	No
V125	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	627	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,632/ W 121.140,697	Jim Gibson	No
V126	3/28/07	Sunny/ Breezy	13	11	4	593	593	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,299/ W 121.140,255	Jim Gibson	No
V127	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	28	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,212/ W 121.148,631	Jim Gibson	No
V128	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	19	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,050/ W 121.147,861	Jim Gibson	No
V129	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	63	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,229/ W 121.141,698	Jim Gibson	No
V130	3/28/07	Sunny/ Breezy	14	15	3	200	438	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,082/ W 121.141,984	Jim Gibson	No
V131	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	159	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,192/ W 121.141,803	Jim Gibson	No
V132	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	102	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,142/ W 121.141,815	Jim Gibson	No
V133	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	208	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,191/ W 121.149,359	Jim Gibson	No
V134	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,135/ W 121.149,385	Jim Gibson	No
V135	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	49	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,498/ W 121.130,283	Jim Gibson	No
V136	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	46	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,745/ W 121.124,120	Jim Gibson	No
V137	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	90	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,064/ W 121.111,989	Jim Gibson	No
V138	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,224/ W 121.103,399	Jim Gibson	No
V139	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,702/ W 121.107,367	Jim Gibson	No
WS1	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	56,720	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,281/ W 121.145,209	Jim Gibson	No
WS2	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	685	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,854/ W 121.150,169	Jim Gibson	No
WS3	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	5,168	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,602/ W 121.150,234	Jim Gibson	No
WS4	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	580	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.629,117/ W 121.149,265	Jim Gibson	No

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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
WS5	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	434	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,181/ W 121.147,132	Jim Gibson	No
WS6	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	3,258	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,258/ W 121.143,895	Jim Gibson	No
WS7	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	710	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,207/ W 121.143,309	Jim Gibson	No
WS8	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	3,520	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,398/ W 121.144,535	Jim Gibson	No
WS9	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	74	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,269/ W 121.144,546	Jim Gibson	No
WS10	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	1,139	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,647/ W 121.143,854	Jim Gibson	No
WS11	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	1,265	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,495/ W 121.142,243	Jim Gibson	No
WS12	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	891	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,956/ W 121.142,008	Jim Gibson	No
WS13	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	246	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,402/ W 121.141,164	Jim Gibson	No
WS14	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	440	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,712/ W 121.140,424	Jim Gibson	No
WS15	3/28/07	Sunny/ Breezy	13	11	13	2,122	2,122	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,465/ W 121.140,384	Jim Gibson	No
WS16	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	687	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	38.640,149/ W 121.137,922	Jim Gibson	No
WS17	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	906	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,403/ W 121.137,678	Jim Gibson	No
WS18	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	206	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,570/ W 121.136,903	Jim Gibson	No
WS19	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	258	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,111/ W 121.136,231	Jim Gibson	No
WS20	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	2,914	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,790/ W 121.131,670	Jim Gibson	No
WS21	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	147	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,692/ W 121.131,050	Jim Gibson	No
WS22	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	50,855	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,305/ W 121.130,886	Jim Gibson	No
WS23	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	840	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,672/ W 121.130,561	Jim Gibson	No
WS24	3/28/07	Sunny/ Breezy	18	20	9	8,000	32,380	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,356/ W 121.128,646	Jim Gibson	No
WS25	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	4,310	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,768/ W 121.125,839	Jim Gibson	No
WS26	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	1,793	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,157/ W 121.126,772	Jim Gibson	No
WS27	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	9,434	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,450/ W 121.127,846	Jim Gibson	No
WS28	3/28/07	Sunny/ Breezy	14	N/A	0	N/A	243	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,916/ W 121.124,907	Jim Gibson	No

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WS29	3/28/07	Sunny/Breezy	14	N/A	0	N/A	624	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,246/ W 121.121,939	Jim Gibson	No
WS30	3/28/07	Sunny/Breezy	14	N/A	0	N/A	109,636	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,894/ W 121.117,339	Jim Gibson	No
WS31	3/28/07	Sunny/Breezy	14	N/A	0	N/A	3,336	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,577/ W 121.124,827	Jim Gibson	No
WS32	3/28/07	Sunny/Breezy	15	18	6	8,000	17,886	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,701/ W 121.119,339	Jim Gibson	No
WS33	3/28/07	Sunny/Breezy	14	N/A	0	N/A	1,626	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,996/ W 121.118,711	Jim Gibson	No
WS34	3/28/07	Sunny/Breezy	14	N/A	0	N/A	1,267	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,612/ W 121.117,705	Jim Gibson	No
WS35	3/28/07	Sunny/Breezy	14	N/A	0	N/A	740	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,842/ W 121.124,438	Jim Gibson	No
WS36	3/28/07	Sunny/Breezy	17	20	2	1,112	1,112	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,048/ W 121.117,778	Jim Gibson	No
WS37	3/28/07	Sunny/Breezy	14	N/A	0	N/A	1,055	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,363/ W 121.117,492	Jim Gibson	No
WS38	3/28/07	Sunny/Breezy	14	N/A	0	N/A	8,026	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,309/ W 121.114,599	Jim Gibson	No
WS39	3/28/07	Sunny/Breezy	14	N/A	0	N/A	21,599	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,722/ W 121.109,500	Jim Gibson	No
WS40	3/28/07	Sunny/Breezy	14	N/A	0	N/A	755	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,237/ W 121.108,976	Jim Gibson	No
WS41	3/28/07	Sunny/Breezy	14	N/A	0	N/A	724	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,862/ W 121.108,886	Jim Gibson	No
WS42	3/28/07	Sunny/Breezy	14	N/A	0	N/A	15,637	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,463/ W 121.110,623	Jim Gibson	No
WS43	3/28/07	Sunny/Breezy	14	N/A	0	N/A	1,290	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,887/ W 121.111,387	Jim Gibson	No
WS44	3/28/07	Sunny/Breezy	14	N/A	0	N/A	1,896	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,773/ W 121.105,162	Jim Gibson	No
WS45	3/28/07	Sunny/Breezy	14	N/A	0	N/A	4,404	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,469/ W 121.109,077	Jim Gibson	No
WS46	3/28/07	Sunny/Breezy	14	N/A	0	N/A	3,118	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,674/ W 121.106,319	Jim Gibson	No
WS47	3/28/07	Sunny/Breezy	14	N/A	0	N/A	144	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,902/ W 121.106,163	Jim Gibson	No
WS48	3/28/07	Sunny/Breezy	14	N/A	0	N/A	4,719	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,091/ W 121.104,113	Jim Gibson	No
WS49	3/28/07	Sunny/Breezy	14	N/A	0	N/A	294	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,157/ W 121.113,577	Jim Gibson	No
WS50	3/28/07	Sunny/Breezy	14	N/A	0	N/A	173	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,264/ W 121.116,688	Jim Gibson	No
WS51	3/28/07	Sunny/Breezy	14	N/A	0	N/A	687	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,011/ W 121.108,181	Jim Gibson	No
WS52	3/28/07	Sunny/Breezy	14	N/A	0	N/A	1,351	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,196/ W 121.106,955	Jim Gibson	No

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V20	4/11/07	Rain	11	N/A	0	N/A	735	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,995/ W 121.149,398	Jim Gibson	No
V21	4/11/07	Rain	11	N/A	0	N/A	511	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,900/ W 121.150,149	Jim Gibson	No
V22	4/11/07	Rain	11	N/A	0	N/A	45	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,134/ W 121.149,845	Jim Gibson	No
V23	4/11/07	Rain	11	N/A	0	N/A	444	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,269/ W 121.149,264	Jim Gibson	No
V24	4/11/07	Rain	11	N/A	0	N/A	105	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,232/ W 121.149,201	Jim Gibson	No
V25	4/11/07	Rain	11	N/A	0	N/A	151	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,211/ W 121.149,076	Jim Gibson	No
V26	4/11/07	Rain	11	N/A	0	N/A	12,794	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,027/ W 121.148,723	Jim Gibson	No
V27	4/11/07	Rain	11	N/A	0	N/A	389	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,211/ W 121.148,609	Jim Gibson	No
V28	4/11/07	Rain	11	N/A	0	N/A	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,309/ W 121.148,191	Jim Gibson	No
V29	4/11/07	Rain	11	N/A	0	N/A	135	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,424/ W 121.148,231	Jim Gibson	No
V30	4/11/07	Rain	11	N/A	0	N/A	125	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,016/ W 121.143,684	Jim Gibson	No
V31	4/11/07	Rain	11	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,099/ W 121.143,566	Jim Gibson	No
V32	4/11/07	Rain	11	N/A	0	N/A	80	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,019/ W 121.143,486	Jim Gibson	No
V33	4/11/07	Rain	11	N/A	0	N/A	63	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,191/ W 121.145,012	Jim Gibson	No
V34	4/11/07	Rain	11	N/A	0	N/A	110	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,291/ W 121.144,919	Jim Gibson	No
V35	4/11/07	Rain	11	N/A	0	N/A	95	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,156/ W 121.144,895	Jim Gibson	No
V36	4/11/07	Rain	11	N/A	0	N/A	100	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,078/ W 121.144,686	Jim Gibson	No
V37	4/11/07	Rain	11	N/A	0	N/A	267	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,175/ W 121.144,540	Jim Gibson	No
V38	4/11/07	Rain	11	N/A	0	N/A	60	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,433/ W 121.143,433	Jim Gibson	No
V39	4/11/07	Rain	11	N/A	0	N/A	114	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,744/ W 121.141,023	Jim Gibson	No
V40	4/11/07	Rain	11	N/A	0	N/A	42	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,187/ W 121.141,023	Jim Gibson	No
V41	4/11/07	Rain	11	N/A	0	N/A	78	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,113/ W 121.141,058	Jim Gibson	No
V42	4/11/07	Rain	11	N/A	0	N/A	73	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,025/ W 121.141,001	Jim Gibson	No
V43	4/11/07	Rain	11	N/A	0	N/A	106	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,948/ W 121.140,966	Jim Gibson	No

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**2006-7 WET-SEASON LISTED BRANCHIOPOD SURVEY**

**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V44	4/11/07	Rain	11	N/A	0	N/A	135	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,901/ W 121.140,996	Jim Gibson	No
V45	4/11/07	Rain	11	N/A	0	N/A	228	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,041/ W 121.141,097	Jim Gibson	No
V46	4/11/07	Rain	11	N/A	0	N/A	200	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,954/ W 121.141,077	Jim Gibson	No
V47	4/11/07	Rain	11	N/A	0	N/A	47	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,819/ W 121.140,994	Jim Gibson	No
V48	4/11/07	Rain	11	N/A	0	N/A	34	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,789/ W 121.140,747	Jim Gibson	No
V49	4/11/07	Rain	11	N/A	0	N/A	140	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,758/ W 121.140,862	Jim Gibson	No
V50	4/11/07	Rain	11	N/A	0	N/A	169	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,696/ W 121.140,848	Jim Gibson	No
V51	4/11/07	Rain	11	N/A	0	N/A	228	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,359/ W 121.136,387	Jim Gibson	No
V52	4/11/07	Rain	11	N/A	0	N/A	112	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,129/ W 121.134,332	Jim Gibson	No
V53	4/11/07	Rain	11	N/A	0	N/A	223	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,297/ W 121.133,725	Jim Gibson	No
V54	4/11/07	Rain	11	N/A	0	N/A	97	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,387/ W 121.133,153	Jim Gibson	No
V55	4/11/07	Rain	11	N/A	0	N/A	284	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,617/ W 121.130,389	Jim Gibson	No
V56	4/11/07	Rain	11	N/A	0	N/A	216	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,218/ W 121.130,494	Jim Gibson	No
V57	4/11/07	Rain	11	N/A	0	N/A	207	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,249/ W 121.128,841	Jim Gibson	No
V58	4/11/07	Rain	11	N/A	0	N/A	279	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,158/ W 121.130,726	Jim Gibson	No
V59	4/11/07	Rain	11	N/A	0	N/A	55	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,189/ W 121.130,666	Jim Gibson	No
V60	4/11/07	Rain	11	N/A	0	N/A	67	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,231/ W 121.130,580	Jim Gibson	No
V61	4/11/07	Rain	11	N/A	0	N/A	17	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,224/ W 121.130,536	Jim Gibson	No
V62	4/11/07	Rain	11	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,197/ W 121.130,459	Jim Gibson	No
V63	4/11/07	Rain	11	N/A	0	N/A	101	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,166/ W 121.136,238	Jim Gibson	No
V64	4/11/07	Rain	11	N/A	0	N/A	223	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,115/ W 121.130,233	Jim Gibson	No
V65	4/11/07	Rain	11	N/A	0	N/A	453	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,157/ W 121.130,361	Jim Gibson	No
V66	4/11/07	Rain	11	N/A	0	N/A	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,195/ W 121.130,620	Jim Gibson	No
V67	4/11/07	Rain	11	N/A	0	N/A	367	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,575/ W 121.126,738	Jim Gibson	No

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Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V68	4/11/07	Rain	11	N/A	0	N/A	2,790	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,097/ W 121.125,894	Jim Gibson	No
V69	4/11/07	Rain	11	N/A	0	N/A	3,983	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,718/ W 121.125,575	Jim Gibson	No
V70	4/11/07	Rain	11	N/A	0	N/A	317	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,369/ W 121.124,252	Jim Gibson	No
V71	4/11/07	Rain	11	N/A	0	N/A	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,363/ W 121.123,978	Jim Gibson	No
V72	4/11/07	Rain	11	N/A	0	N/A	386	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,982/ W 121.126,253	Jim Gibson	No
V73	4/11/07	Rain	11	N/A	0	N/A	458	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,638/ W 121.126,190	Jim Gibson	No
V74	4/11/07	Rain	11	N/A	0	N/A	317	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,479/ W 121.125,902	Jim Gibson	No
V75	4/11/07	Rain	11	N/A	0	N/A	140	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,375/ W 121.125,628	Jim Gibson	No
V76	4/11/07	Rain	11	N/A	0	N/A	126	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,320/ W 121.125,537	Jim Gibson	No
V77	4/11/07	Rain	11	N/A	0	N/A	165	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,131/ W 121.125,135	Jim Gibson	No
V78	4/11/07	Rain	11	N/A	0	N/A	104	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,866/ W 121.124,927	Jim Gibson	No
V79	4/11/07	Rain	11	N/A	0	N/A	122	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,471/ W 121.125,369	Jim Gibson	No
V80	4/11/07	Rain	11	N/A	0	N/A	42	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,343/ W 121.125,162	Jim Gibson	No
V81	4/11/07	Rain	11	N/A	0	N/A	163	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,232/ W 121.124,216	Jim Gibson	No
V82	4/11/07	Rain	11	N/A	0	N/A	48	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,195/ W 121.126,036	Jim Gibson	No
V83	4/11/07	Rain	11	N/A	0	N/A	201	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,624/ W 121.122,236	Jim Gibson	No
V84	4/11/07	Rain	11	N/A	0	N/A	182	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,177/ W 121.122,553	Jim Gibson	No
V85	4/11/07	Rain	11	N/A	0	N/A	190	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,113/ W 121.121,226	Jim Gibson	No
V86	4/11/07	Rain	11	N/A	0	N/A	73	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,385/ W 121.120,128	Jim Gibson	No
V87	4/11/07	Rain	11	N/A	0	N/A	21	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,269/ W 121.121,934	Jim Gibson	No
V88	4/11/07	Rain	11	N/A	0	N/A	70	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,134/ W 121.120,118	Jim Gibson	No
V89	4/11/07	Rain	11	N/A	0	N/A	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,010/ W 121.119,775	Jim Gibson	No
V90	4/11/07	Rain	11	N/A	0	N/A	229	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,095/ W 121.116,589	Jim Gibson	No
V91	4/11/07	Rain	11	N/A	0	N/A	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,997/ W 121.112,988	Jim Gibson	No

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Carpenter Ranch  
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Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V92	4/11/07	Rain	11	N/A	0	N/A	170	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,490/ W 121.112,464	Jim Gibson	No
V93	4/11/07	Rain	11	N/A	0	N/A	178	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,324/ W 121.112,342	Jim Gibson	No
V94	4/11/07	Rain	11	N/A	0	N/A	50	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,066/ W 121.111,799	Jim Gibson	No
V95	4/11/07	Rain	11	N/A	0	N/A	192	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,989/ W 121.111,704	Jim Gibson	No
V96	4/11/07	Rain	11	N/A	0	N/A	34	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,081/ W 121.111,673	Jim Gibson	No
V97	4/11/07	Rain	11	N/A	0	N/A	14	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,079/ W 121.111,376	Jim Gibson	No
V98	4/11/07	Rain	11	N/A	0	N/A	93	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,150/ W 121.111,448	Jim Gibson	No
V99	4/11/07	Rain	11	N/A	0	N/A	29	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,138/ W 121.111,263	Jim Gibson	No
V100	4/11/07	Rain	11	N/A	0	N/A	390	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,227/ W 121.111,149	Jim Gibson	No
V101	4/11/07	Rain	11	N/A	0	N/A	106	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,321/ W 121.110,991	Jim Gibson	No
V102	4/11/07	Rain	11	N/A	0	N/A	1,396	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,085/ W 121.109,415	Jim Gibson	No
V103	4/11/07	Rain	11	N/A	0	N/A	411	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,680/ W 121.190,333	Jim Gibson	No
V104	4/11/07	Rain	11	N/A	0	N/A	87	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,797/ W 121.108,328	Jim Gibson	No
V105	4/11/07	Rain	11	N/A	0	N/A	263	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,789/ W 121.108,390	Jim Gibson	No
V106	4/11/07	Rain	11	N/A	0	N/A	56	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,725/ W 121.108,403	Jim Gibson	No
V107	4/11/07	Rain	11	N/A	0	N/A	216	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,746/ W 121.107,826	Jim Gibson	No
V108	4/11/07	Rain	11	N/A	0	N/A	106	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,871/ W 121.107,693	Jim Gibson	No
V109	4/11/07	Rain	11	N/A	0	N/A	781	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,818/ W 121.107,530	Jim Gibson	No
V110	4/11/07	Rain	11	N/A	0	N/A	266	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,975/ W 121.107,414	Jim Gibson	No
V111	4/11/07	Rain	11	N/A	0	N/A	13	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,375/ W 121.107,478	Jim Gibson	No
V112	4/11/07	Rain	11	N/A	0	N/A	68	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,451/ W 121.107,435	Jim Gibson	No
V113	4/11/07	Rain	11	N/A	0	N/A	33	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,532/ W 121.107,448	Jim Gibson	No
V114	4/11/07	Rain	11	N/A	0	N/A	386	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,492/ W 121.107,241	Jim Gibson	No
V115	4/11/07	Rain	11	N/A	0	N/A	158	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,530/ W 121.107,142	Jim Gibson	No

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V116	4/11/07	Rain	11	N/A	0	N/A	221	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,418/ W 121.107,200	Jim Gibson	No
V117	4/11/07	Rain	11	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,387/ W 121.107,156	Jim Gibson	No
V118	4/11/07	Rain	11	N/A	0	N/A	90	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,244/ W 121.107,111	Jim Gibson	No
V119	4/11/07	Rain	11	N/A	0	N/A	77	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,171/ W 121.107,024	Jim Gibson	No
V120	4/11/07	Rain	11	N/A	0	N/A	121	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,163/ W 121.106,906	Jim Gibson	No
V121	4/11/07	Rain	11	N/A	0	N/A	185	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,708/ W 121.105,461	Jim Gibson	No
V122	4/11/07	Rain	11	N/A	0	N/A	79	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,914/ W 121.103,812	Jim Gibson	No
V123	4/11/07	Rain	11	N/A	0	N/A	1,083	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,029/ W 121.103,409	Jim Gibson	No
V124	4/11/07	Rain	11	N/A	0	N/A	49	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,511/ W 121.143,333	Jim Gibson	No
V125	4/11/07	Rain	11	N/A	0	N/A	627	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,632/ W 121.140,697	Jim Gibson	No
V126	4/11/07	Rain	11	N/A	0	N/A	593	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,299/ W 121.140,255	Jim Gibson	No
V127	4/11/07	Rain	11	N/A	0	N/A	28	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,212/ W 121.148,631	Jim Gibson	No
V128	4/11/07	Rain	11	N/A	0	N/A	19	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,050/ W 121.147,861	Jim Gibson	No
V129	4/11/07	Rain	11	N/A	0	N/A	63	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,229/ W 121.141,698	Jim Gibson	No
V130	4/11/07	Rain	11	N/A	0	N/A	438	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,082/ W 121.141,984	Jim Gibson	No
V131	4/11/07	Rain	11	N/A	0	N/A	159	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,192/ W 121.141,803	Jim Gibson	No
V132	4/11/07	Rain	11	N/A	0	N/A	102	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,142/ W 121.141,815	Jim Gibson	No
V133	4/11/07	Rain	11	N/A	0	N/A	208	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,191/ W 121.149,359	Jim Gibson	No
V134	4/11/07	Rain	11	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,135/ W 121.149,385	Jim Gibson	No
V135	4/11/07	Rain	11	N/A	0	N/A	49	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,498/ W 121.130,283	Jim Gibson	No
V136	4/11/07	Rain	11	N/A	0	N/A	46	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,745/ W 121.124,120	Jim Gibson	No
V137	4/11/07	Rain	11	N/A	0	N/A	90	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,064/ W 121.111,989	Jim Gibson	No
V138	4/11/07	Rain	11	N/A	0	N/A	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,224/ W 121.103,399	Jim Gibson	No
V139	4/11/07	Rain	11	N/A	0	N/A	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,702/ W 121.107,367	Jim Gibson	No

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**2006-7 WET-SEASON LISTED BRANCHIOPOD SURVEY**

**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
WS1	4/11/07	Rain	11	N/A	0	N/A	56,720	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,281/ W 121.145,209	Jim Gibson	No
WS2	4/11/07	Rain	11	N/A	0	N/A	685	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,854/ W 121.150,169	Jim Gibson	No
WS3	4/11/07	Rain	11	N/A	0	N/A	5,168	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,602/ W 121.150,234	Jim Gibson	No
WS4	4/11/07	Rain	11	N/A	0	N/A	580	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.629,117/ W 121.149,265	Jim Gibson	No
WS5	4/11/07	Rain	11	N/A	0	N/A	434	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,181/ W 121.147,132	Jim Gibson	No
WS6	4/11/07	Rain	11	N/A	0	N/A	3,258	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,258/ W 121.143,895	Jim Gibson	No
WS7	4/11/07	Rain	11	N/A	0	N/A	710	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,207/ W 121.143,309	Jim Gibson	No
WS8	4/11/07	Rain	11	N/A	0	N/A	3,520	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,398/ W 121.144,535	Jim Gibson	No
WS9	4/11/07	Rain	11	N/A	0	N/A	74	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,269/ W 121.144,546	Jim Gibson	No
WS10	4/11/07	Rain	11	N/A	0	N/A	1,139	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,647/ W 121.143,854	Jim Gibson	No
WS11	4/11/07	Rain	11	N/A	0	N/A	1,265	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,495/ W 121.142,243	Jim Gibson	No
WS12	4/11/07	Rain	11	N/A	0	N/A	891	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,956/ W 121.142,008	Jim Gibson	No
WS13	4/11/07	Rain	11	N/A	0	N/A	246	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,402/ W 121.141,164	Jim Gibson	No
WS14	4/11/07	Rain	11	N/A	0	N/A	440	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,712/ W 121.140,424	Jim Gibson	No
WS15	4/11/07	Rain	11	N/A	0	N/A	2,122	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,465/ W 121.140,384	Jim Gibson	No
WS16	4/11/07	Rain	11	N/A	0	N/A	687	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	38.640,149/ W 121.137,922	Jim Gibson	No
WS17	4/11/07	Rain	11	N/A	0	N/A	906	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,403/ W 121.137,678	Jim Gibson	No
WS18	4/11/07	Rain	11	N/A	0	N/A	206	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,570/ W 121.136,903	Jim Gibson	No
WS19	4/11/07	Rain	11	N/A	0	N/A	258	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,111/ W 121.136,231	Jim Gibson	No
WS20	4/11/07	Rain	11	N/A	0	N/A	2,914	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,790/ W 121.131,670	Jim Gibson	No
WS21	4/11/07	Rain	11	N/A	0	N/A	147	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,692/ W 121.131,050	Jim Gibson	No
WS22	4/11/07	Rain	11	N/A	0	N/A	50,855	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,305/ W 121.130,886	Jim Gibson	No
WS23	4/11/07	Rain	11	N/A	0	N/A	840	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,672/ W 121.130,561	Jim Gibson	No
WS24	4/11/07	Rain	11	13	4	10,000	32,380	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,356/ W 121.128,646	Jim Gibson	No

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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
WS25	4/11/07	Rain	11	N/A	0	N/A	4,310	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,768/ W 121.125,839	Jim Gibson	No
WS26	4/11/07	Rain	11	N/A	0	N/A	1,793	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,157/ W 121.126,772	Jim Gibson	No
WS27	4/11/07	Rain	11	N/A	0	N/A	9,434	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,450/ W 121.127,846	Jim Gibson	No
WS28	4/11/07	Rain	11	N/A	0	N/A	243	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,916/ W 121.124,907	Jim Gibson	No
WS29	4/11/07	Rain	11	N/A	0	N/A	624	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,246/ W 121.121,939	Jim Gibson	No
WS30	4/11/07	Rain	11	N/A	0	N/A	109,636	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,894/ W 121.117,339	Jim Gibson	No
WS31	4/11/07	Rain	11	N/A	0	N/A	3,336	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,577/ W 121.124,827	Jim Gibson	No
WS32	4/11/07	Rain	11	N/A	0	N/A	17,886	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,701/ W 121.119,339	Jim Gibson	No
WS33	4/11/07	Rain	11	N/A	0	N/A	1,626	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,996/ W 121.118,711	Jim Gibson	No
WS34	4/11/07	Rain	11	N/A	0	N/A	1,267	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,612/ W 121.117,705	Jim Gibson	No
WS35	4/11/07	Rain	11	N/A	0	N/A	740	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,842/ W 121.124,438	Jim Gibson	No
WS36	4/11/07	Rain	11	N/A	0	N/A	1,112	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,048/ W 121.117,778	Jim Gibson	No
WS37	4/11/07	Rain	11	N/A	0	N/A	1,055	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,363/ W 121.117,492	Jim Gibson	No
WS38	4/11/07	Rain	11	N/A	0	N/A	8,026	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,309/ W 121.114,599	Jim Gibson	No
WS39	4/11/07	Rain	11	N/A	0	N/A	21,599	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,722, W 121.109,500	Jim Gibson	No
WS40	4/11/07	Rain	11	N/A	0	N/A	755	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,237/ W 121.108,976	Jim Gibson	No
WS41	4/11/07	Rain	11	N/A	0	N/A	724	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,862/ W 121.108,886	Jim Gibson	No
WS42	4/11/07	Rain	11	N/A	0	N/A	15,637	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,463/ W 121.110,623	Jim Gibson	No
WS43	4/11/07	Rain	11	N/A	0	N/A	1,290	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,887/ W 121.111,387	Jim Gibson	No
WS44	4/11/07	Rain	11	N/A	0	N/A	1,896	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,773/ W 121.105,162	Jim Gibson	No
WS45	4/11/07	Rain	11	N/A	0	N/A	4,404	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,469/ W 121.109,077	Jim Gibson	No
WS46	4/11/07	Rain	11	N/A	0	N/A	3,118	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,674/ W 121.106,319	Jim Gibson	No
WS47	4/11/07	Rain	11	N/A	0	N/A	144	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,902/ W 121.106,163	Jim Gibson	No
WS48	4/11/07	Rain	11	N/A	0	N/A	4,719	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,091/ W 121.104,113	Jim Gibson	No

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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
WS49	4/11/07	Rain	11	N/A	0	N/A	294	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,157/ W 121.113,577	Jim Gibson	No
WS50	4/11/07	Rain	11	N/A	0	N/A	173	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,264/ W 121.116,688	Jim Gibson	No
WS51	4/11/07	Rain	11	N/A	0	N/A	687	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,011/ W 121.108,181	Jim Gibson	No
WS52	4/11/07	Rain	11	N/A	0	N/A	1,351	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,196/ W 121.106,955	Jim Gibson	No
WS53	4/11/07	Rain	11	N/A	0	N/A	302	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,889/ W 121.105,371	Jim Gibson	No
WS54	4/11/07	Rain	11	N/A	0	N/A	169	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,672/ W 121.105,430	Jim Gibson	No
WS55	4/11/07	Rain	11	N/A	0	N/A	3,066	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.643,315/ W 121.103,643	Jim Gibson	No
WS56	4/11/07	Rain	11	N/A	0	N/A	809	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.643,273/ W 121.102,064	Jim Gibson	No
D1	4/11/07	Rain	11	N/A	0	N/A	39	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,140/ W 121.158,164	Jim Gibson	No
D2	4/11/07	Rain	11	N/A	0	N/A	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,596/ W 121.146,475	Jim Gibson	No
D3	4/11/07	Rain	11	N/A	0	N/A	3,342	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,527/ W 121.143,076	Jim Gibson	No
D4	4/11/07	Rain	11	N/A	0	N/A	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,638/ W 121.142,970	Jim Gibson	No
D5	4/11/07	Rain	11	N/A	0	N/A	1,183	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,180/ W 121.143,480	Jim Gibson	No
D6	4/11/07	Rain	11	N/A	0	N/A	137	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.631,188/ W 121.144,122	Jim Gibson	No
D7	4/11/07	Rain	11	N/A	0	N/A	75	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,461/ W 121.144,913	Jim Gibson	No
D8	4/11/07	Rain	11	N/A	0	N/A	78	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,384/ W 121.100,188	Jim Gibson	No
D9	4/11/07	Rain	11	N/A	0	N/A	141	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,289/ W 121.130,220	Jim Gibson	No
D10	4/11/07	Rain	11	N/A	0	N/A	55	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,729/ W 121.130,626	Jim Gibson	No
D11	4/11/07	Rain	11	N/A	0	N/A	135	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,693/ W 121.143,250	Jim Gibson	No
DD1	4/11/07	Rain	11	N/A	0	N/A	13,653	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,493/ W 121.147,360	Jim Gibson	No
DD2	4/11/07	Rain	11	N/A	0	N/A	775	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,734/ W 121.144,304	Jim Gibson	No
DD3	4/11/07	Rain	11	N/A	0	N/A	40	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,084/ W 121.144,292	Jim Gibson	No
DD4	4/11/07	Rain	11	N/A	0	N/A	864	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,516/ W 121.142,162	Jim Gibson	No
DD5	4/11/07	Rain	11	N/A	0	N/A	3,375	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,226/ W 121.142,937	Jim Gibson	No

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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
DD6	4/11/07	Rain	11	N/A	0	N/A	807	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,168/ W 121.137,312	Jim Gibson	No
DD7	4/11/07	Rain	11	N/A	0	N/A	23,391	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,402/ W 121.126,707	Jim Gibson	No
DD8	4/11/07	Rain	11	N/A	0	N/A	10,885	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,712/ W 121.143,735	Jim Gibson	No
DD9	4/11/07	Rain	11	N/A	0	N/A	450	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.631,620/ W 121.149,816	Jim Gibson	No
DD10	4/11/07	Rain	11	N/A	0	N/A	1,626	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,401/ W 121.108,320	Jim Gibson	No
DD11	4/11/07	Rain	11	N/A	0	N/A	825	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,917/ W 121.105,829	Jim Gibson	No
DD12	4/11/07	Rain	11	N/A	0	N/A	1,233	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,663/ W 121.107,437	Jim Gibson	No
DD13	4/11/07	Rain	11	N/A	0	N/A	3,408	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,535/ W 121.104,505	Jim Gibson	No
DD14	4/11/07	Rain	11	N/A	0	N/A	2,586	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,068/ W 121.102,645	Jim Gibson	No
V1	4/27/07	Clear	18	N/A	0	N/A	109	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.626,979/ W 121.143,513	Jim Gibson	No
V2	4/27/07	Clear	18	N/A	0	N/A	39	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,026/ W 121.142,983	Jim Gibson	No
V3	4/27/07	Clear	18	N/A	0	N/A	25	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,370 W 121.142,839	Jim Gibson	No
V4	4/27/07	Clear	18	N/A	0	N/A	285	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,495/ W 121.142,844	Jim Gibson	No
V5	4/27/07	Clear	18	N/A	0	N/A	338	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,652/ W 121.143,464	Jim Gibson	No
V6	4/27/07	Clear	18	N/A	0	N/A	75	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,722/ W 121.143,127	Jim Gibson	No
V7	4/27/07	Clear	17	15	5	200	554	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.628,128/ W 121.142,577	Jim Gibson	No
V8	4/27/07	Clear	18	N/A	0	N/A	748	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.628,456/ W 121.143,176	Jim Gibson	No
V9	4/27/07	Clear	18	N/A	0	N/A	116	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.628,637/ W 121.149,062	Jim Gibson	No
V10	4/27/07	Clear	18	N/A	0	N/A	622	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,227/ W 121.147,166	Jim Gibson	No
V11	4/27/07	Clear	18	N/A	0	N/A	3,460	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,122/ W 121.150,259	Jim Gibson	No
V12	4/27/07	Clear	18	N/A	0	N/A	48	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,502/ W 121.144,620	Jim Gibson	No
V13	4/27/07	Clear	17	15	5	300	653	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,607/ W 121.144,563	Jim Gibson	No
V14	4/27/07	Clear	18	N/A	0	N/A	812	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,659/ W 121.144,171	Jim Gibson	No
V15	4/27/07	Clear	18	N/A	0	N/A	40	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,576/ W 121.149,429	Jim Gibson	No

Note: Branchinecta lynchi = BRLY; Branchinecta conservatio = BRCO; Branchinecta mesovallensis = BRME; Lepidurus packardi = LEPA; and Linderiella occidentalis = LIOC.

**2006-7 WET-SEASON LISTED BRANCHIOPOD SURVEY**

**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Srvey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V16	4/27/07	Clear	18	N/A	0	N/A	82	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,659/ W 121.149,845	Jim Gibson	No
V17	4/27/07	Clear	18	N/A	0	N/A	102	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,810/ W 121.149,707	Jim Gibson	No
V18	4/27/07	Clear	18	N/A	0	N/A	160	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,855/ W 121.149,778	Jim Gibson	No
V19	4/27/07	Clear	18	N/A	0	N/A	1,060	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,914/ W 121.149,563	Jim Gibson	No
V20	4/27/07	Clear	18	N/A	0	N/A	735	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,995/ W 121.149,398	Jim Gibson	No
V21	4/27/07	Clear	18	N/A	0	N/A	511	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,900/ W 121.150,149	Jim Gibson	No
V22	4/27/07	Clear	18	N/A	0	N/A	45	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,134/ W 121.149,845	Jim Gibson	No
V23	4/27/07	Clear	18	N/A	0	N/A	444	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,269/ W 121.149,264	Jim Gibson	No
V24	4/27/07	Clear	18	N/A	0	N/A	105	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,232/ W 121.149,201	Jim Gibson	No
V25	4/27/07	Clear	18	N/A	0	N/A	151	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,211/ W 121.149,076	Jim Gibson	No
V26	4/27/07	Clear	18	N/A	0	N/A	12,794	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,027/ W 121.148,723	Jim Gibson	No
V27	4/27/07	Clear	18	N/A	0	N/A	389	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,211/ W 121.148,609	Jim Gibson	No
V28	4/27/07	Clear	18	N/A	0	N/A	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,309/ W 121.148,191	Jim Gibson	No
V29	4/27/07	Clear	18	N/A	0	N/A	135	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,424/ W 121.148,231	Jim Gibson	No
V30	4/27/07	Clear	18	N/A	0	N/A	125	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,016/ W 121.143,684	Jim Gibson	No
V31	4/27/07	Clear	18	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,099/ W 121.143,566	Jim Gibson	No
V32	4/27/07	Clear	18	N/A	0	N/A	80	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,019/ W 121.143,486	Jim Gibson	No
V33	4/27/07	Clear	18	N/A	0	N/A	63	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,191/ W 121.145,012	Jim Gibson	No
V34	4/27/07	Clear	18	N/A	0	N/A	110	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,291/ W 121.144,919	Jim Gibson	No
V35	4/27/07	Clear	18	N/A	0	N/A	95	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,156/ W 121.144,895	Jim Gibson	No
V36	4/27/07	Clear	18	N/A	0	N/A	100	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,078/ W 121.144,686	Jim Gibson	No
V37	4/27/07	Clear	18	N/A	0	N/A	267	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,175/ W 121.144,540	Jim Gibson	No
V38	4/27/07	Clear	18	N/A	0	N/A	60	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,433/ W 121.143,433	Jim Gibson	No
V39	4/27/07	Clear	18	N/A	0	N/A	114	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,744/ W 121.141,023	Jim Gibson	No

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**Carpenter Ranch  
Sacramento County**

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Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V40	4/27/07	Clear	18	N/A	0	N/A	42	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,187/ W 121.141,023	Jim Gibson	No
V41	4/27/07	Clear	18	N/A	0	N/A	78	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,113/ W 121.141,058	Jim Gibson	No
V42	4/27/07	Clear	18	N/A	0	N/A	73	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,025/ W 121.141,001	Jim Gibson	No
V43	4/27/07	Clear	18	N/A	0	N/A	106	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,948/ W 121.140,966	Jim Gibson	No
V44	4/27/07	Clear	18	N/A	0	N/A	135	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,901/ W 121.140,996	Jim Gibson	No
V45	4/27/07	Clear	18	N/A	0	N/A	228	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,041/ W 121.141,097	Jim Gibson	No
V46	4/27/07	Clear	18	N/A	0	N/A	200	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,954/ W 121.141,077	Jim Gibson	No
V47	4/27/07	Clear	18	N/A	0	N/A	47	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,819/ W 121.140,994	Jim Gibson	No
V48	4/27/07	Clear	18	N/A	0	N/A	34	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,789/ W 121.140,747	Jim Gibson	No
V49	4/27/07	Clear	18	N/A	0	N/A	140	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,758/ W 121.140,862	Jim Gibson	No
V50	4/27/07	Clear	18	N/A	0	N/A	169	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,696/ W 121.140,848	Jim Gibson	No
V51	4/27/07	Clear	18	N/A	0	N/A	228	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,359/ W 121.136,387	Jim Gibson	No
V52	4/27/07	Clear	18	N/A	0	N/A	112	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,129/ W 121.134,332	Jim Gibson	No
V53	4/27/07	Clear	18	N/A	0	N/A	223	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,297/ W 121.133,725	Jim Gibson	No
V54	4/27/07	Clear	18	N/A	0	N/A	97	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,387/ W 121.133,153	Jim Gibson	No
V55	4/27/07	Clear	18	N/A	0	N/A	284	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,617/ W 121.130,389	Jim Gibson	No
V56	4/27/07	Clear	18	N/A	0	N/A	216	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,218/ W 121.130,494	Jim Gibson	No
V57	4/27/07	Clear	18	N/A	0	N/A	207	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,249/ W 121.128,841	Jim Gibson	No
V58	4/27/07	Clear	18	N/A	0	N/A	279	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,158/ W 121.130,726	Jim Gibson	No
V59	4/27/07	Clear	18	N/A	0	N/A	55	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,189/ W 121.130,666	Jim Gibson	No
V60	4/27/07	Clear	18	N/A	0	N/A	67	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,231/ W 121.130,580	Jim Gibson	No
V61	4/27/07	Clear	18	N/A	0	N/A	17	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,224/ W 121.130,536	Jim Gibson	No
V62	4/27/07	Clear	18	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,197/ W 121.130,459	Jim Gibson	No
V63	4/27/07	Clear	18	N/A	0	N/A	101	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,166/ W 121.136,238	Jim Gibson	No

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**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V64	4/27/07	Clear	18	N/A	0	N/A	223	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,115/ W 121.130,233	Jim Gibson	No
V65	4/27/07	Clear	18	N/A	0	N/A	453	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,157/ W 121.130,361	Jim Gibson	No
V66	4/27/07	Clear	18	N/A	0	N/A	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,195/ W 121.130,620	Jim Gibson	No
V67	4/27/07	Clear	18	N/A	0	N/A	367	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,575/ W 121.126,738	Jim Gibson	No
V68	4/27/07	Clear	18	N/A	0	N/A	2,790	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,097/ W 121.125,894	Jim Gibson	No
V69	4/27/07	Clear	18	N/A	0	N/A	3,983	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,718/ W 121.125,575	Jim Gibson	No
V70	4/27/07	Clear	18	N/A	0	N/A	317	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,369/ W 121.124,252	Jim Gibson	No
V71	4/27/07	Clear	18	N/A	0	N/A	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,363/ W 121.123,978	Jim Gibson	No
V72	4/27/07	Clear	18	N/A	0	N/A	386	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,982/ W 121.126,253	Jim Gibson	No
V73	4/27/07	Clear	18	N/A	0	N/A	458	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,638/ W 121.126,190	Jim Gibson	No
V74	4/27/07	Clear	18	N/A	0	N/A	317	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,479/ W 121.125,902	Jim Gibson	No
V75	4/27/07	Clear	18	N/A	0	N/A	140	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,375/ W 121.125,628	Jim Gibson	No
V76	4/27/07	Clear	18	N/A	0	N/A	126	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,320/ W 121.125,537	Jim Gibson	No
V77	4/27/07	Clear	18	N/A	0	N/A	165	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,131/ W 121.125,135	Jim Gibson	No
V78	4/27/07	Clear	18	N/A	0	N/A	104	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,866/ W 121.124,927	Jim Gibson	No
V79	4/27/07	Clear	18	N/A	0	N/A	122	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,471/ W 121.125,369	Jim Gibson	No
V80	4/27/07	Clear	18	N/A	0	N/A	42	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,343/ W 121.125,162	Jim Gibson	No
V81	4/27/07	Clear	18	N/A	0	N/A	163	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,232/ W 121.124,216	Jim Gibson	No
V82	4/27/07	Clear	18	N/A	0	N/A	48	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,195/ W 121.126,036	Jim Gibson	No
V83	4/27/07	Clear	18	N/A	0	N/A	201	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,624/ W 121.122,236	Jim Gibson	No
V84	4/27/07	Clear	18	N/A	0	N/A	182	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,177/ W 121.122,553	Jim Gibson	No
V85	4/27/07	Clear	18	N/A	0	N/A	190	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,113/ W 121.121,226	Jim Gibson	No
V86	4/27/07	Clear	18	N/A	0	N/A	73	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,385/ W 121.120,128	Jim Gibson	No
V87	4/27/07	Clear	18	N/A	0	N/A	21	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,269/ W 121.121,934	Jim Gibson	No

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Per. #: PRT-795935-3  
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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V88	4/27/07	Clear	18	N/A	0	N/A	70	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,134/ W 121.120,118	Jim Gibson	No
V89	4/27/07	Clear	18	N/A	0	N/A	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,010/ W 121.119,775	Jim Gibson	No
V90	4/27/07	Clear	18	N/A	0	N/A	229	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,095/ W 121.116,589	Jim Gibson	No
V91	4/27/07	Clear	18	N/A	0	N/A	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,997/ W 121.112,988	Jim Gibson	No
V92	4/27/07	Clear	18	N/A	0	N/A	170	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,490/ W 121.112,464	Jim Gibson	No
V93	4/27/07	Clear	18	N/A	0	N/A	178	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,324/ W 121.112,342	Jim Gibson	No
V94	4/27/07	Clear	18	N/A	0	N/A	50	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,066/ W 121.111,799	Jim Gibson	No
V95	4/27/07	Clear	18	N/A	0	N/A	192	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,989/ W 121.111,704	Jim Gibson	No
V96	4/27/07	Clear	18	N/A	0	N/A	34	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,081/ W 121.111,673	Jim Gibson	No
V97	4/27/07	Clear	18	N/A	0	N/A	14	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,079/ W 121.111,376	Jim Gibson	No
V98	4/27/07	Clear	18	N/A	0	N/A	93	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,150/ W 121.111,448	Jim Gibson	No
V99	4/27/07	Clear	18	N/A	0	N/A	29	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,138/ W 121.111,263	Jim Gibson	No
V100	4/27/07	Clear	18	N/A	0	N/A	390	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,227/ W 121.111,149	Jim Gibson	No
V101	4/27/07	Clear	18	N/A	0	N/A	106	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,321/ W 121.110,991	Jim Gibson	No
V102	4/27/07	Clear	18	N/A	0	N/A	1,396	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,085/ W 121.109,415	Jim Gibson	No
V103	4/27/07	Clear	18	N/A	0	N/A	411	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,680/ W 121.190,333	Jim Gibson	No
V104	4/27/07	Clear	18	N/A	0	N/A	87	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,797/ W 121.108,328	Jim Gibson	No
V105	4/27/07	Clear	18	N/A	0	N/A	263	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,789/ W 121.108,390	Jim Gibson	No
V106	4/27/07	Clear	18	N/A	0	N/A	56	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,725/ W 121.108,403	Jim Gibson	No
V107	4/27/07	Clear	18	N/A	0	N/A	216	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,746/ W 121.107,826	Jim Gibson	No
V108	4/27/07	Clear	18	N/A	0	N/A	106	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,871/ W 121.107,693	Jim Gibson	No
V109	4/27/07	Clear	18	N/A	0	N/A	781	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,818/ W 121.107,530	Jim Gibson	No
V110	4/27/07	Clear	18	N/A	0	N/A	266	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,975/ W 121.107,414	Jim Gibson	No
V111	4/27/07	Clear	18	N/A	0	N/A	13	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,375/ W 121.107,478	Jim Gibson	No

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**2006-7 WET-SEASON LISTED BRANCHIOPOD SURVEY**

**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V112	4/27/07	Clear	18	N/A	0	N/A	68	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,451/ W 121.107,435	Jim Gibson	No
V113	4/27/07	Clear	18	N/A	0	N/A	33	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,532/ W 121.107,448	Jim Gibson	No
V114	4/27/07	Clear	18	N/A	0	N/A	386	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,492/ W 121.107,241	Jim Gibson	No
V115	4/27/07	Clear	18	N/A	0	N/A	158	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,530/ W 121.107,142	Jim Gibson	No
V116	4/27/07	Clear	18	N/A	0	N/A	221	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,418/ W 121.107,200	Jim Gibson	No
V117	4/27/07	Clear	18	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,387/ W 121.107,156	Jim Gibson	No
V118	4/27/07	Clear	18	N/A	0	N/A	90	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,244/ W 121.107,111	Jim Gibson	No
V119	4/27/07	Clear	18	N/A	0	N/A	77	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,171/ W 121.107,024	Jim Gibson	No
V120	4/27/07	Clear	18	N/A	0	N/A	121	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,163/ W 121.106,906	Jim Gibson	No
V121	4/27/07	Clear	18	N/A	0	N/A	185	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,708/ W 121.105,461	Jim Gibson	No
V122	4/27/07	Clear	18	N/A	0	N/A	79	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,914/ W 121.103,812	Jim Gibson	No
V123	4/27/07	Clear	18	N/A	0	N/A	1,083	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,029/ W 121.103,409	Jim Gibson	No
V124	4/27/07	Clear	18	N/A	0	N/A	49	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,511/ W 121.143,333	Jim Gibson	No
V125	4/27/07	Clear	18	N/A	0	N/A	627	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,632/ W 121.140,697	Jim Gibson	No
V126	4/27/07	Clear	18	N/A	0	N/A	593	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,299/ W 121.140,255	Jim Gibson	No
V127	4/27/07	Clear	18	N/A	0	N/A	28	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,212/ W 121.148,631	Jim Gibson	No
V128	4/27/07	Clear	18	N/A	0	N/A	19	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,050/ W 121.147,861	Jim Gibson	No
V129	4/27/07	Clear	18	N/A	0	N/A	63	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,229/ W 121.141,698	Jim Gibson	No
V130	4/27/07	Clear	18	N/A	0	N/A	438	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,082/ W 121.141,984	Jim Gibson	No
V131	4/27/07	Clear	18	N/A	0	N/A	159	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,192/ W 121.141,803	Jim Gibson	No
V132	4/27/07	Clear	18	N/A	0	N/A	102	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,142/ W 121.141,815	Jim Gibson	No
V133	4/27/07	Clear	18	N/A	0	N/A	208	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,191/ W 121.149,359	Jim Gibson	No
V134	4/27/07	Clear	18	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,135/ W 121.149,385	Jim Gibson	No
V135	4/27/07	Clear	18	N/A	0	N/A	49	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,498/ W 121.130,283	Jim Gibson	No

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Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V136	4/27/07	Clear	18	N/A	0	N/A	46	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,745/ W 121.124,120	Jim Gibson	No
V137	4/27/07	Clear	18	N/A	0	N/A	90	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,064/ W 121.111,989	Jim Gibson	No
V138	4/27/07	Clear	18	N/A	0	N/A	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,224/ W 121.103,399	Jim Gibson	No
V139	4/27/07	Clear	18	N/A	0	N/A	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,702/ W 121.107,367	Jim Gibson	No
WS1	4/27/07	Clear	18	N/A	0	N/A	56,720	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,281/ W 121.145,209	Jim Gibson	No
WS2	4/27/07	Clear	18	N/A	0	N/A	685	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,854/ W 121.150,169	Jim Gibson	No
WS3	4/27/07	Clear	18	N/A	0	N/A	5,168	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,602/ W 121.150,234	Jim Gibson	No
WS4	4/27/07	Clear	18	N/A	0	N/A	580	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.629,117/ W 121.149,265	Jim Gibson	No
WS5	4/27/07	Clear	18	N/A	0	N/A	434	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,181/ W 121.147,132	Jim Gibson	No
WS6	4/27/07	Clear	18	N/A	0	N/A	3,258	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,258/ W 121.143,895	Jim Gibson	No
WS7	4/27/07	Clear	18	N/A	0	N/A	710	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,207/ W 121.143,309	Jim Gibson	No
WS8	4/27/07	Clear	18	N/A	0	N/A	3,520	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,398/ W 121.144,535	Jim Gibson	No
WS9	4/27/07	Clear	18	N/A	0	N/A	74	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,269/ W 121.144,546	Jim Gibson	No
WS10	4/27/07	Clear	18	N/A	0	N/A	1,139	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,647/ W 121.143,854	Jim Gibson	No
WS11	4/27/07	Clear	18	N/A	0	N/A	1,265	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,495/ W 121.142,243	Jim Gibson	No
WS12	4/27/07	Clear	18	N/A	0	N/A	891	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,956/ W 121.142,008	Jim Gibson	No
WS13	4/27/07	Clear	18	N/A	0	N/A	246	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,402/ W 121.141,164	Jim Gibson	No
WS14	4/27/07	Clear	18	N/A	0	N/A	440	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,712/ W 121.140,424	Jim Gibson	No
WS15	4/27/07	Clear	18	N/A	0	N/A	2,122	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,465/ W 121.140,384	Jim Gibson	No
WS16	4/27/07	Clear	18	14	3	687	687	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	38.640,149/ W 121.137,922	Jim Gibson	No
WS17	4/27/07	Clear	18	N/A	0	N/A	906	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,403/ W 121.137,678	Jim Gibson	No
WS18	4/27/07	Clear	18	N/A	0	N/A	206	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,570/ W 121.136,903	Jim Gibson	No
WS19	4/27/07	Clear	18	N/A	0	N/A	258	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,111/ W 121.136,231	Jim Gibson	No
WS20	4/27/07	Clear	18	N/A	0	N/A	2,914	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,790/ W 121.131,670	Jim Gibson	No

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**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
WS21	4/27/07	Clear	18	N/A	0	N/A	147	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,692/ W 121.131,050	Jim Gibson	No
WS22	4/27/07	Clear	18	N/A	0	N/A	50,855	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,305/ W 121.130,886	Jim Gibson	No
WS23	4/27/07	Clear	18	N/A	0	N/A	840	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,672/ W 121.130,561	Jim Gibson	No
WS24	4/27/07	Clear	18	N/A	0	N/A	32,380	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,356/ W 121.128,646	Jim Gibson	No
WS25	4/27/07	Clear	18	N/A	0	N/A	4,310	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,768/ W 121.125,839	Jim Gibson	No
WS26	4/27/07	Clear	18	N/A	0	N/A	1,793	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,157/ W 121.126,772	Jim Gibson	No
WS27	4/27/07	Clear	18	N/A	0	N/A	9,434	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,450/ W 121.127,846	Jim Gibson	No
WS28	4/27/07	Clear	18	N/A	0	N/A	243	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,916/ W 121.124,907	Jim Gibson	No
WS29	4/27/07	Clear	18	N/A	0	N/A	624	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,246/ W 121.121,939	Jim Gibson	No
WS30	4/27/07	Clear	21	16	4	109,636	109,636	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,894/ W 121.117,339	Jim Gibson	No
WS31	4/27/07	Clear	18	N/A	0	N/A	3,336	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,577/ W 121.124,827	Jim Gibson	No
WS32	4/27/07	Clear	18	N/A	0	N/A	17,886	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,701/ W 121.119,339	Jim Gibson	No
WS33	4/27/07	Clear	18	N/A	0	N/A	1,626	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,996/ W 121.118,711	Jim Gibson	No
WS34	4/27/07	Clear	18	N/A	0	N/A	1,267	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,612/ W 121.117,705	Jim Gibson	No
WS35	4/27/07	Clear	18	N/A	0	N/A	740	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,842/ W 121.124,438	Jim Gibson	No
WS36	4/27/07	Clear	18	N/A	0	N/A	1,112	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,048/ W 121.117,778	Jim Gibson	No
WS37	4/27/07	Clear	18	N/A	0	N/A	1,055	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,363/ W 121.117,492	Jim Gibson	No
WS38	4/27/07	Clear	18	N/A	0	N/A	8,026	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,309/ W 121.114,599	Jim Gibson	No
WS39	4/27/07	Clear	18	N/A	0	N/A	21,599	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,722, W 121.109,500	Jim Gibson	No
WS40	4/27/07	Clear	18	N/A	0	N/A	755	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,237/ W 121.108,976	Jim Gibson	No
WS41	4/27/07	Clear	18	N/A	0	N/A	724	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,862/ W 121.108,886	Jim Gibson	No
WS42	4/27/07	Clear	18	N/A	0	N/A	15,637	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,463/ W 121.110,623	Jim Gibson	No
WS43	4/27/07	Clear	18	N/A	0	N/A	1,290	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,887/ W 121.111,387	Jim Gibson	No
WS44	4/27/07	Clear	18	N/A	0	N/A	1,896	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,773/ W 121.105,162	Jim Gibson	No

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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
WS45	4/27/07	Clear	18	N/A	0	N/A	4,404	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,469/ W 121.109,077	Jim Gibson	No
WS46	4/27/07	Clear	18	N/A	0	N/A	3,118	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,674/ W 121.106,319	Jim Gibson	No
WS47	4/27/07	Clear	18	N/A	0	N/A	144	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,902/ W 121.106,163	Jim Gibson	No
WS48	4/27/07	Clear	18	N/A	0	N/A	4,719	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,091/ W 121.104,113	Jim Gibson	No
WS49	4/27/07	Clear	18	N/A	0	N/A	294	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,157/ W 121.113,577	Jim Gibson	No
WS50	4/27/07	Clear	18	N/A	0	N/A	173	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,264/ W 121.116,688	Jim Gibson	No
WS51	4/27/07	Clear	18	N/A	0	N/A	687	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,011/ W 121.108,181	Jim Gibson	No
WS52	4/27/07	Clear	18	N/A	0	N/A	1,351	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,196/ W 121.106,955	Jim Gibson	No
WS53	4/27/07	Clear	18	N/A	0	N/A	302	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,889/ W 121.105,371	Jim Gibson	No
WS54	4/27/07	Clear	18	N/A	0	N/A	169	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,672/ W 121.105,430	Jim Gibson	No
WS55	4/27/07	Clear	18	N/A	0	N/A	3,066	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.643,315/ W 121.103,643	Jim Gibson	No
WS56	4/27/07	Clear	18	N/A	0	N/A	809	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.643,273/ W 121.102,064	Jim Gibson	No
D1	4/27/07	Clear	18	N/A	0	N/A	39	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,140/ W 121.158,164	Jim Gibson	No
D2	4/27/07	Clear	18	N/A	0	N/A	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,596/ W 121.146,475	Jim Gibson	No
D3	4/27/07	Clear	18	N/A	0	N/A	3,342	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,527/ W 121.143,076	Jim Gibson	No
D4	4/27/07	Clear	18	N/A	0	N/A	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,638/ W 121.142,970	Jim Gibson	No
D5	4/27/07	Clear	18	N/A	0	N/A	1,183	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,180/ W 121.143,480	Jim Gibson	No
D6	4/27/07	Clear	18	N/A	0	N/A	137	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.631,188/ W 121.144,122	Jim Gibson	No
D7	4/27/07	Clear	18	N/A	0	N/A	75	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,461/ W 121.144,913	Jim Gibson	No
D8	4/27/07	Clear	18	N/A	0	N/A	78	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,384/ W 121.100,188	Jim Gibson	No
D9	4/27/07	Clear	20	18	7	50	141	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,289/ W 121.130,220	Jim Gibson	No
D10	4/27/07	Clear	18	N/A	0	N/A	55	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,729/ W 121.130,626	Jim Gibson	No
D11	4/27/07	Clear	18	N/A	0	N/A	135	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,693/ W 121.143,250	Jim Gibson	No
DD1	4/27/07	Clear	18	N/A	0	N/A	13,653	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,493/ W 121.147,360	Jim Gibson	No

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Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
DD2	4/27/07	Clear	18	N/A	0	N/A	775	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,734/ W 121.144,304	Jim Gibson	No
DD3	4/27/07	Clear	18	N/A	0	N/A	40	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,084/ W 121.144,292	Jim Gibson	No
DD4	4/27/07	Clear	18	N/A	0	N/A	864	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,516/ W 121.142,162	Jim Gibson	No
DD5	4/27/07	Clear	18	N/A	0	N/A	3,375	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,226/ W 121.142,937	Jim Gibson	No
DD6	4/27/07	Clear	18	N/A	0	N/A	807	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,168/ W 121.137,312	Jim Gibson	No
DD7	4/27/07	Clear	18	N/A	0	N/A	23,391	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,402/ W 121.126,707	Jim Gibson	No
DD8	4/27/07	Clear	17	16	6	10,885	10,885	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,712/ W 121.143,735	Jim Gibson	No
DD9	4/27/07	Clear	18	N/A	0	N/A	450	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.631,620/ W 121.149,816	Jim Gibson	No
DD10	4/27/07	Clear	18	N/A	0	N/A	1,626	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,401/ W 121.108,320	Jim Gibson	No
DD11	4/27/07	Clear	18	N/A	0	N/A	825	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,917/ W 121.105,829	Jim Gibson	No
DD12	4/27/07	Clear	18	N/A	0	N/A	1,233	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,663/ W 121.107,437	Jim Gibson	No
DD13	4/27/07	Clear	18	N/A	0	N/A	3,408	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,535/ W 121.104,505	Jim Gibson	No
DD14	4/27/07	Clear	18	N/A	0	N/A	2,586	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,068/ W 121.102,645	Jim Gibson	No
V1	5/10/07	Clear	18	N/A	0	N/A	109	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.626,979/ W 121.143,513	Jim Gibson	No
V2	5/10/07	Clear	18	N/A	0	N/A	39	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,026/ W 121.142,983	Jim Gibson	No
V3	5/10/07	Clear	18	N/A	0	N/A	25	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,370 W 121.142,839	Jim Gibson	No
V4	5/10/07	Clear	18	N/A	0	N/A	285	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,495/W 121.142,844	Jim Gibson	No
V5	5/10/07	Clear	18	N/A	0	N/A	338	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,652/ W 121.143,464	Jim Gibson	No
V6	5/10/07	Clear	18	N/A	0	N/A	75	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,722/ W 121.143,127	Jim Gibson	No
V7	5/10/07	Clear	18	N/A	0	N/A	554	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.628,128/ W 121.142,577	Jim Gibson	No
V8	5/10/07	Clear	18	N/A	0	N/A	748	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.628,456/ W 121.143,176	Jim Gibson	No
V9	5/10/07	Clear	18	N/A	0	N/A	116	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.628,637/ W 121.149,062	Jim Gibson	No
V10	5/10/07	Clear	18	N/A	0	N/A	622	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,227/ W 121.147,166	Jim Gibson	No
V11	5/10/07	Clear	18	N/A	0	N/A	3,460	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,122/ W 121.150,259	Jim Gibson	No

Note: Branchinecta lynchi = BRLY; Branchinecta conservatio = BRCO; Branchinecta mesoallensis = BRME; Lepidurus packardii = LEPA; and Linderiella occidentalis = LIOC.



**2006-7 WET-SEASON LISTED BRANCHIOPOD SURVEY**

**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V12	5/10/07	Clear	18	N/A	0	N/A	48	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,502/ W 121.144,620	Jim Gibson	No
V13	5/10/07	Clear	18	N/A	0	N/A	653	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,607/ W 121.144,563	Jim Gibson	No
V14	5/10/07	Clear	18	N/A	0	N/A	812	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,659/ W 121.144,171	Jim Gibson	No
V15	5/10/07	Clear	18	N/A	0	N/A	40	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,576/ W 121.149,429	Jim Gibson	No
V16	5/10/07	Clear	18	N/A	0	N/A	82	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,659/ W 121.149,845	Jim Gibson	No
V17	5/10/07	Clear	18	N/A	0	N/A	102	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,810/ W 121.149,707	Jim Gibson	No
V18	5/10/07	Clear	18	N/A	0	N/A	160	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,855/ W 121.149,778	Jim Gibson	No
V19	5/10/07	Clear	18	N/A	0	N/A	1,060	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,914/ W 121.149,563	Jim Gibson	No
V20	5/10/07	Clear	18	N/A	0	N/A	735	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,995/ W 121.149,398	Jim Gibson	No
V21	5/10/07	Clear	18	N/A	0	N/A	511	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,900/ W 121.150,149	Jim Gibson	No
V22	5/10/07	Clear	18	N/A	0	N/A	45	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,134/ W 121.149,845	Jim Gibson	No
V23	5/10/07	Clear	18	N/A	0	N/A	444	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,269/ W 121.149,264	Jim Gibson	No
V24	5/10/07	Clear	18	N/A	0	N/A	105	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,232/ W 121.149,201	Jim Gibson	No
V25	5/10/07	Clear	18	N/A	0	N/A	151	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,211/ W 121.149,076	Jim Gibson	No
V26	5/10/07	Clear	18	N/A	0	N/A	12,794	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,027/ W 121.148,723	Jim Gibson	No
V27	5/10/07	Clear	18	N/A	0	N/A	389	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,211/ W 121.148,609	Jim Gibson	No
V28	5/10/07	Clear	18	N/A	0	N/A	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,309/ W 121.148,191	Jim Gibson	No
V29	5/10/07	Clear	18	N/A	0	N/A	135	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,424/ W 121.148,231	Jim Gibson	No
V30	5/10/07	Clear	18	N/A	0	N/A	125	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,016/ W 121.143,684	Jim Gibson	No
V31	5/10/07	Clear	18	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,099/ W 121.143,566	Jim Gibson	No
V32	5/10/07	Clear	18	N/A	0	N/A	80	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,019/ W 121.143,486	Jim Gibson	No
V33	5/10/07	Clear	18	N/A	0	N/A	63	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,191/ W 121.145,012	Jim Gibson	No
V34	5/10/07	Clear	18	N/A	0	N/A	110	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,291/ W 121.144,919	Jim Gibson	No
V35	5/10/07	Clear	18	N/A	0	N/A	95	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640.156/ W 121.144,895	Jim Gibson	No

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**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V36	5/10/07	Clear	18	N/A	0	N/A	100	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,078/ W 121.144,686	Jim Gibson	No
V37	5/10/07	Clear	18	N/A	0	N/A	267	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,175/ W 121.144,540	Jim Gibson	No
V38	5/10/07	Clear	18	N/A	0	N/A	60	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,433/ W 121.143,433	Jim Gibson	No
V39	5/10/07	Clear	18	N/A	0	N/A	114	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,744/ W 121.141,023	Jim Gibson	No
V40	5/10/07	Clear	18	N/A	0	N/A	42	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,187/ W 121.141,023	Jim Gibson	No
V41	5/10/07	Clear	18	N/A	0	N/A	78	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,113/ W 121.141,058	Jim Gibson	No
V42	5/10/07	Clear	18	N/A	0	N/A	73	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,025/ W 121.141,001	Jim Gibson	No
V43	5/10/07	Clear	18	N/A	0	N/A	106	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,948/ W 121.140,966	Jim Gibson	No
V44	5/10/07	Clear	18	N/A	0	N/A	135	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,901/ W 121.140,996	Jim Gibson	No
V45	5/10/07	Clear	18	N/A	0	N/A	228	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,041/ W 121.141,097	Jim Gibson	No
V46	5/10/07	Clear	18	N/A	0	N/A	200	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,954/ W 121.141,077	Jim Gibson	No
V47	5/10/07	Clear	18	N/A	0	N/A	47	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,819/ W 121.140,994	Jim Gibson	No
V48	5/10/07	Clear	18	N/A	0	N/A	34	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,789/ W 121.140,747	Jim Gibson	No
V49	5/10/07	Clear	18	N/A	0	N/A	140	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,758/ W 121.140,862	Jim Gibson	No
V50	5/10/07	Clear	18	N/A	0	N/A	169	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,696/ W 121.140,848	Jim Gibson	No
V51	5/10/07	Clear	18	N/A	0	N/A	228	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,359/ W 121.136,387	Jim Gibson	No
V52	5/10/07	Clear	18	N/A	0	N/A	112	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,129/ W 121.134,332	Jim Gibson	No
V53	5/10/07	Clear	18	N/A	0	N/A	223	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,297/ W 121.133,725	Jim Gibson	No
V54	5/10/07	Clear	18	N/A	0	N/A	97	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,387/ W 121.133,153	Jim Gibson	No
V55	5/10/07	Clear	18	N/A	0	N/A	284	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,617/ W 121.130,389	Jim Gibson	No
V56	5/10/07	Clear	18	N/A	0	N/A	216	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,218/ W 121.130,494	Jim Gibson	No
V57	5/10/07	Clear	18	N/A	0	N/A	207	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,249/ W 121.128,841	Jim Gibson	No
V58	5/10/07	Clear	18	N/A	0	N/A	279	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,158/ W 121.130,726	Jim Gibson	No
V59	5/10/07	Clear	18	N/A	0	N/A	55	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,189/ W 121.130,666	Jim Gibson	No

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**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V60	5/10/07	Clear	18	N/A	0	N/A	67	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,231/ W 121.130,580	Jim Gibson	No
V61	5/10/07	Clear	18	N/A	0	N/A	17	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,224/ W 121.130,536	Jim Gibson	No
V62	5/10/07	Clear	18	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,197/ W 121.130,459	Jim Gibson	No
V63	5/10/07	Clear	18	N/A	0	N/A	101	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,166/ W 121.136,238	Jim Gibson	No
V64	5/10/07	Clear	18	N/A	0	N/A	223	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,115/ W 121.130,233	Jim Gibson	No
V65	5/10/07	Clear	18	N/A	0	N/A	453	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,157/ W 121.130,361	Jim Gibson	No
V66	5/10/07	Clear	18	N/A	0	N/A	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,195/ W 121.130,620	Jim Gibson	No
V67	5/10/07	Clear	18	N/A	0	N/A	367	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,575/ W 121.126,738	Jim Gibson	No
V68	5/10/07	Clear	18	N/A	0	N/A	2,790	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,097/ W 121.125,894	Jim Gibson	No
V69	5/10/07	Clear	18	N/A	0	N/A	3,983	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,718/ W 121.125,575	Jim Gibson	No
V70	5/10/07	Clear	18	N/A	0	N/A	317	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,369/ W 121.124,252	Jim Gibson	No
V71	5/10/07	Clear	18	N/A	0	N/A	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,363/ W 121.123,978	Jim Gibson	No
V72	5/10/07	Clear	18	N/A	0	N/A	386	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,982/ W 121.126,253	Jim Gibson	No
V73	5/10/07	Clear	18	N/A	0	N/A	458	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,638/ W 121.126,190	Jim Gibson	No
V74	5/10/07	Clear	18	N/A	0	N/A	317	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,479/ W 121.125,902	Jim Gibson	No
V75	5/10/07	Clear	18	N/A	0	N/A	140	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,375/ W 121.125,628	Jim Gibson	No
V76	5/10/07	Clear	18	N/A	0	N/A	126	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,320/ W 121.125,537	Jim Gibson	No
V77	5/10/07	Clear	18	N/A	0	N/A	165	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,131/ W 121.125,135	Jim Gibson	No
V78	5/10/07	Clear	18	N/A	0	N/A	104	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,866/ W 121.124,927	Jim Gibson	No
V79	5/10/07	Clear	18	N/A	0	N/A	122	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,471/ W 121.125,369	Jim Gibson	No
V80	5/10/07	Clear	18	N/A	0	N/A	42	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,343/ W 121.125,162	Jim Gibson	No
V81	5/10/07	Clear	18	N/A	0	N/A	163	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,232/ W 121.124,216	Jim Gibson	No
V82	5/10/07	Clear	18	N/A	0	N/A	48	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,195/ W 121.126,036	Jim Gibson	No
V83	5/10/07	Clear	18	N/A	0	N/A	201	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,624/ W 121.122,236	Jim Gibson	No

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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V84	5/10/07	Clear	18	N/A	0	N/A	182	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,177/ W 121.122,553	Jim Gibson	No
V85	5/10/07	Clear	18	N/A	0	N/A	190	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,113/ W 121.121,226	Jim Gibson	No
V86	5/10/07	Clear	18	N/A	0	N/A	73	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,385/ W 121.120,128	Jim Gibson	No
V87	5/10/07	Clear	18	N/A	0	N/A	21	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,269/ W 121.121,934	Jim Gibson	No
V88	5/10/07	Clear	18	N/A	0	N/A	70	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,134/ W 121.120,118	Jim Gibson	No
V89	5/10/07	Clear	18	N/A	0	N/A	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,010/ W 121.119,775	Jim Gibson	No
V90	5/10/07	Clear	18	N/A	0	N/A	229	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,095/ W 121.116,589	Jim Gibson	No
V91	5/10/07	Clear	18	N/A	0	N/A	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,997/ W 121.112,988	Jim Gibson	No
V92	5/10/07	Clear	18	N/A	0	N/A	170	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,490/ W 121.112,464	Jim Gibson	No
V93	5/10/07	Clear	18	N/A	0	N/A	178	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,324/ W 121.112,342	Jim Gibson	No
V94	5/10/07	Clear	18	N/A	0	N/A	50	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,066/ W 121.111,799	Jim Gibson	No
V95	5/10/07	Clear	18	N/A	0	N/A	192	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,989/ W 121.111,704	Jim Gibson	No
V96	5/10/07	Clear	18	N/A	0	N/A	34	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,081/ W 121.111,673	Jim Gibson	No
V97	5/10/07	Clear	18	N/A	0	N/A	14	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,079/ W 121.111,376	Jim Gibson	No
V98	5/10/07	Clear	18	N/A	0	N/A	93	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,150/ W 121.111,448	Jim Gibson	No
V99	5/10/07	Clear	18	N/A	0	N/A	29	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,138/ W 121.111,263	Jim Gibson	No
V100	5/10/07	Clear	18	N/A	0	N/A	390	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,227/ W 121.111,149	Jim Gibson	No
V101	5/10/07	Clear	18	N/A	0	N/A	106	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,321/ W 121.110,991	Jim Gibson	No
V102	5/10/07	Clear	18	N/A	0	N/A	1,396	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,085/ W 121.109,415	Jim Gibson	No
V103	5/10/07	Clear	18	N/A	0	N/A	411	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,680/ W 121.190,333	Jim Gibson	No
V104	5/10/07	Clear	18	N/A	0	N/A	87	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,797/ W 121.108,328	Jim Gibson	No
V105	5/10/07	Clear	18	N/A	0	N/A	263	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,789/ W 121.108,390	Jim Gibson	No
V106	5/10/07	Clear	18	N/A	0	N/A	56	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,725/ W 121.108,403	Jim Gibson	No
V107	5/10/07	Clear	18	N/A	0	N/A	216	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,746/ W 121.107,826	Jim Gibson	No

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**2006-7 WET-SEASON LISTED BRANCHIOPOD SURVEY**

**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V108	5/10/07	Clear	18	N/A	0	N/A	106	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,871/ W 121.107,693	Jim Gibson	No
V109	5/10/07	Clear	18	N/A	0	N/A	781	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,818/ W 121.107,530	Jim Gibson	No
V110	5/10/07	Clear	18	N/A	0	N/A	266	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,975/ W 121.107,414	Jim Gibson	No
V111	5/10/07	Clear	18	N/A	0	N/A	13	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,375/ W 121.107,478	Jim Gibson	No
V112	5/10/07	Clear	18	N/A	0	N/A	68	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,451/ W 121.107,435	Jim Gibson	No
V113	5/10/07	Clear	18	N/A	0	N/A	33	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,532/ W 121.107,448	Jim Gibson	No
V114	5/10/07	Clear	18	N/A	0	N/A	386	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,492/ W 121.107,241	Jim Gibson	No
V115	5/10/07	Clear	18	N/A	0	N/A	158	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,530/ W 121.107,142	Jim Gibson	No
V116	5/10/07	Clear	18	N/A	0	N/A	221	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,418/ W 121.107,200	Jim Gibson	No
V117	5/10/07	Clear	18	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,387/ W 121.107,156	Jim Gibson	No
V118	5/10/07	Clear	18	N/A	0	N/A	90	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,244/ W 121.107,111	Jim Gibson	No
V119	5/10/07	Clear	18	N/A	0	N/A	77	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,171/ W 121.107,024	Jim Gibson	No
V120	5/10/07	Clear	18	N/A	0	N/A	121	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,163/ W 121.106,906	Jim Gibson	No
V121	5/10/07	Clear	18	N/A	0	N/A	185	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,708/ W 121.105,461	Jim Gibson	No
V122	5/10/07	Clear	18	N/A	0	N/A	79	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,914/ W 121.103,812	Jim Gibson	No
V123	5/10/07	Clear	18	N/A	0	N/A	1,083	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,029/ W 121.103,409	Jim Gibson	No
V124	5/10/07	Clear	18	N/A	0	N/A	49	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,511/ W 121.143,333	Jim Gibson	No
V125	5/10/07	Clear	18	N/A	0	N/A	627	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,632/ W 121.140,697	Jim Gibson	No
V126	5/10/07	Clear	18	N/A	0	N/A	593	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,299/ W 121.140,255	Jim Gibson	No
V127	5/10/07	Clear	18	N/A	0	N/A	28	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,212/ W 121.148,631	Jim Gibson	No
V128	5/10/07	Clear	18	N/A	0	N/A	19	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,050/ W 121.147,861	Jim Gibson	No
V129	5/10/07	Clear	18	N/A	0	N/A	63	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,229/ W 121.141,698	Jim Gibson	No
V130	5/10/07	Clear	18	N/A	0	N/A	438	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,082/ W 121.141,984	Jim Gibson	No
V131	5/10/07	Clear	18	N/A	0	N/A	159	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,192/ W 121.141,803	Jim Gibson	No

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Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
V132	5/10/07	Clear	18	N/A	0	N/A	102	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,142/ W 121.141,815	Jim Gibson	No
V133	5/10/07	Clear	18	N/A	0	N/A	208	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,191/ W 121.149,359	Jim Gibson	No
V134	5/10/07	Clear	18	N/A	0	N/A	53	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,135/ W 121.149,385	Jim Gibson	No
V135	5/10/07	Clear	18	N/A	0	N/A	49	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,498/ W 121.130,283	Jim Gibson	No
V136	5/10/07	Clear	18	N/A	0	N/A	46	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,745/ W 121.124,120	Jim Gibson	No
V137	5/10/07	Clear	18	N/A	0	N/A	90	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,064/ W 121.111,989	Jim Gibson	No
V138	5/10/07	Clear	18	N/A	0	N/A	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,224/ W 121.103,399	Jim Gibson	No
V139	5/10/07	Clear	18	N/A	0	N/A	130	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.638,702/ W 121.107,367	Jim Gibson	No
WS1	5/10/07	Clear	18	N/A	0	N/A	56,720	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,281/ W 121.145,209	Jim Gibson	No
WS2	5/10/07	Clear	18	N/A	0	N/A	685	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,854/ W 121.150,169	Jim Gibson	No
WS3	5/10/07	Clear	18	N/A	0	N/A	5,168	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,602/ W 121.150,234	Jim Gibson	No
WS4	5/10/07	Clear	18	N/A	0	N/A	580	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.629,117/ W 121.149,265	Jim Gibson	No
WS5	5/10/07	Clear	18	N/A	0	N/A	434	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,181/ W 121.147,132	Jim Gibson	No
WS6	5/10/07	Clear	18	N/A	0	N/A	3,258	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,258/ W 121.143,895	Jim Gibson	No
WS7	5/10/07	Clear	18	N/A	0	N/A	710	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,207/ W 121.143,309	Jim Gibson	No
WS8	5/10/07	Clear	18	N/A	0	N/A	3,520	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,398/ W 121.144,535	Jim Gibson	No
WS9	5/10/07	Clear	18	N/A	0	N/A	74	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,269/ W 121.144,546	Jim Gibson	No
WS10	5/10/07	Clear	18	N/A	0	N/A	1,139	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,647/ W 121.143,854	Jim Gibson	No
WS11	5/10/07	Clear	18	N/A	0	N/A	1,265	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,495/ W 121.142,243	Jim Gibson	No
WS12	5/10/07	Clear	18	N/A	0	N/A	891	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.627,956/ W 121.142,008	Jim Gibson	No
WS13	5/10/07	Clear	18	N/A	0	N/A	246	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,402/ W 121.141,164	Jim Gibson	No
WS14	5/10/07	Clear	18	N/A	0	N/A	440	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,712/ W 121.140,424	Jim Gibson	No
WS15	5/10/07	Clear	18	N/A	0	N/A	2,122	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,465/ W 121.140,384	Jim Gibson	No
WS16	5/10/07	Clear	18	N/A	0	N/A	687	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,149/ W 121.137,922	Jim Gibson	No

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**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
WS17	5/10/07	Clear	18	N/A	0	N/A	906	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,403/ W 121.137,678	Jim Gibson	No
WS18	5/10/07	Clear	18	N/A	0	N/A	206	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,570/ W 121.136,903	Jim Gibson	No
WS19	5/10/07	Clear	18	N/A	0	N/A	258	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,111/ W 121.136,231	Jim Gibson	No
WS20	5/10/07	Clear	18	N/A	0	N/A	2,914	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,790/ W 121.131,670	Jim Gibson	No
WS21	5/10/07	Clear	18	N/A	0	N/A	147	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,692/ W 121.131,050	Jim Gibson	No
WS22	5/10/07	Clear	18	N/A	0	N/A	50,855	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,305/ W 121.130,886	Jim Gibson	No
WS23	5/10/07	Clear	18	N/A	0	N/A	840	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,672/ W 121.130,561	Jim Gibson	No
WS24	5/10/07	Clear	18	N/A	0	N/A	32,380	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,356/ W 121.128,646	Jim Gibson	No
WS25	5/10/07	Clear	18	N/A	0	N/A	4,310	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,768/ W 121.125,839	Jim Gibson	No
WS26	5/10/07	Clear	18	N/A	0	N/A	1,793	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,157/ W 121.126,772	Jim Gibson	No
WS27	5/10/07	Clear	18	N/A	0	N/A	9,434	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,450/ W 121.127,846	Jim Gibson	No
WS28	5/10/07	Clear	18	N/A	0	N/A	243	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,916/ W 121.124,907	Jim Gibson	No
WS29	5/10/07	Clear	18	N/A	0	N/A	624	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,246/ W 121.121,939	Jim Gibson	No
WS30	5/10/07	Clear	18	N/A	0	N/A	109,636	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,894/ W 121.117,339	Jim Gibson	No
WS31	5/10/07	Clear	18	N/A	0	N/A	3,336	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,577/ W 121.124,827	Jim Gibson	No
WS32	5/10/07	Clear	18	N/A	0	N/A	17,886	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,701/ W 121.119,339	Jim Gibson	No
WS33	5/10/07	Clear	18	N/A	0	N/A	1,626	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,996/ W 121.118,711	Jim Gibson	No
WS34	5/10/07	Clear	18	N/A	0	N/A	1,267	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,612/ W 121.117,705	Jim Gibson	No
WS35	5/10/07	Clear	18	N/A	0	N/A	740	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,842/ W 121.124,438	Jim Gibson	No
WS36	5/10/07	Clear	18	N/A	0	N/A	1,112	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,048/ W 121.117,778	Jim Gibson	No
WS37	5/10/07	Clear	18	N/A	0	N/A	1,055	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,363/ W 121.117,492	Jim Gibson	No
WS38	5/10/07	Clear	18	N/A	0	N/A	8,026	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,309/ W 121.114,599	Jim Gibson	No
WS39	5/10/07	Clear	18	N/A	0	N/A	21,599	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,722, W 121.109,500	Jim Gibson	No
WS40	5/10/07	Clear	18	N/A	0	N/A	755	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,237/ W 121.108,976	Jim Gibson	No

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Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
WS41	5/10/07	Clear	18	N/A	0	N/A	724	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,862/ W 121.108,886	Jim Gibson	No
WS42	5/10/07	Clear	18	N/A	0	N/A	15,637	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,463/ W 121.110,623	Jim Gibson	No
WS43	5/10/07	Clear	18	N/A	0	N/A	1,290	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,887/ W 121.111,387	Jim Gibson	No
WS44	5/10/07	Clear	18	N/A	0	N/A	1,896	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,773/ W 121.105,162	Jim Gibson	No
WS45	5/10/07	Clear	18	N/A	0	N/A	4,404	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,469/ W 121.109,077	Jim Gibson	No
WS46	5/10/07	Clear	18	N/A	0	N/A	3,118	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,674/ W 121.106,319	Jim Gibson	No
WS47	5/10/07	Clear	18	N/A	0	N/A	144	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,902/ W 121.106,163	Jim Gibson	No
WS48	5/10/07	Clear	18	N/A	0	N/A	4,719	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,091/ W 121.104,113	Jim Gibson	No
WS49	5/10/07	Clear	18	N/A	0	N/A	294	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,157/ W 121.113,577	Jim Gibson	No
WS50	5/10/07	Clear	18	N/A	0	N/A	173	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,264/ W 121.116,688	Jim Gibson	No
WS51	5/10/07	Clear	18	N/A	0	N/A	687	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,011/ W 121.108,181	Jim Gibson	No
WS52	5/10/07	Clear	18	N/A	0	N/A	1,351	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,196/ W 121.106,955	Jim Gibson	No
WS53	5/10/07	Clear	18	N/A	0	N/A	302	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,889/ W 121.105,371	Jim Gibson	No
WS54	5/10/07	Clear	18	N/A	0	N/A	169	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,672/ W 121.105,430	Jim Gibson	No
WS55	5/10/07	Clear	18	N/A	0	N/A	3,066	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.643,315/ W 121.103,643	Jim Gibson	No
WS56	5/10/07	Clear	18	N/A	0	N/A	809	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.643,273/ W 121.102,064	Jim Gibson	No
D1	5/10/07	Clear	18	N/A	0	N/A	39	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,140/ W 121.158,164	Jim Gibson	No
D2	5/10/07	Clear	18	N/A	0	N/A	59	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.637,596/ W 121.146,475	Jim Gibson	No
D3	5/10/07	Clear	18	N/A	0	N/A	3,342	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,527/ W 121.143,076	Jim Gibson	No
D4	5/10/07	Clear	18	N/A	0	N/A	30	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,638/ W 121.142,970	Jim Gibson	No
D5	5/10/07	Clear	18	N/A	0	N/A	1,183	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,180/ W 121.143,480	Jim Gibson	No
D6	5/10/07	Clear	18	N/A	0	N/A	137	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.631,188/ W 121.144,122	Jim Gibson	No
D7	5/10/07	Clear	18	N/A	0	N/A	75	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.630,461/ W 121.144,913	Jim Gibson	No
D8	5/10/07	Clear	18	N/A	0	N/A	78	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,384/ W 121.100,188	Jim Gibson	No

Note: Branchinecta lynchi = BRLY; Branchinecta conservatio = BRCO; Branchinecta mesoallensis = BRME; Lepidurus packardii = LEPA; and Linderiella occidentalis = LIOC.



**2006-7 WET-SEASON LISTED BRANCHIOPOD SURVEY**

**Carpenter Ranch  
Sacramento County**

Per. #: PRT-795935-3  
Clarksville Folsom, CA USGS 7.5 Min. Quad.  
Sec. 16, 17, 18, T. 9N., R. 8E.

Survey Pool	Sampling Date	Weather Conditions	Air Temp. (C)	Water Temp. (C)	Record. Depth (Inches)	Record. Surface Area (sq. ft.)	Est. Max. Surface Area (sq. ft.)	BRLY	BRCO	BRME	LIOC	LEPA	Estimated # of Listed Branchiopods	Notes/Reproductive Status	Habitat Condition	Land Use of Habitat	Lat/Long in degrees	Collector	Voucher Specimens Collected?
D9	5/10/07	Clear	18	N/A	0	N/A	141	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,289/ W 121.130,220	Jim Gibson	No
D10	5/10/07	Clear	18	N/A	0	N/A	55	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,729/ W 121.130,626	Jim Gibson	No
D11	5/10/07	Clear	18	N/A	0	N/A	135	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,693/ W 121.143,250	Jim Gibson	No
DD1	5/10/07	Clear	18	N/A	0	N/A	13,653	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.633,493/ W 121.147,360	Jim Gibson	No
DD2	5/10/07	Clear	18	N/A	0	N/A	775	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,734/ W 121.144,304	Jim Gibson	No
DD3	5/10/07	Clear	18	N/A	0	N/A	40	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,084/ W 121.144,292	Jim Gibson	No
DD4	5/10/07	Clear	18	N/A	0	N/A	864	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.640,516/ W 121.142,162	Jim Gibson	No
DD5	5/10/07	Clear	18	N/A	0	N/A	3,375	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.639,226/ W 121.142,937	Jim Gibson	No
DD6	5/10/07	Clear	18	N/A	0	N/A	807	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.634,168/ W 121.137,312	Jim Gibson	No
DD7	5/10/07	Clear	18	N/A	0	N/A	23,391	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.635,402/ W 121.126,707	Jim Gibson	No
DD8	5/10/07	Clear	18	N/A	0	N/A	10,885	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.632,712/ W 121.143,735	Jim Gibson	No
DD9	5/10/07	Clear	18	N/A	0	N/A	450	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.631,620/ W 121.149,816	Jim Gibson	No
DD10	5/10/07	Clear	18	N/A	0	N/A	1,626	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,401/ W 121.108,320	Jim Gibson	No
DD11	5/10/07	Clear	18	N/A	0	N/A	825	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.642,917/ W 121.105,829	Jim Gibson	No
DD12	5/10/07	Clear	18	N/A	0	N/A	1,233	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.641,663/ W 121.107,437	Jim Gibson	No
DD13	5/10/07	Clear	18	N/A	0	N/A	3,408	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,535/ W 121.104,505	Jim Gibson	No
DD14	5/10/07	Clear	18	N/A	0	N/A	2,586	None	None	None	None	None	0		Moderately grazed	Cattle Pasturage	N 38.636,068/ W 121.102,645	Jim Gibson	No

# **APPENDIX C**

## **PHOTOGRAPHIC DOCUMENTATION**



Photo 1. General view looking east taken from the western portion of the property.

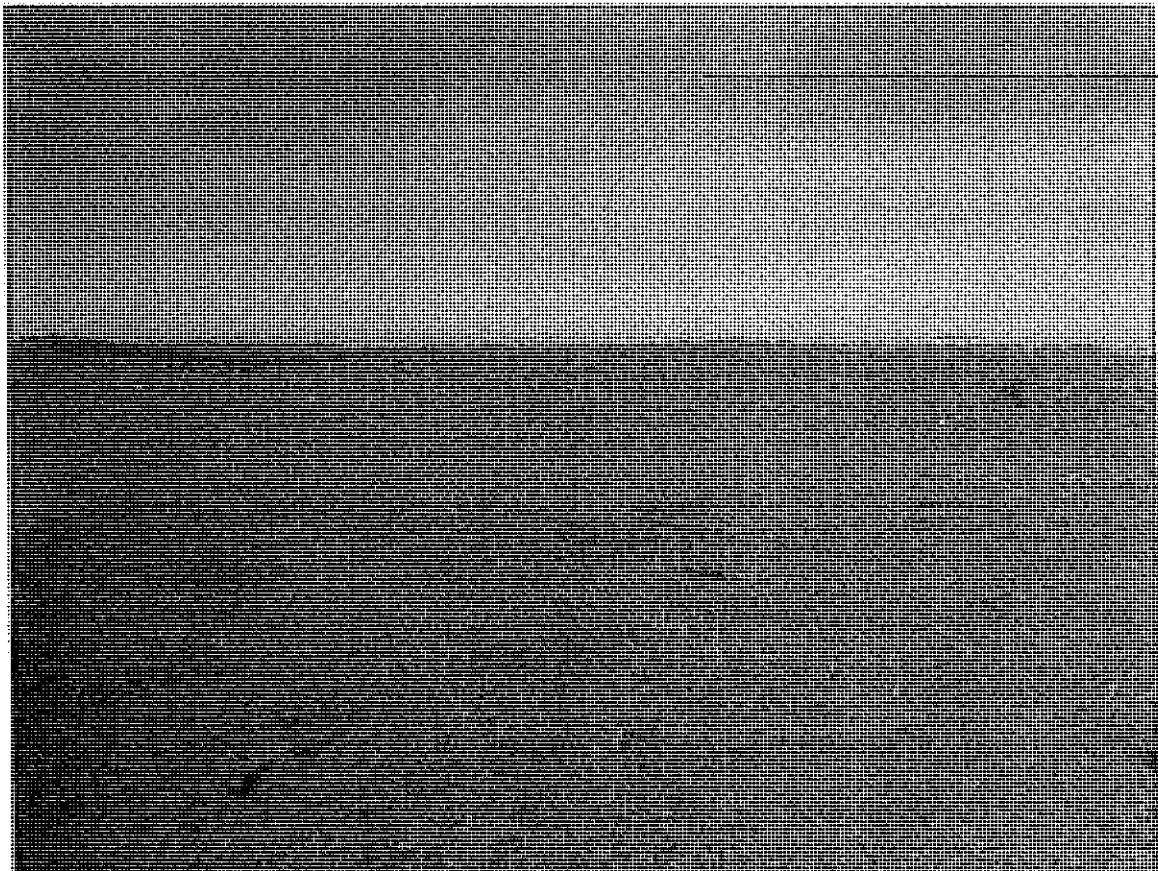


Photo 2. General view looking west from the eastern portion of the property.



Photo 3. DD 1 looking west.



Photo 4. V7 looking south.





Photo 5. V26 looking south.



Photo 6. V48 looking east.

## **APPENDIX D11**

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Revised Jurisdictional Delineation and  
Special-status Species Evaluation, Carpenter Ranch Property

***REVISED JURISDICTIONAL  
DELINEATION  
AND SPECIAL STATUS SPECIES  
EVALUATION***

***CARPENTER RANCH PROPERTY***

***GIBSON & SKORDAL, LLC***  
*Welland Consultants*  
*2277 Fair Oaks Blvd., Suite 105*  
*Sacramento, California 95825*

***REVISED JURISDICTIONAL  
DELINEATION  
AND SPECIAL STATUS SPECIES  
EVALUATION***

***CARPENTER RANCH PROPERTY***

***SACRAMENTO COUNTY,  
CALIFORNIA***

***November 2006  
Revised: October 2007***

***Prepared For:***

***Colliers International  
1610 Arden Way, Suite 240  
Sacramento, California 95661***

***Prepared By:***

***GIBSON & SKORDAL, LLC  
Wetland Consultants  
2277 Fair Oaks Blvd., Suite 105  
Sacramento, California 95825***



## INTRODUCTION

This report presents the results of a special status species assessment and a revised delineation of waters of the United States, including wetlands, which potentially may be regulated by the U. S. Army Corps of Engineers under the authority of Section 404 of the Federal Clean Water Act. The special status species assessment and delineation of waters of the United States were conducted within the study area for the below described Carpenter Ranch property.

## LOCATION

The approximately 1,054-acre study area is located in Sections 9, 16, 17, and 18, Township 9 North, Range 8 East, MDB&M, Sacramento County, California. The parcel can be found at UTM 661,695.75 M E; 4,278,082.56 M N (Zone 10) and is portrayed on the Clarksville and Folsom, California 7.5 Minute Series Quadrangles. Figure 1 is a vicinity map.

To access the site from Sacramento drive east on US 50 and exit at the East Bidwell Street/Scott Road exit. Drive south on Scott Road for approximately two hundred yards. The study area is located directly to the east and west of Scott Road.

## METHODOLOGY

This delineation was performed in accordance with the 1987 "**Corps of Engineers Wetlands Delineation Manual**"<sup>1</sup> and Sacramento District's "**Minimum Standards for Acceptance of Preliminary Wetlands Delineations**" dated November 30, 2001. Corps' regulations (33 CFR 328) were used to determine the presence of waters of the United States other than wetlands. The "**National List of Plant Species That Occur in Wetlands: California (Region 0)**"<sup>2</sup> was used to determine the wetland indicator status of plants observed in the study area.

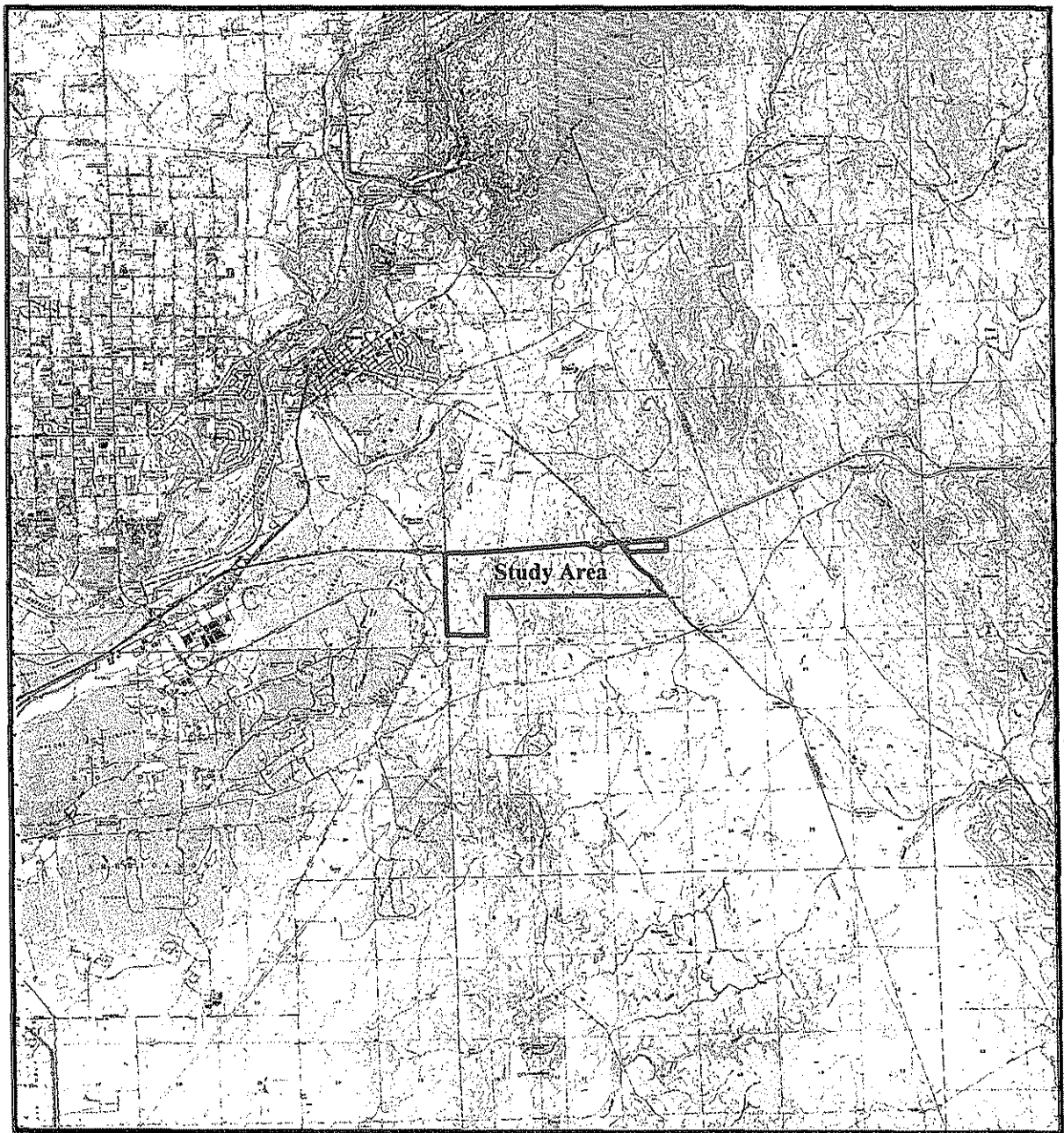
Field surveys were conducted on August 17, 18, and 19, 2005, and August 17, 2006, within the study area to delineate water features, including wetlands that are potentially regulated under Section 404 of the Federal Clean Water Act. The data point locations and water features were surveyed utilizing a Trimble GPS Data Logger equipped with sub-meter accuracy. The

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<sup>1</sup> Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station. Vicksburg, Miss.

<sup>2</sup> Reed, P.B. 1988. National List of Plant Species That Occur In Wetlands: California (Region 0). Biological Report 88(26.10). May 1988. National Ecology Research Center, National Wetlands Inventory, U.S. Fish & Wildlife Service, St. Petersburg, Florida.

**FIGURE 1**  
**Study Area Vicinity Map**



Source: USGS Folsom, Folsom S.E., Buffalo Creek, Roseville,  
Shingle Springs, Citrus Heights, Latrobe, Carmichael, and  
Clarksville, California 7.5 Minute Quadrangles. N.T.S.

delineation map was prepared by digitizing the above features and layering the GPS survey data over a georeferenced May 2002 aerial photograph. A verification visit was performed by Ms. Andrea Jones of the Sacramento District of the Army Corps of Engineers on May 18, 2006. Ms. Jones' requested modification of several features within the study area were incorporated accordingly into the revised wetland delineation map, which is enclosed in Appendix B. Detailed data on vegetation, soils, and hydrology characteristics were taken in the field. Data sheets documenting the basis for determining which areas are wetland or upland are provided in Appendix A.

The study area was assessed for the potential presence of special status species. Initially, a record search of the California Natural Diversity Database (CNDDDB) was conducted for the Folsom S.E., Clarksville, Buffalo Creek, and Folsom 7.5 Minute USGS quadrangles to identify all documented sightings of special status species in the vicinity of the site. In addition to species identified in the CNDDDB search, we included other special status species that may be present based on historical range data.

## **GENERAL SITE CONDITIONS AND HABITAT**

### Existing Field Conditions

The study area consists of two discrete sections which abut the south side of US 50 and are situated in the foothills on rolling to relatively flat terrain at an elevation of approximately 300 to 400 feet. The 1,000-acre west section is separated from the 54-acre east parcel by Placerville Road and a reach of the South Pacific Railroad. The study area supports no habitable structures except for an abandoned trailer. Various relic pits, tailing piles, and channels from historic gold mining operations are scattered throughout the site, and a power line right of way traverses the property from north to south. The western-most boundary is bracketed by Prairie City Road which divides the study area from property owned by Aerojet. Lands to the south and east are sparsely developed rangelands while properties north of Highway 50 support various commercial and residential developments. The parcel did not appear to have been recently grazed, graded, or plowed at the time of field surveys.

### Plant Communities and Habitat Types

The majority of the study area supports two general habitat types: disturbed, non-native annual grasslands and oak forest/woodland/savannah. The eastern portion, including the disjoint eastern

parcel, in general is flatter and dominated by wild oats (*Avena fatua*), tarweed (*Holocarpha virgata*), and medusa-head (*Taeniatherum caput-medusae*). Common grasses and forbs include perennial rye grass (*Lolium perenne*), little quacking grass (*Briza minor*), soft chess (*Bromus mollis*), and prickly lettuce (*Lactuca serriola*). The western half supports an overstory primarily composed by live oak (*Quercus wislizenii*), valley oak (*Quercus lobata*), and blue oak (*Quercus douglasii*). The understory consists of dogtail (*Cynosurus echinatus*), tarweed, soft chess, hairy hawkbit (*Leontodon leyssei*), and perennial rye grass.

The study area also supports a relatively large drainage which spans the properties from east to west. Several other water features are also present and include vernal pools, swales, emergent marsh, seeps, and ditches. These features are described in greater detail below.

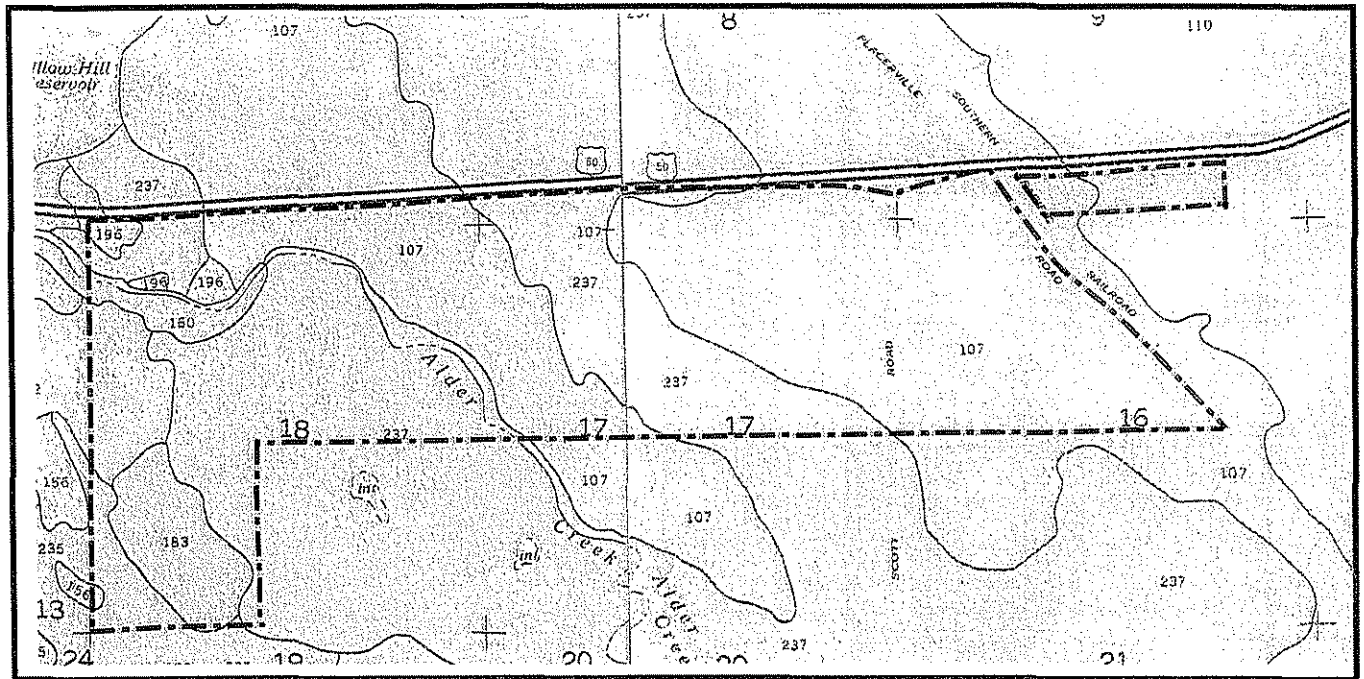
### Hydrology

The majority of the site's wetlands and other waters appear to drain to Alder Creek, the largest feature mapped within the study area. Alder Creek drains to the west and is directly tributary to Lake Natoma, which empties into the navigable American River.

### Soils

According to the April 1993, "Soil Survey of Sacramento County, California," nine soil map units occur within the study area. The first is Argonaut-Auburn complex, 3-8% slopes (107) which is composed of about 45% Argonaut soil and 35% Auburn soil. Both are well drained and derived from weathered metaandesite and metamorphic rocks. The Argonaut component is moderately deep and has an underlying variegated hardpan typically at a depth of 14 inches. Permeability for this component is very slow resulting in pooled water for short periods after heavy winter/spring rains or over irrigation. The Auburn component is shallow or moderately deep and possesses a fractured metabasic bedrock at 14 inches. This unit contains inclusions of Creviscreek, Hicksville, and Mokelumne soils, and Xerorthents, and rock outcrop. The second soil unit is Argonaut-Auburn-Rock complex, 8-30% slopes (110). This unit is composed of approximately 40% Auburn soil, 35% Argonaut soil, and 10% Rock outcrop while the remaining 15% contains inclusions of Mokelumne soils, soils with slopes greater than 30%, and soils with bedrock 10 inches below the surface. The Auburn component is shallow or moderately deep and well drained. The Argonaut soil is moderately deep, well drained, and possesses a 15 inch thick claypan approximately 14 inches below the surface. After heavy rains, water may temporarily perch above the claypan. The third map unit is Hadselville-Pentz complex, 2-30% slopes (156).

**FIGURE 2**  
**Study Area Soils Map**



Symbol	Mapping Unit	Subgroup	Drainage Class
107	Argonaut-Auburn complex, 3-8% slopes	Mollic Haploxeralf/Ruptic-Lithic Xerochrept	Well drained/ Well drained
110	Argonaut-Auburn-Rock Complex, 8-30% slopes	Mollic Haploxeralf/Ruptic-Lithic Xerochrept	Well drained/ Well drained
156	Hadselville-Pentz complex, 2-30% slopes	Ultic Haploxeroll/Ultic Haploxeroll	Mod. well drained/Well drained
160	Hicksville sandy clay loam, 0-2% slopes, occasionally flooded	Mollic Haploxeralf	Mod. well drained
183	Orangevale coarse sandy loam, 2-5% slopes	Ultic Haploxeralf	Well drained
192	Red Bluff loam, 2-5% slopes	Ultic Palexeralf	Well drained
196	Red Bluff-Xerorthents, dredge tailings complex 2-50% slopes	Ultic Palexeralf	Well drained/ Somewhat excess. drained-Excess. drained
235	Vleck gravelly loam, 2-15% slopes	Abruptic Haplic Durixeralf	Mod. well drained
237	Whiterock loam, 3-30% slopes	Lithic Xerorthent	Somewhat excessively drained

Source: USDA, Soil Conservation Service. April 1993. Soil Survey of Sacramento County, California. N.T.S.

The Hadselville component makes up about 45% of the complex and is very shallow and moderately well drained. The Pentz component, which is shallow and well drained, forms about 45% of the complex. In some areas a thin hardpan is situated over bedrock. Included in the unit are areas of Hicksville, Keyes, Ranchoseco, Pardee, Peters, and Redding soils, and Lithic Xerorthents. The fourth unit is Hicksville sandy clay loam, 0-2% slopes, occasionally flooded (160), which is a moderately deep and moderately well drained soil. This unit includes a perched seasonal water table about 36 to 48 inches below the surface and often is subject to short term flooding after intense rain events. Inclusions within the map unit include Amador, Columbia, Corning, Crevicreek, Pentz, and Redding soils. The fifth soil mapped is Orangevale coarse sandy loam, 2-5% slopes (183). This is a very deep, well drained soil with inclusions of Fiddymont soils, Xerarents, and Urban land. It is associated with high terrace remnants and is derived from granitic rock sources in alluvium. The sixth unit is Red Bluff loam, 2-5% slopes (192), which also includes small areas of Redding soils and Xerorthents. This soil is very deep, well drained, and associated with high terraces. A hardpan is commonly found at 40 to 60 inches. The seventh unit is Red Bluff-Xerorthents, dredge tailings complex, 2-50% slopes (196). This soil is composed of about 45% Red Bluff soils, 40% Xerorthents, and 15% inclusions of Corning, Hicksville, Redding soils and Slickens, and/or an unnamed soil with a hardpan at 40-60 inches. The Red Bluff soil is well drained, very deep, and derived from mixed rock sources, while the Xerorthents component represents areas of dredge tailing deposits. Vleck gravelly loam, 2-15% slopes (235) represent the eighth map in the study area. This soil is moderately deep, moderately well drained, and formed in alluvium. Typically, a claypan is situated 13 inches below the surface. Inclusions of Amador and Gillender soils and soils underlain by hardpan at 10 to 20 inches compose approximately 15% of the total acreage. The final unit is Whiterock loam, 3-30% slopes (237), which is very shallow to shallow, and somewhat excessively drained. It is associated with fractured, vertically oriented metasedimentary rock and contains inclusions of Argonaut and Auburn soils, and Rock outcrop.

None of the above soil map units are listed in the June 1991, "**Hydric Soils of the United States**", or the Natural Resources Conservation Service's "**Field Office Official List of Hydric Soil Map Units for Sacramento County, California**" (county list) dated March 17, 1992. The Columbia inclusions in 160 are listed as hydric on the county list when associated with low flood planes as is an unnamed inclusion in 192 and 196 when found in depressions. Lastly, the Slickens in 196 are considered hydric if associated with depressions. Figure 2 is a soils map.

## FINDINGS

### Water Features within the Study Area

A total of 27.7656 acres of water features were mapped within the study area including 1.1607 acres of vernal pools, 0.1211 acre of depressional seasonal wetlands, 1.4948 acres of seeps, 0.0917 acre of emergent marsh, 1.4674 acres of ditches, 8.9226 acres of wet swales, and 14.5072 acres of channels and associated riparian wetlands. Ms. Jones determined that all of the above water features are jurisdictional with the exception of five vernal pools totaling 0.0191 acre. Appendix B provides a delineation map showing the study area boundary, location of representative data points, and location and size of water features. Appendix C provides a list of plant species observed in the study area including their status as wetland indicator species, and Table 1 lists acreage totals by water feature type.

### Vernal Pools

We delineated 139 vernal pools ranging from 13 to more than 12,000 square feet in size. Vernal pools are wetlands that sustain long-term ponding and/or saturated soil conditions during and following periods of heavy precipitation in the winter and early spring. Additional water is provided by surface sheet flow and subsurface discharge onto the perched water-tables or impermeable surfaces which underlie vernal pools. Indicators of wetland hydrology observed during our site visits included the presence of a detritus, hoof prints, rhizospheres, and algal matting. The soils recorded were sandy loams and typically displayed a 10YR 4/2 matrix with common, distinct 10YR 5/6 mottles. Plants surveyed within vernal pools included coyote thistle (*Eryngium vaseyi*), rabbits foot grass (*Polypogon monspeliensis*), perennial rye, manna grass (*Glyceria sp.*), dove weed (*Eremocarpus setigerus*), and slender popcorn flower (*Plagiobothrys stipitatus*).

### Depressional Seasonal Wetlands

Eleven depressional seasonal wetlands ranging in size from 30 to more than 3,000 square feet were surveyed within the study area. These features were differentiated from vernal pools by their lack of endemic vernal pool plant communities. Commonly observed species included toad rush (*Juncus bufonius*), rabbits foot grass, perennial rye grass, tarweed (*Holocarpha virgata*), and coyote thistle. The indicators of wetland hydrology were the presence of algal matting, deep

Vernal Pools

<u>Ref. No.</u>	<u>Area (ft<sup>2</sup>)</u>	<u>Area (ac)</u>	<u>Ref. No.</u>	<u>Area (ft<sup>2</sup>)</u>	<u>Area (ac)</u>	<u>Ref. No.</u>	<u>Area (ft<sup>2</sup>)</u>	<u>Area (ac)</u>
V1	109	0.0025	V48	34	0.0008	V95	192	0.0044
V2	39	0.0009	V49	140	0.0032	V96	34	0.0008
V3	25	0.0006	V50	169	0.0039	V97	14	0.0003
V4	285	0.0065	V51	228	0.0052	V98	93	0.0021
V5	338	0.0078	V52*	112	0.0026	V99	29	0.0007
V6	75	0.0017	V53*	223	0.0051	V100	390	0.0090
V7	554	0.0127	V54*	97	0.0022	V101	106	0.0024
V8	748	0.0172	V55	284	0.0065	V102	1,396	0.0320
V9	116	0.0027	V56	216	0.0050	V103	411	0.0094
V10	622	0.0143	V57	207	0.0048	V104	87	0.0020
V11	3,460	0.0794	V58	279	0.0064	V105	263	0.0060
V12	48	0.0011	V59	55	0.0013	V106	56	0.0013
V13	653	0.0150	V60	67	0.0015	V107	216	0.0050
V14	812	0.0186	V61	17	0.0004	V108	106	0.0024
V15	40	0.0009	V62	53	0.0012	V109	781	0.0179
V16	82	0.0019	V63	101	0.0023	V110	266	0.0061
V17	102	0.0023	V64	223	0.0051	V111	13	0.0003
V18	160	0.0037	V65	453	0.0104	V112	68	0.0016
V19	1,060	0.0243	V66	130	0.0030	V113	33	0.0008
V20	735	0.0169	V67	367	0.0084	V114	386	0.0089
V21	511	0.0117	V68	2,790	0.0640	V115	158	0.0036
V22	45	0.0010	V69	3,983	0.0914	V116	221	0.0051
V23	444	0.0102	V70*	317	0.0073	V117	53	0.0012
V24	105	0.0024	V71*	59	0.0014	V118	90	0.0021
V25	151	0.0035	V72	386	0.0089	V119	77	0.0018
V26	12,794	0.2937	V73	458	0.0105	V120	121	0.0028
V27	389	0.0089	V74	317	0.0073	V121	185	0.0042
V28	130	0.0030	V75	140	0.0032	V122	79	0.0018
V29	135	0.0031	V76	126	0.0029	V123	1,083	0.0249
V30	125	0.0029	V77	165	0.0038	V124	49	0.0011
V31	53	0.0012	V78	104	0.0024	V125	627	0.0144
V32	80	0.0018	V79	122	0.0028	V126	593	0.0136
V33	63	0.0014	V80	42	0.0010	V127	28	0.0006
V34	110	0.0025	V81	163	0.0037	V128	19	0.0004
V35	95	0.0022	V82	48	0.0011	V129	63	0.0014
V36	100	0.0023	V83	201	0.0046	V130	438	0.0101
V37	267	0.0061	V84	182	0.0042	V131	159	0.0037
V38	60	0.0014	V85	190	0.0044	V132	102	0.0023
V39	114	0.0026	V86	73	0.0017	V133	208	0.0048
V40	42	0.0010	V87*	21	0.0005	V134	53	0.0012
V41	78	0.0018	V88	70	0.0016	V135	49	0.0011
V42	73	0.0017	V89	59	0.0014	V136	46	0.0011
V43	106	0.0024	V90	229	0.0053	V137	90	0.0021
V44	135	0.0031	V91	30	0.0007	V138	30	0.0007
V45	228	0.0052	V92	170	0.0039	V139	130	0.0030
V46	200	0.0046	V93	178	0.0041			
V47	47	0.0011	V94	50	0.0011			
						<b>Total:</b>	<b>50,562</b>	<b>1.1607</b>
							<b>Area (ft<sup>2</sup>)</b>	<b>Area (ac)</b>

\*Isolated non-jurisdictional feature.



# Wet Swales

<u>Ref. No.</u>	<u>Area (ft<sup>2</sup>)</u>	<u>Area (ac)</u>	<u>Ref. No.</u>	<u>Area (ft<sup>2</sup>)</u>	<u>Area (ac)</u>	<u>Ref. No.</u>	<u>Area (ft<sup>2</sup>)</u>	<u>Area (ac)</u>
WS1	56,720	1.3021	WS21	147	0.0034	WS41	724	0.0166
WS2	685	0.0157	WS22	50,855	1.1675	WS42	15,637	0.3590
WS3	5,168	0.1186	WS23	840	0.0193	WS43	1,290	0.0296
WS4	580	0.0133	WS24	32,380	0.7433	WS44	1,896	0.0435
WS5	434	0.0100	WS25	4,310	0.0989	WS45	4,404	0.1011
WS6	3,258	0.0748	WS26	1,793	0.0412	WS46	3,118	0.0716
WS7	710	0.0163	WS27	9,434	0.2166	WS47	144	0.0033
WS8	3,520	0.0808	WS28	243	0.0056	WS48	4,719	0.1083
WS9	74	0.0017	WS29	624	0.0143	WS49	294	0.0067
WS10	1,139	0.0261	WS30	109,636	2.5169	WS50	173	0.0040
WS11	1,265	0.0290	WS31	3,336	0.0766	WS51	687	0.0158
WS12	891	0.0205	WS32	17,886	0.4106	WS52	1,351	0.0310
WS13	246	0.0056	WS33	1,626	0.0373	WS53	302	0.0069
WS14	440	0.0101	WS34	1,267	0.0291	WS54	169	0.0039
WS15	2,122	0.0487	WS35	740	0.0170	WS55	3,066	0.0704
WS16	687	0.0158	WS36	1,112	0.0255	WS56	809	0.0186
WS17	906	0.0208	WS37	1,055	0.0242		<u>Area (ft<sup>2</sup>)</u>	<u>Area (ac)</u>
WS18	206	0.0047	WS38	8,026	0.1843	<b>Total:</b>	<b>388,670</b>	<b>8.9226</b>
WS19	258	0.0059	WS39	21,599	0.4958			
WS20	2,914	0.0669	WS40	755	0.0173			

# Depressional Seasonal Wetlands

<u>Ref. No.</u>	<u>Area (ft<sup>2</sup>)</u>	<u>Area (ac)</u>
D1	39	0.0009
D2	59	0.0014
D3	3,342	0.0767
D4	30	0.0007
D5	1,183	0.0272
D6	137	0.0031
D7	75	0.0017
D8	78	0.0018
D9	141	0.0032
D10	55	0.0013
D11	135	0.0031
	<u>Area (ft<sup>2</sup>)</u>	<u>Area (ac)</u>
<b>Total:</b>	<b>5,274</b>	<b>0.1211</b>

# Seeps

<u>Ref. No.</u>	<u>Area (ft<sup>2</sup>)</u>	<u>Area (ac)</u>
S1	2,733	0.0627
S2	4,165	0.0956
S3	1,863	0.0428
S4	310	0.0071
S5	1,518	0.0348
S6	897	0.0206
S7	3,466	0.0796
S8	3,763	0.0864
S9	2,372	0.0545
S10	38,005	0.8725
S11	959	0.0220
S12	5,063	0.1162
	<u>Area (ft<sup>2</sup>)</u>	<u>Area (ac)</u>
<b>Total:</b>	<b>65,114</b>	<b>1.4948</b>

\*Isolated non-jurisdictional feature.

# Channels

<u>Ref. No.</u>	<u>Area (ft<sup>2</sup>)</u>	<u>Area (ac)</u>	<u>Ref. No.</u>	<u>Area (ft<sup>2</sup>)</u>	<u>Area (ac)</u>	<u>Ref. No.</u>	<u>Area (ft<sup>2</sup>)</u>	<u>Area (ac)</u>
C1	464,463	10.6626	C14	11,683	0.2682	C27	1,629	0.0374
C2	988	0.0227	C15	518	0.0119	C28	2,151	0.0494
C3	2,808	0.0645	C16	158	0.0036	C29	1,694	0.0389
C4	1,638	0.0376	C17	612	0.0140	C30	4,245	0.0975
C5	44,304	1.0171	C18	29,046	0.6668	C31	6,292	0.1444
C6	14,126	0.3243	C19	515	0.0118	C32	3,066	0.0704
C7	3,863	0.0887	C20	1,078	0.0247	C33	1,289	0.0296
C8	181	0.0042	C21	3,917	0.0899	C34	5,148	0.1182
C9	167	0.0038	C22	1,929	0.0443	C35	1,078	0.0247
C10	688	0.0158	C23	234	0.0054	C36	31	0.0007
C11	486	0.0112	C24	15,227	0.3496		<u>Area (ft<sup>2</sup>)</u>	<u>Area (ac)</u>
C12	267	0.0061	C25	5,062	0.1162	<u>Total:</u>	<u>631,934</u>	<u>14.5072</u>
C13	303	0.0070	C26	1,050	0.0241			

# Ditches

<u>Ref. No.</u>	<u>Area (ft<sup>2</sup>)</u>	<u>Area (ac)</u>
DD1	13,653	0.3134
DD2	775	0.0178
DD3	40	0.0009
DD4	864	0.0198
DD5	3,375	0.0775
DD6	807	0.0185
DD7	23,391	0.5370
DD8	10,885	0.2499
DD9	450	0.0103
DD10	1,626	0.0373
DD11	825	0.0189
DD12	1,233	0.0283
DD13	3,408	0.0782
DD14	2,586	0.0594
	<u>Area (ft<sup>2</sup>)</u>	<u>Area (ac)</u>
<u>Total:</u>	<u>63,918</u>	<u>1.4674</u>

# Emergent Marsh

<u>Ref. No.</u>	<u>Area (ft<sup>2</sup>)</u>	<u>Area (ac)</u>
E1	3,996	0.0917
	<u>Area (ft<sup>2</sup>)</u>	<u>Area (ac)</u>
<u>Total:</u>	<u>3,996</u>	<u>0.0917</u>

# Total of All Features:

<u>Area (ft<sup>2</sup>)</u>	<u>Area (ac)</u>
<u>1,209,468</u>	<u>27.7656</u>

# Total Jurisdictional Features:

<u>Area (ft<sup>2</sup>)</u>	<u>Area (ac)</u>
<u>1,208,638</u>	<u>27.7465</u>

# Total Non-Jurisdictional Features:

<u>Area (ft<sup>2</sup>)</u>	<u>Area (ac)</u>
<u>832</u>	<u>0.0191</u>

\*Isolated non-jurisdictional feature.

hoof prints, and rhizospheres on live roots. The surveyed soils were sandy loams with matrices of 10YR 4/2 with common, distinct 10YR 5/6 mottles.

### Seeps

We surveyed twelve seeps ranging in size from approximately 310 to 38,005 square feet. Seeps are most often associated with sloping terrain with water that is derived primarily from groundwater discharge in the winter and spring. Dominant plants observed include barnyard grass (*Echinochloa crusgalli*), Bermuda grass (*Cynodon dactylon*), cocklebur (*Xanthium strumarium*), dallis grass (*Paspalum dilatatum*), rice cutgrass (*Leersia oryzoides*), dense-flower spike primrose (*Boisduvalia densiflora*), and perennial rye. The soils, which were sandy loams, were moist to the surface and possessed with a matrix of 10YR 3/1 with common, distinct 10YR 4/6 mottles.

### Wet Swales

We surveyed 56 wet swales within the study area that ranged from less than 80 square feet to over 100,000 square feet. Wet swales typically occur in linear sloping drainages that lack a defined bed and bank, and support a wetland plant community. During surveys we observed plant communities containing penny-royal (*Mentha pulegium*), cocklebur, rice cutgrass, dense-flower spike primrose, and dallis grass. We recorded soil matrices of approximately 10 YR3/2 with common, distinct 10 YR6/4 mottles. Algal matting, sediment deposits, and deep hoof prints were the most common indicators of wetland hydrology.

### Emergent Marsh

We identified a single 3,996 square foot emergent marsh within the study area. The plant community was dominated by cattails (*Typha sp.*) and hardstem bulrush (*Scirpus acutus*), and several inches of standing surface water were present during field surveys.

### Channels Including Alder Creek and Associated Riparian Wetlands

Thirty-six channels including Alder Creek and associated riparian wetlands were mapped within the study area. These features ranged from 31 to more than 400,000 square feet in size and displayed a distinct bed and bank and an ordinary high water mark characterized by shelving and the destruction of terrestrial vegetation. Plants observed in channels included dallis grass,

cattails, joint grass (*Paspalum distichum*), and Olney's rush (*Scirpus americanus*). Several feet of water were present in the western reaches of Alder Creek, but the majority of other channels were dry at the time of field surveys.

### Ditches

Within the study area, we mapped fourteen ditches ranging from 40 to more than 23,000 square feet. These features follow topographic contour lines and may represent relics from historic hydraulic gold mining operations. The ditches typically included an excavated channel enclosed by levees or berms created with sidecast material. Though water was not present at the time of field surveys, wetland indicators such as rhizospheres, hoof prints, and detritus were present. Our surveys recorded a plant community dominated by hydrophytes. Observed species included rabbits foot grass, curly dock, and yellow monkey flower (*Mimulus guttatus*). The soil matrices were 10YR 3/3 with common, distinct 10YR 4/6 mottles.

## **JURISDICTIONAL STATUS**

The delineated areas represent those features that can be considered potentially jurisdictional waters of the United States because of their physical and biological characteristics. Whether they are, in fact, jurisdictional also depends on their hydrologic relationship to downstream waters. The Corps of Engineers maintains jurisdiction under the Federal Clean Water Act over navigable waters of the United States, interstate waters, their tributaries and wetlands adjacent to these waters.

During her site visit of March 23, 2007, Ms. Jones determined that five vernal pools totaling 0.0191 acre are isolated and not regulated under Section 404 of the Federal Clean Water Act. Specific acreage totals are provided on the attached revised delineation map in Appendix B.

These conclusions represent the professional opinion of Gibson & Skordal, LLC. Ultimately, the Corps of Engineers is responsible for determining the jurisdictional status of features within the study area.

## SPECIAL STATUS SPECIES EVALUATION

This report summarizes our evaluation of the potential presence of special status species within the study area. The special status species evaluation considers those species identified as having relative scarcity and/or declining populations by the United States Fish & Wildlife Service (FWS) or California Department of Fish & Game (CDFG). Special status species include those formally listed as threatened or endangered, those proposed for formal listing, candidates for federal listing, and those classified as species of special concern by CDFG. We also included those species considered to be "special animals" or "fully protected" by the CDFG and those plant species considered to be rare, threatened or endangered in California by the California Native Plant Society (CNPS).

A record search of the CNDDB was conducted for the Folsom S.E., Clarksville, Buffalo Creek, and Folsom 7.5 Minute USGS quadrangles to identify all documented sightings of special status species in the vicinity of the study area. In addition to species identified in the CNDDB search, we included other special status species that may occur in the study area based on historical range data.

Table 2 provides a list of special status species that were evaluated including their listing status, habitat associations, and whether potential habitats occur in the study area. Appendix D includes a map portraying special status species occurrence information based on GIS information provided by CDFG. The following is a detailed summary of special status species and their habitats as they relate to the study area.

### American Badger

American badger (*Taxidea taxus*) is a listed CDFG species of special concern. This burrowing carnivorous mammal is solitary and very territorial preferring to feed on small mammals, lizards, snakes, insects, and carrion. It has no known natural enemies and inhabits dry, open fields, grasslands, and pastures.

The open fields provide appropriate foraging and burrowing habitat.

TABLE 2

## EVALUATION OF SPECIAL STATUS SPECIES HABITATS

	Federal Status	State Status	CNPS Listing	Habitat Association	Potential Habitat In Study Area
<b>Mammals</b>					
<i>Taxidea taxus</i> (American badger)	None	Species of Special Concern		This species prefers dry open fields, grasslands, and pastures.	Yes, suitable habitat is present.
<b>Birds</b>					
<i>Accipiter cooperi</i> (Cooper's hawk)	None	Species of Special Concern		Inhabits forested habitats, forest edge, and riparian habitat, may forage in adjacent grassland and fields.	Yes, suitable foraging and nesting habitat is present.
<i>Agelaius tricolor</i> (tricolored blackbird)	None	Species of Special Concern		Colonial nester in cattails, bulrush, or blackberries associated with marsh habitats.	Yes, suitable foraging and nesting habitat is present.
<i>Ardea alba</i> (great egret)	None	CDFG-Special Animals		Rivers, streams, lakes, marsh and other aquatic habitats.	Yes, suitable foraging and nesting habitat is present.
<i>Ardea herodias</i> (great blue heron)	None	CDFG-Special Animals		Rivers, streams, lakes, marsh and other aquatic habitats.	Yes, suitable foraging and nesting habitat is present.
<i>Athene cunicularia</i> (burrowing owl)	None	Species of Special Concern		Nests in abandoned ground squirrel burrows associated with open grassland habitats.	Yes, suitable foraging and nesting habitat is present.
<i>Buteo Swainsoni</i> (Swainson's hawk)	None	Threatened		Nests in tall cottonwoods, valley oaks or willows. Forages in fields, cropland, irrigated pasture, and grassland near large riparian corridors.	Yes, suitable foraging and nesting habitat is present.
<i>Elanus leucurus</i> (white-tailed kite)	None	Fully Protected		Nests in riparian corridors along streams and rivers, and forages in nearby grasslands and fields.	Yes, suitable foraging and nesting habitat is present.
<i>Haliaeetus leucocephalus</i> (bald eagle)	Threatened	Endangered		Documented as wintering & nesting in El Dorado Co., they typically nest in oak woodland within 1 mile of lakes, rivers, or larger streams.	Yes, suitable foraging and nesting habitat is present.
<i>Phalacrocorax auritus</i> (double-crested cormorant)	None	CDFG-Special Animals		This aquatic bird nests in colonies on rocks, cliffs, or in trees. It prefers open water habitats such as coastlines, ponds, rivers, lakes, estuaries, or lagoons.	Yes, suitable foraging and nesting habitat is present.

TABLE 2

## EVALUATION OF SPECIAL STATUS SPECIES HABITATS

Amphibians & Reptiles					
<i>Clemmys marmorata marmorata</i> (northwestern pond turtle)	None	Species of Special Concern		Ponds, rivers, streams, wetlands, and irrigation ditches with associated marsh habitat.	Yes.
<i>Rana aurora draytonii</i> (California red-legged frog)	Threatened	None		Breeds in permanent to semi-permanent aquatic habitats including lakes, ponds, marshes, creeks, and other drainages.	Yes.
<i>Spea (=Scaphiopus) hammondi</i> (western spadefoot)	None	Species of Special Concern		Breeds in vernal pools, seasonal wetlands and associated swales. Forages and hibernates in adjacent grasslands.	Yes.
Invertebrates					
<i>Branchinecta lynchi</i> (vernal pool fairy shrimp)	Threatened	None		Vernal pools	Yes.
<i>Branchinecta mesovallensis</i> (mid-valley fairy shrimp)	None	None		Vernal pools	Yes.
<i>Desmocerus californicus dimorphus</i> (valley elderberry longhorn beetle)	Threatened	None		Dependent upon elderberry plant ( <i>Sambucus mexicana</i> ) as primary host species	Yes - elderberry shrubs are present in study area
<i>Lepidurus packardii</i> (vernal pool tadpole shrimp)	Endangered	None		Vernal pools	Yes.
<i>Lindieriella occidentalis</i> (California lindieriella)	None	None		Vernal pools	Yes.
Plants					
<i>Ceanothus roderickii</i> (Pine Hill ceanothus)	Endangered	Rare	CNPS-1B	Foothill chaparral and cismontane woodland associated with Gabbro soils.	No.
<i>Chlorogalum grandiflorum</i> (Red Hills soaproot)	None	None	CNPS-1B	Foothill chaparral, cismontane woodland, and lower montane coniferous forest. Sometimes found in Gabbro soils.	No.
<i>Clarkia biloba brandegeae</i> (Brandegee's clarkia)	None	None	CNPS-1B	Generally associated with chaparral and cismontane woodland, but may occur in foothill oak woodland and grassland.	Yes.
<i>Eryngium pinnatisectum</i> (Tuolumne button-celery)	None	None	CNPS-1B	Cismontane woodlands, lower montane coniferous forests, and vernal pools.	Yes.
<i>Fremontodendron decumbens</i> (Pine Hill flannelbush)	Endangered	Rare	CNPS-1B	Foothill chaparral and cismontane woodland associated with Gabbro soils.	No.

TABLE 2

## EVALUATION OF SPECIAL STATUS SPECIES HABITATS

<i>Galium californicum ssp. sierrae</i> (El Dorado bedstraw)	Endangered	Rare	CNPS-1B	Foothill chaparral and cismontane woodland associated with Gabbro soils.	No.
<i>Gratiola heterosepala</i> (Bogg's Lake hedge-hyssop)	None	Endangered	CNPS-1B	Vernal pools and margins of lakes/ponds	Yes.
<i>Helianthemum suffrutescens</i> (Bisbee Peak rush rose)	None	None	CNPS-3	Open areas within chaparral. Sometimes found in Gabbro soils.	No.
<i>Juncus leiospermus var. ahartii</i> (Ahart's dwarf rush)	None	None	CNPS-1B	Vernal pools.	Yes.
<i>Legenere limosa</i> (legenere)	None	None	CNPS-1B	Vernal pools.	Yes.
<i>Navarretia myersii myersii</i> (Pin cushion navarretia)	None	None	CNPS-1B	Vernal pools.	Yes.
<i>Orcuttia tenuis</i> (slender orcutt grass)	Threatened	Endangered	CNPS-1B	Vernal pools.	Yes.
<i>Orcuttia viscida</i> (Sacramento orcutt grass)	Threatened	Endangered	CNPS-1B	Vernal pools.	Yes.
<i>Packera layneae</i> (Layne's ragwort)	Threatened	Rare	CNPS-1B	Foothill chaparral and cismontane woodland associated with Gabbro soils.	No.
<i>Wyethia reticulata</i> (El Dorado Co. mule ears)	None	None	CNPS-1B	Foothill chaparral and cismontane woodland associated with Gabbro soils.	No.



### Bald Eagle

The bald eagle (*Haliaeetus leucocephalus*) is a federal threatened and state endangered raptor that typically nests within one mile of large bodies of water including lakes, streams, or rivers. They prey on fish, waterfowl, squirrels, rabbits, and muskrats, and have been observed feeding on carrion. They are solitary nesters and may be monogamous. For the last 40 years, wintering adults have been documented in the Bass Lake area, which is located roughly 5 miles northeast of the study area.

The riparian corridor along Alder Creek contains the appropriate nesting and foraging habitat.

### Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is a raptor species currently listed as threatened in California by the CDFG. They commonly nest in tall cottonwoods, valley oaks, or willows associated with riparian corridors, grassland, irrigated pasture, and cropland with a high density of rodents. The Central Valley population typically breeds and nests in late spring through early summer before migrating to Central and South America for the winter. The closest recorded occurrence by the CNDDDB is approximately 1 mile directly south of the study area.

The open fields support suitable foraging habitat, and the large trees in the study area provide adequate nesting sites.

### Cooper's Hawk

Cooper's hawk (*Accipiter cooperi*), which is also known as the blue darter or chicken hawk, is listed by CDFG as a species of special concern. This raptor is an ambush predator that prefers to forage in or near wooded locations for birds, domestic poultry, and small mammals. Unlike falcons which use their beaks to kill, Cooper's hawks subdue prey by continuously squeezing with talon-equipped feet. It has been observed on occasion drowning captured prey in water. This species prefers tree nesting in wooded areas typically 10 to 60 feet above ground level.

The site supports foraging and nesting habitat for this species.

### White-Tailed Kite

White-tailed kite (*Elanus leucurus*), also called the black-shouldered kite, is a CDFG fully protected species. This non-migrating bird may attain a wingspan of approximately 40 inches and feeds primarily on insects, small mammals, reptiles, and amphibians, which it forages from open grasslands. It builds a platform-like nest of sticks in trees or shrubs and lays 3 to 5 eggs, but may brood a second clutch if prey is abundant. The kite's distinct style of hunting includes hovering before diving onto its target.

The site's open pasture provides foraging habitat for white-tailed kite while the Alder Creek corridor presents adequate nesting sites.

### Burrowing Owl

Burrowing owl (*Athene cunicularia*) is a ground nesting raptor that is afforded protection by CDFG as a species of special concern due to potentially declining populations in the Central Valley of California. They inhabit open grassland habitats where they nest in abandoned ground squirrel burrows and cavities associated with raised mounds, levees, or soft berm features.

The site contains nesting foraging habitat for burrowing owls.

### Tricolored Blackbird

Tricolored blackbirds (*Agelaius tricolor*) are listed by CDFG as a species of special concern due to declining populations in the region. They are colonial nesters preferring to utilize dense stands of cattails, bullrush, and/or blackberry thickets associated with drainages, ditches, and canals. Tricolored blackbirds have been observed about 1 mile north of the study area.

The study area contains the required nesting and foraging habitat.

### Great Egret

The great egret (*Ardea alba*) is listed by CDFG as a special animal. This bird usually forages alone in shallow open water and wetlands for fish, amphibians, and aquatic invertebrates. The species has recovered from historic persecution by plume hunters, but destruction of wetlands,

especially in the West where colonies are few and widely scattered, poses a current threat. Great egrets prefer breeding habitat in or near open waters and wetlands.

The appropriate nesting or foraging habitat is present.

#### Great Blue Heron

The great blue heron (*Ardea herodias*) is listed by CDFG as a special animal. This wading bird forages in wetlands and shallow open waters for fish, aquatic invertebrates, small mammals, and amphibians. It usually nests in rookeries that are situated in wetlands or near open waters.

The appropriate nesting or foraging habitat is present.

#### Double-Crested Cormorant

Double-crested cormorant (*Phalacrocorax auritus*) is listed by CDFG as a special animal. This diving aquatic bird is the most widespread cormorant in North America. It favors open water habitats such as ponds, rivers, estuaries, lagoons, and open coastlines where it forages for fish, amphibians, and crustaceans. It builds its nests near water in colonies on cliffs, rocks, or in trees.

Foraging and nesting habitat for double-crested cormorants occur within the project area.

#### California Red-Legged Frog

The California red-legged frog (*Rana aurora draytonii*) is a federally threatened and a CDFG species of special concern. This species is the largest indigenous frog west of the Continental divide. It was once harvested for food with an annual take of approximately 80,000 animals per year in the late 1800's and early 1900's. To bolster diminishing populations, the larger and much more aggressive bull frog (*Rana catesbiana*) was introduced from the eastern United States in 1886. Bull frogs, which are voracious feeders, extirpated the native frogs from much of its historic range. Habitat destruction associated with placer mining, drought, ranching, farming, and urbanization further reduced populations, and in June 1996, the frog was officially assigned protection under the Endangered Species Act. Presently, the red-legged frog is believed to occupy only about 10% of its original range. This species requires deeper (2' to 3') slow moving or still aquatic habitats with abundant emergent vegetation, but it is known also to forage and disperse in nearby uplands.

On March 13, 2001, the service designated approximately 4.1 million acres as California red-legged frog critical habitat, or habitat that has been deemed as essential to the survival and recovery of the species. However, on November 6, 2002, a U.S. District Court ordered the service to submit a new critical habitat proposal citing deficiencies in the initial economic impact analysis. The service was mandated to adopt a new final rule no later than November 2005. To date thirty-one new Units have been proposed and are presently undergoing the review process. According to the service's Sacramento Office website, Unit 3 (Weber Creek/Consumnes Unit) is the closest proposed critical habitat to the project site; Unit 3 is located at least 12 miles to the east.

The site contains the appropriate habitat for red-legged frogs.

#### Northwestern Pond Turtle

The northwestern pond turtle (*Clemmys marmorata marmorata*) is a California species of special concern. Its preferred habitat includes streams, large rivers, marshes, and canals with slow-moving water. Although the turtles must live near water, they can tolerate drought by burrowing into the muddy beds of dried drainages. This species feeds mainly on invertebrates such as insects and worms, but will also consume small fish, frogs, mammals, and some plants. Northwestern pond turtle predators include raccoons, coyotes, raptors, weasels, large fish, and bullfrogs. This species breeds from mid to late spring and may live up to 50 years.

The site contains appropriate habitat to support this species.

#### Western Spadefoot Toad

The western spadefoot toad (*Spea hamondii*) is a California species of special concern. It is a nocturnally active animal, and prefers to forage in grassland, scrub and chaparral for a variety of insects, worms, and other invertebrates. This species breeds from January to May in vernal pools, pools in ephemeral stream courses, and other fish-free water features. Females commonly lay more than 500 eggs in one season. The tadpoles develop in 3 to 11 weeks, and must complete their metamorphosis before the temporary pools dry.

The study area supports the appropriate breeding or foraging habitat for this species.

### Vernal Pool Branchiopods

The federally threatened vernal pool fairy shrimp (*Branchinecta lynchi*) and the endangered vernal pool tadpole shrimp (*Lepidurus packardii*) as well as the non-listed California linderiella (*Linderiella occidentalis*) have been documented by the CNDDB as occurring within the proximity of the study area. Due to the dearth of available species distribution information and its high potential for future listing, we also included the non-listed midvalley fairy shrimp (*Branchinecta mesovallensis*) in our special status species habitat assessment. These branchiopod species exclusively inhabit vernal pools or other seasonally ponded wetlands that sustain inundation during the winter before drying in the late spring. Several occurrences of vernal pool branchiopods have been recorded one-half mile southwest of the study area.

The study area contains numerous vernal pools and other ephemeral water features, which may support the above branchiopods.

### Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle (*Desmocerus californicus*) is a federal threatened species that is dependent upon the elderberry plant (*Sambucus sp.*) as a primary host species. Elderberry shrubs are a common component of riparian areas throughout the Sacramento Valley region, and they have been documented as occurring at numerous locations in the vicinity of the study area.

Given the presence of elderberry shrubs in the study area, the valley elderberry longhorn beetle may potentially occur within the study area.

### Special Status Plants Requiring Gabbro Soils

Six special status species plants associated with the mildly acidic Gabbro soils are identified on the CNDDB as occurring near the study area. These include Pine Hill ceanothus (*Ceanothus roderickii*), Pine Hill flannelbush (*Fremontodon californicum decumbens*), El Dorado bedstraw (*Galium californicum sierrae*), Layne's ragwort (*Packera layneae*), and El Dorado mule ears (*Wyethia reticulata*). Gabbro soils are derived from igneous rock and possess peculiar characteristics such as high concentrations of magnesium, iron, nickel, chromium, and cobalt and low amounts of calcium and phosphorus. This unusual soil has resulted in the evolution of a unique community of plants, many of which are only found in El Dorado County.

Most of these plants have only been documented in chaparral or cismontane woodland associated with the Gabbro soils region around Pine Hill. The absence of suitable habitat in the study area would eliminate these Gabbro associated plants from occurring in the study area.

The CNDDDB also lists the presence of two other sensitive plant species associated with Gabbro soils within proximity of the site. Brisbee Peak rush-rose (*Helianthemum suffrutescens*) and Red Hills soaproot (*Chlorogalum grandiflorum*) have been documented in the Gabbro soil regions, but are known to grow on other soil types as well. Both occur in chaparral, but Red Hills soaproot is also found in cismontane woodlands, and lower montane coniferous forest.

Since the appropriate habitat is not present within the study area, it is unlikely that either species occurs within the study area.

The CNDDDB also includes Brandegee's clarkia (*Clarkia biloba brandegeae*), which is a CNPS list 1B species, as present within the Clarksville quadrangle. This species is generally associated with chaparral and cismontane woodland, but is also documented in foothill oak woodland and grassland.

Habitat for this species occurs within the study area.

#### Plants Associated with Vernal Pools or Other Wet Habitats

Special status plant species identified on the CNDDDB as occurring within close proximity to the site include Sacramento orcutt grass (*Orcuttia viscida*), slender orcutt grass (*Orcuttia tenuis*), pin cushion navarretia (*Navarretia myersii myersii*), Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*), and legenere (*Legenere limosa*). All are strongly associated with vernal pools and other seasonally ponded wetlands. Tuolumne button-celery (*Eryngium pinnatisectum*) grows in vernal pools, but it is also associated with other habitats such as cismontane woodland and lower coniferous montane forests. Bogg's Lake hedge-hyssop (*Gratiola heterosepala*) is found in vernal pools or other seasonally inundated wetlands as well as the margins of lakes and ponds.

The required wet habitats for all the above species are present in the study area.

### **SUMMARY OF SPECIAL STATUS SPECIES HABITAT ASSESSMENT**

Several special status animals may occur within the study area based on the presence of the appropriate habitat. These include American badger, Cooper's hawk, tricolored blackbird, great

egret, great blue heron, burrowing owl, Swainson's hawk, white-tailed kite, bald eagle, double-crested cormorant, northwestern pond turtle, California red-legged frog, western spadefoot toad, vernal pool fairy shrimp, mid-valley fairy shrimp, valley elderberry longhorn beetle, vernal pool tadpole shrimp, and California linderiella. If future development of the study area will occur during the raptor nesting season, which extends from February to September, we recommend that a pre-construction nesting survey be completed two weeks prior to the start of work.

Lastly, the site may provide habitat for a number of special status plants such as Brandegee's clarkia, Ahart's dwarf rush, Bogg's Lake hedge-hyssop, legenere, pin cushion navarretia, slender orcutt grass, and Sacramento orcutt grass.

# APPENDIX A

## DATA FORMS



GIBSON & SKORDAL

ROUTINE WETLAND DETERMINATION  
DATA FORM

Project/Site: <u>Carpenter Ranch</u>	Date: <u>August 19, 2005</u>
Applicant/Owner: <u>Callers International</u>	City/County: <u>Sacramento Co.</u>
Investigator(s): <u>AH/JG</u>	State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No	Community ID: <u>Seep</u>
Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No	Transect ID: <u>1</u>
Is the area a potential Problem Area? (If needed, explain on reverse.) <input type="radio"/> Yes <input checked="" type="radio"/> No	Data Point ID: <u>1A</u>

VEGETATION

Plant Species				Plant Species			
Dominant (D) - Associate (A)		Stratum	Indicator	Dominant (D) - Associate (A)		Stratum	Indicator
1. <u>Paspalum dilatatum</u>	<u>D</u>	<u>H</u>	<u>FAC</u>	9. <u>Xanthium strumarium</u>	<u>A</u>	<u>H</u>	<u>FAC+</u>
2. <u>Mercurialis</u>	<u>D</u>	<u>H</u>	<u>OBL</u>	10. <u>Cynodon dactylon</u>	<u>D</u>	<u>H</u>	<u>FAC</u>
3. <u>Raietduchia</u>				11. <u>Lycopersicon</u>	<u>D</u>	<u>H</u>	<u>OBL</u>
4. <u>densiflora</u>	<u>A</u>	<u>H</u>	<u>OBL</u>	12.			
5. <u>Carex sp.</u>	<u>A</u>	<u>H</u>	<u>--</u>	13.			
6. <u>Echinocloa</u>				14.			
7. <u>crusgalli</u>	<u>A</u>	<u>H</u>	<u>FACW</u>	15.			
8. <u>Polygonum sp.</u>	<u>A</u>	<u>H</u>	<u>--</u>	16.			

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-).  $\frac{4}{4} = 100$

Remarks:

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p><input type="checkbox"/> Streams, Lake, or Tide Gauge</p> <p><input type="checkbox"/> Aerial Photographs</p> <p><input type="checkbox"/> Other</p> <p><input type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input type="checkbox"/> Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p><input type="checkbox"/> Water Marks</p> <p><input type="checkbox"/> Drift Lines</p> <p><input type="checkbox"/> Sediment Deposits/Organic Detritus</p> <p><input type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p><input type="checkbox"/> Water-Stained Leaves</p> <p><input type="checkbox"/> Local Soil Survey Data</p> <p><input checked="" type="checkbox"/> FAC-Neutral Test</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depths of Surface Water: <u>—</u> (in.)</p> <p>Depth to Free Water in Pit: <u>—</u> (in.)</p> <p>Depth to Saturated Soil: <u>—</u> (in.)</p>	

Remarks:

Soil was very moist at surface in August.

(107)

Map Unit Name

(Series and Phase): Argosol - Auburn complex 3.8% slope

Drainage Class: well drained

Taxonomy (Subgroup):

Mollic Haploxerist  
Ruptic - Lithic Xerochrept

Field Observations

Confirm Mapped Type?

Yes ☒ No

**Profile Description:**

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>8</u>	<u>10YR3/1</u>	<u>10YR3/6</u>	<u>Common, distinct</u>	<u>Sandy loam</u>

**Hydric Soil Indicators:**

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☒ Gleyed or Low-Chroma Colors

- ☐ Concretion in upper 3 inches
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks:

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?

☒ Yes ☐ No

Wetland Hydrology Present?

☒ Yes ☐ No

Hydric Soils Present?

☒ Yes ☐ No

Is this Data Point Within a Wetland?

☒ Yes ☐ No

Remarks:

1A

GIBSON & SKORDAL

ROUTINE WETLAND DETERMINATION  
DATA FORM

Project/Site: <u>Carpenter Ranch</u> Applicant/Owner: <u>Calliers International</u> Investigator(s): <u>AH/JG</u>	Date: <u>August 19, 2005</u> City/County: <u>Sacramento Co.</u> State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: <u>Annual grasslands/Non-native</u> Transect ID: <u>1</u> Data Point ID: <u>1B</u>

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Species Dominant (D) - Associated (A)	Stratum	Indicator
1. <u>Holcus virgatus</u> D	<u>H</u>	<u>LPL</u>	9. _____	_____	_____
2. <u>Lactuca perfoliata</u> D	<u>H</u>	<u>FAC</u>	10. _____	_____	_____
3. <u>Leontodon</u>	<u>H</u>	_____	11. _____	_____	_____
4. <u>Lyssichiton</u> D	_____	<u>FACU</u>	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 1/3 = 33

Remarks: \_\_\_\_\_

HYDROLOGY

<p>___ Recorded Data (Describe in Remarks):</p> <p>___ Streams, Lake, or Tide Gauge</p> <p>___ Aerial Photographs</p> <p>___ Other</p> <p>___ No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>___ Inundated</p> <p>___ Saturated in Upper 12 inches</p> <p>___ Water Marks</p> <p>___ Drift Lines</p> <p>___ Sediment Deposits/Organic Detritus</p> <p>___ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>___ Oxidized Root Channels in Upper 12 inches</p> <p>___ Water-Stained Leaves</p> <p>___ Local Soil Survey Data</p> <p>___ FAC-Neutral Test</p> <p>___ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depths of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	<p>Remarks: <u>None - No indicators present.</u></p>

157

Map Unit Name

(Series and Phase): Argowest - Auburn complex 3.8% slopeDrainage Class: well drained

Taxonomy (Subgroup):

Mollic Haploxerist  
Ruptic-Lithic Xerochrept

Field Observations

Confirm Mapped Type?

Yes ☒ No

## Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>6</u>	<u>10YR 4/3</u>	<u>10YR 5/2</u>	<u>common, distinct</u>	<u>Sandy loam</u>

## Hydric Soil Indicators:

- ☐ Histosol  
☐ Histic Epipedon  
☐ Sulfidic Odor  
☐ Aquic Moisture Regime  
☐ Reducing Conditions  
☐ Gleyed or Low-Chroma Colors

- ☐ Concretion in upper 3 inches  
☐ High Organic Content in Surface Layer in Sandy Soils  
☐ Organic Streaking in Sandy Soils  
☐ Listed on Local Hydric Soils List  
☐ Listed on National Hydric Soils List  
☐ Other (Explain in Remarks)

Remarks:

## WETLAND DETERMINATION

Hydrophytic Vegetation Present?

Yes

☒ No

Wetland Hydrology Present?

Yes

☒ No

Hydric Soils Present?

Yes

☒ No

Is this Data Point Within a Wetland?

Yes

☒ No

Remarks:

DP 1B

GIBSON & SKORDAL

ROUTINE WETLAND DETERMINATION  
DATA FORM

Project/Site: <u>Carpenter Ranch</u>	Date: <u>August 19, 2005</u>
Applicant/Owner: <u>Colliers International</u>	City/County: <u>Sacramento Co.</u>
Investigator(s): <u>MH/JG</u>	State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No	Community ID: <u>Wet Swale</u>
Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No	Transect ID: <u>2</u>
Is the area a potential Problem Area? (If needed, explain on reverse.) <input type="radio"/> Yes <input checked="" type="radio"/> No	Data Point ID: <u>2A</u>

VEGETATION

Plant Species			Plant Species		
Dominant (D) - Associate (A)	Stratum	Indicator	Dominant (D) - Associate (A)	Stratum	Indicator
1. <u>Lotus perenne</u> D	H	FAC*	9. _____	_____	_____
2. <u>Polypogon</u> D	H	_____	10. _____	_____	_____
3. <u>monspeliensis</u>	_____	FACW+	11. _____	_____	_____
4. <u>Eragrostis ussuri</u> D	H	FACW	12. _____	_____	_____
5. <u>Setaria peruviana</u> D	H	FAC	13. _____	_____	_____
6. <u>Hemizonia fitchii</u> A	H	UPL	14. _____	_____	_____
7. <u>Leonodon</u> A	H	_____	15. _____	_____	_____
8. <u>leyssii</u>	_____	FACU	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 3/3 = 100

Remarks:

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>Streams, Lake, or Tide Gauge</p> <p>Aerial Photographs</p> <p>Other</p> <p>No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>Inundated</p> <p>Saturated in Upper 12 inches</p> <p>Water Marks</p> <p>Drift Lines</p> <p><input checked="" type="checkbox"/> Sediment Deposits/Organic Detritus</p> <p>Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>Oxidized Root Channels in Upper 12 inches</p> <p>Water-Stained Leaves</p> <p>Local Soil Survey Data</p> <p><input checked="" type="checkbox"/> FAC-Neutral Test</p> <p><input checked="" type="checkbox"/> Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depths of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	

Remarks: Also mottling also present.

Map Unit Name (Series and Phase): Argent-Auburn complex 3.8% slope Drainage Class: well drained  
 Taxonomy (Subgroup): Mullic Haploxerist Field Observations: well drained  
Ruptic-lithic Xerochrept Confirm Mapped Type? Yes ☒ No

**Profile Description:**

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
8	10YR5/2	10YR 4/6	Common/distinct	Sandy loam

**Hydric Soil Indicators:**

- |   |   |
|---|---|
| <input type="checkbox"/> Histosol                               | <input type="checkbox"/> Concretion in upper 3 inches                         |
| <input type="checkbox"/> Histic Epipedon                        | <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils |
| <input type="checkbox"/> Sulfidic Odor                          | <input type="checkbox"/> Organic Streaking in Sandy Soils                     |
| <input type="checkbox"/> Aquic Moisture Regime                  | <input type="checkbox"/> Listed on Local Hydric Soils List                    |
| <input type="checkbox"/> Reducing Conditions                    | <input type="checkbox"/> Listed on National Hydric Soils List                 |
| <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors | <input type="checkbox"/> Other (Explain in Remarks)                           |

Remarks:

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?	<input checked="" type="radio"/> Yes <input type="radio"/> No	Is this Data Point Within a Wetland?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Wetland Hydrology Present?	<input checked="" type="radio"/> Yes <input type="radio"/> No		
Hydric Soils Present?	<input checked="" type="radio"/> Yes <input type="radio"/> No		

Remarks:

2A

**GIBSON & SKORDAL**

**ROUTINE WETLAND DETERMINATION  
DATA FORM**

<b>Project/Site:</b> <u>Carpenter Ranch</u> <b>Applicant/Owner:</b> <u>Callers International</u> <b>Investigator(s):</b> <u>MH/JG</u>	<b>Date:</b> <u>August 19, 2005</u> <b>City/County:</b> <u>Sacramento Co.</u> <b>State:</b> <u>CA</u>
<b>Do Normal Circumstances exist on the site?</b> <input checked="" type="radio"/> Yes <input type="radio"/> No <b>Is the site significantly disturbed</b> <b>(Atypical Situation)?</b> Yes <input checked="" type="radio"/> No <b>Is the area a potential Problem Area?</b> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	<b>Community ID:</b> <u>Annual Grasslands/Non-Native</u> <b>Transect ID:</b> <u>2</u> <b>Data Point ID:</b> <u>2B</u>

**VEGETATION**

Plant Species <u>Dominant (D) - Associate (A)</u>	<u>Stratum</u>	<u>Indicator</u>	Plant Species <u>Dominant (D) - Associated (A)</u>	<u>Stratum</u>	<u>Indicator</u>
1. <u>Cotus purshianus D</u>	<u>H</u>	<u>FAC</u>	9. _____	_____	_____
2. <u>Thymococcus virgatus D</u>	<u>H</u>	<u>LPL</u>	10. _____	_____	_____
3. <u>Cotus perenne A</u>	<u>H</u>	<u>FAC*</u>	11. _____	_____	_____
4. <u>Bromus mollis A</u>	<u>H</u>	<u>FACU</u>	12. _____	_____	_____
5. <u>Hordeum hystrix A</u>	<u>H</u>	<u>FAC</u>	13. _____	_____	_____
6. <u>Leontodon D</u>	<u>H</u>	<u>FACU</u>	14. _____	_____	_____
7. <u>leyseri</u>	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-).       $\frac{1}{3} = 33$

Remarks:

**HYDROLOGY**

<b>Recorded Data (Describe in Remarks):</b> _____ Streams, Lake, or Tide Gauge _____ Aerial Photographs _____ Other  _____ No Recorded Data Available	<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators:</b> _____ Inundated _____ Saturated in Upper 12 inches _____ Water Marks _____ Drift Lines _____ Sediment Deposits/Organic Detritus _____ Drainage Patterns in Wetlands <b>Secondary Indicators (2 or more required):</b> _____ Oxidized Root Channels in Upper 12 inches _____ Water-Stained Leaves _____ Local Soil Survey Data _____ FAC-Neutral Test _____ Other (Explain in Remarks)
<b>Field Observations:</b>  <b>Depths of Surface Water:</b> _____ (in.)  <b>Depth to Free Water in Pit:</b> _____ (in.)  <b>Depth to Saturated Soil:</b> _____ (in.)	

Remarks:

no indicators

(107)

Map Unit Name

(Series and Phase): Argosol - Auburn complex 3.8% slope

Drainage Class: well drained

Taxonomy (Subgroup):

Mollic Haploxerist  
Ruptic-Lithic Xerochrept

Field Observations

Confirm Mapped Type?

Yes ☒ No

**Profile Description:**

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>6</u>	<u>10YR3/3</u>	<u>10YR4/6</u>	<u>common / distinct</u>	<u>Sandy loam</u>

**Hydric Soil Indicators:**

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors

- ☐ Concretion in upper 3 inches
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks:

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?

Yes

☒ No

Wetland Hydrology Present?

Yes

☒ No

Hydric Soils Present?

Yes

☒ No

Is this Data Point Within a Wetland?

Yes

☒ No

Remarks:



**GIBSON & SKORDAL**

**ROUTINE WETLAND DETERMINATION  
DATA FORM**

Project/Site: <u>Carpenter Ranch</u> Applicant/Owner: <u>Calipers International</u> Investigator(s): <u>MH/JG</u>	Date: <u>August 19, 2005</u> City/County: <u>Sacramento Co.</u> State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? Yes <input type="radio"/> No <input checked="" type="radio"/> Is the area a potential Problem Area? (If needed, explain on reverse.) Yes <input type="radio"/> No <input checked="" type="radio"/>	Community ID: <u>Non-Aquatic Ann. Grassland</u> Transect ID: <u>3</u> Data Point ID: <u>3</u>

**VEGETATION**

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Species Dominant (D) - Associated (A)	Stratum	Indicator
1. <u>Holcus virgatus</u> D	<u>H</u>	<u>CPL</u>	9. _____	_____	_____
2. <u>Lolium perenne</u> D	<u>H</u>	<u>FAC*</u>	10. _____	_____	_____
3. <u>Hordeum hystrix</u> D	<u>H</u>	<u>FAC</u>	11. _____	_____	_____
4. <u>Leontodon leucoseri</u> D	<u>H</u>	<u>FACU</u>	12. _____	_____	_____
5. <u>Lolium perenne</u> A	<u>H</u>	<u>FAC</u>	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 3/4 = 50

Remarks: \_\_\_\_\_

**HYDROLOGY**

___ Recorded Data (Describe in Remarks): ___ Streams, Lake, or Tide Gauge ___ Aerial Photographs ___ Other  ___ No Recorded Data Available	<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators:</b> ___ Inundated ___ Saturated in Upper 12 inches ___ Water Marks ___ Drift Lines ___ Sediment Deposits/Organic Detritus ___ Drainage Patterns in Wetlands <b>Secondary Indicators (2 or more required):</b> ___ Oxidized Root Channels in Upper 12 inches ___ Water-Stained Leaves ___ Local Soil Survey Data ___ FAC-Neutral Test ___ Other (Explain in Remarks)
<b>Field Observations:</b> Depths of Surface Water: _____ (in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: _____ (in.)	

Remarks: no boot prints - no indicators

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Map Unit Name

(Series and Phase): Argus - Auburn complex 3.8% slope Drainage Class: well drained

Taxonomy (Subgroup):

Mollie Haploxerist  
Ruptic - Lithic Xerochrept

Field Observations

Confirm Mapped Type?

Yes ☒ No

## Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
6	2.5YR4/2	10YR4/6	Common / Distinct	Sandy loam

## Hydric Soil Indicators:

- ☐ Histosol  
☐ Histic Epipedon  
☐ Sulfidic Odor  
☐ Aquic Moisture Regime  
☐ Reducing Conditions  
☒ Gleyed or Low-Chroma Colors

- ☐ Concretion in upper 3 inches  
☐ High Organic Content in Surface Layer in Sandy Soils  
☐ Organic Streaking in Sandy Soils  
☐ Listed on Local Hydric Soils List  
☐ Listed on National Hydric Soils List  
☐ Other (Explain in Remarks)

Remarks:

## WETLAND DETERMINATION

Hydrophytic Vegetation Present?

Yes

☒ No

Wetland Hydrology Present?

Yes

☒ No

Hydric Soils Present?

☒ Yes

No

Is this Data Point Within a Wetland?

Yes

☒ No

Remarks:

OP3This data point is located between two ~~so~~ swales.

**GIBSON & SKORDAL**

**ROUTINE WETLAND DETERMINATION  
DATA FORM**

Project/Site: <u>Carpenter Ranch</u> Applicant/Owner: <u>Calliers International</u> Investigator(s): <u>AH/JG</u>	Date: <u>August 19, 2005</u> City/County: <u>Sacramento Co.</u> State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? (If needed, explain on reverse.) <input type="radio"/> Yes <input checked="" type="radio"/> No	Community ID: <u>Suele</u> Transect ID: <u>4</u> Data Point ID: <u>4A</u>

**VEGETATION**

Plant Species	Stratum	Indicator	Plant Species	Stratum	Indicator
<u>Dominant (D) - Associate (A)</u>			<u>Dominant (D) - Associate (A)</u>		
1. <u>Glyceria sp</u> <u>D</u>	<u>H</u>	<u>OBL</u>	9. _____	_____	_____
2. <u>Plantago virginica</u> <u>D</u>	<u>H</u>	<u>OBL</u>	10. _____	_____	_____
3. <u>Eriogonum fasciculatum</u> <u>D</u>	<u>H</u>	<u>FACW</u>	11. _____	_____	_____
4. <u>Hemizonia</u>	<u>H</u>		12. _____	_____	_____
5. <u>Stellaria</u> <u>A</u>	<u>H</u>	<u>UPL</u>	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 3/3 = 100

Remarks: \_\_\_\_\_

**HYDROLOGY**

<p>___ Recorded Data (Describe in Remarks):</p> <p>___ Streams, Lake, or Tide Gauge</p> <p>___ Aerial Photographs</p> <p>___ Other</p> <p>___ No Recorded Data Available</p>	<p><b>Wetland Hydrology Indicators:</b></p> <p><b>Primary Indicators:</b></p> <p>___ Inundated</p> <p>___ Saturated in Upper 12 inches</p> <p>___ Water Marks</p> <p>___ Drift Lines</p> <p><input checked="" type="checkbox"/> Sediment Deposits/Organic Detritus</p> <p>___ Drainage Patterns in Wetlands</p> <p><b>Secondary Indicators (2 or more required):</b></p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>___ Water-Stained Leaves</p> <p>___ Local Soil Survey Data</p> <p><input checked="" type="checkbox"/> FAC-Neutral Test</p> <p><input checked="" type="checkbox"/> Other (Explain in Remarks)</p>
<p><b>Field Observations:</b></p> <p>Depths of Surface Water: <u>      </u> (in.)</p> <p>Depth to Free Water in Pit: <u>      </u> (in.)</p> <p>Depth to Saturated Soil: <u>      </u> (in.)</p>	

Remarks: Hot prints & sigel metting present

Map Unit Name  
(Series and Phase): Argent-Auburn complex 3.8% slope Drainage Class: well drained  
 Taxonomy (Subgroup): Mollie Haploxeranth Field Observations  
Ruptic-Lithic Xerochrept Confirm Mapped Type? Yes ☒ No

**Profile Description:**

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>6</u>	<u>10YR 3/3</u>	<u>10YR 4/6</u>	<u>Common/Distinct</u>	<u>Sandy loam</u>

**Hydric Soil Indicators:**

- |   |   |
|---|---|
| <input type="checkbox"/> Histosol                         | <input type="checkbox"/> Concretion in upper 3 inches                         |
| <input type="checkbox"/> Histic Epipedon                  | <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils |
| <input type="checkbox"/> Sulfidic Odor                    | <input type="checkbox"/> Organic Streaking in Sandy Soils                     |
| <input checked="" type="checkbox"/> Aquic Moisture Regime | <input type="checkbox"/> Listed on Local Hydric Soils List                    |
| <input type="checkbox"/> Reducing Conditions              | <input type="checkbox"/> Listed on National Hydric Soils List                 |
| <input type="checkbox"/> Gleyed or Low-Chroma Colors      | <input type="checkbox"/> Other (Explain in Remarks)                           |

Remarks: Aquic moisture regime inferred from gisel matting.

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?	<input checked="" type="radio"/> Yes No	Is this Data Point Within a Wetland?	<input checked="" type="radio"/> Yes No
Wetland Hydrology Present?	<input checked="" type="radio"/> Yes No		
Hydric Soils Present?	<input checked="" type="radio"/> Yes No		

Remarks: DP 4A

**GIBSON & SKORDAL**

**ROUTINE WETLAND DETERMINATION  
DATA FORM**

Project/Site: <u>Carpenter Ranch</u> Applicant/Owner: <u>Callers International</u> Investigator(s): <u>AH/JG</u>	Date: <u>August 19, 2005</u> City/County: <u>Sacramento Co.</u> State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? Yes <input type="radio"/> No <input checked="" type="radio"/> Is the area a potential Problem Area? Yes <input type="radio"/> No <input checked="" type="radio"/> (If needed, explain on reverse.)	Community ID: <u>Annex/Grossland/Non-Active</u> Transect ID: <u>4</u> Data Point ID: <u>4B</u>

**VEGETATION**

Plant Species	Stratum	Indicator	Plant Species	Stratum	Indicator
<u>Dominant (D) - Associate (A)</u>			<u>Dominant (D) - Associated (A)</u>		
1. <u>Holcus</u>			9. <u>Ternstroemia</u> <input checked="" type="radio"/> <u>A</u>		
2. <u>virgate</u> <u>D</u>	<u>H</u>	<u>UPL</u>	10. <u>capit-medusa</u>	<u>H</u>	<u>UPL</u>
3. <u>Centaurea</u>			11. _____		
4. <u>solstitialis</u> <u>A</u>	<u>H</u>	<u>UPL</u>	12. _____		
5. <u>Lotus peruvianus</u> <u>A</u>	<u>H</u>	<u>FAC</u>	13. _____		
6. <u>Leontodon</u>			14. _____		
7. <u>legumini</u> <u>D</u>	<u>H</u>	<u>FACU</u>	15. _____		
8. <u>Avena fetis</u> <u>A</u>	<u>H</u>	<u>UPL</u>	16. _____		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0% = 0

Remarks:

**HYDROLOGY**

<p>___ Recorded Data (Describe in Remarks):</p> <p>___ Streams, Lake, or Tide Gauge</p> <p>___ Aerial Photographs</p> <p>___ Other</p> <p>___ No Recorded Data Available</p>	<p><b>Wetland Hydrology Indicators:</b></p> <p><b>Primary Indicators:</b></p> <p>___ Inundated</p> <p>___ Saturated in Upper 12 inches</p> <p>___ Water Marks</p> <p>___ Drift Lines</p> <p>___ Sediment Deposits/Organic Detritus</p> <p>___ Drainage Patterns in Wetlands</p> <p><b>Secondary Indicators (2 or more required):</b></p> <p>___ Oxidized Root Channels in Upper 12 inches</p> <p>___ Water-Stained Leaves</p> <p>___ Local Soil Survey Data</p> <p>___ FAC-Neutral Test</p> <p>___ Other (Explain in Remarks)</p>
<p><b>Field Observations:</b></p> <p>Depths of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	

Remarks:

Map Unit Name

(Series and Phase): Argowest - Auburn complex 3.8% slope

Drainage Class: well drained

Taxonomy (Subgroup):

Mollie Haploxerist  
Ruptic-lithic Xerochrept

Field Observations

Confirm Mapped Type?

Yes ☒ No

**Profile Description:**

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
4	10YR 3/3	10YR 4/6	Few / Distinct	Sandy lam

**Hydric Soil Indicators:**

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors

- ☐ Concretion in upper 3 inches
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks:

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?

Yes ☒ No

Wetland Hydrology Present?

Yes ☒ No

Hydric Soils Present?

Yes ☒ No

Is this Data Point Within a Wetland?

Yes ☒ No

Remarks:

DP 4B

GIBSON & SKORDAL

ROUTINE WETLAND DETERMINATION  
DATA FORM

Project/Site: <u>Carpenter Ranch</u>	Date: <u>August 19, 2005</u>
Applicant/Owner: <u>Callers International</u>	City/County: <u>Sacramento Co.</u>
Investigator(s): <u>AH/JG</u>	State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No	Community ID: <u>Vernal pool</u>
Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No	Transect ID: <u>5</u>
Is the area a potential Problem Area? (If needed, explain on reverse.) <input type="radio"/> Yes <input checked="" type="radio"/> No	Data Point ID: <u>5A</u>

VEGETATION

Plant Species			Plant Species		
Dominant (D) - Associate (A)	Stratum	Indicator	Dominant (D) - Associate (A)	Stratum	Indicator
1. <u>Eragrostis</u> <u>D</u>	<u>H</u>	<u>FACW</u>	9. _____	_____	_____
2. <u>usseyi</u>	_____	_____	10. _____	_____	_____
3. <u>Lolium perenne</u> <u>D</u>	<u>H</u>	<u>FAC*</u>	11. _____	_____	_____
4. <u>Glyceria sp.</u> <u>A</u>	<u>H</u>	<u>OBL</u>	12. _____	_____	_____
5. <u>Hordeum hystris</u> <u>A</u>	<u>H</u>	<u>FAC</u>	13. _____	_____	_____
6. <u>Holcus</u>	_____	_____	14. _____	_____	_____
7. <u>virgata</u> <u>A</u>	<u>H</u>	<u>UPL</u>	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 2/2 = 100

Remarks:

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>Streams, Lake, or Tide Gauge</p> <p>Aerial Photographs</p> <p>Other</p> <p>No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>Inundated</p> <p>Saturated in Upper 12 inches</p> <p>Water Marks</p> <p>Drift Lines</p> <p><input checked="" type="checkbox"/> Sediment Deposits/Organic Detritus</p> <p>Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>Water-Stained Leaves</p> <p>Local Soil Survey Data</p> <p><input checked="" type="checkbox"/> FAC-Neutral Test</p> <p><input checked="" type="checkbox"/> Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depths of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	

Remarks: Algal matting & hoof prints present.

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Map Unit Name  
(Series and Phase): White rock loam, 3-30% slopesDrainage Class: Somewhat Excessively DrainedTaxonomy (Subgroup): Lithic Xerorthent

Field Observations

Confirm Mapped Type?

Yes ☐ No ☒**Profile Description:**

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>6</u>	<u>10YR 4/2</u>	<u>10YR 5/6</u>	<u>Common/Distinct</u>	<u>Sandy loam</u>

**Hydric Soil Indicators:**

- ☐ Histosol  
☐ Histic Epipedon  
☐ Sulfidic Odor  
☐ Aquic Moisture Regime  
☐ Reducing Conditions  
☒ Gleyed or Low-Chroma Colors

- ☐ Concretion in upper 3 inches  
☐ High Organic Content in Surface Layer in Sandy Soils  
☐ Organic Streaking in Sandy Soils  
☐ Listed on Local Hydric Soils List  
☐ Listed on National Hydric Soils List  
☐ Other (Explain in Remarks)

Remarks:

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?

☒ Yes ☐ No

Wetland Hydrology Present?

☒ Yes ☐ No

Hydric Soils Present?

☒ Yes ☐ No

Is this Data Point Within a Wetland?

☒ Yes ☐ No

Remarks:

5A



# GIBSON & SKORDAL

## ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: <u>Carpenter Ranch -</u> Applicant/Owner: <u>Callers International</u> Investigator(s): <u>MH/JG</u>	Date: <u>August 19, 2005</u> City/County: <u>Sacramento Co.</u> State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: <u>Grassland, Annual/Non-Annual</u> Transect ID: <u>5</u> Data Point ID: <u>5B</u>

### VEGETATION

Plant Species	Stratum	Indicator	Plant Species	Stratum	Indicator
<u>Dominant (D) - Associate (A)</u>			<u>Dominant (D) - Associate (A)</u>		
1. <u>Holcus</u>	<u>D</u>	<u>FACU</u>	9. _____		
2. <u>Vulpia</u>	<u>H</u>	<u>FACU</u>	10. _____		
3. <u>Bromus mollis</u>	<u>D</u>	<u>FACU</u>	11. _____		
4. <u>Lolium perenne</u>	<u>D</u>	<u>FACU</u>	12. _____		
5. <u>Hordeum hystrix</u>	<u>A</u>	<u>FAC</u>	13. _____		
6. <u>Lotus purshianus</u>	<u>A</u>	<u>FAC</u>	14. _____		
7. <u>Leonodon</u>	<u>A</u>	<u>FAC</u>	15. _____		
8. <u>Leysseria</u>	<u>H</u>	<u>FACU</u>	16. _____		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0% = 0

Remarks:

### HYDROLOGY

Recorded Data (Describe in Remarks): <input type="checkbox"/> Streams, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: <b>Primary Indicators:</b> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits/Organic Detritus <input type="checkbox"/> Drainage Patterns in Wetlands <b>Secondary Indicators (2 or more required):</b> <input type="checkbox"/> Oxidized Root Channels in Upper 12 inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depths of Surface Water: _____ (in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: _____ (in.)	

Remarks:

Map Unit Name

(Series and Phase): White rock loam, 3-30% slopesDrainage Class: Somewhat Excessively Drained

Taxonomy (Subgroup):

Lithic Xerorthent

Field Observations

Confirm Mapped Type?

Yes ☐ No ☒**Profile Description:**

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>6</u>	<u>10YR 3/3</u>	<u>10YR 4/6</u>	<u>Common / Distinct</u>	<u>Sandy loam</u>

**Hydric Soil Indicators:**

- ☐ Histosol  
☐ Histic Epipedon  
☐ Sulfidic Odor  
☐ Aquic Moisture Regime  
☐ Reducing Conditions  
☐ Gleyed or Low-Chroma Colors

- ☐ Concretion in upper 3 inches  
☐ High Organic Content in Surface Layer in Sandy Soils  
☐ Organic Streaking in Sandy Soils  
☐ Listed on Local Hydric Soils List  
☐ Listed on National Hydric Soils List  
☐ Other (Explain in Remarks)

Remarks:

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?

Yes

No ☒

Wetland Hydrology Present?

Yes

No ☒

Hydric Soils Present?

Yes

No ☒

Is this Data Point Within a Wetland?

Yes

No ☒

Remarks:

5B

GIBSON & SKORDAL

ROUTINE WETLAND DETERMINATION  
DATA FORM

Project/Site: <u>Carpenter Ranch -</u>	Date: <u>August 19, 2005</u>
Applicant/Owner: <u>Callers International</u>	City/County: <u>Sacramento Co.</u>
Investigator(s): <u>MH/JG</u>	State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No	Community ID: <u>Ditch/Abandoned</u>
Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No	Transect ID: <u>6</u>
Is the area a potential Problem Area? (If needed, explain on reverse.) <input type="radio"/> Yes <input checked="" type="radio"/> No	Data Point ID: <u>6A</u>

VEGETATION

Plant Species			Plant Species		
Dominant (D) - Associate (A)	Stratum	Indicator	Dominant (D) - Associated (A)	Stratum	Indicator
1. <u>Mimulus guttatus</u> A	<u>H</u>	<u>OBL</u>	9. _____	_____	_____
2. <u>Rhynchospora</u>	_____	_____	10. _____	_____	_____
3. <u>Monarda mollis</u> D	<u>H</u>	<u>FACW</u>	11. _____	_____	_____
4. <u>Rumex crispus</u> A	<u>H</u>	<u>FACW</u>	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 1/1 = 100

Remarks:

HYDROLOGY

<p>___ Recorded Data (Describe in Remarks):</p> <p>___ Streams, Lake, or Tide Gauge</p> <p>___ Aerial Photographs</p> <p>___ Other</p> <p>___ No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>___ Inundated</p> <p>___ Saturated in Upper 12 inches</p> <p>___ Water Marks</p> <p>___ Drift Lines</p> <p><input checked="" type="checkbox"/> Sediment Deposits/Organic Detritus</p> <p>___ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>___ Oxidized Root Channels in Upper 12 inches</p> <p>___ Water-Stained Leaves</p> <p>___ Local Soil Survey Data</p> <p><input checked="" type="checkbox"/> FAC-Neutral Test</p> <p>___ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depths of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	

Remarks:

Hot prints present.

237

Map Unit Name

(Series and Phase): White rock loam, 3-30% slopesDrainage Class: Somewhat Excessively DrainedTaxonomy (Subgroup): Lithic Xerotherm

Field Observations

Confirm Mapped Type?

Yes

No

## Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>6</u>	<u>10YR 3/3</u>	<u>10YR 4/6</u>	<u>Common / Distinct</u>	<u>Sandy loam</u>

## Hydric Soil Indicators:

- ☐ Histosol  
☐ Histic Epipedon  
☐ Sulfidic Odor  
☐ Aquic Moisture Regime  
☐ Reducing Conditions  
☐ Gleyed or Low-Chroma Colors

- ☐ Concretion in upper 3 inches  
☐ High Organic Content in Surface Layer in Sandy Soils  
☐ Organic Streaking in Sandy Soils  
☐ Listed on Local Hydric Soils List  
☐ Listed on National Hydric Soils List  
☐ Other (Explain in Remarks)

Remarks:

## WETLAND DETERMINATION

Hydrophytic Vegetation Present?

Yes

No

Wetland Hydrology Present?

Yes

No

Hydric Soils Present?

Yes

No

Is this Data Point Within a Wetland?

Yes

No

Remarks:

# GIBSON & SKORDAL

## ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: <u>Carpenter Ranch -</u>	Date: <u>August 19, 2005</u>
Applicant/Owner: <u>Caltrans International</u>	City/County: <u>Sacramento Co.</u>
Investigator(s): <u>MH/JG</u>	State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No	Community ID: <u>Upland adjacent to Ditch</u>
Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No	Transect ID: <u>6</u>
Is the area a potential Problem Area? (If needed, explain on reverse.) <input type="radio"/> Yes <input checked="" type="radio"/> No	Data Point ID: <u>6B</u>

### VEGETATION

Plant Species				Plant Species			
Dominant (D) - Associate (A)	Stratum	Indicator		Dominant (D) - Associated (A)	Stratum	Indicator	
1. <u>Taraxacum</u> <u>D</u>	<u>H</u>			9. _____			
2. <u>Cypripedium</u>		<u>UPL</u>		10. _____			
3. <u>Holcus</u> <u>D</u>	<u>H</u>			11. _____			
4. <u>Virgata</u>		<u>UPL</u>		12. _____			
5. <u>Alnus</u> <u>A</u>	<u>H</u>	<u>UPL</u>		13. _____			
6. <u>Bromus</u> <u>A</u>	<u>H</u>	<u>FACU</u>		14. _____			
7. <u>Bromus</u> <u>A</u>	<u>H</u>	<u>UPL</u>		15. _____			
8. _____				16. _____			

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0

Remarks:

### HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>Streams, Lake, or Tide Gauge</p> <p>Aerial Photographs</p> <p>Other</p> <p>No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>Inundated</p> <p>Saturated in Upper 12 inches</p> <p>Water Marks</p> <p>Drift Lines</p> <p>Sediment Deposits/Organic Detritus</p> <p>Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>Oxidized Root Channels in Upper 12 inches</p> <p>Water-Stained Leaves</p> <p>Local Soil Survey Data</p> <p>FAC-Neutral Test</p> <p>Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depths of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	

Remarks:

237

Map Unit Name (Series and Phase): <u>White rock loam, 3-30% slopes</u>		Drainage Class: <u>Somewhat Excessively Drained</u>	
Taxonomy (Subgroup): <u>Lithic Xerorthent</u>		Field Observations Confirm Mapped Type? Yes <input type="radio"/> No <input checked="" type="radio"/>	
<b>Profile Description:</b>			
Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Texture, Concretions, Structure, etc.
<u>6</u>	<u>10YR 3/3</u>	<u>—</u>	<u>Sandy loam</u>

**Hydric Soil Indicators:**

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Concretion in upper 3 inches <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)
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**Remarks:**

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?	Yes	<input type="radio"/> No	Is this Data Point Within a Wetland?	Yes	<input type="radio"/> No
Wetland Hydrology Present?	Yes	<input type="radio"/> No		Remarks: <u>DP-6B</u>	
Hydric Soils Present?	Yes	<input type="radio"/> No			

GIBSON & SKORDAL

ROUTINE WETLAND DETERMINATION  
DATA FORM

Project/Site: <u>Carpenter Ranch</u>	Date: <u>August 19, 2005</u>
Applicant/Owner: <u>Enliven International</u>	City/County: <u>Sacramento Co.</u>
Investigator(s): <u>AH/JG</u>	State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No	Community ID: <u>Suck</u>
Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No	Transect ID: <u>7</u>
Is the area a potential Problem Area? (If needed, explain on reverse.) <input type="radio"/> Yes <input checked="" type="radio"/> No	Data Point ID: <u>7A</u>

VEGETATION

Plant Species			Plant Species		
Dominant (D) - Associate (A)	Stratum	Indicator	Dominant (D) - Associate (A)	Stratum	Indicator
1. <u>Baccharis</u>		OBL	9. <u>Leersia oryzoides</u>	H	OBL
2. <u>densiflora</u>	A	H	10. <u>Ludwigia peploides</u>	H	OBL
3. <u>Mimulus guttatus</u>	A	H	11. <u>Alisma plantago-</u>		
4. <u>Cyperus</u> sp.	A	H	12. <u>sp. sp.</u>	A	OBL
5. <u>Xanthium strumarium</u>	A	H	13.		
6. <u>Meathis pulgum</u>	A	H	14.		
7. <u>Polygonum</u> sp.	D	H	15.		
8. <u>Desmodium dilatatum</u>	D	H	16.		

Percent of Dominant Species that are OBL, FACW or FAC  $\geq \frac{3}{4} \geq 75$   
(excluding FAC-).

Remarks:

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>Streams, Lake, or Tide Gauge</p> <p>Aerial Photographs</p> <p>Other</p> <p>No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>Inundated</p> <p>Saturated in Upper 12 inches</p> <p>Water Marks</p> <p>Drift Lines</p> <p><input checked="" type="checkbox"/> Sediment Deposits/Organic Detritus</p> <p>Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>Oxidized Root Channels in Upper 12 inches</p> <p>Water-Stained Leaves</p> <p>Local Soil Survey Data</p> <p><input checked="" type="checkbox"/> FAC-Neutral Test</p> <p><input checked="" type="checkbox"/> Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depths of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	

Remarks:

Good prints & local wetting present.

Map Unit Name  
(Series and Phase): Argowit-Auburn complex 3.8% slope Drainage Class: well drained  
Taxonomy (Subgroup): Mollic Haploxerist Field Observations  
Ruptic-Lithic Xerochrept Confirm Mapped Type? Yes ☒ No

**Profile Description:**

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.

**Hydric Soil Indicators:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Histosol         | <input type="checkbox"/> Concretion in upper 3 inches                         |
| <input type="checkbox"/> Histic Epipedon             | <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils |
| <input type="checkbox"/> Sulfidic Odor               | <input type="checkbox"/> Organic Streaking in Sandy Soils                     |
| <input type="checkbox"/> Aquic Moisture Regime       | <input type="checkbox"/> Listed on Local Hydric Soils List                    |
| <input type="checkbox"/> Reducing Conditions         | <input type="checkbox"/> Listed on National Hydric Soils List                 |
| <input type="checkbox"/> Gleyed or Low-Chroma Colors | <input type="checkbox"/> Other (Explain in Remarks)                           |

Remarks:

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?	<input checked="" type="radio"/> Yes <input type="radio"/> No	Is this Data Point Within a Wetland?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Wetland Hydrology Present?	<input checked="" type="radio"/> Yes <input type="radio"/> No		
Hydric Soils Present?	<input checked="" type="radio"/> Yes <input type="radio"/> No		

Remarks:

7A



GIBSON & SKORDAL

ROUTINE WETLAND DETERMINATION  
DATA FORM

Project/Site: <u>Carpenter Ranch</u>	Date: <u>August 19, 2005</u>
Applicant/Owner: <u>Callers International</u>	City/County: <u>Sacramento Co.</u>
Investigator(s): <u>AH/JG</u>	State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No	Community ID: <u>Grassland/Non-Native Annual</u>
Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No	Transect ID: <u>7</u>
Is the area a potential Problem Area? (If needed, explain on reverse.) <input type="radio"/> Yes <input checked="" type="radio"/> No	Data Point ID: <u>7B</u>

VEGETATION

Plant Species			Plant Species		
Dominant (D) - Associate (A)	Stratum	Indicator	Dominant (D) - Associated (A)	Stratum	Indicator
1. <u>Lotus perfoliatus D</u>	<u>H</u>	<u>FA</u>	9. _____	_____	_____
2. <u>Hibiscus</u>	_____	_____	10. _____	_____	_____
3. <u>Vinosa D</u>	<u>H</u>	<u>UPL</u>	11. _____	_____	_____
4. <u>Centaurea</u>	_____	_____	12. _____	_____	_____
5. <u>substituta A</u>	<u>H</u>	<u>UPL</u>	13. _____	_____	_____
6. <u>Bromus mollis A</u>	<u>H</u>	<u>FACU</u>	14. _____	_____	_____
7. <u>Tenistherum D</u>	_____	_____	15. _____	_____	_____
8. <u>capit-medusa</u>	<u>H</u>	<u>UPL</u>	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 1/3 = 33

Remarks:

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>Streams, Lake, or Tide Gauge</p> <p>Aerial Photographs</p> <p>Other</p> <p>No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>Inundated</p> <p>Saturated in Upper 12 inches</p> <p>Water Marks</p> <p>Drift Lines</p> <p>Sediment Deposits/Organic Detritus</p> <p>Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>Oxidized Root Channels in Upper 12 inches</p> <p>Water-Stained Leaves</p> <p>Local Soil Survey Data</p> <p>FAC-Neutral Test</p> <p>Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depths of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
Remarks:	

Map Unit Name (Series and Phase): <u>Argowest - Auburn complex 3.8% slope</u>		Drainage Class: <u>well drained</u>
Taxonomy (Subgroup): <u>Mollic Haploxerist Ruptic - Lithic Xerochrept</u>		Field Observations Confirm Mapped Type? Yes <input type="radio"/> No <input checked="" type="radio"/>

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>8</u>	<u>10YR 3/3</u>	<u>—</u>	<u>None</u>	<u>Sandy loam</u>

**Hydric Soil Indicators:**

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Concretion in upper 3 inches <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)
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Remarks:

### WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	No <input checked="" type="radio"/>	Is this Data Point Within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Wetland Hydrology Present?	Yes	No <input checked="" type="radio"/>	
Hydric Soils Present?	Yes	No <input checked="" type="radio"/>	

Remarks: OP 7B

GIBSON & SKORDAL

ROUTINE WETLAND DETERMINATION  
DATA FORM

Project/Site: <u>Carpenter Ranch</u>	Date: <u>August 19, 2005</u>
Applicant/Owner: <u>Calipers International</u>	City/County: <u>Sacramento Co.</u>
Investigator(s): <u>MH/JG</u>	State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No	Community ID: <u>Grassland / non-native, Annual</u>
Is the site significantly disturbed (Atypical Situation)? Yes <input type="radio"/> No <input checked="" type="radio"/>	Transect ID: <u>8</u>
Is the area a potential Problem Area? (If needed, explain on reverse.) Yes <input type="radio"/> No <input checked="" type="radio"/>	Data Point ID: <u>8</u>

VEGETATION

Plant Species				Plant Species			
Dominant (D) - Associate (A)	Stratum	Indicator		Dominant (D) - Associated (A)	Stratum	Indicator	
1. <u>Lolium perenne</u> D	H	FAC*		9. <u>Bromus mollis</u> A	H	FAC*	
2. <u>Holcus</u>				10.			
3. <u>virgate</u> D	H	CPL		11.			
4. <u>Eryngium</u>				12.			
5. <u>virgati</u> A	H	FACW		13.			
6. <u>Leontodon</u>				14.			
7. <u>leucoseri</u> A	H	FACW		15.			
8. <u>Hordeum hystrix</u> A	H	FAC		16.			

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-).  $\frac{1}{2} = 50$

Remarks:

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>Streams, Lake, or Tide Gauge</p> <p>Aerial Photographs</p> <p>Other</p> <p>No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>Inundated</p> <p>Saturated in Upper 12 inches</p> <p>Water Marks</p> <p>Drift Lines</p> <p>Sediment Deposits/Organic Detritus</p> <p>Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>Oxidized Root Channels in Upper 12 inches</p> <p>Water-Stained Leaves</p> <p>Local Soil Survey Data</p> <p>FAC-Neutral Test</p> <p>Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depths of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	

Remarks:

no indicators present

Map Unit Name (Series and Phase): <u>Argowest - Auburn complex 3.8% slope</u>		Drainage Class: <u>well drained</u>	
Taxonomy (Subgroup): <u>Mullic Haploxerist Ruptic-Lithic Xerochrept</u>		Field Observations Confirm Mapped Type? Yes <input type="radio"/> No <input checked="" type="radio"/>	

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>8</u>	<u>7.5YR3/4</u>	<u>-</u>	<u>None</u>	<u>Sandy loam</u>

**Hydric Soil Indicators:**

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Concretion in upper 3 inches <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)
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Remarks:

### WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Is this Data Point Within a Wetland?	Yes <input type="radio"/> No <input checked="" type="radio"/>
Wetland Hydrology Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>		
Hydric Soils Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>		

Remarks: DP8

**GIBSON & SKORDAL**

**ROUTINE WETLAND DETERMINATION  
DATA FORM**

<b>Project/Site:</b> <u>Carpenter Ranch</u> <b>Applicant/Owner:</b> <u>Enlbers International</u> <b>Investigator(s):</b> <u>MH/JG</u>	<b>Date:</b> <u>August 19, 2005</u> <b>City/County:</b> <u>Sacramento Co.</u> <b>State:</b> <u>CA</u>
<b>Do Normal Circumstances exist on the site?</b> <input checked="" type="radio"/> Yes <input type="radio"/> No <b>Is the site significantly disturbed (Atypical Situation)?</b> <input type="radio"/> Yes <input checked="" type="radio"/> No <b>Is the area a potential Problem Area? (If needed, explain on reverse.)</b> <input type="radio"/> Yes <input checked="" type="radio"/> No	<b>Community ID:</b> <u>Alder Ct w/ Riparian wetlands</u> <b>Transect ID:</b> <u>9A</u> <b>Data Point ID:</b> <u>9</u>

**VEGETATION**

Plant Species	Stratum	Indicator	Plant Species	Stratum	Indicator
<u>1. Leersia oryzoides D</u>	<u>H</u>	<u>OBL</u>	<u>9.</u>		
<u>2. Paspalum dilatatum D</u>	<u>H</u>	<u>FAC</u>	<u>10.</u>		
<u>3. Paspalum distichum D</u>	<u>H</u>	<u>OBL</u>	<u>11.</u>		
<u>4. Typha latifolia A</u>	<u>H</u>	<u>OBL</u>	<u>12.</u>		
<u>5. Cyperus sp. A</u>	<u>H</u>	<u>--</u>	<u>13.</u>		
<u>6. Scirpus americanus A</u>	<u>H</u>	<u>OBL</u>	<u>14.</u>		
<u>7. Polygonum sp. A</u>		<u>--</u>	<u>15.</u>		
<u>8.</u>			<u>16.</u>		

**Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-).** 3/3 = 100

**Remarks:**

**HYDROLOGY**

<b>Recorded Data (Describe in Remarks):</b> <input type="checkbox"/> Streams, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other  <input type="checkbox"/> No Recorded Data Available	<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators:</b> <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits/Organic Detritus <input type="checkbox"/> Drainage Patterns in Wetlands <b>Secondary Indicators (2 or more required):</b> <input type="checkbox"/> Oxidized Root Channels in Upper 12 inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
<b>Field Observations:</b> <b>Depths of Surface Water:</b> <u>      </u> (in.) <b>Depth to Free Water in Pit:</b> <u>6</u> (in.) <b>Depth to Saturated Soil:</b> <u>      </u> (in.)	

**Remarks:**

Map Unit Name (Series and Phase): Hicksville sandy clay loam, 0-2 slope occasionally flooded Drainage Class: Mod. well Drained  
 Taxonomy (Subgroup): Mollie Haploxeralf Field Observations Confirm Mapped Type? Yes ☒ No ☐

**Profile Description:**

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-1	10YR 2/1	—	—	Sandy loam

**Hydric Soil Indicators:**

- |   |   |
|---|---|
| <input type="checkbox"/> Histosol                               | <input type="checkbox"/> Concretion in upper 3 inches                         |
| <input type="checkbox"/> Histic Epipedon                        | <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils |
| <input type="checkbox"/> Sulfidic Odor                          | <input type="checkbox"/> Organic Streaking in Sandy Soils                     |
| <input checked="" type="checkbox"/> Aquic Moisture Regime       | <input type="checkbox"/> Listed on Local Hydric Soils List                    |
| <input type="checkbox"/> Reducing Conditions                    | <input type="checkbox"/> Listed on National Hydric Soils List                 |
| <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors | <input type="checkbox"/> Other (Explain in Remarks)                           |

Remarks:

Cobbles below 1"

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?  
 Wetland Hydrology Present?  
 Hydric Soils Present?

☒ Yes No  
☒ Yes No  
☒ Yes No

Is this Data Point Within a Wetland?

☒ Yes No

Remarks:

PA

# GIBSON & SKORDAL

## ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: <u>Carpenter Ranch</u>	Date: <u>August 19, 2005</u>
Applicant/Owner: <u>Callers International</u>	City/County: <u>Sacramento Co.</u>
Investigator(s): <u>MH/JG</u>	State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No	Community ID: <u>Upland adjacent to stream</u>
Is the site significantly disturbed (Atypical Situation)? Yes <input type="radio"/> No <input checked="" type="radio"/>	Transect ID: <u>9</u>
Is the area a potential Problem Area? Yes <input type="radio"/> No <input checked="" type="radio"/> (If needed, explain on reverse.)	Data Point ID: <u>9B</u>

### VEGETATION

Plant Species			Plant Species		
Dominant (D) - Associate (A)	Stratum	Indicator	Dominant (D) - Associated (A)	Stratum	Indicator
1. <u>Sentanea substylis D</u>	<u>H</u>	<u>UPL</u>	9. _____	_____	_____
2. <u>Plantago</u>	_____	<u>FAC-</u>	10. _____	_____	_____
3. <u>Tenaculata D</u>	<u>H</u>	_____	11. _____	_____	_____
4. <u>Cynodon dactylon D</u>	<u>H</u>	<u>FAC</u>	12. _____	_____	_____
5. <u>Holcophora</u>	_____	_____	13. _____	_____	_____
6. <u>Virgata A</u>	<u>H</u>	<u>UPL</u>	14. _____	_____	_____
7. <u>Juncus sp. A</u>	<u>H</u>	<u>-</u>	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 1/3 = 33

Remarks:

### HYDROLOGY

<p>___ Recorded Data (Describe in Remarks):</p> <p>___ Streams, Lake, or Tide Gauge</p> <p>___ Aerial Photographs</p> <p>___ Other</p> <p>___ No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>___ Inundated</p> <p>___ Saturated in Upper 12 inches</p> <p>___ Water Marks</p> <p>___ Drift Lines</p> <p>___ Sediment Deposits/Organic Detritus</p> <p>___ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>___ Oxidized Root Channels in Upper 12 inches</p> <p>___ Water-Stained Leaves</p> <p>___ Local Soil Survey Data</p> <p>___ FAC-Neutral Test</p> <p>___ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depths of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
Remarks:	

Map Unit Name Hicksville sandy clay loam  
(Series and Phase): 0.2% slopes, occasionally flooded

Drainage Class: Mod well drained  
Field Observations  
Confirm Mapped Type? Yes ☐ No ☒

Taxonomy (Subgroup): Mollic Haploverself

**Profile Description:**

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>6</u>	<u>10YR3/3</u>	<u>10YR3/6</u>	<u>Common/Distinct</u>	<u>Sandy loam</u>

**Hydric Soil Indicators:**

☐ Histosol  
☐ Histic Epipedon  
☐ Sulfidic Odor  
☐ Aquic Moisture Regime  
☐ Reducing Conditions  
☐ Gleyed or Low-Chroma Colors

☐ Concretion in upper 3 inches  
☐ High Organic Content in Surface Layer in Sandy Soils  
☐ Organic Streaking in Sandy Soils  
☐ Listed on Local Hydric Soils List  
☐ Listed on National Hydric Soils List  
☐ Other (Explain in Remarks)

Remarks:

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present? Yes ☐ No ☒  
Wetland Hydrology Present? Yes ☐ No ☒  
Hydric Soils Present? Yes ☐ No ☒

Is this Data Point Within a Wetland? Yes ☐ No ☒

Remarks:

DP9B



**GIBSON & SKORDAL**

**ROUTINE WETLAND DETERMINATION  
DATA FORM**

Project/Site: <u>Carpenter Ranch -</u> Applicant/Owner: <u>Callers International</u> Investigator(s): <u>MH/JG</u>	Date: <u>August 19, 2005</u> City/County: <u>Sacramento Co.</u> State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: <u>Vernal pool</u> Transect ID: <u>10</u> Data Point ID: <u>10 A</u>

**VEGETATION**

Plant Species	Stratum	Indicator	Plant Species	Stratum	Indicator
Dominant (D) - Associate (A)			Dominant (D) - Associated (A)		
1. <u>Zythrum hyssopifolius</u>	<u>H</u>	<u>FACw</u>	9. <u>Trichostema</u>	<u>A</u>	<u>H</u>
2. <u>Elymus v. v. v.</u>	<u>D</u>	<u>FACw</u>	10. <u>Leucostemum</u>		<u>CPL</u>
3. <u>Pennisetum</u>	<u>D</u>	<u>H</u>	11. _____		
4. <u>stipitatus</u>		<u>OBL</u>	12. _____		
5. <u>Lolium perenne</u>	<u>A</u>	<u>FAC*</u>	13. _____		
6. <u>Polygonum monspeliensis</u>	<u>A</u>	<u>FACw</u>	14. _____		
7. <u>Eriogonum</u>			15. _____		
8. <u>Microstichus</u>	<u>A</u>	<u>OBL</u>	16. _____		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100

Remarks:

**HYDROLOGY**

Recorded Data (Describe in Remarks): <input type="checkbox"/> Streams, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators:</b> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input checked="" type="checkbox"/> Sediment Deposits/Organic Detritus <input type="checkbox"/> Drainage Patterns in Wetlands <b>Secondary Indicators (2 or more required):</b> <input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test <input checked="" type="checkbox"/> Other (Explain in Remarks)
<b>Field Observations:</b> Depths of Surface Water: _____ (in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: _____ (in.)	

Remarks:

Hand prints & soil wetting.

183

Map Unit Name Orangevale coarse  
 (Series and Phase): Sandy loam, 2-5% slopes

Drainage Class: Well drained

Taxonomy (Subgroup): Utic Haploxerist

Field Observations

Confirm Mapped Type?

Yes ☐ No ☒

**Profile Description:**

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>6</u>	<u>10YR 4/2</u>	<u>10YR 3/6</u>	<u>Common/Distinct</u>	<u>Sandy loam</u>

**Hydric Soil Indicators:**

- ☐ Histosol  
☐ Histic Epipedon  
☐ Sulfidic Odor  
☒ Aquic Moisture Regime  
☐ Reducing Conditions  
☒ Gleyed or Low-Chroma Colors

- ☐ Concretion in upper 3 inches  
☐ High Organic Content in Surface Layer in Sandy Soils  
☐ Organic Streaking in Sandy Soils  
☐ Listed on Local Hydric Soils List  
☐ Listed on National Hydric Soils List  
☐ Other (Explain in Remarks)

**Remarks:**

AMP inferred from elgsl nothing.

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?

☒ Yes ☐ No

Wetland Hydrology Present?

☒ Yes ☐ No

Hydric Soils Present?

☒ Yes ☐ No

Is this Data Point Within a Wetland?

☒ Yes ☐ No

**Remarks:**

DP10A

GIBSON & SKORDAL

ROUTINE WETLAND DETERMINATION  
DATA FORM

Project/Site: <u>Carpenter Ranch -</u>	Date: <u>August 19, 2005</u>
Applicant/Owner: <u>Callers International</u>	City/County: <u>Sacramento Co.</u>
Investigator(s): <u>MH/JG</u>	State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No	Community ID: <u>Grassland/Non-Wetland Area</u>
Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No	Transect ID: <u>10</u>
Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No	Data Point ID: <u>10B</u>
(If needed, explain on reverse.)	

VEGETATION

Plant Species			Plant Species		
Dominant (D) - Associate (A)	Stratum	Indicator	Dominant (D) - Associate (A)	Stratum	Indicator
1. <u>Holcus viridis</u> D	<u>H</u>	<u>UPL</u>	9. _____	_____	_____
2. <u>Leontodon leucoseri</u> D	<u>H</u>	<u>FACU</u>	10. _____	_____	_____
3. <u>Bromus mollis</u> A	<u>H</u>	<u>FACU</u>	11. _____	_____	_____
4. <u>Ternstroemia</u> D	_____	_____	12. _____	_____	_____
5. <u>Cypripedium</u> H	<u>H</u>	<u>UPL</u>	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0

Remarks:

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>Streams, Lake, or Tide Gauge</p> <p>Aerial Photographs</p> <p>Other</p> <p>No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>Inundated</p> <p>Saturated in Upper 12 inches</p> <p>Water Marks</p> <p>Drift Lines</p> <p>Sediment Deposits/Organic Detritus</p> <p>Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>Oxidized Root Channels in Upper 12 inches</p> <p>Water-Stained Leaves</p> <p>Local Soil Survey Data</p> <p>FAC-Neutral Test</p> <p>Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depths of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
Remarks:	

183

Map Unit Name Orangevale coarse  
 (Series and Phase): Sandy loam, 2-5% slopes

Drainage Class: Well drained  
 Field Observations

Taxonomy (Subgroup): Utic Haploxerist

Confirm Mapped Type? Yes ☐ No ☒

**Profile Description:**

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>6</u>	<u>10YR4/2</u>	<u>10YR3/6</u>	<u>Common/Distinct</u>	<u>Sandy loam</u>

**Hydric Soil Indicators:**

- ☐ Histosol  
☐ Histic Epipedon  
☐ Sulfidic Odor  
☐ Aquic Moisture Regime  
☐ Reducing Conditions  
☒ Gleyed or Low-Chroma Colors

- ☐ Concretion in upper 3 inches  
☐ High Organic Content in Surface Layer in Sandy Soils  
☐ Organic Streaking in Sandy Soils  
☐ Listed on Local Hydric Soils List  
☐ Listed on National Hydric Soils List  
☐ Other (Explain in Remarks)

Remarks:

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?

Yes ☐ No ☒

Wetland Hydrology Present?

Yes ☐ No ☒

Hydric Soils Present?

☒ Yes ☐ No

Is this Data Point Within a Wetland?

Yes ☐ No ☒

Remarks:

DP: 10B

GIBSON & SKORDAL

ROUTINE WETLAND DETERMINATION  
DATA FORM

Project/Site: <u>Carpenter Ranch -</u> Applicant/Owner: <u>Willers International</u> Investigator(s): <u>MH/JG</u>	Date: <u>August 19, 2005</u> City/County: <u>Sacramento Co.</u> State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: <u>Depressional Seasonal Wetland</u> Transect ID: <u>11</u> Data Point ID: <u>11A</u>

VEGETATION

Plant Species	Stratum	Indicator	Plant Species	Stratum	Indicator
<u>Dominant (D) - Associate (A)</u>			<u>Dominant (D) - Associated (A)</u>		
1. <u>Glyceria sp.</u> <u>D</u>	<u>H</u>	<u>OBL</u>	9. _____	_____	_____
2. <u>Polyposis monspeliensis</u> <u>D</u>	<u>H</u>	<u>FACW</u>	10. _____	_____	_____
3. <u>Holcus</u>	<u>H</u>	<u>UPL</u>	11. _____	_____	_____
4. <u>Virgate</u>	<u>H</u>	<u>FACW</u>	12. _____	_____	_____
5. <u>Lolium perenne</u>	<u>H</u>	<u>FACW</u>	13. _____	_____	_____
6. <u>Juncus bitorius</u>	<u>H</u>	<u>FACW</u>	14. _____	_____	_____
7. <u>Elymus Vaseyi</u>	<u>H</u>	<u>FACW</u>	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks:

HYDROLOGY

<p><input type="checkbox"/> Recorded Data (Describe in Remarks):</p> <p style="margin-left: 20px;"><input type="checkbox"/> Streams, Lake, or Tide Gauge</p> <p style="margin-left: 20px;"><input type="checkbox"/> Aerial Photographs</p> <p style="margin-left: 20px;"><input type="checkbox"/> Other</p> <p><input type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p style="margin-left: 20px;"><input type="checkbox"/> Inundated</p> <p style="margin-left: 20px;"><input type="checkbox"/> Saturated in Upper 12 inches</p> <p style="margin-left: 20px;"><input type="checkbox"/> Water Marks</p> <p style="margin-left: 20px;"><input type="checkbox"/> Drift Lines</p> <p style="margin-left: 20px;"><input checked="" type="checkbox"/> Sediment Deposits/Organic Detritus</p> <p style="margin-left: 20px;"><input type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p style="margin-left: 20px;"><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p style="margin-left: 20px;"><input type="checkbox"/> Water-Stained Leaves</p> <p style="margin-left: 20px;"><input type="checkbox"/> Local Soil Survey Data</p> <p style="margin-left: 20px;"><input checked="" type="checkbox"/> FAC-Neutral Test</p> <p style="margin-left: 20px;"><input checked="" type="checkbox"/> Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depths of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	<p>Remarks: <u>Hub prints &amp; soil wetting present.</u></p>

237

Map Unit Name  
(Series and Phase): White rock loam, 3-30% slopes

Drainage Class: Somewhat Excessively Drained

Taxonomy (Subgroup): Lithic Xerotherm

Field Observations  
Confirm Mapped Type? Yes ☐ No ☒

**Profile Description:**

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>6</u>	<u>10YR 4/2</u>	<u>10YR 5/6</u>	<u>Common/Distinct</u>	<u>Sandy loam</u>

**Hydric Soil Indicators:**

- ☐ Histosol  
☐ Histic Epipedon  
☐ Sulfidic Odor  
☒ Aquic Moisture Regime  
☐ Reducing Conditions  
☒ Gleyed or Low-Chroma Colors

- ☐ Concretion in upper 3 inches  
☐ High Organic Content in Surface Layer in Sandy Soils  
☐ Organic Streaking in Sandy Soils  
☐ Listed on Local Hydric Soils List  
☐ Listed on National Hydric Soils List  
☐ Other (Explain in Remarks)

**Remarks:**

AMP inferred from s/gsl matting

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?

☒ Yes ☐ No

Wetland Hydrology Present?

☒ Yes ☐ No

Hydric Soils Present?

☒ Yes ☐ No

Is this Data Point Within a Wetland?

☒ Yes ☐ No

**Remarks:**

DP 11A

## GIBSON &amp; SKORDAL

ROUTINE WETLAND DETERMINATION  
DATA FORM

Project/Site: <u>Carpenter Ranch -</u>	Date: <u>August 19, 2005</u>
Applicant/Owner: <u>Calliers International</u>	City/County: <u>Sacramento Co.</u>
Investigator(s): <u>AH/JG</u>	State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No	Community ID: <u>Grassland/Annual, Non-Native</u>
Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No	Transect ID: <u>11</u>
Is the area a potential Problem Area? (If needed, explain on reverse.) <input type="radio"/> Yes <input checked="" type="radio"/> No	Data Point ID: <u>11B</u>

## VEGETATION

Plant Species			Plant Species		
Dominant (D) - Associate (A)	Stratum	Indicator	Dominant (D) - Associate (A)	Stratum	Indicator
1. <u>Holcus</u>			9.		
2. <u>Vernonia</u> D	H	UPL	10.		
3. <u>Hordeum</u> D	H	FAC	11.		
4. <u>Bromus</u> D	H	FACU-	12.		
5. <u>Airs</u> D	H	UPL	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 1/4 = 25

Remarks:

## HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p><input type="checkbox"/> Streams, Lake, or Tide Gauge</p> <p><input type="checkbox"/> Aerial Photographs</p> <p><input type="checkbox"/> Other</p> <p><input type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input type="checkbox"/> Inundated</p> <p><input type="checkbox"/> Saturated in Upper 12 inches</p> <p><input type="checkbox"/> Water Marks</p> <p><input type="checkbox"/> Drift Lines</p> <p><input type="checkbox"/> Sediment Deposits/Organic Detritus</p> <p><input type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p><input type="checkbox"/> Water-Stained Leaves</p> <p><input type="checkbox"/> Local Soil Survey Data</p> <p><input type="checkbox"/> FAC-Neutral Test</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depths of Surface Water: <u>      </u> (in.)</p> <p>Depth to Free Water in Pit: <u>      </u> (in.)</p> <p>Depth to Saturated Soil: <u>      </u> (in.)</p>	

Remarks:

237

Map Unit Name  
(Series and Phase): White rock loam, 3-30% slopesDrainage Class: Somewhat Excessively DrainedTaxonomy (Subgroup): Lithic XerorthentField Observations  
Confirm Mapped Type? Yes ☐ No ☒

## Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>6</u>	<u>10YR3/3</u>	<u>10YR3/6</u>	<u>Common / Distinct</u>	<u>Sandy loam</u>

## Hydric Soil Indicators:

- ☐ Histosol  
☐ Histic Epipedon  
☐ Sulfidic Odor  
☐ Aquic Moisture Regime  
☐ Reducing Conditions  
☐ Gleyed or Low-Chroma Colors

- ☐ Concretion in upper 3 inches  
☐ High Organic Content in Surface Layer in Sandy Soils  
☐ Organic Streaking in Sandy Soils  
☐ Listed on Local Hydric Soils List  
☐ Listed on National Hydric Soils List  
☐ Other (Explain in Remarks)

Remarks:

## WETLAND DETERMINATION

Hydrophytic Vegetation Present?

Yes

No ☒

Wetland Hydrology Present?

Yes

No ☒

Hydric Soils Present?

Yes

No ☒

Is this Data Point Within a Wetland?

Yes

No ☒

Remarks:

DP 11B



# APPENDIX B

## DELINEATION MAP

# **APPENDIX C**

## **PLANT LIST**

**PARTIAL LIST OF PLANTS OBSERVED ON THE CARPENTER RANCH  
PROPERTY AND THEIR STATUS AS WETLAND INDICATOR SPECIES**

<u>Scientific Name</u>	<u>Common Name</u>	<u>Status</u> <sup>1&amp;2</sup>
<i>Aira caryophylla</i>	silver hairgrass	UPL
<i>Alisma plantago-aquatica</i>	broad-leaf water plantain	OBL
<i>Asclepias fascicularis</i>	slender milkweed	FAC
<i>Avena fatua</i>	wild oats	UPL
<i>Boisduvalia densiflora</i>	dense-flower, spike primrose	OBL
<i>Bromus diandrus</i> ( <i>B. rigidus</i> )	rip-gut grass	UPL
<i>Bromus mollis</i>	soft chess	FACU-
<i>Carex</i> sp.	desge	-----
<i>Centaurea solstitialis</i>	yellow star-thistle	UPL
<i>Cichorium intybus</i>	chickory	UPL
<i>Cirsium vulgare</i>	bull thistle	FACU
<i>Conyza canadensis</i>	Canada horseweed	FAC
<i>Crypsis schoenoides</i>	swamp timothy	OBL
<i>Cynodon dactylon</i>	Bermuda grass	FAC
<i>Cynosurus echinatus</i>	dogtail	UPL
<i>Cyperus eragrostis</i>	tall flatsedge	FACW
<i>Echinochloa crusgalli</i>	barnyard grass	FACW
<i>Eleocharis macrostachya</i>	creeping spikerush	OBL
<i>Eremocarpus setigerus</i>	doveweed	UPL
<i>Eryngium vaseyi</i>	coyote thistle	FACW
<i>Glyceria</i> sp.	manna grass	OBL
<i>Hemizonia fitchii</i>	Fitch's spikeweed	UPL
<i>Hemizonia pungens</i>	common tarweed	FAC
<i>Holocarpha virgata</i>	tarweed	UPL
<i>Hordeum hystrix</i> ( <i>H. geniculatum</i> )	Mediterranean barley	FAC
<i>Juncus bufonius</i>	toad rush	FACW+
<i>Juncus</i> sp.	rush	-----
<i>Lactuca serriola</i>	prickly lettuce	FAC
<i>Lasthenia fremontii</i>	Fremont's goldfields	OBL
<i>Leersia oryzoides</i>	rice cutgrass	OBL
<i>Leontodon leysleri</i>	hairy hawkbit	FACU
<i>Lippia nodiflora</i> ( <i>Phyla nodiflora</i> )	common frog-fruit	FACW
<i>Lolium perenne</i> ( <i>L. multiflorum</i> )	perennial ryegrass	FAC*
<i>Lotus purshianus</i>	Spanish clover	FAC
<i>Ludwigia peploides</i>	floating primrose	OBL
<i>Lythrum hyssopifolia</i>	loosestrife	FACW
<i>Mentha pulegium</i>	penny-royal	OBL
<i>Mimulus guttatus</i>	yellow monkey-flower	OBL
<i>Paspalum dilatatum</i>	dallis grass	FAC

<sup>1</sup> Reed, P.B. 1988. National List of Plant Species That Occur in Wetlands: California (Region 0). Biological Report 88(26.10) May 1988. National Ecology Research Center, National Wetland Inventory, U.S. Fish and Wildlife Service, St. Petersburg, Fl.

<sup>2</sup> OBL = obligate; FACW = facultative wetland; FAC = facultative; FACU = facultative upland; UPL = upland; and NI = no indicator.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Status</u>
<i>Paspalum distichum</i>	knot grass	OBL
<i>Plagiobothrys stipitatus</i> var. <i>micranthus</i>	slender popcorn flower	OBL
<i>Plantago lanceolata</i>	English plantain	FAC-
<i>Plantago major</i>	common plantain	FACW-
<i>Polygonum aviculare</i>	knotweed	FAC
<i>Polygonum sp.</i>	smartweed	----
<i>Polypogon monspeliensis</i>	annual rabbit-foot grass	FACW+
<i>Populus fremontii</i>	Fremont cottonwood	FACW
<i>Quercus douglasii</i>	blue oak	UPL
<i>Quercus lobata</i>	valley oak	FAC*
<i>Quercus wislizenii</i>	interior live oak	UPL
<i>Rubus procerus</i>	Himalayan blackberry	FAC
<i>Rumex crispus</i>	curly dock	FACW-
<i>Salix lasiolepis</i>	arroyo willow	FACW
<i>Sambucus mexicana</i>	blue elderberry	FAC
<i>Scirpus acutus</i>	hardstem bulrush	OBL
<i>Scirpus americanus</i>	Olney's rush	OBL
<i>Silybum marianum</i>	milk thistle	UPL
<i>Taeniatherum caput-medusae</i>	medusa-head	UPL
<i>Toxicodendron diversilobum</i>	poison oak	UPL
<i>Trichostema lancheolatum</i>	vinegar weed	UPL
<i>Trifolium hirtum</i>	rose clover	UPL
<i>Typha sp.</i>	cattail	OBL
<i>Verbena hastata</i>	blue vervain	FACW
<i>Xanthium strumarium</i>	rough cocklebur	FAC+

# **APPENDIX D**

## **CNDDDB OCCURRENCE MAP**

## **APPENDIX D12**

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### Carpenter Ranch Vernal Pool Branchiopod Survey Results and Summary

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**MEMORANDUM**

**Date:** April 10, 2009

**To:** Kent MacDiarmid

**From:** Ginger Fodge

**Subject/Project:** Carpenter Ranch Vernal Pool Branchiopod Survey Results and Summary

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**MESSAGE:**

Dear Kent:

Per your request, this memo provides a summary of the vernal pool crustacean surveys that have been conducted at the Carpenter Ranch property in Sacramento County, California.

Wet season surveys were conducted on the site during the 2006-2007 and 2007-2008 rainy seasons. No listed vernal pool crustaceans were identified on the site in either of these surveys. Two wet season surveys with negative results are typically accepted by the U.S. Fish and Wildlife Service (Service) as evidence that the listed species are not present on a site. However, because the 2006-2007 rainy season was a below normal rainfall year, the Service rejected the results of that year's survey. As a result, another survey was initiated in fall 2008 and continues through this spring.

To date, the 2008-2009 wet season sampling has not identified any of the listed vernal pool crustacean species on the project site. Although sampling will continue for a few more weeks until the wetlands have dried out, we do not anticipate that any new hatching will occur in the wetlands. Furthermore, since listed vernal pool crustaceans have successfully hatched on other properties in the Sacramento region this season, we anticipate that the Service will accept the results of this year's survey.

Based on these survey results, it is our opinion that the listed vernal pool crustaceans do not occur on the Carpenter Ranch site. We anticipate that the Service will concur with this conclusion and will not require a biological opinion for the Carpenter Ranch project.

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(x) As Requested    ( ) For Review & Comments    ( ) FYI    ( ) Returned As Requested    ( ) For Approval

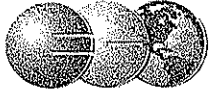
VIA:    (x) E-Mail    ( ) Express Mail    ( ) Messenger    ( ) Fax

## **APPENDIX D13**

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Folsom 560 Revised Wetland





16 March 2007

Mr. Will Ness  
USACE, Sacramento District  
ATTN: Regulatory Branch  
1325 J Street, Room 1480  
Sacramento, California 95814

**RE: Folsom 560, Sacramento County, California – Revised Wetland Delineation (USACE Reg. File No. 200600561)**

Dear Mr. Ness:

Please find attached the revised wetland delineation for the 560±-acre Folsom 560 site in Sacramento County, California. The revised wetland delineation (map dated: 14 March 2007) is the result of additional data collected in response to your request for additional information dated 14 February 2007.

The site corresponds to portions of Sections 18 and 19, Township 9 North, Range 8 East (MDBM) of the "Folsom, California" and "Buffalo Creek, California" 7.5-minute quadrangles (U.S. Department of the Interior, Geological Survey 1980). The approximate center of the site is located at 38° 37' 25" North and 121° 08' 23" West.

Within this submittal, we have included:

- one (1) copy of the 14 February 2007 letter requesting additional information,
- one (1) 1"=200' revised map,
- one (1) 8.5x11 revised map,
- completed Routine Wetland Determination Forms for 26 additional data point locations,
- one (1) revised list of plant species observed on-site,
- fourteen (14) pages of representative photographs, and
- one (1) Compact Disk containing the revised map, shape files, and a PDF version of the revised map.

The following is a summary of the information identified as being needed to complete the delineation review process. Each requested item is identified in italics with the response immediately following.

*1. Collect data at points marked on the attached map.*

ECORP biologist D. Snider collected three criteria data at the 26 requested data point locations on 21 February 2007. Copies of the completed Routine Wetland Determination Forms are included within this submittal. Photographs of each data point location and representative landscapes are included within this submittal. No additional wetland features were identified during the 21 February 2007 field visit.

*2. Report must include detailed discussions of wetland boundary justifications.*

The waters of the U.S. boundaries were delineated using standard field methodologies (e.g., paired data set analyses), and all wetland data were recorded on Routine Wetland Determination Forms. At each paired data point location, one point was located such that it was within the estimated wetland area, and the other point was situated outside the limits of the estimated wetland area. Wetland boundaries were typically determined based on a shift of vegetative composition from wetland associated species to upland associated species, topographic distinctions, and/or the limits of hydrology indicators (e.g., inundation, algal matting). The limits of other waters were delineated at the ordinary high water mark, which was typically identified based on extent of scour, water marks, shelving, and/or shifts in vegetative composition.

A color aerial photograph (1"=200' scale, U.S. Department of the Interior, Geological Survey 2002) was used to assist with mapping and ground-truthing. *Munsell Soil Color Charts* (Kollmorgen Instruments Co. 1990) and the *Soil Survey of Sacramento County, California* (U.S. Department of Agriculture, Soil Conservation Service 1993) were used to aid in identifying hydric soils in the field. *The Jepson Manual* (Hickman, ed. 1993) was used for plant nomenclature and identification.

*3. Report must include robust discussions of existing field conditions experienced during field surveys.*

The initial wetland delineation field surveys were conducted on 6-9, 12, and 28-30 December 2005; 3 and 31 January 2006; and 5 May 2006. Approximately 23.35 inches of rain (~117.5% of normal) was

recorded during the 2005-2006 wet season (Sacramento Bee 2006). Normal rainfall for this period is approximately 19.87 inches (Sacramento Bee 2006). All wetland and other water features, as well as many upland areas, were inundated during the December 2005 and January 2006 site visits. The extent of surface inundation was greatly reduced during the 5 May 2006 site visit. Plant species were generally in an early vegetative state during all of the site visits, with the exception of the 5 May 2006 site visit during which most species had reached flowering stage.

The requested additional data was also collected during winter (21 February 2007). Approximately 9.04 inches of rain (~57.9% of normal) had been recorded during the 2006-2007 wet season prior to this field visit (Sacramento Bee 2007). Normal rainfall to this date is approximately 15.61 inches (Sacramento Bee 2007). It appeared that many of the wetland features on-site had not yet been inundated or had only been inundated for a brief period during the 2006-2007 wet season. Plant species were generally in an early vegetative state, making species identification difficult, most notably with respect to grass species.

The site consists primarily of rolling terrain at elevations ranging from approximately 290 to 400 feet above mean sea level. The site is currently used for cattle grazing. Surrounding land uses include the Aerojet facilities to the west, the Highway 50 corridor to the north, a concrete mine to the east, and an off-road vehicle park to the southwest. Representative site photographs are included within this submittal.

Annual grassland is the dominant plant community on-site. A variety of non-native annual grasses, including soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), medusahead grass (*Taeniatherum caput-medusae*), slender wild oat (*Avena barbata*), and little quaking grass (*Briza minor*), were commonly observed in this community. Other herbaceous species observed in this community include sticky tarweed (*Holocarpha virgata*), yellow star-thistle (*Centaurea solstitialis*), rose clover (*Trifolium hirtum*), shamrock clover (*Trifolium dubium*), Fremont's tidy-tips (*Layia fremontii*), Valley tassels (*Castilleja attenuata*), and hyacinth brodiaea (*Triteleia hyacinthina*).

Blue oak woodland occurs in the northern portion of the site. Blue oaks (*Quercus douglasii*) represent the dominant tree species in this community. Species observed in the understory were generally similar to those found in the annual grassland.

A relatively large stock pond is present in the northern portion of the site, which drains to Alder Creek (located off-site to the north). Other aquatic features identified on-site include vernal pools, seasonal wetlands, seasonal wetland swales, a seep, ephemeral drainages, intermittent drainages, and constructed ditches.

According to the *Soil Survey of Sacramento County, California* (U.S. Department of Agriculture, Soil Conservation Service 1993), seven (7) soil units, or types, have been mapped within the site. These are: (107) Argonaut Auburn complex, 3 to 8 percent slopes; (145) Fiddymont fine sandy loam, 1 to 8 percent slopes; (190) Pits; (192) Red Bluff loam, 2 to 5 percent slopes; (193) Red Bluff-Redding complex, 0 to 5 percent slopes; (235) Vleck gravelly loam, 2 to 15 percent slopes; and (237) Whiterock loam, 3 to 30 percent slopes. While none of these soil units have hydric components, the following have hydric inclusions: (192) Red Bluff loam (unnamed soils in depressions) and (193) Red Bluff-Redding complex (unnamed soils in depressions) (U.S. Department of Agriculture, Soil Conservation Service 1992).

*3. Report must include a detailed project site hydrology discussion.*

The vernal pools, seasonal wetlands, and stock ponds become inundated through a combination of direct rainfall and surface runoff during and immediately following rain events. All of these features, with the exception of the stock pond located in the northern section of the site, are ephemeral. This stock pond (SP-1) was constructed in the path of an intermittent drainage that is tributary to Alder Creek. This perennial feature receives water from seasonal wetland swales and ephemeral drainages, as well as direct rainfall and surface runoff.

The seasonal wetland swales, ephemeral drainages, and intermittent drainages are seasonal features that convey flows for varying periods during the wet season. The constructed ditches were constructed on contour; however, they appear to no longer convey flow. Many of the constructed ditches pond water for a sufficient period of time during the growing season to support hydrophytic vegetation.

The wetlands located in the northeastern portion of the site, in the vicinity of stock pond-1 (SP-1), are or appear to be tributary to on-site seasonal wetland swales, ephemeral drainages, constructed

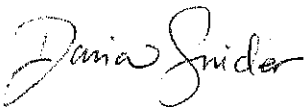
ditches, and/or intermittent drainages via direct connection or overland sheet flows. These linear drainage features are or appear to be tributary to Alder Creek or other linear features that are tributary to Alder Creek. Alder Creek is tributary to the American River, a navigable waters. The wetlands located in the western portion of the site, west of Scott Road, appear to be tributary to on-site seasonal wetland swales, ephemeral drainages, and/or intermittent drainages via direct connection or overland sheet flows. These linear features appear to tributary to Buffalo Creek, which is also tributary to the American River. The remaining wetland features, located in the southeastern corner of the site, drain south towards Coyote Creek, which drains south to Carson Creek, then to Deer Creek, and finally to the Consumnes River, a navigable waters.

4. *Reference block of delineation map must include the names of delineators/surveyors.*

ECORP biologists D. Snider, M. Buchalski, and A. Ballard conducted the wetland delineation field surveys. The names of these individuals are now included in the notes field on the wetland delineation graphics.

We hope that the revised map and supplemental information will allow you to complete the verification process and issue a letter to that effect. Please feel free to call me at (916) 782-9100 if you have any questions regarding this issue.

Sincerely,

A handwritten signature in cursive script that reads "Daria Snider".

Daria Snider  
Biologist

Attachment(s)

CC: Mr. David Hatch / GenCorp Realty Investments



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO  
CORPS OF ENGINEERS  
1325 J STREET  
SACRAMENTO, CALIFORNIA 95814-2922

February 14, 2007

Regulatory Branch (200600561)

David Hatch  
GenCorp Realty Investments  
620 Coolidge Drive, Suite 100  
Folsom, California 95630-3182

Dear Mr. Hatch:

This concerns your consultant's July 25, 2006 request for an approved jurisdictional determination for the Folsom 560 site. We are unable to complete our review or verify this delineation since you have not provided complete information. We have withdrawn your request from our active priority projects until we receive adequate information or can otherwise re-prioritize your request.

An itemized list of the minimal information we need to process your request is enclosed. Once we receive complete information we will continue to evaluate your delineation, including a site visit if necessary. This withdrawal does not preclude the need for a Department of the Army permit for work on this site.

Please refer to identification number 200600561 in any correspondence concerning this project. If you have any questions, please contact William Ness at our Sacramento Office, 1325 J Street, Room 1480, Sacramento, California 95814-2922, email *William.W.Ness@usace.army.mil*, or telephone 916-557-5268. You may also use our website: *www.spk.usace.army.mil/regulatory.html*.

Sincerely,

**ORIGINAL SIGNED**

Will Ness  
Chief, Sacramento Office

Enclosure(s)

Copy furnished with enclosure(s):

✓ Daria Hoyer, ECORP Consulting, Incorporated, 2525 Warren Drive, Rocklin, California  
95677-2167

File 200600561 Project Title FOLSOM 560 Date 12/6/2006  
County SACRAMENTO State CA Project Manager NESS Project Acreage 560.0  
Applicant GENCORP REALTY INVESTMENTS Consultant: ECORP CONSULTING

**Minimum Standards for Acceptance of Wetland Delineations**

Topography ☒

1987 Corps Manual Statement <input checked="" type="checkbox"/>	Contact Information <input checked="" type="checkbox"/>	ID Data Pts, Wetland Boundaries <input checked="" type="checkbox"/>
Wetland Narrative <input checked="" type="checkbox"/>	Plant List and Discussion <input checked="" type="checkbox"/>	All Potential Waters of US Shown <input checked="" type="checkbox"/>
Justify Wetland Boundary <input type="checkbox"/>	Soil Descriptions, Maps, List <input checked="" type="checkbox"/>	Standard Mapping Conventions <input checked="" type="checkbox"/>
Total Project Acreage <input checked="" type="checkbox"/>	Interstate or Foreign Commerce <input checked="" type="checkbox"/>	Reference Block <input checked="" type="checkbox"/>
Existing Field Conditions <input type="checkbox"/>	Delineation Map Scale <input checked="" type="checkbox"/>	Individually ID All Water Features <input checked="" type="checkbox"/>
Hydrology Discussion <input checked="" type="checkbox"/>	Project Boundary <input checked="" type="checkbox"/>	Waters Acreage Table <input checked="" type="checkbox"/>
Project Location Map <input checked="" type="checkbox"/>	All Wetlands and Waters Shown <input type="checkbox"/>	Data Sheets Filled Out Correctly <input checked="" type="checkbox"/>
Directions To Site <input checked="" type="checkbox"/>	Color/Thatched Coding <input checked="" type="checkbox"/>	Paired Data Points For All Features <input checked="" type="checkbox"/>

☒ Note: Checked boxes represent information recieved

GIS Data Submitted ☒

**Minimum Information Needed to Complete Delineation Review**

1: Collect data on points marked on attached map.

2: Report must include detailed discussions of Wetland Boundary Justifications.

3: Report must include robust discussions Existing Field Conditions experienced during field surveys.

4: Report must include a detailed project site hydrology discussion.

5: Reference block of delineation map must include the names of delineators/surveyors.

6:

7:

8:

9:

10:

# WATERS OF THE U.S. ACREAGE<sup>1</sup>

CLASSIFICATION	EXISTING ACREAGE
<b>WETLANDS:</b>	
Vernal Pool	1.207
Seasonal Wetland	1.538
Seasonal Wetland Swale	3.072
Seep	0.030
<b>OTHER WATERS:</b>	
Ephemeral Drainage	0.367
Intermittent Drainage	0.382
Constructed Ditch	0.406
Stock Pond	2.788
<b>TOTAL:</b>	<b>9.790</b>

Prairie City Road

White Rock Road

1" equals 800'

SCALE IN FEET  
0 400 800

<sup>1</sup> Subject to the Army Corps of Engineers verification

06/22/06  
F:\GIS\_Maps\2005-461\Folsom560\_WD(letter).mxd

FIGURE 3. Wetland Delineation<sup>1</sup>

2005-461 Folsom 560



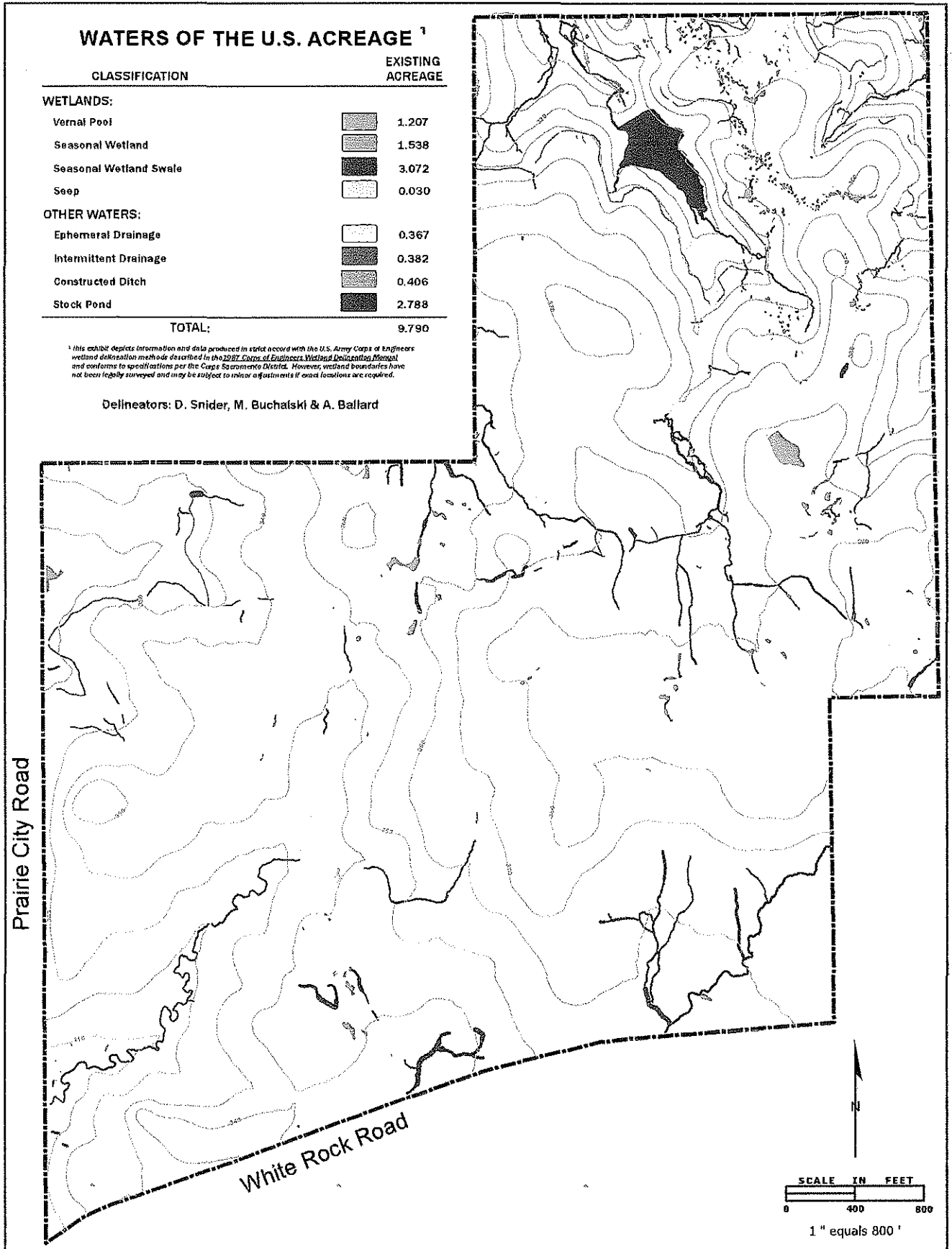


FIGURE 3. Wetland Delineation

2005-461 Folsom 560

# ECORP Consulting, Inc.

## ENVIRONMENTAL CONSULTANTS

### ROUTINE WETLAND DELINEATION

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 24N  
 Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
 Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

#### VEGETATION

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) LEO TAR	FACU	H	40%	5)			
2) MON FORD	OBL	H	20%	6)			
3) TRI sp.	—	H	20%	7)			
4) Unidentifiable grass	—	H	20%	8)			

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]:  $\frac{1}{2}$  = 50 %

Comments: Both non-dominants are upland species. Dominance percentage is based on identifiable species. Note that Montia fontana is common throughout the site at this time of year, in both upland and wetland situations.

#### HYDROLOGY

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_

Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)

Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_

Comments: No wetland hydrology indicators detected. No cattle hoofprints observed, whereas obvious wetland areas have cattle hoofprints.

#### SOILS

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: (235) Vleek gravelly loam, 2-15% slopes Drainage Class: Mod. well

Taxonomy [Subgroup]: Abnuptic Haplic Duxeralfs Confirm Map Type: Yes ☐ No ☒

☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma

☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_

Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
0-2"		10YR <sup>2</sup> / <sub>2</sub>	—	—	Loam
2-12"		10YR <sup>4</sup> / <sub>2</sub>	7.5YR <sup>3</sup> / <sub>4</sub>	Many, medium	Sandy clay loam

Comments: \_\_\_\_\_

#### \* DECISION \*

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: Only 1 of 3 wetland criteria is satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

Species Observed	Stratum	Actual Cover	Relative Cover
LEO TAR	H	40%	
MON FON	H	20%	
TRI sp	H	20%	
unidentifiable grass	H	20%	
BRO sp	H	trace	
GER MOL	H	trace	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

<u>COVER:</u>	
Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

Species (Descending Order)	Stratum	Relative Cover	Cumulative Cover	Indicator Status	Dominants
TOTAL SUM ( $\Sigma$ ) =		100%			

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom 560 Date: 2/21/07 Sample Point: 25N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>JAE CAP</u>	<u>N/L</u>	<u>H</u>	<u>50%</u>	5) _____	_____	_____	_____
2) <u>LED TAR</u>	<u>FACV</u>	<u>H</u>	<u>20%</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/2 = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected.

**SOILS**

**HYDRIC SOILS?** Yes ☐ No ☒

Series/Phase: (192) Red Bluff loam, 2-5% slopes Drainage Class: Well drained  
Taxonomy [Subgroup]: Ultic Palexerolls Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: Unnamed soils in depressions On Hydric Soils List: Yes ☒ No ☐  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	_____	<u>7.5YR3/4</u>	<u>—</u>	<u>—</u>	<u>Sandy clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

  
Comments: No hydric soil indicators detected. DP is not in a depression.

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.  
General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
TAE CAP	H	50%	
LED TAR	H	20%	
BRO HOR	H	10%	
FED BOT	H	10%	
LUL MUL	H	10%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

COVER:

Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) =		100%			

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom 560 Date: 2/21/07 Sample Point: 26W  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>JRI sp.</u>	<u>—</u>	<u>H</u>	<u>45%</u>	5) _____	_____	_____	_____
2) <u>LED TAR</u>	<u>FACU</u>	<u>H</u>	<u>33%</u>	6) _____	_____	_____	_____
3) <u>unidentifiable grass</u>	<u>—</u>	<u>H</u>	<u>22%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0 % = 0 %

Comments: Dominance percentage is based on identifiable species.

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: Insufficient wetland hydrology indicators. Cattle hoofprints are not present at this point as they are at wetlands throughout site.

**SOILS**

**HYDRIC SOILS?** Yes ☒ No ☐

Series/Phase: (192) Red Bluff loam, 2-5% slopes Drainage Class: Well drained  
Taxonomy [Subgroup]: Ultic Palexeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: Unnamed soils in depressions On Hydric Soils List: Yes ☒ No ☐

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-5"</u>	_____	<u>5YR 5/1</u>	<u>5YR 4/6</u>	<u>Many, medium</u>	<u>clay loam</u>
<u>5'-12"</u>	_____	<u>7.5YR 3/4</u>	<u>7.5YR 4/2</u>	<u>Common, fine</u>	<u>clay loam</u>

Comments: DP is not in a depression.

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☐ No ☒

Rationale: Only 1 wetland criterion is satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
TRI SP.	H	10%	45%
LEO TAR	H	30%	33%
unidentifiable grass	H	20%	22%
TOTAL SUM ( $\Sigma$ ) =		90%	100%

<u>COVER:</u>	
Vegetation	90%
Bare Ground	10%
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) = 100%					

# ECORP Consulting, Inc.

ENVIRONMENTAL CONSULTANTS

## ROUTINE WETLAND DELINEATION

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 27N  
 Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): Folsom, CA Section/Township/Range: Section 19/T9N/R8E  
 Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

### VEGETATION

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>LED TAR</u>	<u>FACU</u>	<u>H</u>	<u>20%</u>	5) _____	_____	_____	_____
2) <u>TRI sp.</u>	<u>-</u>	<u>H</u>	<u>20%</u>	6) _____	_____	_____	_____
3) <u>DOA ANN</u>	<u>FACW</u>	<u>H</u>	<u>20%</u>	7) _____	_____	_____	_____
4) <u>unidentifiable seedlings</u>	<u>-</u>	<u>H</u>	<u>30%</u>	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/2 = 50 %

Comments: Dominance percentage is based on identifiable species.

### HYDROLOGY

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
 Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
 Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
 Secondary Indicators (2 or more required):  
☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
 Comments: Insufficient wetland hydrology. Cattle hoofprint not observed.

### SOILS

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: (192) Red Bluff loam, 2-5% slopes Drainage Class: Well drained  
 Taxonomy [Subgroup]: Ultic Palexeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
 Inclusions [Series/Phase]: Unnamed soils in depressions On Hydric Soils List: Yes ☒ No ☐  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-0.5"</u>	_____	<u>10YR 2/1</u>	_____	_____	<u>Loam</u>
<u>0.5"-1"</u>	_____	<u>10YR 4/2</u>	<u>7.5YR 4/6</u>	<u>Many, medium</u>	<u>Silty loam</u>
<u>1"-12"</u>	_____	<u>10YR 5/2</u>	<u>7.5YR 4/6</u>	<u>Common, coarse</u>	<u>Loamy fine sand</u>

Comments: DP is not in a depression.

### \* DECISION \*

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: Only 1 of 3 wetland criteria is satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_



# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
LEO TAR	H	20%	
TRI SP.	H	20%	
POA ANN	H	20%	
ERO BOT	H	10%	
HOR MAR	H	trace	
BRO SP.	H	trace	
unidentifiable seedlings	H	30%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

COVER:

Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) =		100%			

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom 560 Date: 2/21/07 Sample Point: 28N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>TAE CAP</u>	<u>N/L</u>	<u>H</u>	<u>56%</u>	5) _____	_____	_____	_____
2) <u>LED TAR</u>	<u>FACU</u>	<u>H</u>	<u>22%</u>	6) _____	_____	_____	_____
3) <u>BRI MAX</u>	<u>N/L</u>	<u>H</u>	<u>22%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/3 = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_

Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)

Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_

Comments: No wetland hydrology indicators detected.

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (193) Red Bluff - Redding complex, 0-5% slopes Drainage Class: Mod. well - well

Taxonomy [Subgroup]: Ultic Palexeralfs Confirm Map Type: Yes ☐ No ☒

☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma

☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_

Inclusions [Series/Phase]: Unnamed soils in depressions On Hydric Soils List: Yes ☒ No ☐

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-1"</u>	_____	<u>10YR 3/2</u>	<u>—</u>	<u>—</u>	<u>Clay loam</u>
<u>1-12"</u>	_____	<u>7.5YR 4/6</u>	<u>—</u>	<u>—</u>	<u>Gravelly clay loam</u>

Comments: No hydric soils indicators detected. DP is not in a depression.

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

[illegible]

<u><b>COVER:</b></u>	
Vegetation	90%
Bare Ground	10%
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
<b>TOTAL SUM (<math>\Sigma</math>) = 100%</b>					

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**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom 560 Date: 2/21/07 Sample Point: 29N  
Applicant/Owner: GenCap Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>ERO BBT</u>	<u>N/L</u>	<u>L</u>	<u>47%</u>	5) _____	_____	_____	_____
2) <u>TAE CAP</u>	<u>N/L</u>	<u>H</u>	<u>18%</u>	6) _____	_____	_____	_____
3) <u>BRO HOR</u>	<u>FACU-</u>	<u>H</u>	<u>18%</u>	7) _____	_____	_____	_____
4) <u>TRI HIR</u>	<u>N/L</u>	<u>H</u>	<u>18%</u>	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/4 = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected.

**SOILS**

**HYDRIC SOILS?** Yes ☐ No ☒

Series/Phase: (235) Vlede gravelly loam, 2-15% slopes Drainage Class: Mod. well  
Taxonomy [Subgroup]: Abruptic Haplic Durixerolls Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	_____	<u>7.5YR4/6</u>	_____	_____	<u>Gravelly clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: No hydric soil indicators detected.

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.  
General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
ERO BOT	H	40%	47%
TAE CAP	H	15%	18%
BRO HOR	H	15%	18%
TRI HIR	H	15%	18%
TOTAL SUM ( $\Sigma$ ) =		85%	100%

COVER:

Vegetation 85%

Bare Ground 15%

Rocks

Other

TOTAL = 100%

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# ECORP Consulting, Inc.

ENVIRONMENTAL CONSULTANTS

## ROUTINE WETLAND DELINEATION

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 30W  
 Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
 Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

### VEGETATION

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>LED TAR</u>	<u>FACU</u>	<u>H</u>	<u>33%</u>	5) _____	_____	_____	_____
2) <u>unidentifiable seedlings</u>	<u>—</u>	<u>H</u>	<u>25%</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0% = 0 %

Comments: All non-dominants are upland species. Percent dominance is based on identifiable species.

### HYDROLOGY

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
 Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
 Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
 Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
 Comments: Some sort of dark crust on surface of soil, but the data point is on a slope, not in a depression.

### SOILS

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (190) Pits Drainage Class: \_\_\_\_\_  
 Taxonomy [Subgroup]: \_\_\_\_\_ Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
 Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-0.5"</u>	_____	<u>10YR 3/2</u>	<u>—</u>	<u>—</u>	<u>Loam</u>
<u>0.5"-6"</u>	_____	<u>10YR 5/3</u>	<u>—</u>	<u>—</u>	<u>Sand</u>
<u>6"-12"</u>	_____	<u>5Y 5/2</u>	<u>—</u>	<u>—</u>	<u>rocky/crystalline?</u>

Comments: No hydric soil indicators detected.

### \* DECISION \*

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
LED TAR	H	20%	33%
GAS VED	H	10%	17%
TRI ERI	H	10%	17%
BRO EP.	H	5%	8%
ERO BOT	H	trace	trace
unidentifiable seedlings	H	15%	25%
TOTAL SUM ( $\Sigma$ ) =		60%	100%

<u>COVER:</u>	
Vegetation	60%
Bare Ground	40%
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) = 100%					

# ECORP Consulting, Inc.

ENVIRONMENTAL CONSULTANTS

## ROUTINE WETLAND DELINEATION

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 31N  
 Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): Folsom, CA Section/Township/Range: Section 19/T9N/R8E  
 Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

### VEGETATION

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>LEO TAR</u>	<u>FACU</u>	<u>L</u>	<u>30%</u>	5) _____	_____	_____	_____
2) <u>BRI MAX</u>	<u>N/L</u>	<u>L</u>	<u>20%</u>	6) _____	_____	_____	_____
3) <u>LOI MUL</u>	<u>FAC*</u>	<u>H</u>	<u>20%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/3 = 33 %

Comments: \_\_\_\_\_

### HYDROLOGY

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
 Depth of surface water: None (in.) Depth to free water in pit: >6" (in.) Depth to saturated soil: >6" (in.)  
 Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
 Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
 Comments: No wetland hydrology indicators detected

### SOILS

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (235) Vleek gravelly loam, 2-15% slopes Drainage Class: Mod. well  
 Taxonomy [Subgroup]: Abruptic Haplic Duxeranth Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
 Inclusions [Series/Phase]: None Listed On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-6"</u>	_____	<u>7.5YR 3/4</u>	<u>7.5YR 3/2</u>	<u>Few, coarse</u>	<u>Gravelly clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: Refusal at 6". No hydric soil indicators detected.

### \* DECISION \*

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_



# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
LFO TAR	H	30%	
ERI MAX	H	20%	
LOL MUL	H	20%	
TAE CAP	H	15%	
ERO BOT	H	10%	
NAY TAG	H	5%	
TRI ERI	H	trace	
BRO sp.	H	trace	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

COVER:

Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) =		100%			

# ECORP Consulting, Inc.

ENVIRONMENTAL CONSULTANTS

## ROUTINE WETLAND DELINEATION

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 32N

Applicant/Owner: GenCorp Field Investigator(s): Daria Snider

County: Sacramento State: CA Plant Community: Annual Grassland

Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E

Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_

Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_

Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

### VEGETATION

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) POA ANN	FACW-	H	40%	5)			
2) LEO TAR	FACU	H	30%	6)			
3)				7)			
4)				8)			

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/2 = 50 %

Comments: All nondominants are upland species.

### HYDROLOGY

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_

Depth of surface water: None (in.) Depth to free water in pit: >6" (in.) Depth to saturated soil: >6" (in.)

Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_

Comments: Insufficient wetland hydrology

### SOILS

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: (192) Red Bluff loam, 2-5% slopes Drainage Class: Well drained

Taxonomy [Subgroup]: Ultic Palexerolls Confirm Map Type: Yes ☐ No ☒

☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma

☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_

Inclusions [Series/Phase]: Unnamed soils in depressions On Hydric Soils List: Yes ☒ No ☐

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
0-0.5"		10YR 2/1	—	—	Loam
0.5"-6"		10YR 4/2	10YR 4/6	Common, fine	Gravelly clay loam

Comments: Refusal at 6". DP is not in a depression.

### \* DECISION \*

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: Only 1 of three wetland criteria is satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
POA ALOO	H	40%	
LED TAR	H	30%	
TRI SP.	H	10%	
ERO BOT	H	10%	
LEP NIT	H	10%	
BRO SP.	H	trace	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

COVER:

Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) =		100%			

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ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom 560 Date: 2/21/07 Sample Point: 33W  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION** **HYDROPHYTIC VEGETATION? Yes ☐ No ☒**

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>BRO CAR</u>	<u>N/L</u>	<u>H</u>	<u>80%</u>	5) _____	_____	_____	_____
2) _____	_____	_____	_____	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 91 % = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY** **WETLAND HYDROLOGY? Yes ☐ No ☒**

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_

Depth of surface water: None (in.) Depth to free water in pit: >6" (in.) Depth to saturated soil: >6" (in.)

Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_

Comments: No wetland hydrology indicators detected. A dark crust is present on the soil surface - source unknown.

**SOILS** **HYDRIC SOILS? Yes ☐ No ☒**

Series/Phase: (190) Pits Drainage Class: \_\_\_\_\_

Taxonomy [Subgroup]: \_\_\_\_\_ Confirm Map Type: Yes ☐ No ☒

☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma

☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_

Inclusions [Series/Phase]: None listed. On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-6"</u>	_____	<u>7.5YR 3/4</u>	_____	_____	<u>Gravelly clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: No hydric soil indicators detected.

**\* DECISION \*** **WETLAND / WATERS DETERMINATION? Yes ☐ No ☒**

Rationale: None of the wetland criteria are satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
BRO CAR	H	80%	
BRO HOR	H	10%	
ERO BOT	H	10%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

COVER:

Vegetation 100%

Bare Ground

Rocks

Other

TOTAL = 100%

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**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 34N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>HYP sp.</u>	<u>N/L</u>	<u>H</u>	<u>40%</u>	5) _____	_____	_____	_____
2) <u>unidentifiable grass</u>	<u>—</u>	<u>H</u>	<u>50%</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0% = 0%

Comments: At least one of three non-dominant is an upland species.  
Percent dominance is based on identifiable species.

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☒ No ☐

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☒ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):

☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_

Comments: The drift lines present are thatch that appears to have been carried by sheet flow. Based on veg. it doesn't appear that water stays long enough to form a wetland.

**SOILS**

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: (235) Vleek gravelly loam, 2-15% slopes Drainage Class: Mod. well  
Taxonomy [Subgroup]: Abruptic Haplic Dixeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: None listed. On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-1"</u>	_____	<u>10YR 3/2</u>	_____	_____	<u>Loam</u>
<u>1"-5"</u>	_____	<u>10YR 4/1</u>	<u>7.5YR 3/4</u>	<u>Many, medium</u>	<u>Clay loam</u>
<u>5"-12"</u>	_____	<u>10YR 5/2</u>	<u>7.5YR 4/6</u>	<u>Many, medium</u>	<u>Clay loam</u>

Comments: \_\_\_\_\_

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: Only 2 of 3 wetland criteria are satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
HYP sp.	H	40%	
NAV TAG	H	trace	
ERY VAS	H	trace	
unidentifiable grasses	H	50%	
unidentifiable seedlings	H	10%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

<u>COVER:</u>	
Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) =		100%			

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ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 35N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>HYP sp.</u>	<u>N/L</u>	<u>H</u>	<u>53%</u>	5) _____	_____	_____	_____
2) <u>HOR MAR</u>	<u>FAC</u>	<u>H</u>	<u>32%</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/2 = 50 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: Very slight depression. No wetland hydrology indicators detected.

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (235) Vleek gravelly loam, 2-15% slopes Drainage Class: Mod. well  
Taxonomy [Subgroup]: Abruptic Haplic Durixeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	_____	<u>10YR4/3</u>	<u>7.5YR3/4</u>	<u>Many, medium</u>	<u>Sandy loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: No hydric soil indicators detected.

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.  
General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_



## VEGETATIVE COVER / DOMINANCE WORK SHEET

Species Observed	Stratum	Actual Cover	Relative Cover
HYP sp.	H	50%	53%
HOR MAR	H	30%	32%
ERY VAS	H	15%	15%
TOTAL SUM ( $\Sigma$ ) =		95%	100%

**COVER:**

Vegetation 95%

Bare Ground 5 1/2

## Rocks

Other

*TOTAL* = 100%

[illegible]

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom 560 Date: 2/21/07 Sample Point: 36N  
Applicant/Owner: GenCap Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>JAE CAP</u>	<u>N/L</u>	<u>I</u>	<u>40%</u>	5) _____	_____	_____	_____
2) <u>ERO BOT</u>	<u>N/L</u>	<u>I</u>	<u>30%</u>	6) _____	_____	_____	_____
3) <u>LED TAR</u>	<u>FACV</u>	<u>I</u>	<u>30%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/3 = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected.

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (235) Vleek gravelly loam, 2-15% slopes Drainage Class: Mod. well  
Taxonomy [Subgroup]: Abruptic Haplic Durixeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	_____	<u>10YR 4/3</u>	<u>10YR 4/4</u>	<u>Common, coarse</u>	<u>Sandy loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: No hydric soil indicators detected.

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

$l_1$                        $l_2$ 

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
TAE CAP	H	40%	
ERO BOT	H	30%	
LEO TAR	H	30%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

**COVER:**

Vegetation	_____ 100%
Bare Ground	_____
Rocks	_____
Other _____	_____
<b><u>TOTAL</u></b> =	_____ 100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
<b>TOTAL SUM (<math>\Sigma</math>) = 100%</b>					

# ECORP Consulting, Inc.

ENVIRONMENTAL CONSULTANTS

## ROUTINE WETLAND DELINEATION

Project/Site: Folsom 560 Date: 2/21/07 Sample Point: 37N

Applicant/Owner: GenCorp Field Investigator(s): Daria Snider

County: Sacramento State: CA Plant Community: Annual Grassland

Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E

Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_

Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_

Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

### VEGETATION

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>HYP sp.</u>	<u>N/L</u>	<u>H</u>	<u>37%</u>	5) _____	_____	_____	_____
2) <u>TRT sp.</u>	<u>—</u>	<u>H</u>	<u>26%</u>	6) _____	_____	_____	_____
3) <u>HOR MAR</u>	<u>FAC</u>	<u>H</u>	<u>26%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/2 = 50 %

Comments: Both non-dominant species are upland species. Percent dominance is based on identifiable species.

### HYDROLOGY

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_

Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)

Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_

Comments: Insufficient wetland hydrology

### SOILS

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: (235) Vleek gravelly loam, 2-15% slopes Drainage Class: Mod. well

Taxonomy [Subgroup]: Abruptic Haplic Durixeralfs Confirm Map Type: Yes ☐ No ☒

☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma

☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_

Inclusions [Series/Phase]: None listed. On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-0.5"</u>	_____	<u>10YR 2/1</u>	_____	_____	<u>Loam</u>
<u>0.5"-2"</u>	_____	<u>10YR 4/1</u>	<u>7.5YR 4/6</u>	<u>Many, fine</u>	<u>Loamy sand</u>
<u>2"-12"</u>	_____	<u>7.5YR 3/4</u>	_____	_____	<u>Sand</u>

Comments: \_\_\_\_\_

### \* DECISION \*

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: Only 1 of 3 wetland criteria is satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
HYP sp.	H	35%	37%
TRI sp.	H	25%	26%
HOR MAR	H	25%	26%
ERO BOT	H	10%	11%
BRO sp.	H	trace	trace
TOTAL SUM ( $\Sigma$ ) =		95%	100%

<u>COVER:</u>	
Vegetation	95%
Bare Ground	5%
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) = 100%					

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 38A  
Applicant/Owner: GenCap Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>HYP sp.</u>	<u>N/L</u>	<u>H1</u>	<u>75%</u>	5) _____	_____	_____	_____
2) _____	_____	_____	_____	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0% = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: Insufficient wetland hydrology

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (235) Vlecke gravelly loam, 2-15% slopes Drainage Class: Mod. well  
Taxonomy [Subgroup]: Abruptic Haplic Duxterals Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-1"</u>	_____	<u>10YR 2/2</u>	<u>—</u>	<u>—</u>	<u>Loam</u>
<u>1"-12"</u>	_____	<u>10YR 4/3</u>	<u>7.5YR 3/4</u>	<u>Common, fine</u>	<u>loamy sand</u>

  
Comments: No hydric soil indicators detected.

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.  
General comments: \_\_\_\_\_  
Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
HYP sp.	H	75%	
unidentifiable grass	H	10%	
TRI sp.	H	5%	
MON FOW	H	5%	
ERO BOT	H	5%	
BRO sp.	H	trace	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

COVER:

Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) =		100%			

# ECORP Consulting, Inc.

ENVIRONMENTAL CONSULTANTS

## ROUTINE WETLAND DELINEATION

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 39N  
 Applicant/Owner: GenCap Field Investigator(s): Daria Snider  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
 Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

### VEGETATION

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>unidentifiable seedlings</u>	<u>—</u>	<u>H</u>	<u>28%</u>	5) _____	_____	_____	_____
2) <u>LEO TAR</u>	<u>FACV</u>	<u>H</u>	<u>17%</u>	6) _____	_____	_____	_____
3) <u>ERO BOT</u>	<u>N/L</u>	<u>H</u>	<u>17%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/2 = 0 %

Comments: Percent dominance is based on identifiable species

### HYDROLOGY

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
 Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
 Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
 Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
 Comments: No wetland hydrology indicators detected.

### SOILS

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (237) Whitetrock loam, 3-30% slopes Drainage Class: Somewhat excessively  
 Taxonomy [Subgroup]: Lithic Xerorthents Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
 Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	_____	<u>10YR4/3</u>	<u>10YR4/4</u>	<u>Common, medium</u>	<u>Sandy loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: No hydric soil indicators detected.

### \* DECISION \*

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_



# VEGETATIVE COVER / DOMINANCE WORK SHEET

Species Observed	Stratum	Actual Cover	Relative Cover
ERO BOT	H	15%	17%
LEO TAR	H	15%	17%
BRO SP.	H	10%	11%
TRI SP.	H	10%	11%
TRI ERI	H	5%	6%
LOL MUL	H	5%	6%
BRO HOR	H	5%	6%
unidentifiable seedlings	H	25%	28%
TOTAL SUM ( $\Sigma$ ) =		90%	100%

<u>COVER:</u>	
Vegetation	90%
Bare Ground	10%
Rocks	
Other	
TOTAL =	100%

Species (Descending Order)	Stratum	Relative Cover	Cumulative Cover	Indicator Status	Dominants
TOTAL SUM ( $\Sigma$ ) =			100%		

# ECORP Consulting, Inc.

ENVIRONMENTAL CONSULTANTS

## ROUTINE WETLAND DELINEATION

Project/Site: Folsom 560 Date: 2/21/07 Sample Point: 40N  
 Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
 Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

### VEGETATION

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) POA ANN	FACW	H	30%	5)			
2) TRI sp.	—	H	30%	6)			
3) ERO BOT	N/L	H	20%	7)			
4)				8)			

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/2 = 50 %

Comments: At least one non-dominant is an upland species. Percent dominance is based on identifiable species.

### HYDROLOGY

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
 Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
 Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
 Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
 Comments: No wetland hydrology indicators detected.

### SOILS

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (H5) Fiddymont fine sandy loam, 0-8% slopes Drainage Class: Well drained  
 Taxonomy [Subgroup]: Typic Durixeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
 Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
0-2.5"		7.5YR4/4	—	—	Sand
2.5"-3"		10YR3/2	—	—	Loam
3"-12"		7.5YR4/6	10YR4/2	Many, coarse	Sandy loam

Comments: No hydric soil indicators detected.

### \* DECISION \*

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.  
 General comments: This DP is located in a linear depression that appears to be an old drainage channel that was abandoned when the culvert under the adjacent road was moved. Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
POA ANN	H	30%	
TRI sp.	H	30%	
ERO BOT	H	20%	
LEP WIT	H	10%	
unidentifiable seedlings	H	10%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

COVER:

Vegetation 100%

Bare Ground           

Rocks           

Other           

TOTAL = 100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) =		100%			

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 41N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☒ No ☐

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>IRI sp.</u>	<u>—</u>	<u>H</u>	<u>33%</u>	5) _____	_____	_____	_____
2) <u>POA ANNU</u>	<u>FACW-</u>	<u>H</u>	<u>22%</u>	6) _____	_____	_____	_____
3) <u>unidentifiable seedlings</u>	<u>—</u>	<u>H</u>	<u>33%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/1 = 100 %

Comments: Percent dominance is based on identifiable species. At least one of two non-dominants is an upland species. Note that Poa annua is common throughout the site, in both uplands and wetlands.

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_

Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)

Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_

Comments: Insufficient wetland hydrology indicators. No cattle tramping is evident here as it is in wetland situated throughout the site.

**SOILS**

**HYDRIC SOILS?** Yes ☒ No ☐

Series/Phase: (K5) Fiddyment fine sandy loam, 0-8% slopes Drainage Class: Well drained

Taxonomy [Subgroup]: Typic Duviverralla Confirm Map Type: Yes ☐ No ☒

☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma

☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_

Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-3"</u>	_____	<u>10YR 4/1</u>	<u>7.5YR 3/3</u>	<u>Many, fine</u>	<u>Clay loam</u>
<u>3"-12"</u>	_____	<u>10YR 4/2</u>	<u>10YR 3/6</u>	<u>Common, medium</u>	<u>Loamy sand</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: \_\_\_\_\_

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☐ No ☒

Rationale: Only 2 of 3 wetland criteria is satisfied.

General comments: This data point is on an elevated area above the adjacent swale that is not a topographic depression; thus, it is unlikely that water would remain here for a sufficient period to qualify this area as a wetland. Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
TRI SP.	H	30%	33%
POA AND	H	20%	22%
LEO TAR	H	10%	12%
unidentifiable seedlings	H	30%	33%
unidentifiable grass	H	trace	trace
TOTAL SUM ( $\Sigma$ ) =		90%	100%

<u>COVER:</u>	
Vegetation	90%
Bare Ground	10%
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) = 100%					

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom 560 Date: 2/21/07 Sample Point: 42N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>LEO TAR</u>	<u>FACU</u>	<u>H</u>	<u>50%</u>	5) _____	_____	_____	_____
2) <u>HOR MAR</u>	<u>FAC</u>	<u>H</u>	<u>20%</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/2 = 50 %

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: Insufficient wetland hydrology

**SOILS**

**HYDRIC SOILS?** Yes ☒ No ☐

Series/Phase: (145) Fiddymont fine sandy loam, 0-8% slopes Drainage Class: Well drained  
Taxonomy [Subgroup]: Typic Duxteralks Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	_____	<u>10YR 4/2</u>	<u>7.5YR 3/4</u>	<u>Many, medium</u>	<u>Sandy loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: \_\_\_\_\_

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☐ No ☒

Rationale: Only 1 of 3 wetland criteria is satisfied.  
General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

Species Observed	Stratum	Actual Cover	Relative Cover
LEO TAR	H	50%	
HOR MAR	H	20%	
unidentifiable grass	H	10%	
TRI sp.	H	5%	
BEO sp.	H	5%	
MON FON	H	5%	
POA ANN	H	5%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

COVER:

Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

Species (Descending Order)	Stratum	Relative Cover	Cumulative Cover	Indicator Status	Dominants
TOTAL SUM ( $\Sigma$ ) =		100%			

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom 560 Date: 2/21/07 Sample Point: 43N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>LEO TAR</u>	<u>FACU</u>	<u>H</u>	<u>50%</u>	5) _____	_____	_____	_____
2) <u>HXR MAR</u>	<u>FAC</u>	<u>H</u>	<u>30%</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/2 = 50 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: Insufficient wetland hydrology

**SOILS**

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: (145) Fiddyment fine sandy loam, 0-8% slopes Drainage Class: Well drained  
Taxonomy [Subgroup]: Typic Durixeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	_____	<u>10YR4/2</u>	<u>7.5YR3/4</u>	<u>Many, medium</u>	<u>Sandy loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: \_\_\_\_\_

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: Only 1 of 3 wetland criteria is satisfied.  
General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_



# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
LEO TAR	H	50%	
HOR MAR	H	30%	
ERO BOT	H	10%	
TEI SP.	H	5%	
MON FON	H	5%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

<u>COVER:</u>	
Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) =		100%			

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 44N  
Applicant/Owner: GenCap Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>HYP sp.</u>	<u>N/L</u>	<u>H</u>	<u>30%</u>	5) _____	_____	_____	_____
2) <u>JAE CAP</u>	<u>N/L</u>	<u>H</u>	<u>20%</u>	6) _____	_____	_____	_____
3) <u>ERD BOT</u>	<u>N/L</u>	<u>H</u>	<u>20%</u>	7) _____	_____	_____	_____
4) <u>HDR MAR</u>	<u>FAC</u>	<u>H</u>	<u>20%</u>	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/4 = 25 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected.

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (145) Fiddymont fine sandy loam, 0-8% slopes Drainage Class: Well drained  
Taxonomy [Subgroup]: Typic Durixeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	_____	<u>10YR 1/3</u>	_____	_____	<u>Sandy loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: No hydric soil indicators detected.

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
HYP sp.	L	30%	
TAE CAP	H	20%	
ERD BOT	H	20%	
HAR MAR	H	20%	
TRI sp.	H	10%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

<u>COVER:</u>	
Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) =			100%		

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 45N  
Applicant/Owner: GenCap Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>HYP sp.</u>	<u>N/L</u>	<u>H</u>	<u>30%</u>	5) _____	_____	_____	_____
2) <u>ERD BOT</u>	<u>N/L</u>	<u>H</u>	<u>30%</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/2 = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected.

**SOILS**

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: (145) Fiddymont fine sandy loam, 0-8% slopes Drainage Class: Well drained  
Taxonomy [Subgroup]: Typic Durixeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	_____	<u>10YR 4/2</u>	<u>7.5YR 3/4</u>	<u>Many, fine</u>	<u>Sandy clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: \_\_\_\_\_

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: Only 1 wetland criterion is satisfied.  
General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
HYP sp.	H	30%	
ERO BOT	H	30%	
TAE CAP	H	15%	
HOL MAR	H	10%	
TRI sp.	H	10%	
BRO sp	H	5%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

COVER:

Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) =		100%			

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 46W  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>TAE CAP</u>	<u>N/L</u>	<u>H</u>	<u>60%</u>	5) _____	_____	_____	_____
2) <u>HYP sp.</u>	<u>N/L</u>	<u>H</u>	<u>30%</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/2 = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_

Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)

Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_

Comments: No wetland hydrology indicators detected.

**SOILS**

**HYDRIC SOILS?** Yes ☐ No ☒

Series/Phase: (145) Fiddymert fine sandy loam, 0-8% slopes Drainage Class: well drained

Taxonomy [Subgroup]: Typic Durixeralfs Confirm Map Type: Yes ☐ No ☒

☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma

☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_

Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	_____	<u>7.5YR 3/4</u>	<u>—</u>	<u>—</u>	<u>Sandy clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: No hydric soil indicators detected.

**DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
TAE CAP	H	60%	
HYP sp.	H	30%	
TRI sp.	H	5%	
GER MOL	H	5%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

<u>COVER:</u>	
Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) =			100%		

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 47N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Swider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>PRO sp.</u>	<u>—</u>	<u>H</u>	<u>17%</u>	5) <u>unidentifiable grass</u>	<u>—</u>	<u>H</u>	<u>17%</u>
2) <u>HYP sp.</u>	<u>N/L</u>	<u>H</u>	<u>17%</u>	6) _____	_____	_____	_____
3) <u>ERO BOT</u>	<u>N/L</u>	<u>H</u>	<u>17%</u>	7) _____	_____	_____	_____
4) <u>TRI sp.</u>	<u>—</u>	<u>H</u>	<u>17%</u>	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/2 = 0 %

Comments: Percent dominance is based on identifiable species.

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected.

**SOILS**

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: (H5) Fiddymont fine sandy loam, 0-8% slopes Drainage Class: Well Drained  
Taxonomy [Subgroup]: Typic Durixerollic Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	_____	<u>10YR 7/2</u>	<u>7.5YR 7/4</u>	<u>Common, fine</u>	<u>Sandy clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: \_\_\_\_\_

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: Only 1 wetland criterion is satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_



# VEGETATIVE COVER / DOMINANCE WORK SHEET

Species Observed	Stratum	Actual Cover	Relative Cover
BRO SP.	H	15%	17%
HYP SP.	H	15%	17%
ERO BOT	H	15%	17%
TRI SP.	H	15%	17%
unidentifiable grass	H	15%	17%
unidentifiable seedlings	H	10%	10%
MON FOR	H	5%	5%
TOTAL SUM (Σ) =		90%	100%

<u>COVER:</u>	
Vegetation	90%
Bare Ground	10%
Rocks	
Other	
TOTAL =	100%

Species (Descending Order)	Stratum	Relative Cover	Cumulative Cover	Indicator Status	Dominants
TOTAL SUM (Σ) =		100%			

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 48N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>HYP sp.</u>	<u>N/L</u>	<u>H</u>	<u>25%</u>	5) <u>MON FOL</u>	<u>Obl</u>	<u>H</u>	<u>15%</u>
2) <u>CRD BOT</u>	<u>N/L</u>	<u>H</u>	<u>15%</u>	6) <u>unidentifiable seedlings</u>	<u>—</u>	<u>H</u>	<u>15%</u>
3) <u>HAR MAR</u>	<u>FAC</u>	<u>H</u>	<u>15%</u>	7) _____	_____	_____	_____
4) <u>TRI sp.</u>	<u>—</u>	<u>H</u>	<u>15%</u>	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 2/4 = 50 %

Comments: Percent dominance is based on identifiable species. Note that Montia fontana is common throughout the site, in uplands as well as wetlands.

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected.

**SOILS**

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: (Hs) Fiddymont fine sandy loam, 0-8% slope Drainage Class: Well drained  
Taxonomy [Subgroup]: Typic Durixerollic Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-1"</u>	_____	<u>10YR 2/1</u>	_____	_____	<u>Loam</u>
<u>1"-12"</u>	_____	<u>10YR 4/2</u>	<u>7.5YR 1/4</u>	<u>Many, fine</u>	<u>Sandy clay loam</u>

Comments: \_\_\_\_\_

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: Only 1 wetland criterion is satisfied.  
General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
HYP sp.	H	25%	
ERO BOT	H	15%	
HOR MAR	H	15%	
TRI sp.	H	15%	
MON FOR	H	15%	
unidentifiable seedlings	H	15%	
TOTAL SUM ( $\Sigma$ ) =		117%	100%

COVER:

Vegetation 100%

Bare Ground           

Rocks           

Other           

TOTAL = 100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) = 100%					

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom 560 Date: 2/21/07 Sample Point: 49N  
Applicant/Owner: GenCap Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19/T9N/R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>HVP sp</u>	<u>N/L</u>	<u>H</u>	<u>40%</u>	5) _____	_____	_____	_____
2) <u>PROBOT</u>	<u>N/L</u>	<u>H</u>	<u>20%</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/2 = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: In sufficient wetland hydrology

**SOILS**

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: (195) Fiddymunt fine sandy loam, 0-8% slopes Drainage Class: Well drained  
Taxonomy [Subgroup]: Typic Durixeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	_____	<u>10YR 4/2</u>	<u>7.5YR 4/4</u>	<u>Many, fine</u>	<u>Sandy clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: \_\_\_\_\_

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: Only 1 wetland criterion is satisfied.  
General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

Species Observed	Stratum	Actual Cover	Relative Cover
HYP sp.	H	40%	
ERO BOT	H	20%	
LOL MUL	H	15%	
HIX MAR	H	10%	
GAS VEN	H	10%	
TRI sp.	H	5%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

COVER:

Vegetation 100%

Bare Ground  

Rocks  

Other  

TOTAL = 100%

Species (Descending Order)	Stratum	Relative Cover	Cumulative Cover	Indicator Status	Dominants
TOTAL SUM ( $\Sigma$ ) =			100%		

**Folsom 560**  
**Wetland Delineation**  
**Plant Species Observed On-Site**

<b>Abbr.</b>	<b>Scientific Name</b>	<b>Common Name</b>	<b>Indicator Status</b>
AIR CAR	<i>Aira caryophyllea</i>	Hairgrass	N/L
AVE BAR	<i>Avena barbata</i>	Slender wild oat	N/L
BRI MAX	<i>Briza maxima</i>	Big quaking grass	N/L
BRI MIN	<i>Briza minor</i>	Little quaking grass	FACW-
BRO spe.	<i>Brodiaea</i> species	Brodiaea	- -
BRO CAR	<i>Bromus carinatus</i>	California brome	N/L
BRO DIA	<i>Bromus diandrus</i>	Ripgut brome	N/L
BRO HOR	<i>Bromus hordeaceus</i>	Soft brome	FACU-
CAS ATT	<i>Castilleja attenuata</i>	Valley tassels	N/L
CEN SOL	<i>Centaurea solstitialis</i>	Yellow star-thistle	N/L
CEN MUE	<i>Centaureum muehlenbergii</i>	Monterey centaury	FAC
CYN ECH	<i>Cynosurus echinatus</i>	Hedgehog dog-tail grass	N/L
ELE MAC	<i>Eleocharis macrostachya</i>	Creeping spikerush	OBL
ELE spe.	<i>Eleocharis</i> species	Spikerush	FACW
ERO BOT	<i>Erodium botrys</i>	Filaree	N/L
ERO spe.	<i>Erodium</i> species	Filaree	N/L
ERY VAS	<i>Eryngium vaseyi</i>	Vasey's coyote-thistle	FACW
GAS VEN	<i>Gastridium ventricosum</i>	Nit grass	FACU
GER MOL	<i>Geranium molle</i>	Hairy geranium	N/L
HOL VIR	<i>Holocarpha virgata</i>	Sticky tarweed	N/L
HOR MAR	<i>Hordeum marinum</i>	Mediterranean barley	FAC
HOR MUR	<i>Hordeum murinum</i>	Barley	NI
HYP RAD	<i>Hypochaeris radicata</i>	Perennial cat's-ear	N/L
HYP spe.	<i>Hypochaeris</i> species	Cat's-ear	N/L
JUN BUF	<i>Juncus bufonius</i>	Toad rush	FACW+
LAY FRE	<i>Layia fremontii</i>	Fremont's tidy-tips	N/L
LEO TAR	<i>Leontodon taraxacoides</i>	Hairy hawkbit	FACU
LEP NIT	<i>Lepidium nitidum</i>	Pepper grass	N/L
LOL MUL	<i>Lolium multiflorum</i>	Ryegrass	FAC*
LUP BIC	<i>Lupinus bicolor</i>	Bicolored lupine	N/L
LYT HYS	<i>Lythrum hyssopifolia</i>	Hyssop loosestrife	FACW
MEN PUL	<i>Mentha pulegium</i>	Pennyroyal	OBL
MON FON	<i>Montia fontana</i>	Fountain miner's-lettuce	OBL
NAV spe.	<i>Navarretia</i> species	Navarretia	- -
NAV TAG	<i>Navarretia tagetina</i>	Marigold navarretia	N/L
PLA STI	<i>Plagiobothrys stipitatus</i>	Slender popcorn-flower	OBL
PLA spe.	<i>Plantago</i> species	Plantain	- -
POA ANN	<i>Poa annua</i>	Annual bluegrass	FACW-
POL MON	<i>Polypogon monspeliensis</i>	Annual rabbit-foot grass	FACW+
QUE DOU	<i>Quercus douglasii</i>	Blue oak	N/L
RAN BON	<i>Ranunculus bonariensis</i>	Carter's buttercup	OBL
RUB DIS	<i>Rubus discolor</i>	Himalayan blackberry	FACW*
RUM spe.	<i>Rumex</i> species	Dock	- -
SAL GOO	<i>Salix gooddingii</i>	Goodding's black willow	OBL
TAE CAP	<i>Taeniatherum caput-medusae</i>	Medusahead grass	N/L

**Folsom 560**  
**Wetland Delineation**  
**Plants Observed at Data Points**

<b>Abbr.</b>	<b>Scientific Name</b>	<b>Common Name</b>	<b>Indicator Status</b>
TOR ARV	<i>Torilis arvensis</i>	Torilis (hedge parsley)	N/L
TRI DUB	<i>Trifolium dubium</i>	Shamrock clover	FACU*
TRI HIR	<i>Trifolium hirtum</i>	Rose clover	N/L
TRI spe.	<i>Trifolium species</i>	Clover	--
TRI VAR	<i>Trifolium variegatum</i>	White-tip clover	FACW-
TRI spe.	<i>Trifolium species</i>	Clover	--
TRI ERI	<i>Triphysaria eriantha</i>	Butter and eggs	N/L
TRI HYA	<i>Triteleia hyacinthina</i>	Hyacinth brodiaea	FACW*
VUL MYU	<i>Vulpia myuros</i>	Rat-tail vulpia	FACU*
VUL spe.	<i>Vulpia species</i>	Vulpia	--

**Indicator Status Codes**

**OBL** = Obligate Wetland; occur almost always (estimated probability >99%) under natural conditions in wetlands.

**FACW** = Facultative Wetland; usually occur in wetlands (estimated probability 67%-99%) under natural conditions in wetlands.

**FAC** = Facultative; equally likely to occur in wetlands or non-wetlands (estimated probability 34%-66%).

**FACU** = Facultative Upland; usually occur in non-wetlands (estimated probability 67%-99%).

**UPL** = Obligate Upland; occur almost always (estimated probability >99%) in non-wetlands in the region specified.

**N/L** = Not Listed.

**NI** = No indicator was recorded for those species for which insufficient information was available to determine a status.

-- = May or may not occur in wetlands depending upon species.

A positive (+) sign indicates a frequency toward the higher (more frequently found in wetlands) end of the facultative categories.

A negative (-) sign indicates a frequency toward the lower (less frequently found in wetlands) end of the facultative categories.

An asterisk (\*) indicates a tentative assignment based upon limited information or conflicting review.



Data Point 24N, looking west.

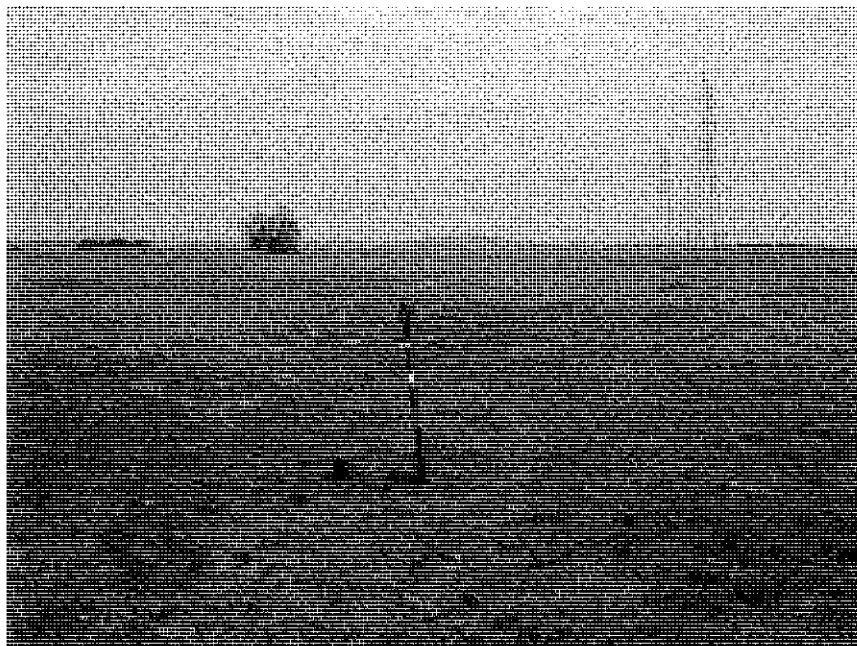


Data Point 25N, looking west.

## Representative Site Photos

2005-461 Folsom 560





Data Point 26N, looking east.



Data Point 27N, looking southwest.

## Representative Site Photos

2005-461 Folsom 560



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Data Point 28N, looking northwest.



Data Point 29N, looking north.

## Representative Site Photos

2005-461 Folsom 560



Data Point 30N, looking northeast.



Data Point 31N, looking southwest.

## Representative Site Photos



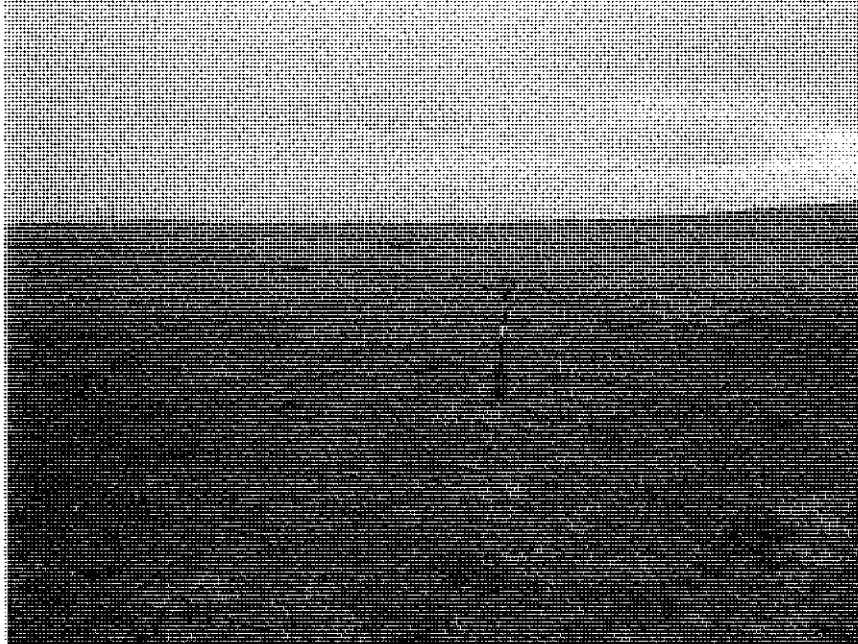
Data Point 32N, looking southeast.



Data Point 33N, looking southwest.

## Representative Site Photos

2005-461 Folsom 560



Data Point 34N, looking southeast.



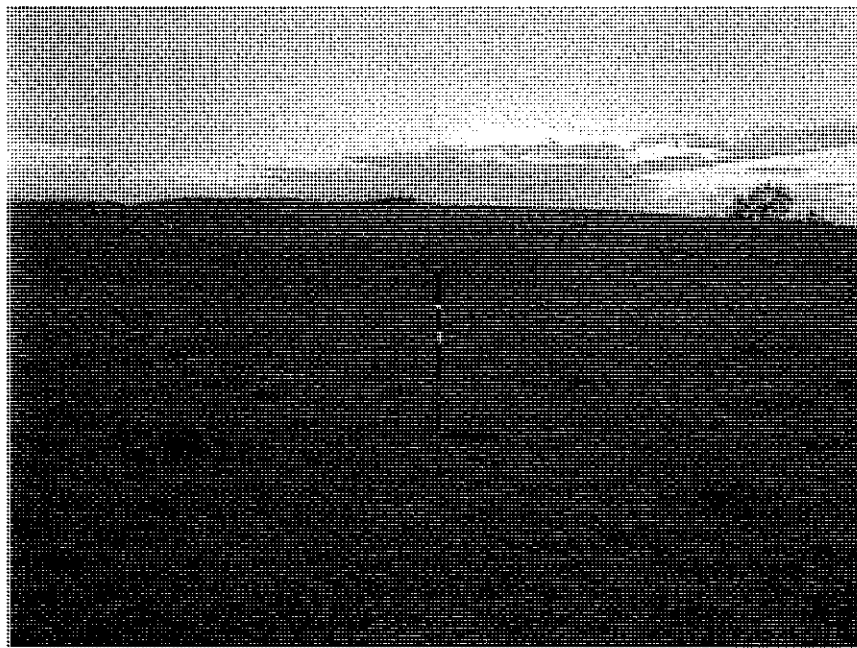
SW-37, looking north.

## Representative Site Photos

2005-461 Folsom 560



Data Point 35N, looking east.



Data Point 36N, looking south.

## Representative Site Photos

2005-461 Folsom 560



Data Point 37N, looking west.



Data Point 38N, looking west.

## Representative Site Photos

2005-461 Folsom 560





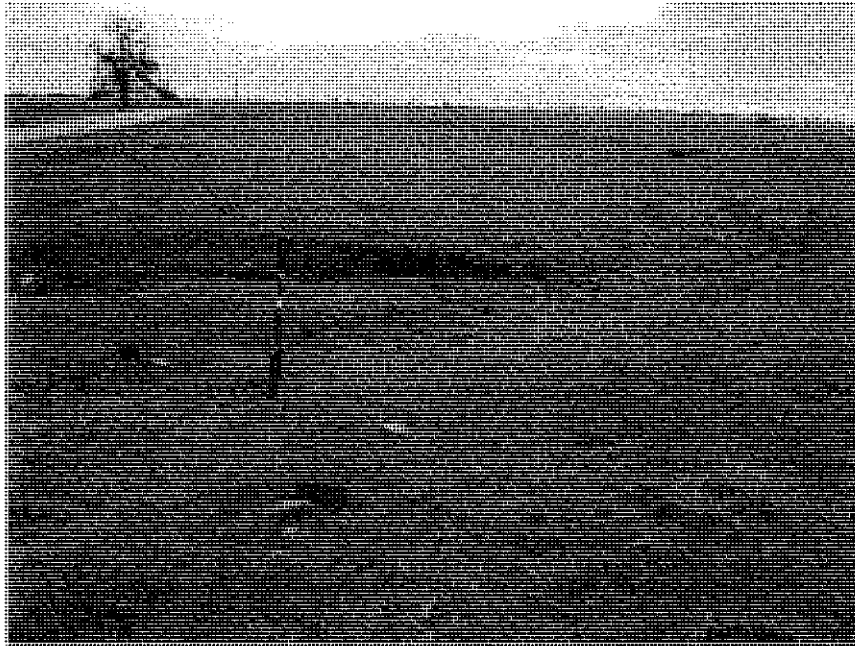
SW-34, looking northeast.



Data Point 39N, looking south.

## Representative Site Photos





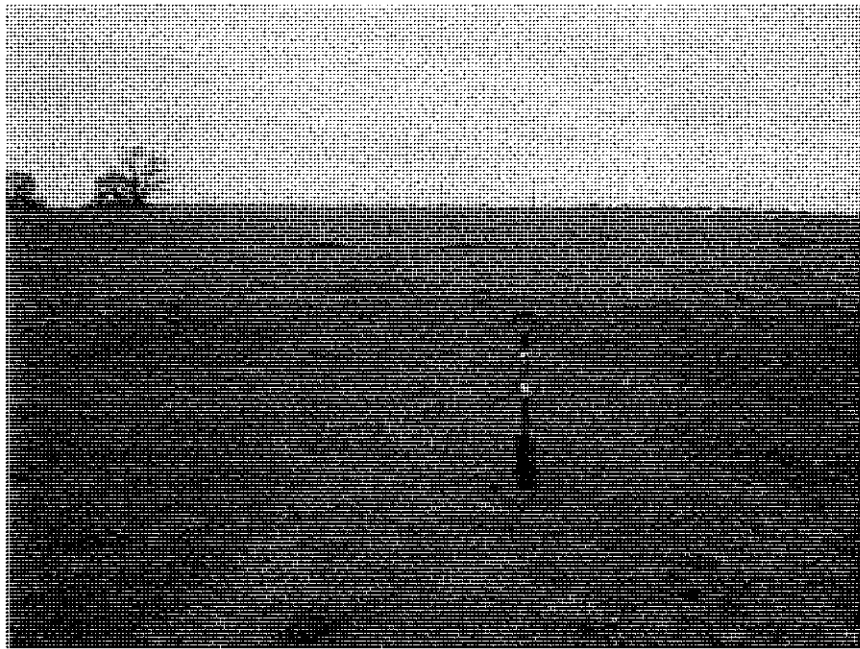
Data Point 40N, looking south.



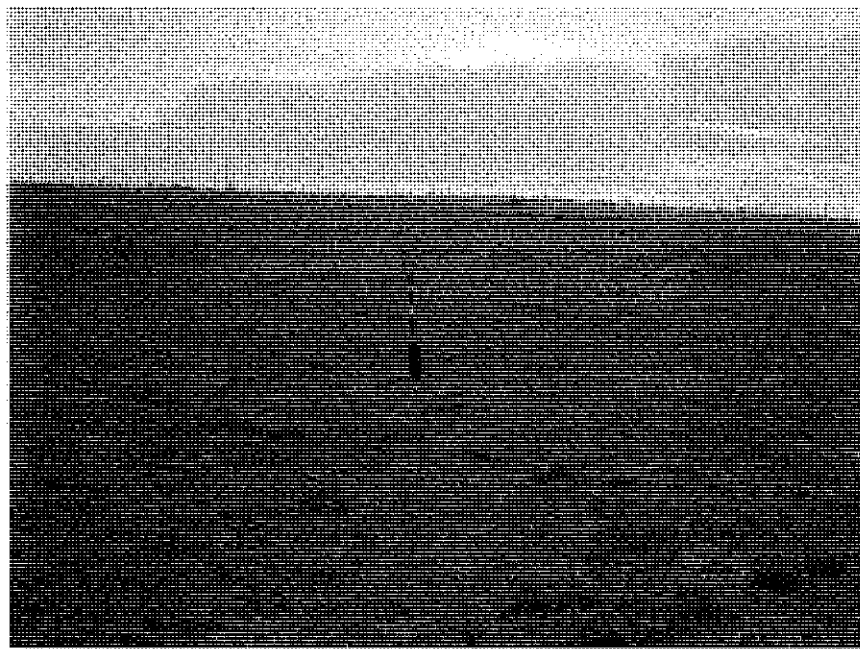
Data Point 41N, looking north.

## Representative Site Photos

2005-461 Folsom 560



Data Point 42N, looking southeast.



Data Point 43N, looking southwest.

## Representative Site Photos

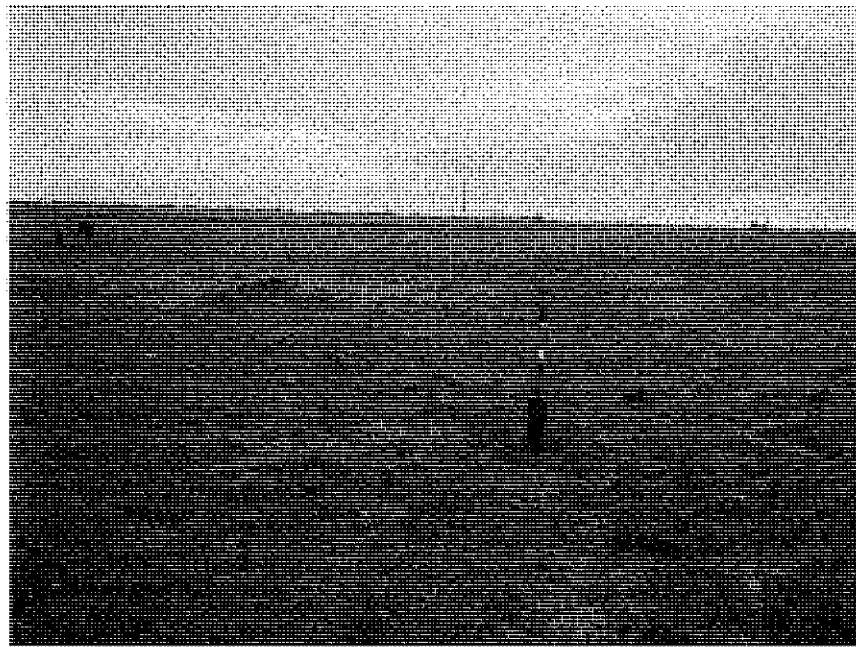
2005-461 Folsom 560



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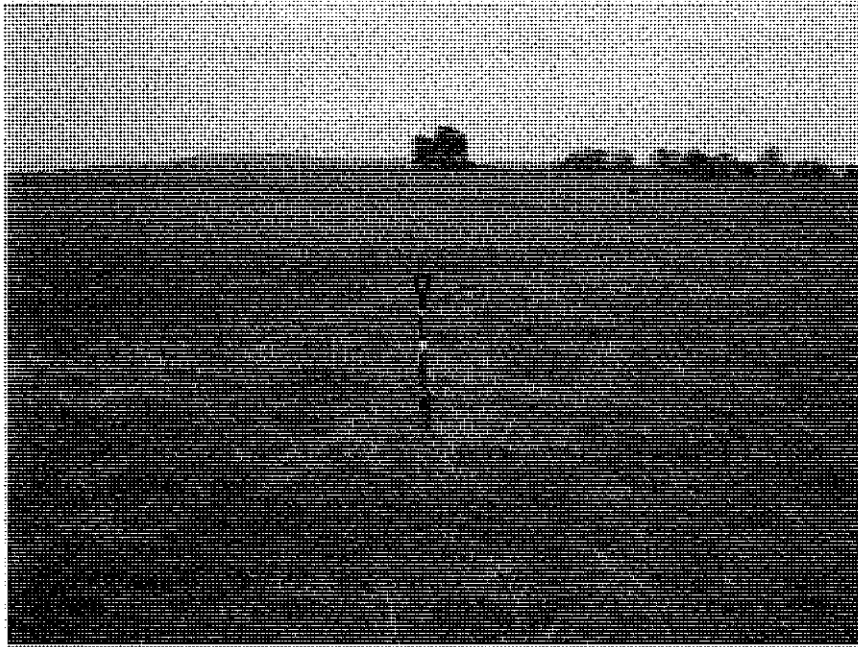


Data Point 44N, looking west.



Data Point 45N, looking southwest.

## Representative Site Photos



Data Point 46N, looking northeast.



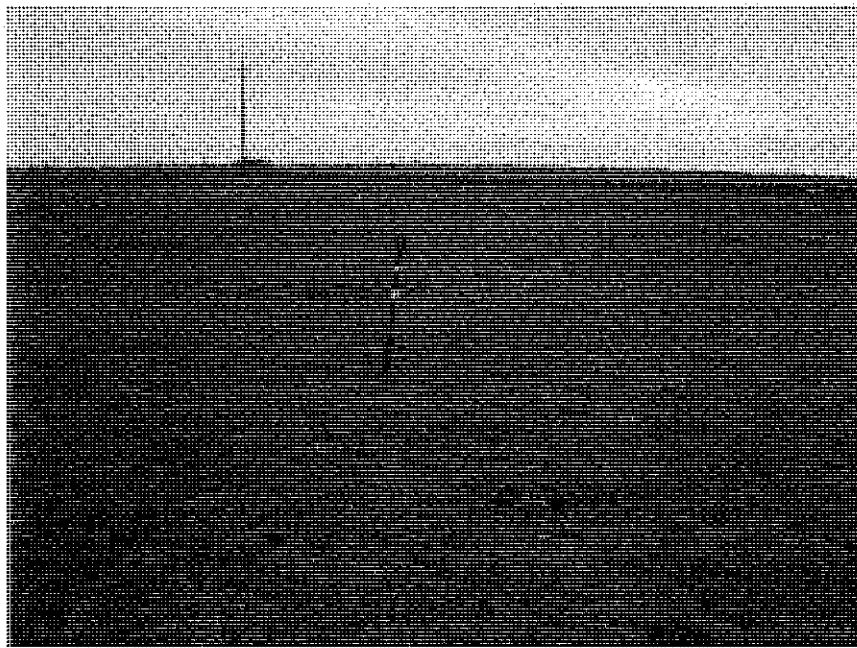
Data Point 47N, looking south.

## Representative Site Photos

2005-461 Folsom 560



Data Point 48N, looking south.



Data Point 49N, looking south.

## Representative Site Photos

2005-461 Folsom 560

## **APPENDIX D13**

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Folsom 560 Revised Wetland

Wetland Delineation

For

**Folsom 560**

Sacramento County, California

**SUPERSEDED**

3.16.07

July 25, 2006

Prepared for:

**GenCorp Realty Investments**



**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

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## INTRODUCTION

On behalf of GenCorp Realty Investments (GenCorp), ECORP Consulting, Inc. (ECORP) conducted a wetland delineation of the 560±-acre Folsom 560 site. The site is located east of Prairie City Road, north of White Rock Road, and south of the City of Folsom in eastern Sacramento County, California (Figure 1 – *Project Site and Vicinity Map*). The site corresponds to portions of Sections 18 and 19, Township 9 North, Range 8 East (MDBM) of the "Folsom, California" and "Buffalo Creek, California" 7.5-minute quadrangles (U.S. Department of the Interior, Geological Survey 1980). The approximate center of the site is located at 38° 37' 25" North and 121° 08' 23" West. The site is located within the Lower American River Watershed (#18020111, U.S. Department of Interior, Geological Survey 1978).

This report describes waters of the United States, including wetlands, identified within the site that may be regulated by the U.S. Army Corps of Engineers (Corps) pursuant to Section 404 of the Clean Water Act. The information presented in this report provides data required by the Corps Sacramento District's *Minimum Standards for Acceptance of Preliminary Wetland Delineations* (U.S. Army Corps of Engineers 2001). The waters of the U.S. boundaries depicted in this report represent a calculated estimation of the jurisdictional area within the site, and are subject to modification following the Corps verification process.

### APPLICANT:

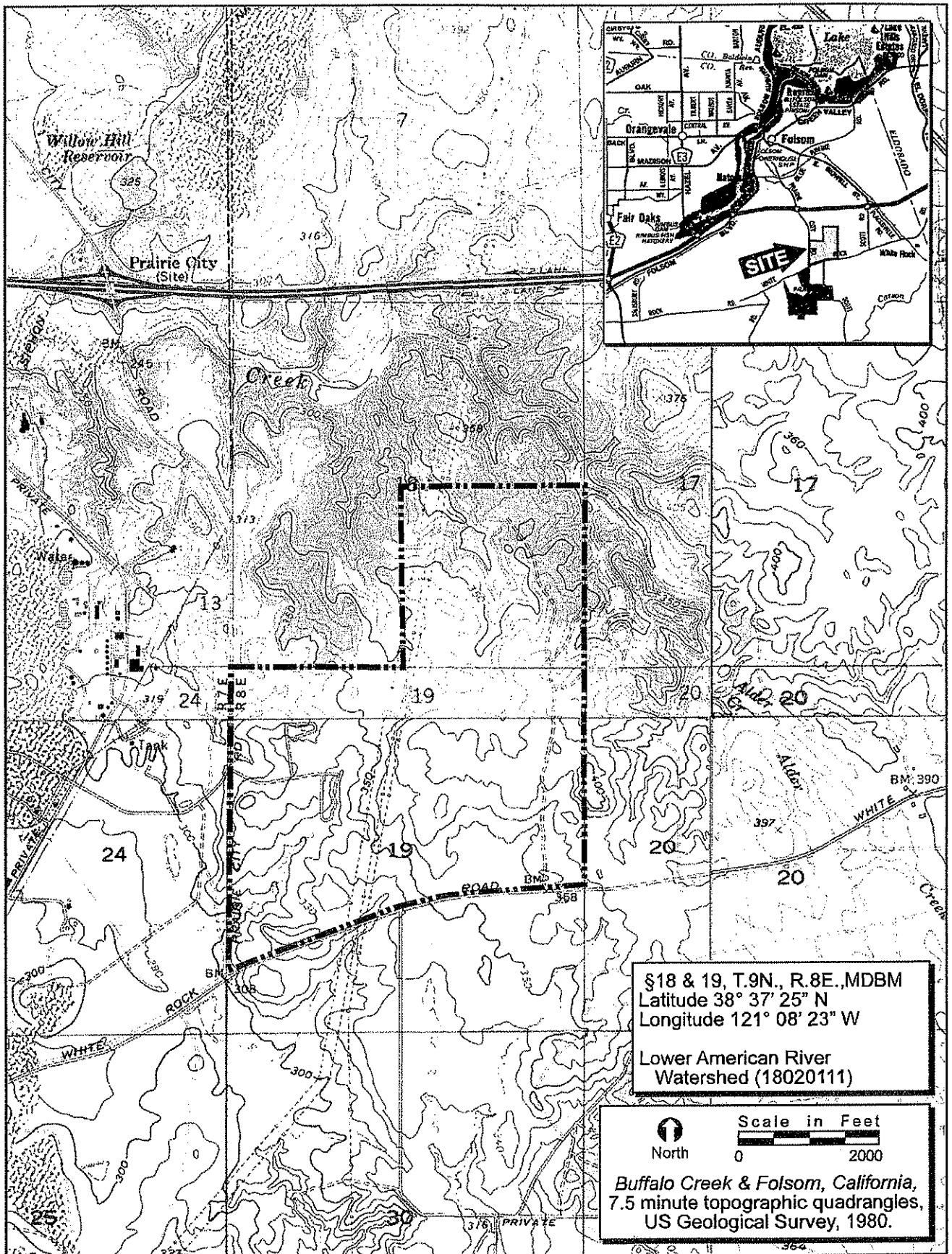
Attn: Mr. David Hatch  
GenCorp Realty Investments  
620 Coolidge Drive, Suite 100  
Folsom, California 95630  
Phone: (916) 355-6956  
Fax: (916) 351-8669

### AGENT:

Attn: Ms. Daria Hoyer  
ECORP Consulting, Inc.  
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Rocklin, California 95677  
Phone: (916) 782-9100  
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### Existing Site Conditions

The site consists primarily of rolling terrain at elevations ranging from approximately 290 to 400 feet above mean sea level. The site is currently used for cattle grazing. Surrounding land uses



**FIGURE 1. Project Site and Vicinity Map**

2005-461 Folsom 560

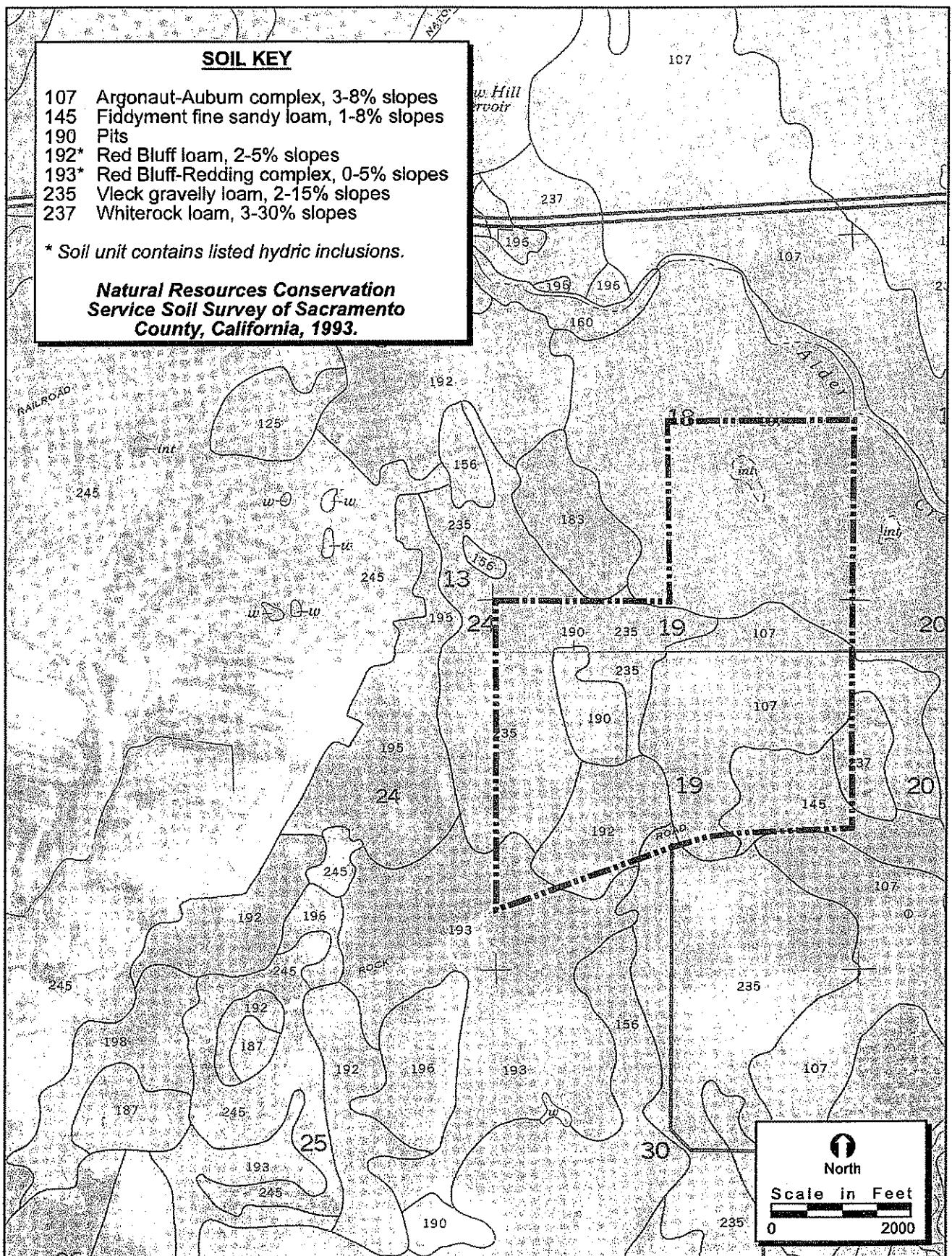
include the Aerojet facilities to the west, the Highway 50 corridor to the north, a concrete mine to the east, and an off-road vehicle park to the southwest.

Annual grassland is the dominant plant community on-site. A variety of non-native annual grasses, including soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), medusahead grass (*Taeniatherum caput-medusae*), slender wild oat (*Avena barbata*), and little quaking grass (*Briza minor*), were commonly observed in this community. Other herbaceous species observed in this community include sticky tarweed (*Holocarpha virgata*), yellow star-thistle (*Centaurea solstitialis*), rose clover (*Trifolium hirtum*), shamrock clover (*Trifolium dubium*), Fremont's tidy-tips (*Layia fremontii*), Valley tassels (*Castilleja attenuata*), and hyacinth brodiaea (*Triteleia hyacinthina*).

Blue oak woodland occurs in the northern portion of the site. Blue oaks (*Quercus douglasii*) represent the dominant tree species in this community. Species observed in the understory were generally similar to those found in the annual grassland.

A relatively large stock pond is present in the northern portion of the site, which drains to Alder Creek (located off-site to the north). Other aquatic features identified on-site include vernal pools, seasonal wetlands, seasonal wetland swales, a seep, ephemeral drainages, intermittent drainages, and constructed ditches. These features are described in further detail in the Results section.

According to the *Soil Survey of Sacramento County, California* (U.S. Department of Agriculture, Soil Conservation Service 1993), seven (7) soil units, or types, have been mapped within the site (Figure 2 – *Natural Resources Conservation Service Soil Types*). These are: (107) Argonaut Auburn complex, 3 to 8 percent slopes; (145) Fiddymment fine sandy loam, 1 to 8 percent slopes; (190) Pits; (192) Red Bluff loam, 2 to 5 percent slopes; (193) Red Bluff-Redding complex, 0 to 5 percent slopes; (235) Vleck gravelly loam, 2 to 15 percent slopes; and (237) Whiterock loam, 3 to 30 percent slopes. While none of these soil units have hydric components, the following have hydric inclusions: (192) Red Bluff loam (unnamed soils in depressions) and (193) Red Bluff-Redding complex (unnamed soils in depressions) (U.S. Department of Agriculture, Soil Conservation Service 1992).



**FIGURE 2. Natural Resources Conservation Service Soil Types**

## **METHODS**

This wetland delineation was conducted in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987). The waters of the U.S. boundaries were delineated through standard field methodologies (i.e., paired data set analyses), and all wetland data were recorded on Routine Wetland Determination Forms (Appendix A). A color aerial photograph (1"=200' scale, U.S. Department of the Interior, Geological Survey 2002) was used to assist with mapping and ground-truthing. *Munsell Soil Color Charts* (Kollmorgen Instruments Co. 1990) and the *Soil Survey of Sacramento County, California* (U.S. Department of Agriculture, Soil Conservation Service 1993) were used to aid in identifying hydric soils in the field. *The Jepson Manual* (Hickman, ed. 1993) was used for plant nomenclature and identification.

Field surveys were conducted on December 6-9, 12, and 28-30, 2005; January 3 and 31, 2006; and May 5, 2006 by ECORP biologists Daria Hoyer, Michael Buchalski, and Adam Ballard. ECORP field staff walked meandering transects throughout the 560±-acre site to determine the location and extent of potential waters of the U.S. within the site. Nine paired data point locations and four single point locations were sampled to evaluate whether or not the vegetation, hydrology, and soils data supported a determination of wetland or non-wetland status. At each paired data point location, one point was located such that it was within the estimated wetland area, and the other point was situated outside the limits of the estimated wetland area. The data collected at each single point location was used to support a non-wetland determination. The total area of wetlands and other waters within the site was recorded in the field using a post-processing capable global positioning system (GPS) unit with sub-meter accuracy (Trimble GeoXT).

### **Waters of the United States**

This report describes waters of the U.S. that may be regulated by the Corps under Section 404 of the Clean Water Act. Wetlands are "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil

conditions" [33 CFR 328.3(b), 51 FR 41250, November 13, 1986]. Wetlands can be perennial or intermittent, and isolated or adjacent to other waters.

Other waters are non-tidal, perennial, and intermittent watercourses and tributaries to such watercourses [33 CFR 328.3(a), 51 FR 41250, November 13, 1986]. The limit of Corps jurisdiction for non-tidal watercourses (without adjacent wetlands) is defined in 33 CFR 328.4(c)(1) as the "ordinary high water mark" (OHWM). The OHWM is defined as the "*line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas*" [33 CFR 328.3(e), 51 FR 41250, November 13, 1986]. The bank-to-bank extent of the channel that contains the water-flow during a normal rainfall year generally serves as a good first approximation of the lateral limit of Corps jurisdiction. The upstream limits of other waters are defined as the point where the OHWM is no longer perceptible.

### **Routine Determinations**

To be determined a wetland; the following three criteria should be met:

- A majority of dominant vegetation species are wetland associated species;
- Hydrologic conditions exist that result in periods of flooding, ponding, or saturation during the growing season; and
- Hydric soils are present.

### *Vegetation*

Hydrophytic vegetation is defined as the sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanent or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present (Environmental Laboratory 1987). The definition of wetlands includes the phrase "a prevalence of vegetation typically adapted for life in saturated soil conditions."

Prevalent vegetation is characterized by the dominant plant species comprising the plant community (Environmental Laboratory 1987). The "50/20 rule" was used to determine the dominant plant species at each data point location. The rule states that for each stratum in the plant community, dominant species are the most abundant plant species (when ranked in descending order of abundance and cumulatively totaled) that immediately exceed 50 percent of the total dominance measure for the stratum, plus any additional species that individually comprise 20 percent or more of the total dominance measure for the stratum (HQUSACE 1992).

Dominant plant species observed at each data point were then classified according to their indicator status (probability of occurrence in wetlands) (Table 1), in accordance with the U.S. Fish and Wildlife Service's (USFWS) National List of Vascular Plant Species That Occur in Wetlands: California (Region 0) (Reed 1988). If the majority (greater than 50 percent) of the dominant vegetation on a site are classified as obligate (OBL), facultative wetland (FACW), or facultative (FAC) (excluding FAC-), then the site is considered to be dominated by hydrophytic vegetation.

**Table 1 – Classification of Wetland-Associated Plant Species<sup>1</sup>**

<b>Plant Species Classification</b>	<b>Abbreviation<sup>2</sup></b>	<b>Probability of Occurring in Wetland</b>
Obligate	OBL	>99%
Facultative Wetland	FACW	66-99%
Facultative	FAC	33-66%
Facultative Upland	FACU	1-33%
Upland	UPL	<1%
No indicator status	NI	Insufficient information to determine status
Plants That Are Not Listed (assumed upland species)	NL	Does not occur in wetlands in any region.

<sup>1</sup> Source: Reed 1988

<sup>2</sup> A '+' or '-' symbol can be added to the classification to indicate greater or lesser probability, respectively, of occurrence in a wetland.

### *Soils*

A hydric soil is defined as a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (U.S. Department of Agriculture, Natural Resources Conservation Service 2003). Indicators that a hydric soil is present include soil color (gleyed soils and soils with bright mottles and/or low matrix chroma), aquic or preaquic moisture regime, reducing soil conditions, sulfidic material



(odor), soils listed on hydric soils list, iron and manganese concretions, organic soils (Histosols), histic epipedon, high organic content in surface layer in sandy soils, and organic streaking in sandy soils.

A soil pit was excavated to a depth of 16 inches or refusal at each data point. The soil was then examined for hydric soil indicators. The matrix color and mottle color (if present) of the soil was determined using the *Munsell Soil Color Charts*.

### *Hydrology*

Wetlands, by definition, are seasonally inundated or saturated at or near (within 12 inches of) the soil surface. To be classified as a wetland, a site should have at least one primary indicator or two secondary indicators of wetland hydrology. Primary indicators of wetland hydrology may include, but are not limited to: water marks, drift lines, sediment deposition, drainage patterns, visual observation of saturated soils, and visual observation of inundation. In addition to the primary indicators, there are a variety of secondary wetland hydrology indicators. Secondary indicators include, but are not limited to: oxidized root channels in the upper 12 inches, water-stained leaves, and local soil survey data. When no primary indicators of wetland hydrology are observed at a data point, two or more secondary indicators are required to confirm wetland hydrology.

## **RESULTS**

A total of 9.790 acres of potential waters of the U.S were mapped on-site (Table 2). The routine wetland determination forms are included in Appendix A, and a list of plant species observed at the data points is included in Appendix B. A discussion of the wetlands and other waters is presented below, and wetland delineation maps are presented in Figure 3 and Appendix C.

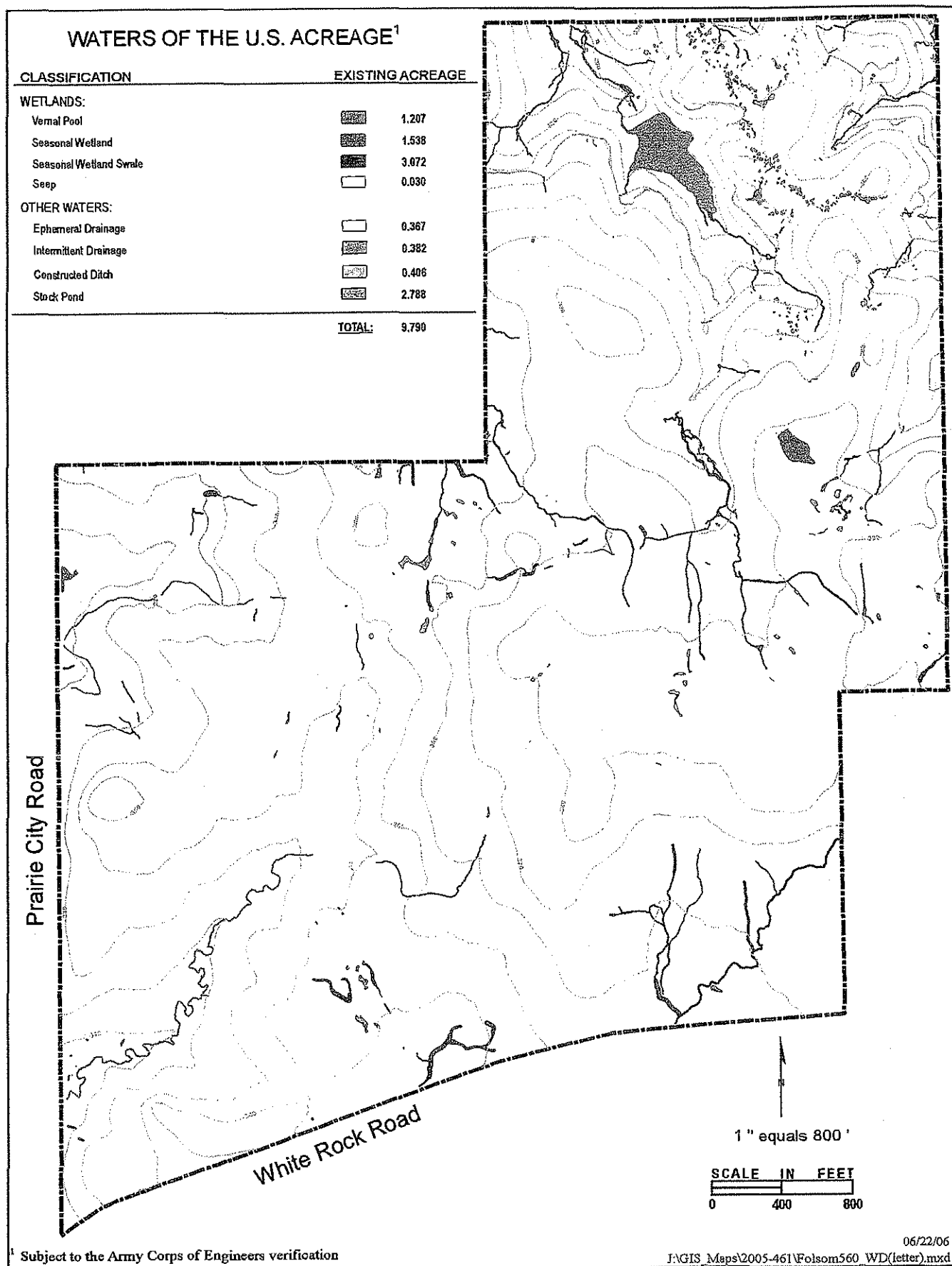


FIGURE 3. Wetland Delineation <sup>1</sup>

2005-461 Folsom 560

**Table 2 – Waters of the U.S.**

<b>Type</b>	<b>Acreage<sup>1</sup></b>
<i>Wetlands</i>	
Vernal Pool	1.207
Seasonal Wetland	1.538
Seasonal Wetland Swale	3.072
Seep	0.030
<i>Other Waters</i>	
Ephemeral Drainage	0.367
Intermittent Drainage	0.382
Constructed Ditch	0.406
Stock Pond	2.788
<b>Total</b>	<b>9.790</b>

<sup>1</sup> Acreages are approximate and are subject to revision during the Corps verification process.

## **Wetlands**

### *Vernal Pool*

In general, vernal pools are topographic basins that are underlain with an impermeable or semi-permeable hardpan or duripan layer. Direct rainfall and surface runoff inundate the pools during the wet season. The pools typically remain inundated and/or the saturated through spring and are dry by late spring through the following wet season. Vernal pools are scattered throughout the site, although they are relatively scarce in the area immediately north of White Rock Road. Dominant plant species in the vernal pools included Vasey's coyote-thistle (*Eryngium vaseyi*), Monterey centaury (*Centaureum muehlenbergii*), Carter's buttercup (*Ranunculus bonariensis*), and hyssop loosestrife (*Lythrum hyssopifolia*). Other plant species observed less frequently included Douglas mesamint (*Pogogyne douglasii*), annual hairgrass (*Deschampsia danthonioides*), toad rush (*Juncus bufonius*), Mediterranean barley (*Hordeum marinum*), Fitch's spikeweed (*Hemizonia fitchii*), cat's-ear (*Hypochaeris* species), and sticky tarweed (*Holocarpha virgata*).

Wetland hydrology indicators observed within vernal pools on-site included inundation and soil saturation, oxidized root channels, sediment deposits (algal matting), and FAC-neutral test.

The soil matrix color within VP-61 was 10YR4/1 with mottles (abundant/large) colored 10YR3/4. The soil within this feature was determined to be hydric based on the presence of a low chroma

matrix color and mottles. The soil matrix color in an adjacent upland area was 7.5YR4/3 without mottles.

Many of the vernal pools mapped within the northeastern portion of the site appear to be the result of historic mining activities. These mining activities (i.e., small-scale excavations) within the oak woodland and grassland communities have resulted in the presence of relatively small basins within the landscape. These basins capture runoff during the wet season, and there is enough clay content in the soil that surface inundation persists into the growing season. The soils in these features were considered hydric based on low chroma color and/or an aquatic moisture regime. Hydrophytic plants observed in these features include hyssop loosestrife, Vasey's coyote-thistle, Carter's buttercup, slender popcorn flower (*Plagiobothrys stipitatus*), and Monterey centaury.

#### *Seasonal Wetland*

Seasonal wetlands are ephemeral wet due to accumulation of surface runoff and rainwater within low-lying areas. Inundation periods tend to be relatively short and they are commonly dominated by non-native annual, and sometimes perennial, hydrophytic species. Seasonal wetlands are scattered throughout the site. Dominant plant species identified within the seasonal wetlands included toad rush, Vasey's coyote-thistle, Mediterranean barley, annual rabbit-foot grass (*Polypogon monspeliensis*), hyssop loosestrife, Himalayan blackberry (*Rubus discolor*), and pennyroyal (*Mentha pulegium*).

Wetland hydrology indicators observed within seasonal wetlands included soil saturation, sediment deposits (algal matting), drainage patterns in wetlands, and oxidized root channels.

The soil matrix color within SW-17 was 7.5YR4/1 without mottles from the surface to a depth of 1 inch, 10YR4/1 with mottles (many) colored 7.5YR5/8 at depths between 1 and 8 inches below the surface, and 5YR4/8 without mottles at depths from 8 to 12 inches below the surface. The soils within SW-17 were determined to be hydric based on the presence of low chroma matrix colors and mottles, and high organic content in the surface layer of sandy soils. The soil matrix color within SW-58 was 2.5Y4/2 with mottles (abundant/small) colored 10YR4/6. The soils

within SW-58 were determined to be hydric based on the presence of low chroma matrix colors and mottles. Soil matrix colors in adjacent upland areas were of high chroma colors including 7.5YR4/3 with 7.5YR5/8 mottles, 7.5YR5/8 without mottles, and 10YR4/3 without mottles.

### *Seasonal Wetland Swale*

Seasonal wetland swales are linear features that convey stormwater runoff and support a predominance of hydrophytic vegetation. Seasonal wetland swales are scattered throughout the site. Dominant plant species observed within the seasonal wetland swales include hyssop loosestrife, Vasey's coyote-thistle, annual hairgrass, and Carter's buttercup. Spiny-fruit buttercup (*Ranunculus muricatus*), Fitch's spikeweed, Mediterranean barley, and sticky tarweed also occurred frequently.

Wetland hydrology indicators observed within seasonal wetland swales included saturation of the soil in the upper 12 inches and oxidized root channels.

The soil matrix color within SWS-1 was 10YR3/2 with mottles (many) colored 10YR4/6 from the surface to a depth of 4 inches and 10YR3/2 without mottles at depths between 4 and 12 inches below the surface. The soils within the seasonal wetland swales were determined to be hydric based on the presence of low chroma soil matrix colors with mottles. The soil matrix color in an adjacent upland area was 10YR3/3 without mottles.

### *Seep*

Seeps are seasonally or perennially wet areas resulting from discharge of groundwater to the surface. A seep (Seep-1) was identified in the southwestern portion of the site on a north-facing slope adjacent to an ephemeral drainage. Plant species observed within the seep included toad rush, creeping spikerush, Vasey's coyote-thistle, Mediterranean barley, and white-tip clover (*Trifolium variegatum*).

Wetland hydrology indicators observed within the seep included saturation in the upper 12 inches, sediment deposits (i.e., algal matting), and oxidized root channels.

The soil matrix color within Seep-1 was 10YR3/1 with mottles colored 5YR3/4 from the surface to a depth of 5 inches and 7.5YR3/4 with depletion zones colored 10YR4/1 at depths between 5 and 15 inches. The soil at this location was determined to be hydric based on the presence of low chroma soil matrix colors with mottles. The soil matrix color in an adjacent upland area was 7.5YR3/4 without mottles.

## **Other Waters**

### *Ephemeral Drainage*

Ephemeral drainages are seasonal features that convey runoff for short periods of time, immediately following rain events and do not receive supplemental water from groundwater sources. These are linear features that exhibit an ordinary high water mark. The primary channel is largely un-vegetated due to the scouring effects of flowing water. However, hydrophytic vegetation has become sparsely established in scour pools that remain inundated after the feature has stopped flowing. Ephemeral drainages are scattered throughout the site. The following plant species were commonly observed on the banks adjacent to ephemeral drainages: sticky tarweed, medusahead grass, ryegrass (*Lolium multiflorum*), dock (*Rumex* species), cat's-ear, soft brome, vulpia (*Vulpia* species), Vasey's coyote-thistle, and hyssop loosestrife.

Hydrologic indicators detected in ephemeral drainages included inundation, soil saturation, and drift lines. The ephemeral drainages were mapped based on the presence of an ordinary high water mark.

The soil matrix color within ED-1 was 10YR3/2 without mottles. A bedrock substrate occurs in portions of some of the ephemeral drainages on-site; thus, soils could not be assessed in these areas. Soils within ED-1 were determined to be hydric based on the presence of concretions. The soil matrix color in an adjacent upland area was 10YR3/4 without mottles.

### *Intermittent Drainage*

Intermittent drainages are linear features that exhibit an ordinary high water mark and convey both stormwater and groundwater flows. Intermittent drainages differ from ephemeral drainages in that they receive groundwater recharge for all or a portion of the year. This usually results in greater quantities and duration of flow relative to ephemeral drainages. For the purposes of this delineation, intermittent drainages were identified by the apparent influence of groundwater to the drainage or by the indication of a broken blue-line feature on the "Folsom, California" or "Buffalo Creek, California" 7.5-minute quadrangles. These features tend to be largely unvegetated due to the depth and scouring effects of flowing water. Hydrophytic vegetation was present along the banks of these drainages and in areas of sediment accumulation that provide a substrate suitable for plant establishment and growth. Plants observed within intermittent drainages included Vasey's coyote-thistle, Mediterranean barley, toad rush, and hyssop loosestrife.

The intermittent drainages were delineated at the ordinary high water mark, which was located according to water marks, drift lines, and sediment deposits. A soil pit was not excavated (refusal at surface) at the data point located within ID-1 due to the dominance of cobble, gravel, and bedrock within the bed of the channel. Fines were primarily restricted to the interstitial spaces between cobble and gravel. The soil matrix color in an adjacent upland area was 5YR3/4.

### *Constructed Ditch*

Numerous constructed ditches occur within the site that pond water for a sufficient period of time during the growing season to support hydrophytic vegetation. These features were constructed on contour; however, they appear to no longer convey flow. Those constructed ditches that have fallen so far into disrepair that they no longer convey or pond water and are dominated by upland-associated plant species were not included on the wetland delineation map, as these features do not qualify as waters of the U.S. The majority of the constructed ditches occur in the northern portion of the site, in the vicinity of stock pond-1 (SP-1). Dominant plant species within the mapped constructed ditches included Vasey's coyote-thistle,

Carter's buttercup, creeping spikerush, and annual hairgrass. Other species commonly observed within these features included hyssop loosestrife, smooth cat's-ear (*Hypochaeris glabra*), Mediterranean barley, and sticky tarweed.

Wetland hydrology indicators observed within constructed ditches included soil inundation and saturation, sediment deposits (algal matting), oxidized root channels, and FAC-neutral test.

The soil matrix color within CD-12 was 5YR4/1 without mottles from the surface to a depth of 0.5 inch and 2.5Y5/1 with mottles (many) colored 10YR 4/6 at depths between 0.5 and 8 inches. The soil within this constructed ditch was determined to be hydric based on the presence of low chroma soil matrix colors with mottles and the presence of a presumed aquatic moisture regime. The soil matrix color in an adjacent upland area was 10YR4/4 without mottles.

#### *Stock Pond*

Stock ponds represent ponded areas that were either created or enhanced through the placement of an earthen dam in the course of a drainage and/or through excavation. Stock ponds exhibit an ordinary high water mark. Two stock ponds were mapped in the northeastern portion of the site. Vegetation within these features generally occurs within the shallower areas along the margins. Plant species observed within and adjacent to the stock ponds included Goodding's black willow (*Salix gooddingii*), Fremont cottonwood (*Populus fremontii*), cattail, hyssop loosestrife, pennyroyal, dock, spikerush, and Vasey's coyote-thistle.

Wetland hydrology indicators observed at the stock ponds included soil inundation and saturation, water marks, sediment deposits, oxidized root channels, water stained leaves, and FAC-neutral test.

The soil matrix color within SP-1 was 10YR3/1 without mottles from the surface to a depth of 2 inches and 10YR4/2 without mottles at depths between 2 and 12 inches below the surface. The soil at this location was determined to be hydric based the presence of concretions and low



chroma soil matrix colors. The soil matrix color in an adjacent upland area was 10YR4/2 without mottles.

## **INTERSTATE COMMERCE**

The wetlands located in the northeastern portion of the site, in the vicinity of SP-1, are or appear to be tributary to on-site seasonal wetland swales, ephemeral drainages, constructed ditches, and/or intermittent drainages via direct connection or overland sheet flows. These linear drainage features are or appear to be tributary to Alder Creek or other linear features that are tributary to Alder Creek. Alder Creek is tributary to the American River, a navigable waters. The wetlands located in the western portion of the site, west of Scott Road, appear to be tributary to on-site seasonal wetland swales, ephemeral drainages, and/or intermittent drainages via direct connection or overland sheet flows. These linear features appear to be tributary to Buffalo Creek, which is also tributary to the American River. The remaining wetland features, located in the southeastern corner of the site, drain south towards Coyote Creek, which drains south to Carson Creek, then to Deer Creek, and finally to the Consumnes River, a navigable waters. Thus, the wetlands and other waters mapped on-site may be considered connected with and/or adjacent to a waters of the U.S., and would therefore be subject to interstate and/or foreign commerce.

## **CONCLUSION**

A total of 9.790 acres of potential waters of the U.S. have been mapped on-site. These acreages represent a calculated estimation of the jurisdictional area within the site, and are subject to modification following the Corps verification process. Fill within jurisdictional features would require permitting pursuant to Section 404 and 401 of the federal Clean Water Act.

## REFERENCES

- Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. U. S. Army Engineer Waterways Experiment Station. Vicksburg, Mississippi.
- Headquarters, U.S. Army Corps of Engineers (HQUSACE). 1992. Clarification and Interpretation of the 1987 Manual. Memorandum from Major General Arthur E. Williams. Dated: 6 March 1992.
- Hickman, J. C. (ed.). 1993. The Jepson Manual: Higher Plants of California. University of California Press. Berkeley, California.
- Kollmorgen Instruments Company. 1990. Munsell Soil Color Charts. Kollmorgen Corporation. Baltimore, Maryland.
- Reed, P.B., Jr. 1988. National List of Plant Species that Occur in Wetlands: California (Region 0). (Biological Report 88[26.10].) U.S. Fish and Wildlife Service, Ft. Collins, Colorado.
- U.S. Department of Agriculture, Natural Resources Conservation Service. 2003. National Soil Survey Handbook, title 430-VI. Available Online: <http://soils.usda.gov/technical/handbook>.
- U.S. Department of Agriculture, Soil Conservation Service. 1992. Hydric Soils List for Sacramento County. U.S. Department of Agriculture, Soil Conservation Service, Davis, California.
- U.S. Department of Agriculture, Soil Conservation Service. 1993. Soil Survey of Sacramento County, California. U.S. Department of Agriculture, Soil Conservation Service. Davis, California.
- U.S. Department of the Army, Corps of Engineers, Sacramento District. 2001. Minimum Standard for Acceptance of Preliminary Wetland Delineations. Dated: November 30, 2001.
- U.S. Department of the Interior, Geological Survey. 1980. "Folsom, California" 7.5-minute Quadrangle. Geological Survey. Denver, Colorado.
- U.S. Department of the Interior, Geological Survey. 1980. "Buffalo Creek, California" 7.5-minute Quadrangle. Geological Survey. Denver, Colorado.
- U.S. Department of the Interior, Geological Survey. 2002. DOQ Orthophotograph of the site. Photo Dated: May 2002.

U.S. Department of the Interior, Geological Survey. 1978. Hydrologic Unit Map, State of California. Geological Survey. Reston, Virginia.

## LIST OF APPENDICES

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Appendix A – San Juan Wetland Determination Forms

Appendix B – Plant Species Observations Data Form Locations

Appendix C – Wetland Delineation

Appendix D – Wetland Delineation Short-Form Worksheet with Data Collection Form

Appendix E – Corps-Modified Wetland Map and Wetland Determination Form

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## APPENDIX A

ROUTINE WATER DELAY AND FORTS



## APPENDIX B

RECEIVED BY THE DIRECTOR OF THE FBI ON 10/10/78

**Folsom 560**  
**Wetland Delineation**  
**Plants Observed at Data Points**

<b>Abbr.</b>	<b>Scientific Name</b>	<b>Common Name</b>	<b>Indicator Status</b>
AIR CAR	<i>Aira caryophyllea</i>	Hairgrass	N/L
AVE BAR	<i>Avena barbata</i>	Slender wild oat	N/L
BRI MAX	<i>Briza maxima</i>	Big quaking grass	N/L
BRI MIN	<i>Briza minor</i>	Little quaking grass	FACW-
BRO spe.	<i>Brodiaea</i> species	Brodiaea	--
BRO DIA	<i>Bromus diandrus</i>	Ripgut brome	N/L
BRO HOR	<i>Bromus hordeaceus</i>	Soft brome	FACU-
CEN SOL	<i>Centaurea solstitialis</i>	Yellow star-thistle	N/L
CEN MUE	<i>Centaureum muehlenbergii</i>	Monterey centaury	FAC
CYN ECH	<i>Cynosurus echinatus</i>	Hedgehog dog-tail grass	N/L
ELE MAC	<i>Eleocharis macrostachya</i>	Creeping spikerush	OBL
ELE spe.	<i>Eleocharis</i> species	Spikerush	FACW
ERO BOT	<i>Erodium botrys</i>	Filaree	N/L
ERO spe.	<i>Erodium</i> species	Filaree	N/L
ERY VAS	<i>Eryngium vaseyi</i>	Vasey's coyote-thistle	FACW
GAS VEN	<i>Gastidium ventricosum</i>	Nit grass	FACU
HOL VIR	<i>Holcarpha virgata</i>	Sticky tarweed	N/L
HOR MAR	<i>Hordeum marinum</i>	Mediterranean barley	FAC
HOR MUR	<i>Hordeum murinum</i>	Barley	NI
HYP RAD	<i>Hypochaeris radicata</i>	Perennial cat's-ear	N/L
HYP spe.	<i>Hypochaeris</i> species	Cat's-ear	N/L
JUN BUF	<i>Juncus bufonius</i>	Toad rush	FACW+
LEO TAR	<i>Leontodon taraxacoides</i>	Hairy hawkbit	FACU
LOL MUL	<i>Lolium multiflorum</i>	Ryegrass	FAC*
LUP BIC	<i>Lupinus bicolor</i>	Bicolored lupine	N/L
LYT HYS	<i>Lythrum hyssopifolia</i>	Hyssop loosestrife	FACW
MEN PUL	<i>Mentha pulegium</i>	Pennyroyal	OBL
NAV spe.	<i>Navarretia</i> species	Navarretia	--
PLA STI	<i>Plagiobothrys stipitatus</i>	Slender popcorn-flower	OBL
PLA spe.	<i>Plantago</i> species	Plantain	--
POL MON	<i>Polypogon monspeliensis</i>	Annual rabbit-foot grass	FACW+
QUE DOU	<i>Quercus douglasii</i>	Blue oak	N/L
RAN BON	<i>Ranunculus bonariensis</i>	Carter's buttercup	OBL
RUB DIS	<i>Rubus discolor</i>	Himalayan blackberry	FACW*
RUM spe.	<i>Rumex</i> species	Dock	--
SAL GOO	<i>Salix gooddingii</i>	Goodding's black willow	OBL
TAE CAP	<i>Taeniatherum caput-medusae</i>	Medusahead grass	N/L
TOR ARV	<i>Torilis arvensis</i>	Torilis (hedge parsley)	N/L
TRI DUB	<i>Trifolium dubium</i>	Shamrock clover	FACU*
TRI HIR	<i>Trifolium hirtum</i>	Rose clover	N/L
TRI VAR	<i>Trifolium variegatum</i>	White-tip clover	FACW-

**Folsom 560**  
**Wetland Delineation**  
**Plants Observed at Data Points**

<b>Abbr.</b>	<b>Scientific Name</b>	<b>Common Name</b>	<b>Indicator Status</b>
TRI spe.	<i>Trifolium</i> species	Clover	--
TRI HYA	<i>Triteleia hyacinthina</i>	Hyacinth brodiaea	FACW*
VUL MYU	<i>Vulpia myuros</i>	Rat-tail vulpia	FACU*
VUL spe.	<i>Vulpia</i> species	Vulpia	--

**Indicator Status Codes**

**OBL** = Obligate Wetland; occur almost always (estimated probability >99%) under natural conditions in wetlands.

**FACW** = Facultative Wetland; usually occur in wetlands (estimated probability 67%-99%) under natural conditions in wetlands.

**FAC** = Facultative; equally likely to occur in wetlands or non-wetlands (estimated probability 34%-66%).

**FACU** = Facultative Upland; usually occur in non-wetlands (estimated probability 67%-99%).

**UPL** = Obligate Upland; occur almost always (estimated probability >99%) in non-wetlands in the region specified.

**N/L** = Not Listed.

**NI** = No indicator was recorded for those species for which insufficient information was available to determine a status.

-- = May or may not occur in wetlands depending upon species.

A positive (+) sign indicates a frequency toward the higher (more frequently found in wetlands) end of the facultative categories.

A negative (-) sign indicates a frequency toward the lower (less frequently found in wetlands) end of the facultative categories.

An asterisk (\*) indicates a tentative assignment based upon limited information or conflicting review.



## APPENDIX C

### Appendix C: Estimation

Project/Site: Folsom S60 Date: 12/6/05 Sample Point: 1N  
Applicant/Owner: GenCorp Field Investigator(s): M. Buchalski, D. Hoyer  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Buffalo Creek, CA Section/Township/Range: 19/9N/8E  
Do normal environmental conditions exist site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☒ No ☐

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>Lolium multiflorum Fac</u>		<u>H</u>	<u>20</u>	5) _____			
2) <u>Holcus virgatus NL</u>		<u>H</u>	<u>20</u>	6) _____			
3) <u>Hordeum maximum Fac</u>		<u>H</u>	<u>20</u>	7) _____			
4) _____				8) _____			

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 66% = \_\_\_\_\_%

Comments: Numerous unidentifiable seedlings

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: None (in.) Depth to saturated soil: None (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetland  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: Appears to be a cow path - no evidence of water flow.

**SOILS**

**HYDRIC SOILS?** Yes ☐ No ☒

Series/Phase: Fiddymont fine sandy loam, 1-8% slopes Drainage Class: Well  
Taxonomy [Subgroup]: Typic Durixeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☐  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-4"</u>	<u>A</u>	<u>5YR 3/4</u>	<u>None</u>	<u>None</u>	<u>Sandy loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: No hydric soil indicators detected.

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☐ No ☒

Rationale: Neither hydric soils or wetland hydrology are present.  
General comments: This was a suspect feature based on the aerial signature.  
Wetland Type: \_\_\_\_\_

[illegible]

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## ENVIRONMENTAL CONSULTANTS

### ROUTINE WETLAND DELINEATION

Project/Site: Folsom 560 Date: 12/6/05 Sample Point: 2  
 Applicant/Owner: GenCap Field Investigator(s): M. Buchalaki, D. Hoyer  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): Buffalo Creek, California Section/Township/Range: 19/9N/8E  
 Do normal environmental conditions exist site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

#### VEGETATION

HYDROPHYTIC VEGETATION? Yes ☒ No ☐

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>Eryngium yoseyi</u>	<u>FACW</u>	<u>H</u>	<u>30</u>	5) _____	_____	_____	_____
2) <u>Holcus virgatus</u>	<u>NL</u>	<u>H</u>	<u>30</u>	6) _____	_____	_____	_____
3) <u>Lolium multiflorum</u>	<u>FAC</u>	<u>H</u>	<u>20</u>	7) _____	_____	_____	_____
4) <u>Hordeum maritimum</u>	<u>FAC</u>	<u>H</u>	<u>20</u>	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 75% = \_\_\_\_\_ %

Comments: \_\_\_\_\_

#### HYDROLOGY

WETLAND HYDROLOGY? Yes ☒ No ☐

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
 Depth of surface water: None (in.) Depth to free water in pit: None (in.) Depth to saturated soil: 10 (in.)  
 Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
 Comments: Soil appears to be saturated just above the shale layer.

SOILS Scared bed and bank Feature ~3' wide here HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: Fiddymont fine sandy loam, 1-8% slopes Drainage Class: Well  
 Taxonomy [Subgroup]: Typic Durixeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
 Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☐  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-4"</u>	<u>A</u>	<u>10YR 3/2</u>	<u>10YR 4/6</u>	<u>Many</u>	<u>Clay loam</u>
<u>4"-12"</u>	<u>A</u>	<u>10YR 3/2</u>	<u>None</u>	<u>None</u>	<u>Clay loam</u>

Comments: Shale encountered @ ~10"

\* DECISION \* WETLAND / WATERS DETERMINATION? Yes ☒ No ☐

Rationale: \_\_\_\_\_  
 General comments: This feature is a scared seasonal wetswale with ponding in scar holes occurring intermittently throughout feature. Wetland Type: Seasonal wetland swale

# HERBACEOUS COVER / DOMINANCE WORK SHEET

Species Observed	Actual Cover	Relative Cover
<i>Eragrostis vaseyi</i>		30%
<i>Holcus virgatus</i>		30%
<i>Lolium multiflorum</i>		20%
<i>Hordeum marinum</i>		20%
<i>Lythrum hyssopifolium</i>		trace
TOTAL SUM ( $\Sigma$ ) =		100%

## COVER:

Vegetation	
Bare Ground	
Rocks	
Other	
TOTAL =	100%

Species (Descending Order)	Relative Cover	Cumulative Cover	Indicator Status	Dominants
TOTAL SUM ( $\Sigma$ ) =		100%		

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom 560 Date: 12/6/05 Sample Point: 3N  
Applicant/Owner: GenCorp Field Investigator(s): M. Buchalski, D. Hoyer  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Buffalo Creek, California Section/Township/Range: \_\_\_\_\_  
Do normal environmental conditions exist site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>Taraxacum caput-medusae</u>	<u>NL</u>	<u>H</u>	<u>40%</u>	5) _____	_____	_____	_____
2) <u>Holcorpha virgate</u>	<u>NL</u>	<u>H</u>	<u>40%</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: \_\_\_\_\_ = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: None (in.) Depth to saturated soil: None (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetland  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected.

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: Fiddymont fine sandy loam, 0-8% slopes Drainage Class: Well  
Taxonomy [Subgroup]: Typic Duxteralks Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-14"</u>	<u>A</u>	<u>10YR 3/3</u>	<u>None</u>	<u>None</u>	<u>Clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

  
Comments: No hydric soil indicators detected.

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: This point does not satisfy any of the 3 parameters.  
General comments: Upland comparison to DP2.  
Wetland Type: \_\_\_\_\_

<u>Species Observed</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
Taeniatherum capit-medusae	40%	
Holocarpha virgata	40%	
Bromus hordeaceus	10%	
Lolium multiflorum	5%	
Briza minor	5%	
TOTAL SUM ( $\Sigma$ ) =	100	100%

COVER:

Vegetation	100%
Bare Ground	-
Rocks	-
Other	-
TOTAL =	100%

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**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom 560 Date: 12/6/05 Sample Point: 4N  
Applicant/Owner: GenCorp Field Investigator(s): M. Buchalski, D. Hoyer  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Buffalo Creek, California Section/Township/Range: 19/9N/8E  
Do normal environmental conditions exist site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>Holocarpha virgata</u>	<u>NL</u>	<u>H</u>	<u>30</u>	5) _____	_____	_____	_____
2) <u>Taeniatherum caput-medusae</u>	<u>NL</u>	<u>H</u>	<u>30</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0 = \_\_\_\_\_ %

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: None (in.) Depth to saturated soil: None (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetland  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected.

**SOILS**

**HYDRIC SOILS?** Yes ☐ No ☒

Series/Phase: Argonaut Auburn complex, 3-8% slopes Drainage Class: Well  
Taxonomy [Subgroup]: Mollic Haploxeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-10"</u>	<u>A</u>	<u>5YR 3/4</u>	<u>None</u>	<u>None</u>	<u>Clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

  
Comments: No hydric soil indicators detected.

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☐ No ☒

Rationale: None of the 3 parameters are satisfied.  
General comments: This was a suspect feature based on the aerial signature.  
Wetland Type: \_\_\_\_\_



# HERBACEOUS COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
<i>Holcarpha virgata</i>	30%	
<i>Taeniatherum</i>	30%	
<i>caput-medusae</i>		
<i>Branus hordeaceus</i>	10%	
<i>Lolium multiflorum</i>	10%	
<i>Brodiaea</i> sp.	10%	
<i>Gastroidium ventricosum</i>	10%	
<i>Trifolium</i> sp.	trace	
TOTAL SUM ( $\Sigma$ ) =	100	100%

<u>COVER:</u>	
Vegetation	100
Bare Ground	—
Rocks	—
Other	—
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) =	100%			

Project/Site: Folsom S60 Date: 12/7/05 Sample Point: 5  
Applicant/Owner: GenCorp Field Investigator(s): D. Hoyer  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Buffalo Creek, California Section/Township/Range: 19/9N/8E  
Do normal environmental conditions exist site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☒ No ☐

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>Juncus bariensis</u>	<u>FacW+</u>	<u>H</u>	<u>30</u>	5) _____	_____	_____	_____
2) <u>Eryngium vaseyi</u>	<u>FacW</u>	<u>H</u>	<u>30</u>	6) _____	_____	_____	_____
3) <u>Hydrum maritimum</u>	<u>Fac</u>	<u>H</u>	<u>20</u>	7) _____	_____	_____	_____
4) <u>Polypogon monspeliensis</u>	<u>FacW+</u>	<u>H</u>	<u>20</u>	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 100 =        %

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☒ No ☐

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: None (in.) Depth to saturated soil: None (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☒ Sediment Deposits ☐ Drainage Patterns in Wetland  
Secondary Indicators (2 or more required):  
☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☒ FAC-Neutral Test ☒ Other Algal matt.  
Comments: Feature has well-defined border

**SOILS**

**HYDRIC SOILS?** Yes ☒ No ☐

Series/Phase: Argosol Auburn complex, 3-8% slopes Drainage Class: Well  
Taxonomy [Subgroup]: Mollic Haploxeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☒ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☐  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-1"</u>	_____	<u>7.5YR 4/1</u>	<u>None</u>	<u>None</u>	<u>Sandy loam</u>
<u>1"-8"</u>	_____	<u>10YR 4/1</u>	<u>7.5YR 5/8</u>	<u>Many</u>	<u>Sand</u>
<u>8"-12"</u>	_____	<u>5YR 4/8</u>	<u>None</u>	<u>None</u>	<u>Sand</u>

Comments: Top 1" of soil has high organic content.

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☒ No ☐

Rationale: This feature satisfies all 3 wetland parameters.

General comments: \_\_\_\_\_

Wetland Type: Seasonal wetland

## HERBACEOUS COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
Juncus bufonius	40	30
Eryngium vaseyi	20	30
Hordeum maritimum	20	20
Polygala mansuetioides	15	20
Lycium hyssopifolium	trace	
Holocarpa virgata	trace	
TOTAL SUM ( $\Sigma$ ) =		100%

<u><b>COVER:</b></u>	
Vegetation	70
Bare Ground	30
Rocks	-
Other	-
<b>TOTAL =</b>	<b>100%</b>

[illegible]

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**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom 560 Date: 12/7/05 Sample Point: 6N  
Applicant/Owner: Gen Corp Field Investigator(s): D. Hoyer  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Buffalo Creek, California Section/Township/Range: 19/9N/8E  
Do normal environmental conditions exist site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>Holcus virgatus</u>	<u>NL</u>	<u>H</u>	<u>30%</u>	5) _____	_____	_____	_____
2) <u>Taraxacum</u>	<u>NL</u>	<u>H</u>	<u>30%</u>	6) _____	_____	_____	_____
caput-medusae				7) _____	_____	_____	_____
3) _____	_____	_____	_____	8) _____	_____	_____	_____
4) <u>Juncus bufonius</u>	<u>FACW+</u>	<u>H</u>	<u>20%</u>				

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 33% = \_\_\_\_\_%

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☐ No ☒

Recorded Data: Yes ☒ No ☐ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: None (in.) Depth to saturated soil: None (in.)  
**Primary Indicators:** ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetland  
**Secondary Indicators (2 or more required):**  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_

Comments: No wetland hydrology indicators detected

**SOILS**

**HYDRIC SOILS?** Yes ☐ No ☒

Series/Phase: Argonaut Auburn complex, 3-8% slopes Drainage Class: Well  
Taxonomy [Subgroup]: Mollic Haploxeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-10"</u>		<u>7.5YR 4/3</u>	<u>7.5YR 5/8</u>	<u>Many</u>	<u>Sand</u>
<u>10-12"</u>		<u>7.5YR 5/8</u>	<u>None</u>	<u>None</u>	<u>Sand</u>
_____		_____	_____	_____	_____
_____		_____	_____	_____	_____

Comments: No hydric soil indicators detected

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☐ No ☒

Rationale: This point does not satisfy any of the 3 wetland parameters.  
General comments: Upland comparison to DP 5.

Wetland Type: \_\_\_\_\_

# HERBACEOUS COVER / DOMINANCE WORK SHEET

Species Observed	Actual Cover	Relative Cover
<i>Holcarpha virgata</i>	30%	
<i>Taeniatherum</i>	30%	
<i>caput-medusae</i>		
<i>Taraxacum officinale</i>	20%	
<i>Bromus hordeaceus</i>	5%	
<i>Hordeum marinum</i>	5%	
<i>Lolium multiflorum</i>	trace	
seedlings	10%	
TOTAL SUM ( $\Sigma$ ) =	100%	100%

## COVER:

Vegetation	100%
Bare Ground	—
Rocks	—
Other	—
TOTAL =	100%

Species (Descending Order)	Relative Cover	Cumulative Cover	Indicator Status	Dominants
TOTAL SUM ( $\Sigma$ ) =	100%			

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**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom 560 Date: 12/7/05 Sample Point: 8 N  
Applicant/Owner: GenCap Field Investigator(s): D. Hoyer  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Buffalo Creek, California Section/Township/Range: 19 / 9 N / 8 E  
Do normal environmental conditions exist site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>Taeniatherum caput-medusae</u>	<u>NL</u>	<u>H</u>	<u>45%</u>	5) _____	_____	_____	_____
2) _____	_____	_____	_____	6) _____	_____	_____	_____
3) <u>Holcus virgatus</u>	<u>NL</u>	<u>H</u>	<u>45%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0% = \_\_\_\_\_ %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: None (in.) Depth to saturated soil: None (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetland:  
Secondary Indicators (2 or more required):  
☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: Suspect feature on aerial appears to be a constructed ditch that carries no flow.

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: Red Bluff-Redding complex, 3-8% slopes Drainage Class: Mod. well-Well  
Taxonomy [Subgroup]: Ultic Palexeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-10"</u>	<u>A</u>	<u>10YR 4/2</u>	<u>None</u>	<u>None</u>	<u>Sandy loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: No hydric soil indicators detected.

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: This feature does not satisfy any of the 3 parameters.  
General comments: \_\_\_\_\_

Wetland Type: \_\_\_\_\_

[illegible]

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**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom 560 Date: 12/8/05 Sample Point: 9N 7  
Applicant/Owner: GenCorp Field Investigator(s): D. Hoyer  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Buffalo Creek, California Section/Township/Range: 19/9N/8E  
Do normal environmental conditions exist site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>Holcarpha virgata</u>	<u>NL</u>	<u>H</u>	<u>30%</u>	5) _____	_____	_____	_____
2) <u>Taraxacum</u>	<u>NL</u>	<u>H</u>	<u>20%</u>	6) _____	_____	_____	_____
3) <u>caput-medusae</u>	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0% = \_\_\_\_\_ %

Comments: Hydrophytic vegetation not dominant.

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☐ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: None (in.) Depth to saturated soil: None (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetland  
Secondary Indicators (2 or more required):  
☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: Soil moist but not saturated. Rain storm yesterday.

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: Vleek gravelly loam, 2-15% slopes Drainage Class: Mod. well  
Taxonomy [Subgroup]: Abruptic Haplic Durixeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-9"</u>	_____	<u>3.5YR 4/3</u>	<u>None</u>	<u>None</u>	<u>Gravelly clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

  
Comments: No hydric soil indicators detected. Soil very cobbly.

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: This feature does not satisfy any of the 3 parameters.

General comments: This was a suspect feature based on the aerial signature.

Wetland Type: \_\_\_\_\_



Species Observed	Actual Cover	Relative Cover
<i>Holocarpha virgata</i>	30%	
<i>Taeniatherum caput-medusae</i>	20%	
<i>Eragrostis vaseyi</i>	15%	
<i>Vulpia</i> sp.	15%	
<i>Navarretia</i> sp.	5%	
<i>Lolium multiflorum</i>	5%	
<i>Hordeum maritimum</i>	5%	
<i>Lythrum hyssopifolium</i>	5%	
<i>Gastrophysalis virgatus</i>	trace	
<i>Brodiaea</i> sp.	trace	
TOTAL SUM ( $\Sigma$ ) =	100%	100%

**COVER:**

Vegetation 100%

Bare Ground -

Rocks -

Other -

TOTAL = 100%

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**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom SBO Date: 12/8/05 Sample Point: 109  
Applicant/Owner: GenCorp Field Investigator(s): D. Hoyer  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Buffalo Creek, California Section/Township/Range: 19/9N/8E  
Do normal environmental conditions exist site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) _____	_____	_____	_____	5) _____	_____	_____	_____
2) _____	_____	_____	_____	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: \_\_\_\_\_ = \_\_\_\_\_ %

Comments: Feature itself is unvegetated. Species on the banks are listed on the back of this sheet.

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☒ No ☐

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: None (in.) Depth to saturated soil: None (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetland  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☒ Other scored bed + b  
Comments: Scored bed and bank. Feature is ~3' wide and incised ~3'.

**SOILS**

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: Pits Drainage Class: \_\_\_\_\_  
Taxonomy [Subgroup]: \_\_\_\_\_ Confirm Map Type: Yes ☐ No ☐  
☐ Histo<sub>1</sub>sol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☒ Concretions ☒ Other Frequently Flood  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☐  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-14"</u>	<u>A</u>	<u>10YR 3/2</u>	<u>None</u>	<u>None</u>	<u>Gravelly clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

  
Comments: Concretions indicate presence of hydric soil

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☒ No ☐

Rationale: As this feature is unvegetated but exhibits a scored bed and bank, it  
General comments: qualifies as a waters of the US. - Also exhibits an OHWM  
Wetland Type: Ephemeral drainage

<u>Species Observed</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
Holocarpha virgata		
Lolium multiflorum		
Rumex sp.		
Hypochaeris sp.		
Bromus hordeaceus		
Vulpia sp.		
Eryngium vaseyi		
Lycium hyssopifolium		
Taraxacum officinale-medusa		
TOTAL SUM ( $\Sigma$ ) =		100%

COVER:

Vegetation \_\_\_\_\_

Bare Ground \_\_\_\_\_

Rocks \_\_\_\_\_

Other \_\_\_\_\_

TOTAL = 100%

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**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom 560 Date: 12/8/05 Sample Point: 11N 10N  
Applicant/Owner: GenCon Field Investigator(s): D. Hoyer  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Buffalo Creek, California Section/Township/Range: 19/9N/8E  
Do normal environmental conditions exist site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>Tarriatherum</u>	<u>NL</u>	<u>H</u>	<u>60%</u>	5) _____	_____	_____	_____
2) <u>caput-medusae</u>	_____	_____	_____	6) _____	_____	_____	_____
3) <u>Holcarpha virgata</u>	<u>NL</u>	<u>H</u>	<u>20%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0% = \_\_\_\_\_ %

Comments: No hydrophytic vegetation present.

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☐ No ☒

Recorded Data: Yes ☐ No ☐ If yes, \_\_\_\_\_  
Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
**Primary Indicators:** ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetland  
**Secondary Indicators (2 or more required):**  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_

Comments: No wetland hydrology indicators detected.

**SOILS**

**HYDRIC SOILS?** Yes ☐ No ☒

Series/Phase: Pits Drainage Class: \_\_\_\_\_  
Taxonomy [Subgroup]: \_\_\_\_\_ Confirm Map Type: Yes ☐ No ☐  
☐ Histo~~sol~~ ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☐

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-6"</u>	<u>A</u>	<u>10YR 3/4</u>	<u>None</u>	<u>None</u>	<u>Gravelly loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: Could not penetrate deeper due to gravelly nature of soil.

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☐ No ☒

Rationale: This feature does not satisfy any of the 3 parameters.

General comments: Upland comparison to DP 9

Wetland Type: \_\_\_\_\_

[illegible]

<b><u>COVER:</u></b>	
Vegetation	100%
Bare Ground	—
Rocks	—
Other	—
<b>TOTAL =</b>	<b>100%</b>

[illegible]

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**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom 560 Date: 12/28/05 Sample Point: 12 11  
Applicant/Owner: GenCorp Field Investigator(s): Daria Hoyer  
County: Sacramento State: CA Plant Community: Blue oak woodland  
Quad(s): Folsom, California Section/Township/Range: 18/9N/8E  
Do normal environmental conditions exist site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☒ No ☐

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>Salix goodingii</u>	<u>Obl</u>	<u>T</u>	<u>100%</u>	5) <u>Eleocharis sp.</u>	<u>FacW</u>	<u>1+</u>	<u>20%</u>
2) <u>Lythrum hyssopifolia</u>	<u>FacW</u>	<u>H</u>	<u>20%</u>	6) _____	_____	_____	_____
3) <u>Mentha pulegium</u>	<u>Obl</u>	<u>H</u>	<u>20%</u>	7) _____	_____	_____	_____
4) <u>Rumex sp.</u>	<u>Fac/FacW/Obl</u>	<u>H</u>	<u>20%</u>	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: \_\_\_\_\_ = 100%

Comments: Vegetation listed here includes what little emergent vegetation that is present in feature.

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☒ No ☐

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: 5" (in.) Depth to free water in pit: surface (in.) Depth to saturated soil: surface (in.)  
Primary Indicators: ☒ Inundated ☒ Saturated in Upper 12 in. ☒ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetland  
Secondary Indicators (2 or more required):  
☒ Oxidized Root Channels in Upper 12 in. ☒ Water-stained Leaves ☐ Local Soil Survey Data ☒ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: This feature is a reservoir that is currently full.

**SOILS**

**HYDRIC SOILS?** Yes ☒ No ☐

Series/Phase: Whiterock loam, 3-30% slopes Drainage Class: Somewhat excess  
Taxonomy [Subgroup]: Lithic Xerothents Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☒ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-2"</u>	<u>O</u>	<u>10YR 3/1</u>	<u>—</u>	<u>—</u>	<u>Loam</u>
<u>2-12"</u>	<u>A</u>	<u>10YR 4/2</u>	<u>—</u>	<u>—</u>	<u>Gravelly clay</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: \_\_\_\_\_

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☒ No ☐

Rationale: All 3 wetland criteria have been satisfied.

General comments: \_\_\_\_\_

Wetland Type: Stock Pond

[illegible]

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**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom S60 Date: 12/28/05 Sample Point: 13N 12N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Hoyer  
County: Sacramento State: CA Plant Community: Blue oak woodland  
Quad(s): Folsom, California Section/Township/Range: 18/9N/8E  
Do normal environmental conditions exist site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>Quercus douglasii</u>	<u>NL</u>	<u>T</u>	<u>100%</u>	5) <u>Erodium sp.</u>	<u>NL</u>	<u>H</u>	<u>20%</u>
2) <u>Holcus virgatus</u>	<u>NL</u>	<u>H</u>	<u>20%</u>	6) _____	_____	_____	_____
3) <u>Plantago sp.</u>	<u>-</u>	<u>H</u>	<u>20%</u>	7) _____	_____	_____	_____
4) <u>Trifolium sp.</u>	<u>-</u>	<u>H</u>	<u>20%</u>	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: \_\_\_\_\_ = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☐ No ☒

Recorded Data? Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: None (in.) Depth to saturated soil: None (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetland  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected.

**SOILS**

**HYDRIC SOILS?** Yes ☐ No ☒

Series/Phase: Whiterock loam, 3-30% slopes Drainage Class: Somewhat excess  
Taxonomy [Subgroup]: Lithic Xerorthents Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	<u>A</u>	<u>10YR 4/2</u>	<u>-</u>	<u>-</u>	<u>Gravelly loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: No hydric soil indicators detected.

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied  
General comments: Upland comparison to DP 11

Wetland Type: \_\_\_\_\_



[illegible]

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**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom 560 Date: 12/29/05 Sample Point: 14 13  
Applicant/Owner: GenCorp Field Investigator(s): Daria Hoyer  
County: Sacramento State: CA Plant Community: Blue oak woodland  
Quad(s): Folsom, California Section/Township/Range: 18/9N/8E  
Do normal environmental conditions exist site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☒ No ☐

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>Rubus discolor</u>	<u>FACW</u>	<u>S</u>	<u>100%</u>	5) _____	_____	_____	_____
2) <u>Mentha pulegioides</u>	<u>Obl</u>	<u>H</u>	<u>100%</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: \_\_\_\_\_ = 100% %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☒ No ☐

Recorded Data: Yes ☐ No ☐ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: 2" (in.) Depth to saturated soil: ~1" (in.)  
Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 in. ☐ Water Marks ☒ Drift Lines ☒ Sediment Deposits ☒ Drainage Patterns in Wetland  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☒ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: Feature is adjacent to an ephemeral drainage.

**SOILS**

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: Whiterock loam, 3-8% slopes Drainage Class: Somewhat excessive  
Taxonomy [Subgroup]: Lithic Xerothents Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☐  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-12" +</u>	_____	<u>2.5Y 4/2</u>	<u>10YR 4/6</u>	<u>Abundant/Small</u>	<u>Gravelly silt.</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

  
Comments: \_\_\_\_\_

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☒ No ☐

Rationale: This feature satisfies all 3 wetland criteria.

General comments: \_\_\_\_\_

Wetland Type: Seasonal wetland

[illegible]

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**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom SW Date: 12/29/05 Sample Point: LSN 14N  
Applicant/Owner: Gen Corp Field Investigator(s): Daria Hoyer  
County: Sacramento State: CA Plant Community: Blue oak woodland  
Quad(s): Folsom, California Section/Township/Range: 18/9N/8E  
Do normal environmental conditions exist site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) _____	_____	_____	_____	5) _____	_____	_____	_____
2) _____	_____	_____	_____	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: \_\_\_\_\_ = \_\_\_\_\_ %

Comments: Unvegetated.

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: None (in.) Depth to saturated soil: None (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetland  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected.

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: Whiterock loam, 3-8% slopes Drainage Class: Somewhat excessive  
Taxonomy [Subgroup]: Lithic Xerothents Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☐  
Depth (in.) Horizon Matrix Color Mottle Color Mottle (Abund/Contrast/Size) Texture, Concretions, Structure  
0-12" + \_\_\_\_\_ 10YR 4/3 None None Gravelly loam

Comments: No hydric soil indicators detected.

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: This point does not satisfy any of the wetland criteria.  
General comments: Upland comparison to DP13

Wetland Type: \_\_\_\_\_

[illegible]

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**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom 560 Date: 12/29/05 Sample Point: 16N 15N  
Applicant/Owner: GenCap Field Investigator(s): Daria Hayer  
County: Sacramento State: CA Plant Community: Blue oak woodland  
Quad(s): Folsom, California Section/Township/Range: 18/9N/8E  
Do normal environmental conditions exist site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>Cynosurus echinatus</u>	<u>NL</u>	<u>H</u>	<u>30%</u>	5) _____	_____	_____	_____
2) <u>Centaurea solstitialis</u>	<u>NL</u>	<u>H</u>	<u>30%</u>	6) _____	_____	_____	_____
3) <u>Tarlis arvensis</u>	<u>NL</u>	<u>H</u>	<u>30%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: \_\_\_\_\_ = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: None (in.) Depth to saturated soil: None (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetland  
Secondary Indicators (2 or more required):  
☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: \_\_\_\_\_

**SOILS**

**HYDRIC SOILS?** Yes ☒ No ☐

Series/Phase: Whiterock loam, 3-8% slopes Drainage Class: Somewhat excess  
Taxonomy [Subgroup]: Lithic Xerorthents Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☒ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☐

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	<u>A</u>	<u>10YR 5/2</u>	<u>7.5YR 4/4</u>	<u>Abundant/Large</u>	<u>Gravelly clay</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: \_\_\_\_\_

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☐ No ☒

Rationale: Although hydric soils are present, the other two criteria are not satisfied.  
General comments: This feature was suspect due to topography, but appears to have been historically abandoned. Wetland Type: \_\_\_\_\_

[illegible]

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**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom 560 Date: 12/29/05 Sample Point: 17 16  
Applicant/Owner: GenCap Field Investigator(s): Daria Hoyer  
County: Sacramento State: CA Plant Community: Blue oak woodland  
Quad(s): Folsom, California Section/Township/Range: 18/9N/8E  
Do normal environmental conditions exist site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☒ No ☐

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>Eryngium yosegi</u>	<u>FACW</u>	<u>H</u>	<u>30%</u>	5) _____	_____	_____	_____
2) <u>Centaurium muhlenbergii</u>	<u>FAC</u>	<u>H</u>	<u>30%</u>	6) _____	_____	_____	_____
3) <u>Lythrum hyssopifolia</u>	<u>FACW</u>	<u>H</u>	<u>30%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: \_\_\_\_\_ = 100 %

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☒ No ☐

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: 4" (in.) Depth to free water in pit: surface (in.) Depth to saturated soil: surface (in.)  
Primary Indicators: ☒ Inundated ☒ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetland  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☒ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: \_\_\_\_\_

**SOILS**

**HYDRIC SOILS?** Yes ☒ No ☐

Series/Phase: Whiterock loam, 3-8% slopes Drainage Class: Somewhat excessive  
Taxonomy [Subgroup]: Lithic Xerothents Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	_____	<u>10YR 4/1</u>	<u>10YR 3/4</u>	<u>Abundant/Large</u>	<u>Clay</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

  
Comments: \_\_\_\_\_

**DECISION**

**WETLAND / WATERS DETERMINATION?** Yes ☒ No ☐

Rationale: This feature satisfies all 3 wetland criteria  
General comments: \_\_\_\_\_  
Wetland Type: Vernal Pool



[illegible]

COVER:

Vegetation	8%
Bare Ground	
Rocks	
Other <u>water</u>	92%
TOTAL =	100%

[illegible]

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ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom S60 Date: 12/29/05 Sample Point: 18N 17N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Hoyer  
County: Sacramento State: CA Plant Community: Blue oak woodland  
Quad(s): Folsom, California Section/Township/Range: 18/9N/8E  
Do normal environmental conditions exist site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>Volpia myuros</u>	<u>FACU</u>	<u>H</u>	<u>70%</u>	5) _____	_____	_____	_____
2) _____	_____	_____	_____	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: \_\_\_\_\_ = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: None (in.) Depth to saturated soil: None (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetland  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected.

**SOILS**

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: Whiterock loam, 3-8% slopes Drainage Class: Somewhat excess  
Taxonomy [Subgroup]: Lithic Xerothents Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☒ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	_____	<u>7.5YR 4/3</u>	<u>—</u>	<u>—</u>	<u>Clay</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: \_\_\_\_\_

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: This point satisfies only one of the three wetland criteria.  
General comments: Upland comparison to DP 16  
Wetland Type: \_\_\_\_\_

[illegible]

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**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom 560 Date: 2/24/06 Sample Point: 24 18  
Applicant/Owner: Gen Corp Field Investigator(s): Daria Hoyer  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, Ca Section/Township/Range: Section 18 / T9N / R8E  
Do normal environmental conditions exist at site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☒ No ☐

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>Ranunculus borealis</u>	<u>Obl</u>	<u>H</u>	<u>40%</u>	5) _____	_____	_____	_____
2) <u>Elymus macrotachya</u>	<u>Obl</u>	<u>H</u>	<u>27%</u>	6) _____	_____	_____	_____
3) <u>Eryngium yagei</u>	<u>FACW</u>	<u>H</u>	<u>20%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: \_\_\_\_\_ = \_\_\_\_\_ %

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☒ No ☐

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: 2" (in.) Depth to free water in pit: surface (in.) Depth to saturated soil: surface (in.)  
Primary Indicators: ☒ Inundated ☒ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☒ Sediment Deposits ☐ Drainage Patterns in Wetland  
Secondary Indicators (2 or more required):  
☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☒ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: This is a linear feature constructed on contour that ponds water but does not exhibit evidence of water flow.

**SOILS**

**HYDRIC SOILS?** Yes ☒ No ☐

Series/Phase: Whiterock loam, 3-30% slopes Drainage Class: \_\_\_\_\_  
Taxonomy [Subgroup]: \_\_\_\_\_ Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☒ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-1/2"</u>	<u>O</u>	<u>5Y4/1</u>	<u>—</u>	<u>—</u>	<u>Loam</u>
<u>1/2"-8"</u>	<u>A</u>	<u>2.5Y 5/1</u>	<u>10YR 4/6</u>	<u>Many/High</u>	<u>Clay loam</u>

Comments: Soil below 8" not cohesive; thus an accurate profile could not be obtained below.

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☒ No ☐

Rationale: This feature satisfies all 3 wetland criteria.  
General comments: \_\_\_\_\_  
Wetland Type: Constructed Ditch

[illegible]

<u><b>COVER:</b></u>	
Vegetation	<u>75%</u>
Bare Ground	<u>25%</u>
Rocks	<u>          </u>
Other	<u>          </u>
<b>TOTAL =</b>	<b><u>100%</u></b>

[illegible]

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**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom 560 Date: 2/24/06 Sample Point: 25N 19N  
Applicant/Owner: Gen Corp Field Investigator(s): Daria Hoyer  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, Ca Section/Township/Range: Section 18/T9N/R8E  
Do normal environmental conditions exist at site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>Hypochaeris radicata NL</u>		<u>H</u>	<u>48%</u>	5) _____			
2) <u>Bromus hordeaceus FACW</u>		<u>H</u>	<u>12%</u>	6) _____			
3) _____				7) _____			
4) _____				8) _____			

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: \_\_\_\_\_ = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: None (in.) Depth to saturated soil: None (in.)  
**Primary Indicators:** ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetland  
**Secondary Indicators (2 or more required):**  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected.

**SOILS**

**HYDRIC SOILS?** Yes ☐ No ☒

Series/Phase: Whiterock loam, 3-30% slopes Drainage Class: \_\_\_\_\_  
Taxonomy [Subgroup]: \_\_\_\_\_ Confirm Map Type: Yes ☐ No ☐  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-1/2"</u>		<u>2.5Y 4/3</u>	<u>—</u>	<u>—</u>	<u>Loam</u>
<u>1/2"-12"</u>		<u>10YR 4/4</u>	<u>—</u>	<u>—</u>	<u>Silty loam</u>
_____					
_____					

Comments: No hydric soil indicators detected.

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☐ No ☒

Rationale: Point does not satisfy any of the wetland criteria

General comments: Upland comparison to DP 18

Wetland Type: \_\_\_\_\_

<u>Species Observed</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
Hypochaeris radicata	60%	48%
Unidentifiable seedlings	30%	24%
Bromus hordeaceus	15%	12%
Holocarpha virgata	10%	8%
Gastidium ventricosum	10%	8%
TOTAL SUM ( $\Sigma$ ) =	125%	100%

COVER:

Vegetation \_\_\_\_\_ 100%

Bare Ground \_\_\_\_\_

Rocks \_\_\_\_\_

Other \_\_\_\_\_

TOTAL = 100%

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**ROUTINE WETLAND DELINEATION**

Project/Site: FOLSOM S60 Date: 5 MAY 2006 Sample Point: 26 2D

Applicant/Owner: GENCOAP REALTY INVESTMENTS Field Investigator(s): A BAUARD

County: SACRAMENTO State: CA Plant Community: ANNUAL GRASSLAND

Quad(s): BUFFALO CRK, CA Section/Township/Range: \_\_\_\_\_

Do normal environmental conditions exist site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_

Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_

Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☒ No ☐

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>ERY VAS</u>	<u>FACW</u>	<u>HEPB</u>	<u>60</u>	5) _____	_____	_____	_____
2) <u>HORMAR</u>	<u>FAC</u>	<u>HEPB</u>	<u>20</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 2/2 = 100 %

Comments: VEL RELATIVELY SPACE IN CHANNEL DUE TO LIMITED AMTS OF FINE

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☒ No ☐

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_

Depth of surface water: NONE (in.) Depth to free water in pit: UNKNOWN (in.) Depth to saturated soil: UNKNOWN (in.)

Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☒ Water Marks ☒ Drift Lines ☒ Sediment Deposits ☐ Drainage Patterns in Wetland

Secondary Indicators (2 or more required):

☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_

Comments: NO SOIL PIT WAS EXCAVATED SO DEPTH TO FREE H<sub>2</sub>O IN PIT & SATURATED SOIL ARE UNKNOWN

**SOILS**

HYDRIC SOILS? Yes ☐ No ☐

Series/Phase: 235- VLECK GRAVELLY LOAM 2-15% SLOPES Drainage Class: MOTS WELL

Taxonomy (Subgroup): ABRUPTIC HAPIC DUXIERAEFI Confirm Map Type: Yes ☐ No ☒

☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma

☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_

Inclusions [Series/Phase]: NONE On Hydric Soils List: Yes ☐ No ☒

Depth (in.) Horizon Matrix Color Mottle Color Mottle (Abund/Contrast/Size) Texture, Concretions, Structure

NOT ABLE TO EXCAVATE PIT DUE TO COBBLE/GRAVEL/BEDROCK SUBSTRATE IN BED OF CHANNEL

Comments: REFUSAL @ SURFACE FINES PRIMARILY RESTRICTED TO INTERSTITIAL SPACES BETWEEN COBBLES & GRAVEL AREAS OF EXPOSED BEDROCK IN A-D SECTION

\* DECISION OF THE DRAINAGE WETLAND / WATERS DETERMINATION? Yes ☒ No ☐

Rationale: INCISED CHANNEL (BED: BANC) - FEATURE EXHIBITS AN ORDINARY HIGH WATER MARK (OHWM)

General comments: FEATURE IS IDENTIFIED AS A BROKEN-BLUE-LINE FEATURE ON THE BUFFALO CRK QUAD

Wetland Type: INTERMITTENT DRAINAGE



[illegible]

**TOTAL SUM ( $\Sigma$ ) = 100%**

# ECORP Consulting, Inc.

## ENVIRONMENTAL CONSULTANTS

### ROUTINE WETLAND DELINEATION

Project/Site: Folsom SLO Date: 5 MAY 2006 Sample Point: 27 21  
 Applicant/Owner: GENCORP REALTY INVESTMENTS Field Investigator(s): A BALLARD  
 County: SACRAMENTO State: CA Plant Community: ANNUAL GRASSLAND  
 Quad(s): BUFFALO CREEK, CA Section/Township/Range: \_\_\_\_\_  
 Do normal environmental conditions exist site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

#### VEGETATION

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) BRO HOR	FACU-	HERB	35	5)			
2) BRI MIN	FACW-	HERB	20	6)			
3) TRI DUB	FACW*	HERB	20	7)			
4)				8)			

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/3 = 33 %

Comments: \_\_\_\_\_

#### HYDROLOGY

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
 Depth of surface water: NONE (in.) Depth to free water in pit: >15 (in.) Depth to saturated soil: >15 (in.)  
 Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
 Comments: NO PRIMARY INDICATORS OBSERVED; ONLY ONE SECONDARY INDICATOR WAS OBSERVED

#### SOILS

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: 235 - VLECL Gravelly loam 2-15% slope Drainage Class: MOD. WELL  
 Taxonomy [Subgroup]: ABZPTK HAPUC DURICRELLS Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
 Inclusions [Series/Phase]: NONE On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
0-15		5YR 3/4			SANDY LOAM

  
 Comments: LIMITED AMOUNT OF GRAVEL FOUND THROUGH PIT

#### \* DECISION \*

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: 3 CRITERIA HAVE NOT BEEN MET UPLAND DATA POINT ADJACENT TO INTERMITTENT DRAINAGE  
 General comments: \_\_\_\_\_

Wetland Type: \_\_\_\_\_

# HERBACEOUS COVER / DOMINANCE WORK SHEET

Species Observed	Actual Cover	Relative Cover
BRO HOR	35	
LEO TAR	15	
BRI MIN	20	
TRI DUB	20	
BRO DIA	5	
AVE BAR	5	
ERO BOT	TR	
TOTAL SUM ( $\Sigma$ ) =		100%

<u>COVER:</u>	
Vegetation	100
Bare Ground	—
Rocks	—
Other	—
TOTAL =	100%

Species (Descending Order)	Relative Cover	Cumulative Cover	Indicator Status	Dominants
BRO HOR	35	35	FACU-	X
BRI MIN	20	55	FACW-	X
TRI DUB	20	75	FACU*	X
LEO TAR	15	90	FACU	
BRO DIA	5	95	NIL	
AVE BAR	5	100	NIL	
ERO BOT	TR		NIL	
TOTAL SUM ( $\Sigma$ ) =		100%		

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: FOLSOM 560 Date: 5 MAY 2006 Sample Point: 28 22  
Applicant/Owner: GENCORP REALTY INVESTMENTS Field Investigator(s): A BAUARD  
County: SACRAMENTO State: CA Plant Community: ANNUAL GRASSLAND  
Quad(s): BUFFALO CREEK, CA Section/Township/Range: \_\_\_\_\_  
Do normal environmental conditions exist site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☒ No ☐

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>JUN BUF</u>	<u>FACW+</u>	<u>HERB</u>	<u>60</u>	5) _____	_____	_____	_____
2) _____	_____	_____	_____	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 111 = 100 %

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☒ No ☐

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: NONE (in.) Depth to free water in pit: >15 (in.) Depth to saturated soil: AT SURFACE (in.)  
Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☒ Sediment Deposits ☐ Drainage Patterns in Wetland: ALGAL MATTING  
Secondary Indicators (2 or more required):  
☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: \_\_\_\_\_

**SOILS**

**HYDRIC SOILS?** Yes ☒ No ☐

Series/Phase: 192 - RED BLUFF LOAM, 2-5% SWAPS Drainage Class: WELL DRAINED  
Taxonomy [Subgroup]: ULTIC PAXEXERAUF Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: UNNAMED (DEPRESSION) On Hydric Soils List: Yes ☒ No ☐  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-5</u>	_____	<u>10YR 3/1</u>	<u>5YR 3/4</u>	<u>COMMON</u>	<u>SANDY CLAY LOAM</u>
<u>5-15</u>	_____	<u>7.5YR 3/4</u>	<u>10YR 4/1 (DEPLETION ZONES)</u>	<u>COMMON</u>	<u>SANDY CLAY LOAM</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

  
Comments: \_\_\_\_\_

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☒ No ☐

Rationale: \_\_\_\_\_  
General comments: FEATURE LOCATED ON SLOPE TO SOUTH OF DRAINAGE  
Wetland Type: SEEP

<u>Species Observed</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
JUN BUF	60	
ELE MAC	15	
ERY VAR	10	
HOR MAR	5	
BRO HOR	TR	
BRI MAX	TR	
TRI VAR	10	
TOTAL SUM ( $\Sigma$ ) =		100%

COVER:

Vegetation	100
Bare Ground	-
Rocks	-
Other	-
TOTAL =	100%

**TOTAL SUM ( $\Sigma$ ) = 100%**

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: FOLSOM S60 Date: 5 MAY 2006 Sample Point: 21 23  
Applicant/Owner: GENCORP REALTY INVESTMENTS Field Investigator(s): A BAUARD  
County: SACRAMENTO State: CA Plant Community: ANNUAL GRASSLAND  
Quad(s): BUFFALO CREEK, CA Section/Township/Range: \_\_\_\_\_  
Do normal environmental conditions exist site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>BRO HOR</u>	<u>FACW</u>	<u>HERB</u>	<u>40</u>	5) _____	_____	_____	_____
2) <u>LEO TAR</u>	<u>FACW</u>	<u>HERB</u>	<u>15</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/2 = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: NONE (in.) Depth to free water in pit: >16 (in.) Depth to saturated soil: >16 (in.)  
**Primary Indicators:** ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetland  
**Secondary Indicators (2 or more required):**  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: NO HYDROLOGY INDICATORS WERE OBSERVED

**SOILS**

**HYDRIC SOILS?** Yes ☐ No ☒

Series/Phase: 196 - PITS Drainage Class: \_\_\_\_\_  
Taxonomy [Subgroup]: \_\_\_\_\_ Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: NONE On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-16</u>	_____	<u>7.5 YR 3/4</u>	_____	_____	<u>SANDY LOAM</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

  
Comments: GRAVEL & COBBLE (SMALL) FOUND THROUGHOUT PIT

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☐ No ☒

Rationale: 3 CRITERIA HAVE NOT BEEN MET

General comments: \_\_\_\_\_

Wetland Type: \_\_\_\_\_

<u>Species Observed</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
BRO DIA	10	
BRO HOR	40	
LEO TAR	15	
BRI MIN	10	
TRI DOB	10	
AIR CAR	10	
LUP BIC	TR	
TRI HIR	TR	
TRI HYA	5	
TOTAL SUM ( $\Sigma$ ) =	100	100%

COVER:

Vegetation 100

Bare Ground -

Rocks -

Other -

TOTAL = 100%

TOTAL SUM ( $\Sigma$ ) = 100%



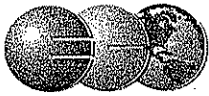
## APPENDIX D

Wetland Determination Study File (to be filled with contents of the study)



## APPENDIX E

Corps-Verified Wetland Map and Verification Letter (to be returned to Corps Consulting  
Ecologist by ERM)



16 March 2007

Mr. Will Ness  
USACE, Sacramento District  
ATTN: Regulatory Branch  
1325 J Street, Room 1480  
Sacramento, California 95814

**RE: Folsom 560, Sacramento County, California – Revised Wetland Delineation (USACE Reg. File No. 200600561)**

Dear Mr. Ness:

Please find attached the revised wetland delineation for the 560±-acre Folsom 560 site in Sacramento County, California. The revised wetland delineation (map dated: 14 March 2007) is the result of additional data collected in response to your request for additional information dated 14 February 2007.

The site corresponds to portions of Sections 18 and 19, Township 9 North, Range 8 East (MDBM) of the "Folsom, California" and "Buffalo Creek, California" 7.5-minute quadrangles (U.S. Department of the Interior, Geological Survey 1980). The approximate center of the site is located at 38° 37' 25" North and 121° 08' 23" West.

Within this submittal, we have included:

- one (1) copy of the 14 February 2007 letter requesting additional information,
- one (1) 1"=200' revised map,
- one (1) 8.5x11 revised map,
- completed Routine Wetland Determination Forms for 26 additional data point locations,
- one (1) revised list of plant species observed on-site,
- fourteen (14) pages of representative photographs, and
- one (1) Compact Disk containing the revised map, shape files, and a PDF version of the revised map.

The following is a summary of the information identified as being needed to complete the delineation review process. Each requested item is identified in italics with the response immediately following.

*1. Collect data at points marked on the attached map.*

ECORP biologist D. Snider collected three criteria data at the 26 requested data point locations on 21 February 2007. Copies of the completed Routine Wetland Determination Forms are included within this submittal. Photographs of each data point location and representative landscapes are included within this submittal. No additional wetland features were identified during the 21 February 2007 field visit.

*2. Report must include detailed discussions of wetland boundary justifications.*

The waters of the U.S. boundaries were delineated using standard field methodologies (e.g., paired data set analyses), and all wetland data were recorded on Routine Wetland Determination Forms. At each paired data point location, one point was located such that it was within the estimated wetland area, and the other point was situated outside the limits of the estimated wetland area. Wetland boundaries were typically determined based on a shift of vegetative composition from wetland associated species to upland associated species, topographic distinctions, and/or the limits of hydrology indicators (e.g., inundation, algal matting). The limits of other waters were delineated at the ordinary high water mark, which was typically identified based on extent of scour, water marks, shelving, and/or shifts in vegetative composition.

A color aerial photograph (1"=200' scale, U.S. Department of the Interior, Geological Survey 2002) was used to assist with mapping and ground-truthing. *Munsell Soil Color Charts* (Kollmorgen Instruments Co. 1990) and the *Soil Survey of Sacramento County, California* (U.S. Department of Agriculture, Soil Conservation Service 1993) were used to aid in identifying hydric soils in the field. *The Jepson Manual* (Hickman, ed. 1993) was used for plant nomenclature and identification.

*3. Report must include robust discussions of existing field conditions experienced during field surveys.*

The initial wetland delineation field surveys were conducted on 6-9, 12, and 28-30 December 2005; 3 and 31 January 2006; and 5 May 2006. Approximately 23.35 inches of rain (~117.5% of normal) was

recorded during the 2005-2006 wet season (Sacramento Bee 2006). Normal rainfall for this period is approximately 19.87 inches (Sacramento Bee 2006). All wetland and other water features, as well as many upland areas, were inundated during the December 2005 and January 2006 site visits. The extent of surface inundation was greatly reduced during the 5 May 2006 site visit. Plant species were generally in an early vegetative state during all of the site visits, with the exception of the 5 May 2006 site visit during which most species had reached flowering stage.

The requested additional data was also collected during winter (21 February 2007). Approximately 9.04 inches of rain (~57.9% of normal) had been recorded during the 2006-2007 wet season prior to this field visit (Sacramento Bee 2007). Normal rainfall to this date is approximately 15.61 inches (Sacramento Bee 2007). It appeared that many of the wetland features on-site had not yet been inundated or had only been inundated for a brief period during the 2006-2007 wet season. Plant species were generally in an early vegetative state, making species identification difficult, most notably with respect to grass species.

The site consists primarily of rolling terrain at elevations ranging from approximately 290 to 400 feet above mean sea level. The site is currently used for cattle grazing. Surrounding land uses include the Aerojet facilities to the west, the Highway 50 corridor to the north, a concrete mine to the east, and an off-road vehicle park to the southwest. Representative site photographs are included within this submittal.

Annual grassland is the dominant plant community on-site. A variety of non-native annual grasses, including soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), medusahead grass (*Taeniatherum caput-medusae*), slender wild oat (*Avena barbata*), and little quaking grass (*Briza minor*), were commonly observed in this community. Other herbaceous species observed in this community include sticky tarweed (*Holocarpha virgata*), yellow star-thistle (*Centaurea solstitialis*), rose clover (*Trifolium hirtum*), shamrock clover (*Trifolium dubium*), Fremont's tidy-tips (*Layia fremontii*), Valley tassels (*Castilleja attenuata*), and hyacinth brodiaea (*Triteleia hyacinthina*).

Blue oak woodland occurs in the northern portion of the site. Blue oaks (*Quercus douglasii*) represent the dominant tree species in this community. Species observed in the understory were generally similar to those found in the annual grassland.

A relatively large stock pond is present in the northern portion of the site, which drains to Alder Creek (located off-site to the north). Other aquatic features identified on-site include vernal pools, seasonal wetlands, seasonal wetland swales, a seep, ephemeral drainages, intermittent drainages, and constructed ditches.

According to the *Soil Survey of Sacramento County, California* (U.S. Department of Agriculture, Soil Conservation Service 1993), seven (7) soil units, or types, have been mapped within the site. These are: (107) Argonaut Auburn complex, 3 to 8 percent slopes; (145) Fiddymont fine sandy loam, 1 to 8 percent slopes; (190) Pits; (192) Red Bluff loam, 2 to 5 percent slopes; (193) Red Bluff-Redding complex, 0 to 5 percent slopes; (235) Vleck gravelly loam, 2 to 15 percent slopes; and (237) Whiterock loam, 3 to 30 percent slopes. While none of these soil units have hydric components, the following have hydric inclusions: (192) Red Bluff loam (unnamed soils in depressions) and (193) Red Bluff-Redding complex (unnamed soils in depressions) (U.S. Department of Agriculture, Soil Conservation Service 1992).

*3. Report must include a detailed project site hydrology discussion.*

The vernal pools, seasonal wetlands, and stock ponds become inundated through a combination of direct rainfall and surface runoff during and immediately following rain events. All of these features, with the exception of the stock pond located in the northern section of the site, are ephemeral. This stock pond (SP-1) was constructed in the path of an intermittent drainage that is tributary to Alder Creek. This perennial feature receives water from seasonal wetland swales and ephemeral drainages, as well as direct rainfall and surface runoff.

The seasonal wetland swales, ephemeral drainages, and intermittent drainages are seasonal features that convey flows for varying periods during the wet season. The constructed ditches were constructed on contour; however, they appear to no longer convey flow. Many of the constructed ditches pond water for a sufficient period of time during the growing season to support hydrophytic vegetation.

The wetlands located in the northeastern portion of the site, in the vicinity of stock pond-1 (SP-1), are or appear to be tributary to on-site seasonal wetland swales, ephemeral drainages, constructed

ditches, and/or intermittent drainages via direct connection or overland sheet flows. These linear drainage features are or appear to be tributary to Alder Creek or other linear features that are tributary to Alder Creek. Alder Creek is tributary to the American River, a navigable waters. The wetlands located in the western portion of the site, west of Scott Road, appear to be tributary to on-site seasonal wetland swales, ephemeral drainages, and/or intermittent drainages via direct connection or overland sheet flows. These linear features appear to tributary to Buffalo Creek, which is also tributary to the American River. The remaining wetland features, located in the southeastern corner of the site, drain south towards Coyote Creek, which drains south to Carson Creek, then to Deer Creek, and finally to the Consumnes River, a navigable waters.

4. *Reference block of delineation map must include the names of delineators/surveyors.*

ECORP biologists D. Snider, M. Buchalski, and A. Ballard conducted the wetland delineation field surveys. The names of these individuals are now included in the notes field on the wetland delineation graphics.

We hope that the revised map and supplemental information will allow you to complete the verification process and issue a letter to that effect. Please feel free to call me at (916) 782-9100 if you have any questions regarding this issue.

Sincerely,



Daria Snider  
Biologist

Attachment(s)

CC: Mr. David Hatch / GenCorp Realty Investments



DEPARTMENT OF THE ARMY  
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO  
CORPS OF ENGINEERS  
1325 J STREET  
SACRAMENTO, CALIFORNIA 95814-2922

REPLY TO  
ATTENTION OF

February 14, 2007

Regulatory Branch (200600561)

David Hatch  
GenCorp Realty Investments  
620 Coolidge Drive, Suite 100  
Folsom, California 95630-3182

Dear Mr. Hatch:

This concerns your consultant's July 25, 2006 request for an approved jurisdictional determination for the Folsom 560 site. We are unable to complete our review or verify this delineation since you have not provided complete information. We have withdrawn your request from our active priority projects until we receive adequate information or can otherwise re-prioritize your request.

An itemized list of the minimal information we need to process your request is enclosed. Once we receive complete information we will continue to evaluate your delineation, including a site visit if necessary. This withdrawal does not preclude the need for a Department of the Army permit for work on this site.

Please refer to identification number 200600561 in any correspondence concerning this project. If you have any questions, please contact William Ness at our Sacramento Office, 1325 J Street, Room 1480, Sacramento, California 95814-2922, email [William.W.Ness@usace.army.mil](mailto:William.W.Ness@usace.army.mil), or telephone 916-557-5268. You may also use our website: [www.spk.usace.army.mil/regulatory.html](http://www.spk.usace.army.mil/regulatory.html).

Sincerely,

**ORIGINAL SIGNED**

Will Ness  
Chief, Sacramento Office

Enclosure(s)

Copy furnished with enclosure(s):

✓ Daria Hoyer, ECORP Consulting, Incorporated, 2525 Warren Drive, Rocklin, California  
95677-2167



File 200600561 Project Title FOLSOM 560 Date 12/6/2006  
County SACRAMENTO State CA Project Manager NESS Project Acreage 560.0  
Applicant GENCORP REALTY INVESTMENTS Consultant: ECORP CONSULTING

**Minimum Standards for Acceptance of Wetland Delineations**

Topography ☒

1987 Corps Manual Statement <input checked="" type="checkbox"/>	Contact Information <input checked="" type="checkbox"/>	ID Data Pts, Wetland Boundaries <input checked="" type="checkbox"/>
Wetland Narrative <input checked="" type="checkbox"/>	Plant List and Discussion <input checked="" type="checkbox"/>	All Potential Waters of US Shown <input checked="" type="checkbox"/>
Justify Wetland Boundary <input type="checkbox"/>	Soil Descriptions, Maps, List <input checked="" type="checkbox"/>	Standard Mapping Conventions <input checked="" type="checkbox"/>
Total Project Acreage <input checked="" type="checkbox"/>	Interstate or Foreign Commerce <input checked="" type="checkbox"/>	Reference Block <input checked="" type="checkbox"/>
Existing Field Conditions <input type="checkbox"/>	Delineation Map Scale <input checked="" type="checkbox"/>	Individually ID All Water Features <input checked="" type="checkbox"/>
Hydrology Discussion <input checked="" type="checkbox"/>	Project Boundary <input checked="" type="checkbox"/>	Waters Acreage Table <input checked="" type="checkbox"/>
Project Location Map <input checked="" type="checkbox"/>	All Wetlands and Waters Shown <input type="checkbox"/>	Data Sheets Filled Out Correctly <input checked="" type="checkbox"/>
Directions To Site <input checked="" type="checkbox"/>	Color/Thatched Coding <input checked="" type="checkbox"/>	Paired Data Points For All Features <input checked="" type="checkbox"/>

☒ Note: Checked boxes represent information recieved

GIS Data Submitted ☒

**Minimum Information Needed to Complete Delineation Review**

- 1: Collect data on points marked on attached map.
- 2: Report must include detailed discussions of Wetland Boundary Justifications.
- 3: Report must include robust discussions Existing Field Conditions experienced during field surveys.
- 4: Report must include a detailed project site hydrology discussion.
- 5: Reference block of delineation map must include the names of delineators/surveyors.

6:

7:

8:

9:

10:



# WATERS OF THE U.S. ACREAGE<sup>1</sup>

## CLASSIFICATION

## EXISTING ACREAGE

### WETLANDS:

Vernal Pool



1.207

Seasonal Wetland



1.538

Seasonal Wetland Swale



3.072

Seep



0.036

### OTHER WATERS:

Ephemeral Drainage



0.367

Intermittent Drainage



0.382

Constructed Ditch



0.406

Stock Pond



2.788

**TOTAL: 8.790**

Prairie City Road

White Rock Road

1" equals 800'

SCALE IN FEET  
0 400 800

<sup>1</sup> Subject to the Army Corps of Engineers verification

06/22/06  
J:\GIS Maps\2005-461\Folsom560 WD(letter).mxd

FIGURE 3. Wetland Delineation<sup>1</sup>

2005-461 Folsom 560



**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

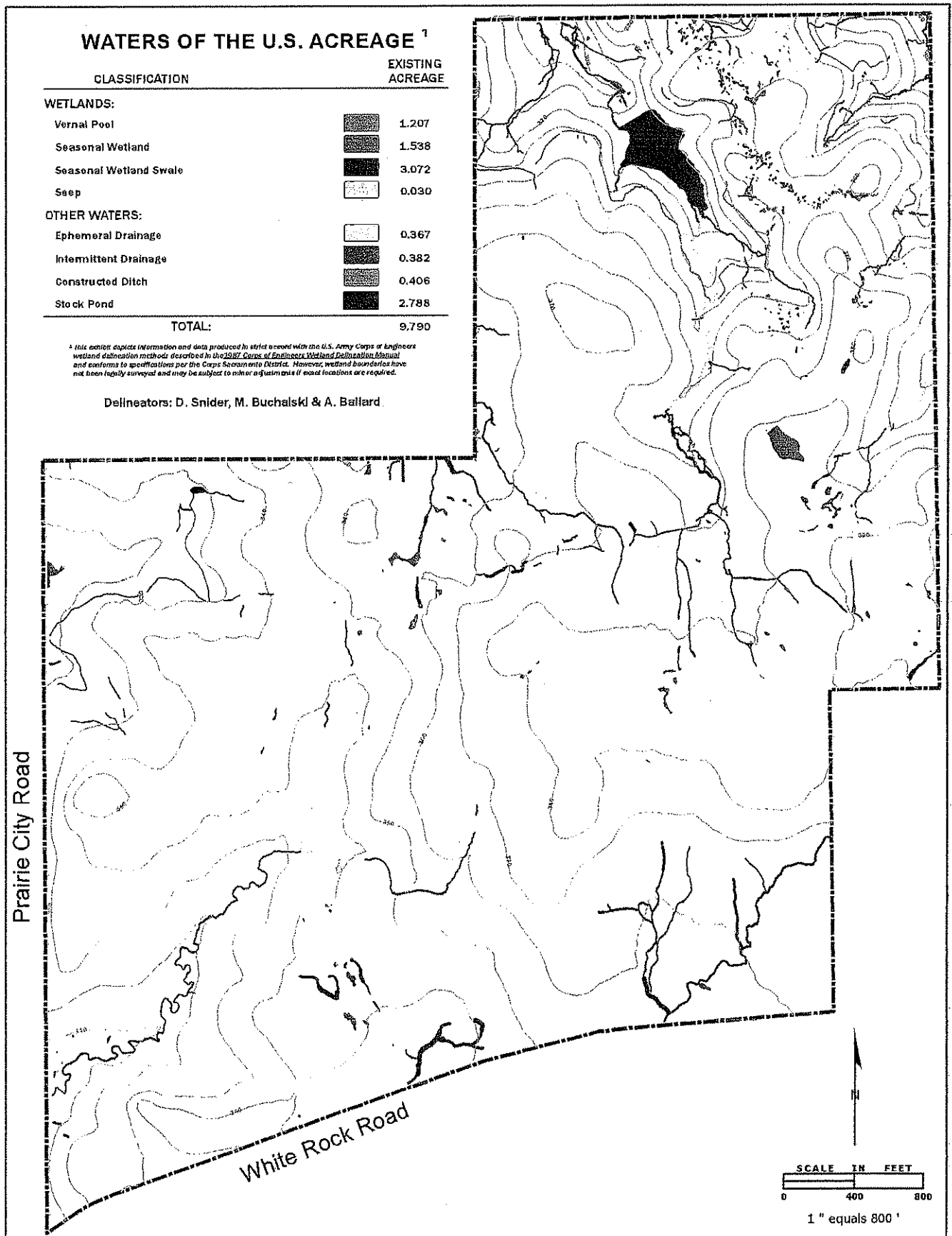


FIGURE 3. Wetland Delineation

2005-461 Folsom 560

# ECORP Consulting, Inc.

ENVIRONMENTAL CONSULTANTS

## ROUTINE WETLAND DELINEATION

Project/Site: Folsom 560 Date: 2/21/07 Sample Point: 24N  
 Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
 Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

### VEGETATION

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) LEO TAR	FACU	H	40%	5)			
2) MON FOW	Obl	H	20%	6)			
3) TRT sp	—	H	20%	7)			
4) Unidentifiable grass	—	H	20%	8)			

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/2 = 50 %

Comments: Both non-dominants are upland species. Dominance percentage is based on identifiable species. Note that Montia fontana is common throughout the site at this time of year, in both upland and wetland situations.

### HYDROLOGY

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
 Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
 Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
 Secondary Indicators (2 or more required):

☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_

Comments: No wetland hydrology indicators detected. No cattle hoofprints observed, whereas obvious wetland areas have cattle hoofprints.

### SOILS

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: (235) Vleck gravelly loam, 2-15% slopes Drainage Class: Mod. well

Taxonomy [Subgroup]: Abiotic Haplic Durixeralfs Confirm Map Type: Yes ☐ No ☒

☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma

☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_

Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
0-2"		10YR 7/2	—	—	Loam
2-12"		10YR 4/2	7.5YR 3/4	Many, medium	Sandy clay loam

Comments: \_\_\_\_\_

### DECISION

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: Only 1 of 3 wetland criteria is satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
LED TAR	H	40%	
MDJ FOW	H	20%	
TRI sp	H	20%	
unidentifiable grasses	H	20%	
BRO sp	H	trace	
GER MOL	H	trace	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

<u>COVER:</u>	
Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) = 100%					

Project/Site: Folsom 560 Date: 2/21/07 Sample Point: 25N  
Applicant/Owner: GenCap Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>TAE CAP</u>	<u>N/L</u>	<u>H</u>	<u>50%</u>	5) _____	_____	_____	_____
2) <u>LED TAR</u>	<u>FACU</u>	<u>H</u>	<u>20%</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/2 = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected.

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (192) Red Bluff loam, 2-5% slopes Drainage Class: Well drained  
Taxonomy [Subgroup]: Ultic Palexeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: Unnamed soils in depressions On Hydric Soils List: Yes ☒ No ☐  
Depth (in.) Horizon Matrix Color Mottle Color Mottle (Quantity/Contrast/Size) Texture, Concretions, Structure  
0-12" 7.5YR3/4 — — — Sandy clay loam

Comments: No hydric soil indicators detected. DP is not in a depression.

**DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.

General comments: \_\_\_\_\_ Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
TAE CAP	H	50%	
LED TAR	H	20%	
BRO HDE	H	10%	
ERO BOT	H	10%	
LUL MUL	H	10%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

<u>COVER:</u>	
Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) =		100%			

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 26N  
Applicant/Owner: GenCap Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>TRI sp.</u>	<u>—</u>	<u>H</u>	<u>45%</u>	5) _____	_____	_____	_____
2) <u>LED TAR</u>	<u>FACU</u>	<u>H</u>	<u>33%</u>	6) _____	_____	_____	_____
3) <u>unidentifiable grass</u>	<u>—</u>	<u>H</u>	<u>22%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0 % = 0 %

Comments: Dominance percentage is based on identifiable species.

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_

Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)

Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_

Comments: Insufficient wetland hydrology indicators. Cattle hoofprints are not present at this point as they are a wetland throughout site.

**SOILS**

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: (192) Red Bluff loam, 2-5% slopes Drainage Class: Well drained

Taxonomy [Subgroup]: Ultic Palexeralfs Confirm Map Type: Yes ☐ No ☒

☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma

☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_

Inclusions [Series/Phase]: Unnamed soils in depressions On Hydric Soils List: Yes ☒ No ☐

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-5"</u>	_____	<u>5YR 7/1</u>	<u>5YR 4/6</u>	<u>Many, medium</u>	<u>clay loam</u>
<u>5"-12"</u>	_____	<u>7.5YR 3/4</u>	<u>7.5YR 4/2</u>	<u>Common, fine</u>	<u>clay loam</u>

Comments: DP is not in a depression.

**DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: Only 1 wetland criterion is satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
TRI SP.	H	40%	45%
LEO TAR	H	30%	33%
unidentifiable grass	H	20%	22%
TOTAL SUM ( $\Sigma$ ) =		90%	100%

<u>COVER:</u>	
Vegetation	90%
Bare Ground	10%
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) = 100%					



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ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 27N  
Applicant/Owner: GenCap Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>LEO TAR</u>	<u>FACV</u>	<u>H</u>	<u>20%</u>	5) _____	_____	_____	_____
2) <u>TRI sp.</u>	<u>-</u>	<u>H</u>	<u>20%</u>	6) _____	_____	_____	_____
3) <u>POA ANN</u>	<u>FACW</u>	<u>H</u>	<u>20%</u>	7) _____	_____	_____	_____
4) <u>unidentifiable seedlings</u>	<u>-</u>	<u>H</u>	<u>30%</u>	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/2 = 50 %

Comments: Dominance percentage is based on identifiable species.

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: Insufficient wetland hydrology. Cattle hoofprint not observed

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (192) Red Bluff loam, 2-5% slopes Drainage Class: Well drained  
Taxonomy [Subgroup]: Ultic Palexeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: Unnamed soils in depressions On Hydric Soils List: Yes ☒ No ☐  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-0.5"</u>	_____	<u>10YR 3/1</u>	_____	_____	<u>Loam</u>
<u>0.5"-1"</u>	_____	<u>10YR 4/2</u>	<u>7.5YR 1/6</u>	<u>Many, medium</u>	<u>Silty loam</u>
<u>1"-12"</u>	_____	<u>10YR 5/2</u>	<u>7.5YR 4/6</u>	<u>Common, coarse</u>	<u>Loamy fine sand</u>

Comments: DP is not in a depression.

**DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: Only 1 of 3 wetland criteria is satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

Species Observed	Stratum	Actual Cover	Relative Cover
LEO TAR	H	20%	
TRI SP.	H	20%	
POA ANN	H	20%	
ERO BOT	H	10%	
HOR MAR	H	trace	
BRO SP.	H	trace	
unidentifiable seedlings	H	30%	
TOTAL SUM ( $\Sigma$ ) = 100%			100%

COVER:

Vegetation 100%

Bare Ground  

Rocks  

Other  

TOTAL = 100%

Species (Descending Order)	Stratum	Relative Cover	Cumulative Cover	Indicator Status	Dominants
TOTAL SUM ( $\Sigma$ ) = 100%					

Project/Site: Folsom 560 Date: 2/21/07 Sample Point: 28N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>TAE CAP</u>	<u>N/L</u>	<u>H</u>	<u>56%</u>	5) _____	_____	_____	_____
2) <u>LED TAR</u>	<u>FACU</u>	<u>H</u>	<u>22%</u>	6) _____	_____	_____	_____
3) <u>BRI MAX</u>	<u>N/L</u>	<u>H</u>	<u>22%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/3 = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected.

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (193) Red Bluff-Redding complex, 0-5% slopes Drainage Class: Mod. well - well  
Taxonomy [Subgroup]: Ultic Palexeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: Unnamed soils in depressions On Hydric Soils List: Yes ☒ No ☐  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-1"</u>	_____	<u>10YR 3/2</u>	_____	_____	<u>Clay loam</u>
<u>1-12"</u>	_____	<u>7.5YR 4/6</u>	_____	_____	<u>Gravelly clay loam</u>

Comments: No hydric soils indicators detected. DP is not in a depression.

**DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.

General comments: \_\_\_\_\_  
Feature Type: \_\_\_\_\_

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
TAE CAP	H	50%	56%
LCO TAE	A	20%	22%
BRI MAX	H	20%	22%
BRO HOR	I+	trace	trace
<b>TOTAL SUM (<math>\Sigma</math>) =</b>		<u>90%</u>	100%

COVER:

Vegetation                 90%

Bare Ground              10%

Rocks                          \_\_\_\_\_

Other                          \_\_\_\_\_

**TOTAL =**                                 100%

TOTAL SUM ( $\Sigma$ ) = 100%

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**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 29N  
Applicant/Owner: GenCap Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>ERO BOT</u>	<u>N/L</u>	<u>H</u>	<u>47%</u>	5) _____	_____	_____	_____
2) <u>TAE CAP</u>	<u>N/L</u>	<u>H</u>	<u>18%</u>	6) _____	_____	_____	_____
3) <u>BRO HOR</u>	<u>FACU-</u>	<u>H</u>	<u>18%</u>	7) _____	_____	_____	_____
4) <u>TRI HIR</u>	<u>N/L</u>	<u>H</u>	<u>18%</u>	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/4 = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected.

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (235) Vlede gravelly loam, 2-15% slopes Drainage Class: Mod. well  
Taxonomy [Subgroup]: Abruptic Haplic Durixerolls Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	_____	<u>7.5YR4/6</u>	_____	_____	<u>Gravelly clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: No hydric soil indicators detected.

**DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
ERO BOT	H	40%	47%
TAE CAP	H	15%	18%
BRO HOR	H	15%	18%
TRI HIR	H	15%	18%
<b>TOTAL SUM (<math>\Sigma</math>) =</b>		<u>85%</u>	<b>100%</b>

<u><b>COVER:</b></u>	
Vegetation	<u>85%</u>
Bare Ground	<u>15%</u>
Rocks	<u>          </u>
Other	<u>          </u>
<b>TOTAL =</b>	<b>100%</b>

[illegible]

Project/Site: Folsom 560 Date: 2/21/07 Sample Point: 30N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>LED TAR</u>	<u>FACU</u>	<u>H</u>	<u>33%</u>	5) _____	_____	_____	_____
2) <u>unidentifiable seedlings</u>	<u>—</u>	<u>H</u>	<u>25%</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0% = 0 %

Comments: All non-dominants are upland species. Percent dominance is based on identifiable species.

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: Some sort of dark crust on surface of soil, but the data point is on a slope, not in a depression.

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (190) Pits Drainage Class: \_\_\_\_\_  
Taxonomy [Subgroup]: \_\_\_\_\_ Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-0.5"</u>	_____	<u>10YR 3/2</u>	<u>—</u>	<u>—</u>	<u>Loam</u>
<u>0.5-6"</u>	_____	<u>10YR 5/3</u>	<u>—</u>	<u>—</u>	<u>Sand</u>
<u>6-12"</u>	_____	<u>5Y 5/3</u>	<u>—</u>	<u>—</u>	<u>rocky/crystalline?</u>

Comments: No hydric soil indicators detected.

**DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
LED TAR	H	20%	33%
GAS VEO	H	10%	17%
TRI ERI	H	10%	17%
BRO sp.	H	5%	8%
ERO BOT	H	trace	trace
unidentifiable seedlings	H	15%	25%
TOTAL SUM ( $\Sigma$ ) =		60%	100%

<u>COVER:</u>	
Vegetation	60%
Bare Ground	40%
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) = 100%					



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ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 31N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>LEO TAR</u>	<u>FACU</u>	<u>LI</u>	<u>30%</u>	5) _____	_____	_____	_____
2) <u>BRI MAX</u>	<u>N/L</u>	<u>LI</u>	<u>20%</u>	6) _____	_____	_____	_____
3) <u>LOL MUL</u>	<u>FAC*</u>	<u>LI</u>	<u>20%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/3 = 33 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >6" (in.) Depth to saturated soil: >6" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (235) Vleek gravelly loam, 2-15% slopes Drainage Class: Mod. well  
Taxonomy [Subgroup]: Abruptic Haplic Duxenzella Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-6"</u>	_____	<u>7.5YR 3/4</u>	<u>7.5YR 3/2</u>	<u>Few, coarse</u>	<u>Gravelly clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: Refusal at 6". No hydric soil indicators detected.

**DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

Species Observed	Stratum	Actual Cover	Relative Cover
LFO TAR	H	30%	
ERI MAX	H	20%	
LOL MUL	H	20%	
TAE CAP	H	15%	
ERO BOT	H	10%	
NAV TAG	H	5%	
TRI ERI	H	trace	
BRO sp.	H	trace	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

## COVER:

Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

Species (Descending Order)	Stratum	Relative Cover	Cumulative Cover	Indicator Status	Dominants
TOTAL SUM ( $\Sigma$ ) =		100%			

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 320  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) POA ANN	FACW-	H	40%	5)			
2) LEO TAR	FACU	H	30%	6)			
3)				7)			
4)				8)			

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/2 = 50 %

Comments: All non-dominants are upland species.

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_

Depth of surface water: None (in.) Depth to free water in pit: >6" (in.) Depth to saturated soil: >6" (in.)

Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_

Comments: Insufficient wetland hydrology

**SOILS**

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: (92) Red Bluff loam, 2-5% slopes Drainage Class: Well drained

Taxonomy [Subgroup]: Ultic Palexeralfs Confirm Map Type: Yes ☐ No ☒

☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma

☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_

Inclusions [Series/Phase]: Unnamed soils in depressions On Hydric Soils List: Yes ☒ No ☐

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
0-0.5"		10YR 2/1			Loam
0.5"-6"		10YR 4/2	10YR 4/6	Common, fine	Gravelly clay loam

Comments: Refusal at 6". DP is not in a depression.

**DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: Only 1 of three wetland criteria is satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
POA AND	H	40%	
LEO TAR	H	30%	
TRI sp.	H	10%	
ERO BOT	H	10%	
LEP NIT	H	10%	
BRO sp.	H	trace	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

<u>COVER:</u>	
Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) =		100%			

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 32W  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>BRO CAR</u>	<u>N/L</u>	<u>H</u>	<u>80%</u>	5) _____	_____	_____	_____
2) _____	_____	_____	_____	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 91 % = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >6" (in.) Depth to saturated soil: >6" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):

☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_

Comments: No wetland hydrology indicators detected. A dark crust is present on the soil surface - source unknown.

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (190) Pits Drainage Class: \_\_\_\_\_

Taxonomy [Subgroup]: \_\_\_\_\_ Confirm Map Type: Yes ☐ No ☒

☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma

☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_

Inclusions [Series/Phase]: None listed. On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-6"</u>	_____	<u>7.5YR3/4</u>	<u>—</u>	<u>—</u>	<u>Gravelly clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: No hydric soil indicators detected.

**DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
BRO CAR	H	80%	
BRO HOR	H	10%	
ERO BOT	H	10%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

<u>COVER:</u>	
Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) =			100%		

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom 560 Date: 2/21/07 Sample Point: 34N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>HYP sp.</u>	<u>N/L</u>	<u>H</u>	<u>40%</u>	5) _____	_____	_____	_____
2) <u>unidentifiable grass</u>	<u>—</u>	<u>H</u>	<u>50%</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0% = 0%

Comments: At least one of three non-dominant is an upland species.  
Percent dominance is based on identifiable species.

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☒ No ☐

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☒ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_

Comments: The drift lines present are thatch that appears to have been carried by sheet flow. Based on veg. it doesn't appear that water stays long enough to form a wetland.

**SOILS**

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: (235) Vleek gravelly loam, 2-15% slopes Drainage Class: Mod. well  
Taxonomy [Subgroup]: Abruptic Haplic Durixeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: None listed. On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-1"</u>	_____	<u>10YR 3/2</u>	_____	_____	<u>Loam</u>
<u>1"-5"</u>	_____	<u>10YR 4/1</u>	<u>7.5YR 3/4</u>	<u>Many, medium</u>	<u>Clay loam</u>
<u>5"-12"</u>	_____	<u>10YR 5/2</u>	<u>7.5YR 4/6</u>	<u>Many, medium</u>	<u>Clay loam</u>

Comments: \_\_\_\_\_

**DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: Only 2 of 3 wetland criteria are satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

Species Observed	Stratum	Actual Cover	Relative Cover
HYP SP.	H	40%	
NAV TAG	H	trace	
ERY VAS	H	trace	
unidentifiable grass	H	50%	
unidentifiable seedlings	H	10%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

<u>COVER:</u>	
Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

Species (Descending Order)	Stratum	Relative Cover	Cumulative Cover	Indicator Status	Dominants
TOTAL SUM ( $\Sigma$ ) =		100%			



**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 35N  
Applicant/Owner: GenCap Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>HYP sp.</u>	<u>N/L</u>	<u>H</u>	<u>53%</u>	5) _____	_____	_____	_____
2) <u>HOR MAR</u>	<u>FAC</u>	<u>H</u>	<u>32%</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/2 = 50 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: Very slight depression. No wetland hydrology indicators detected.

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (235) Vleek gravelly loam, 2-15% slopes Drainage Class: Mod. well  
Taxonomy [Subgroup]: Abnuptic Haplic Duixeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	_____	<u>10YR 4/3</u>	<u>7.5YR 3/4</u>	<u>Many, medium</u>	<u>Sandy loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: No hydric soil indicators detected.

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.

General comments: \_\_\_\_\_  
Feature Type: \_\_\_\_\_

Species Observed	Stratum	Actual Cover	Relative Cover
HYP sp.	H	50%	53%
HOR MAT	H	30%	32%
ERY VAS	H	15%	15%
TOTAL SUM ( $\Sigma$ ) =		95%	100%

<u>COVER:</u>	
Vegetation	<u>95%</u>
Bare Ground	<u>5%</u>
Rocks	<u>          </u>
Other	<u>          </u>
TOTAL =	<u>100%</u>

[illegible]

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 36N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>TAE CAP</u>	<u>N/L</u>	<u>H</u>	<u>40%</u>	5) _____	_____	_____	_____
2) <u>ERO BOT</u>	<u>N/L</u>	<u>H</u>	<u>30%</u>	6) _____	_____	_____	_____
3) <u>LED TAR</u>	<u>FACU</u>	<u>H</u>	<u>30%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 9% = 0%

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected.

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (235) Vleek gravelly loam, 2-15% slopes Drainage Class: Mod. well  
Taxonomy [Subgroup]: Abruptic Haplic Duxteralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	_____	<u>10YR4/3</u>	<u>10YR4/4</u>	<u>Common, coarse</u>	<u>Sandy loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

  
Comments: No hydric soil indicators detected.

**DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.  
General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
TAE CAP	H	40%	
ERG BOT	H	30%	
LEO TAR	H	30%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

<u>COVER:</u>	
Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) =			100%		

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 37N  
Applicant/Owner: GenCap Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>HYP sp.</u>	<u>N/L</u>	<u>H</u>	<u>37%</u>	5) _____	_____	_____	_____
2) <u>TRI sp.</u>	<u>—</u>	<u>H</u>	<u>26%</u>	6) _____	_____	_____	_____
3) <u>HOR MAR</u>	<u>FAC</u>	<u>H</u>	<u>26%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/2 = 50 %

Comments: Both non-dominant species are upland species. Percent dominance is based on identifiable species.

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_

Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)

Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_

Comments: Insufficient wetland hydrology

**SOILS**

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: (235) Vleek gravelly loam, 2-15% slopes Drainage Class: Mod. well

Taxonomy [Subgroup]: Abruptic Haplic Durixeralfs Confirm Map Type: Yes ☐ No ☒

☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma

☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_

Inclusions [Series/Phase]: None listed. On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-0.5"</u>	_____	<u>10YR 2/1</u>	_____	_____	<u>Loam</u>
<u>0.5"-2"</u>	_____	<u>10YR 4/1</u>	<u>7.5YR 4/6</u>	<u>Many, fine</u>	<u>Loamy sand</u>
<u>2"-12"</u>	_____	<u>7.5YR 3/4</u>	_____	<u>—</u>	<u>Sand</u>

Comments: \_\_\_\_\_

**DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: Only 1 of 3 wetland criteria is satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

Species Observed	Stratum	Actual Cover	Relative Cover
HYP sp.	H	35%	37%
TRI sp.	H	25%	26%
HOR MAR	H	25%	26%
ERO BOT	H	10%	11%
BRD sp.	H	trace	trace
TOTAL SUM ( $\Sigma$ ) =		95%	100%

<u>COVER:</u>	
Vegetation	95%
Bare Ground	5%
Rocks	
Other	
TOTAL =	100%

Species (Descending Order)	Stratum	Relative Cover	Cumulative Cover	Indicator Status	Dominants
TOTAL SUM ( $\Sigma$ ) =			100%		

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom 560 Date: 2/21/07 Sample Point: 38N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19/T9N/R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>HYP sp.</u>	<u>N/L</u>	<u>H</u>	<u>75%</u>	5) _____	_____	_____	_____
2) _____	_____	_____	_____	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0% = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_

Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)

Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_

Comments: Insufficient wetland hydrology

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (235) Vleek gravelly loam, 2-15% slopes Drainage Class: Mod. well

Taxonomy [Subgroup]: Abruptic Haplic Duxeralfs Confirm Map Type: Yes ☐ No ☒

☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma

☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_

Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-1"</u>	_____	<u>10YR 2/2</u>	_____	_____	<u>Loam</u>
<u>1"-12"</u>	_____	<u>10YR 4/3</u>	<u>7.5YR 3/4</u>	<u>Common, fine</u>	<u>loamy sand</u>

Comments: No hydric soil indicators detected.

**DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

Species Observed	Stratum	Actual Cover	Relative Cover
HYP sp.	H	75%	
unidentifiable grass	H	10%	
TRI sp.	H	5%	
MON FOR	H	5%	
ERO BOT	H	5%	
BRO sp.	H	trace	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

COVER:	
Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

Species (Descending Order)	Stratum	Relative Cover	Cumulative Cover	Indicator Status	Dominants
TOTAL SUM ( $\Sigma$ ) =		100%			



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**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 39N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T4N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>unidentifiable seedlings</u>	<u>—</u>	<u>H</u>	<u>28%</u>	5) _____	_____	_____	_____
2) <u>LED TAR</u>	<u>FACV</u>	<u>H</u>	<u>17%</u>	6) _____	_____	_____	_____
3) <u>ERO BOT</u>	<u>N/L</u>	<u>H</u>	<u>17%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/2 = 0 %

Comments: Percent dominance is based on identifiable species

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected.

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (237) Whiterock loam, 3-30% slopes Drainage Class: somewhat excessively  
Taxonomy [Subgroup]: Lithic Xerorthents Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	_____	<u>10YR4/3</u>	<u>10YR4/4</u>	<u>Common, medium</u>	<u>Sandy loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

  
Comments: No hydric soil indicators detected.

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
ERD BOT	H	15%	17%
LED TAR	H	15%	17%
BRO sp.	H	10%	11%
TRI sp.	H	10%	11%
TRI ERI	H	5%	6%
LOT MUL	H	5%	6%
BRO HOR	H	5%	6%
unidentifiable seedlings	H	25%	28%
TOTAL SUM ( $\Sigma$ ) =		90%	100%

COVER:

Vegetation 90%

Bare Ground 10%

Rocks \_\_\_\_\_

Other \_\_\_\_\_

TOTAL = 100%

[illegible]

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**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom 560 Date: 2/21/07 Sample Point: 40N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) POA ANN	FACW	H	30%	5)			
2) TRI sp.	—	H	30%	6)			
3) ERO BOT	N/L	H	20%	7)			
4)				8)			

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]:  $\frac{1}{2}$  = 50 %

Comments: At least one non-dominant is an upland species. Percent dominance is based on identifiable species.

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected.

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (H45) Fiddymont fine sandy loam, 0-8% slopes Drainage Class: Well drained  
Taxonomy [Subgroup]: Typic Durixeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
0-2.5"		7.5YR4/4	—	—	Sand
2.5"-3"		10YR3/2	—	—	Loam
3"-12"		7.5YR4/6	10YR4/2	Many, coarse	Sandy loam

Comments: No hydric soil indicators detected.

**DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.

General comments: This DP is located in a linear depression that appears to be an old drainage channel that was abandoned when the culvert under the adjacent road was moved. Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
POA ANN	H	30%	
TR1 sp.	H	30%	
ERO BOT	H	20%	
LEP NIT	H	10%	
unidentifiable seedlings	H	10%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

<u>COVER:</u>	
Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) = 100%					

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 41N  
Applicant/Owner: GenCap Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☒ No ☐

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>TR1 sp.</u>	<u>—</u>	<u>H</u>	<u>33%</u>	5) _____	_____	_____	_____
2) <u>POA ANNU</u>	<u>FACW-</u>	<u>H</u>	<u>22%</u>	6) _____	_____	_____	_____
3) <u>unidentifiable seedlings</u>	<u>—</u>	<u>H</u>	<u>33%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/1 = 100 %

Comments: Percent dominance is based on identifiable species. At least one of two non-dominant is an upland species. Note that Poa annua is common throughout the site, in both uplands and wetlands.

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_

Comments: Insufficient wetland hydrology indicators. No cattle tramping is evident here as it is in wetland habitats throughout the site.

**SOILS**

HYDRIC SOILS? Yes ☐ No ☐

Series/Phase: (145) Fiddymment fine sandy loam, 0-8% slopes Drainage Class: Well drained  
Taxonomy [Subgroup]: Typic Durixeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-3"</u>	_____	<u>10YR 4/1</u>	<u>7.5YR 3/3</u>	<u>Many, fine</u>	<u>Clay loam</u>
<u>3"-12"</u>	_____	<u>10YR 4/2</u>	<u>10YR 3/6</u>	<u>Common, medium</u>	<u>Loamy sand</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: \_\_\_\_\_

**DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: Only 2 of 3 wetland criteria is satisfied.  
General comments: This data point is on an elevated area above the adjacent swale that is not a topographic depression; thus, it is unlikely that water would remain here for a sufficient period to qualify this area as a wetland. Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

Species Observed	Stratum	Actual Cover	Relative Cover
TRI SP.	H	30%	33%
POA ANW	H	20%	22%
LEO TAR	H	10%	12%
unidentifiable seedlings	H	30%	33%
unidentifiable grass	H	trace	trace
TOTAL SUM ( $\Sigma$ ) =		90%	100%

COVER:	
Vegetation	90%
Bare Ground	10%
Rocks	
Other	
TOTAL =	100%

Species (Descending Order)	Stratum	Relative Cover	Cumulative Cover	Indicator Status	Dominants
TOTAL SUM ( $\Sigma$ ) =		100%			

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 42N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>LEO TAR</u>	<u>FacU</u>	<u>H</u>	<u>50%</u>	5) _____	_____	_____	_____
2) <u>HOR MAR</u>	<u>Fac</u>	<u>H</u>	<u>20%</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/2 = 50 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: Insufficient wetland hydrology

**SOILS**

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: (145) Fiddymint fine sandy loam, 0-8% slopes Drainage Class: Well drained  
Taxonomy [Subgroup]: Typic Duxteralks Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	_____	<u>10YR4/2</u>	<u>7.5YR3/4</u>	<u>Many, medium</u>	<u>Sandy loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: \_\_\_\_\_

**DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: Only 1 of 3 wetland criteria is satisfied.  
General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

Species Observed	Stratum	Actual Cover	Relative Cover
LEO TAR	H	50%	
HOR MAR	H	20%	
unidentifiable grass	H	10%	
TRI sp.	H	5%	
BRO sp.	H	5%	
MON FOR	H	5%	
POA ANN	H	5%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

<u>COVER:</u>	
Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

Species (Descending Order)	Stratum	Relative Cover	Cumulative Cover	Indicator Status	Dominants
TOTAL SUM ( $\Sigma$ ) =		100%			



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**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 43N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>LEO TAR</u>	<u>FacU</u>	<u>H</u>	<u>50%</u>	5) _____	_____	_____	_____
2) <u>HUX MAR</u>	<u>Fac</u>	<u>H</u>	<u>30%</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/2 = 50 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_

Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)

Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_

Comments: Insufficient wetland hydrology

**SOILS**

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: (145) Fiddymment fine sandy loam, 0-8% slopes Drainage Class: Well drained

Taxonomy [Subgroup]: Typic Durixeralfs Confirm Map Type: Yes ☐ No ☒

☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma

☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_

Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	_____	<u>10YR1/2</u>	<u>7.5YR3/4</u>	<u>Many, medium</u>	<u>Sandy loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: \_\_\_\_\_

**DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: Only 1 of 3 wetland criteria is satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

Species Observed	Stratum	Actual Cover	Relative Cover
LEO TAR	H	50%	
HOR MAR	H	30%	
ERO BOT	H	10%	
TRI SP.	H	5%	
MON FOW	H	5%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

**COVER:**

Vegetation	_____100%
Bare Ground	_____
Rocks	_____
Other _____	_____
<b><i>TOTAL =</i></b>	<b><i>100%</i></b>

[illegible]

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**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 44N  
Applicant/Owner: GenCap Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T4N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>HYP sp.</u>	<u>N/L</u>	<u>H</u>	<u>30%</u>	5) _____	_____	_____	_____
2) <u>JAE CAP</u>	<u>N/L</u>	<u>H</u>	<u>20%</u>	6) _____	_____	_____	_____
3) <u>ERD BOT</u>	<u>N/L</u>	<u>H</u>	<u>20%</u>	7) _____	_____	_____	_____
4) <u>HDR MAR</u>	<u>FAC</u>	<u>H</u>	<u>20%</u>	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/4 = 25 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected.

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (145) Fiddymont fine sandy loam, 0-8% slopes Drainage Class: Well drained  
Taxonomy [Subgroup]: Typic Durixeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>		<u>10YR 1/3</u>	<u>—</u>	<u>—</u>	<u>Sandy loam</u>

Comments: No hydric soil indicators detected.

**DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.

General comments: \_\_\_\_\_  
Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
HYP sp.	H	30%	
TAE CAP	H	20%	
ERD BOT	H	20%	
HAR MAR	H	20%	
TRI sp.	H	10%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

<u>COVER:</u>	
Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) =		100%			

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 45N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>HYP sp.</u>	<u>N/L</u>	<u>H</u>	<u>30%</u>	5) _____	_____	_____	_____
2) <u>PRO BOT</u>	<u>N/L</u>	<u>H</u>	<u>30%</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 9/2 = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected.

**SOILS**

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: (145) Fiddymont fine sandy loam, 0-8% slopes Drainage Class: Well drained  
Taxonomy [Subgroup]: Typic Durixerolfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	_____	<u>10YR 4/2</u>	<u>7.5YR 3/4</u>	<u>Many, fine</u>	<u>Sandy clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: \_\_\_\_\_

**DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: Only 1 wetland criterion is satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
HYP SP.	H	30%	
ERO BOT	H	30%	
TAE CAP	H	15%	
HOR MAR	H	10%	
TRI SP.	H	10%	
BRD SP	H	5%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

## COVER:

Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) =		100%			

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom 560 Date: 2/21/07 Sample Point: 46N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>TAE CAP</u>	<u>N/L</u>	<u>H</u>	<u>60%</u>	5) _____	_____	_____	_____
2) <u>HYP SP.</u>	<u>N/L</u>	<u>H</u>	<u>30%</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/2 = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected.

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (145) Fiddymont fine sandy loam, 0-8% slopes Drainage Class: Well drained  
Taxonomy [Subgroup]: Typic Durixeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	_____	<u>7.5YR 3/4</u>	_____	_____	<u>Sandy clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: No hydric soil indicators detected.

**DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.

General comments: \_\_\_\_\_  
Feature Type: \_\_\_\_\_

[illegible]

**COVER:**

Vegetation	100%
Bare Ground	
Rocks	
Other	
<b>TOTAL =</b>	<b>100%</b>

[illegible]



**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 47N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>PRO SP.</u>	<u>—</u>	<u>H</u>	<u>17%</u>	5) <u>unidentifiable grass</u>	<u>—</u>	<u>H</u>	<u>17%</u>
2) <u>HYP SP.</u>	<u>N/L</u>	<u>H</u>	<u>17%</u>	6) _____	_____	_____	_____
3) <u>ERO BOT</u>	<u>Y/L</u>	<u>H</u>	<u>17%</u>	7) _____	_____	_____	_____
4) <u>TRI SP.</u>	<u>—</u>	<u>H</u>	<u>17%</u>	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/2 = 0 %

Comments: Percent dominance is based on identifiable species.

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected.

**SOILS**

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: (45) Fiddymont fine sandy loam, 0-8% slopes Drainage Class: Well drained  
Taxonomy [Subgroup]: Typic Durixeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	_____	<u>10YR 4/2</u>	<u>7.5YR 4/4</u>	<u>Common, fine</u>	<u>Sandy clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: \_\_\_\_\_  
\* DECISION \* WETLAND / WATERS DETERMINATION? Yes ☐ No ☒  
Rationale: Only 1 wetland criterion is satisfied.  
General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

Species Observed	Stratum	Actual Cover	Relative Cover
BRO sp.	H	15%	17%
HYP sp.	H	15%	17%
ERD BOT	H	15%	17%
TRI sp.	H	15%	17%
unidentifiable grass	H	15%	17%
unidentifiable seedlings	H	10%	10%
MON FLOW	H	5%	5%
TOTAL SUM ( $\Sigma$ ) =		90%	100%

<u>COVER:</u>	
Vegetation	90%
Bare Ground	10%
Rocks	
Other	
TOTAL =	100%

Species (Descending Order)	Stratum	Relative Cover	Cumulative Cover	Indicator Status	Dominants
TOTAL SUM ( $\Sigma$ ) =		100%			

Project/Site: Folsom S60 Date: 2/21/07 Sample Point: 48N  
Applicant/Owner: GenCap Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION** **HYDROPHYTIC VEGETATION?** Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>HYP sp.</u>	<u>N/L</u>	<u>H</u>	<u>25%</u>	5) <u>MON FOW</u>	<u>Obl</u>	<u>H</u>	<u>15%</u>
2) <u>ERD BOT</u>	<u>N/L</u>	<u>H</u>	<u>15%</u>	6) <u>unidentifiable seedlings</u>	<u>—</u>	<u>H</u>	<u>15%</u>
3) <u>HOR MAR</u>	<u>FAC</u>	<u>H</u>	<u>15%</u>	7) _____	_____	_____	_____
4) <u>TRI sp.</u>	<u>—</u>	<u>H</u>	<u>15%</u>	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 2/4 = 50 %  
Comments: Percent dominance is based on identifiable species. Note that Montia fontana is common throughout the site, in uplands as well as wetlands.

**HYDROLOGY** **WETLAND HYDROLOGY?** Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected

**SOILS** **HYDRIC SOILS?** Yes ☒ No ☐

Series/Phase: (H5) Eddyment fine sandy loam, 0-8% slope Drainage Class: Well drained  
Taxonomy [Subgroup]: Typic Durixerolls Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-1"</u>	_____	<u>10YR 2/1</u>	_____	_____	<u>Loam</u>
<u>1"-12"</u>	_____	<u>10YR 4/2</u>	<u>7.5YR 1/4</u>	<u>Many, fine</u>	<u>Sandy clay loam</u>

Comments: \_\_\_\_\_

**DECISION \*** **WETLAND / WATERS DETERMINATION?** Yes ☐ No ☒

Rationale: Only 1 wetland criterion is satisfied  
General comments: \_\_\_\_\_  
Feature Type: \_\_\_\_\_

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
HYP sp.	H	25%	
ERO BOT	H	15%	
HOR MAR	H	15%	
TRI sp.	H	15%	
MON FOR	H	15%	
unidentifiable seedlings	H	15%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

Vegetation	<u>100%</u>
Bare Ground	<u>          </u>
Rocks	<u>          </u>
Other <u>                    </u>	<u>          </u>
<i>TOTAL</i> =	<i>100%</i>

TOTAL SUM ( $\Sigma$ ) = 1197% 100%

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Project/Site: Folsom 560 Date: 2/21/07 Sample Point: 49N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: Section 19 / T9N / R8E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>HYP sp.</u>	<u>N/L</u>	<u>H</u>	<u>40%</u>	5) _____	_____	_____	_____
2) <u>EROTOT</u>	<u>N/L</u>	<u>H</u>	<u>20%</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/2 = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: In sufficient wetland hydrology

**SOILS**

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: (195) Fiddymont fine sandy loam, 0-8% slopes Drainage Class: Well drained  
Taxonomy [Subgroup]: Typic Durixeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: None listed On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	_____	<u>10YR 4/2</u>	<u>7.5YR 4/4</u>	<u>Many, fine</u>	<u>Sandy clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: \_\_\_\_\_

**DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: Only 1 wetland criterion is satisfied.  
General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
HYP sp.	H	40%	
ERO BOT	H	20%	
LDL MUL	H	15%	
HDL MAR	H	10%	
GAS VEN	H	10%	
TRI sp.	H	5%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

<u>COVER:</u>	
Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) =		100%			

**Folsom 560**  
**Wetland Delineation**  
**Plant Species Observed On-Site**

<b>Abbr.</b>	<b>Scientific Name</b>	<b>Common Name</b>	<b>Indicator Status</b>
AIR CAR	<i>Alra caryophyllea</i>	Hairgrass	N/L
AVE BAR	<i>Avena barbata</i>	Slender wild oat	N/L
BRI MAX	<i>Briza maxima</i>	Big quaking grass	N/L
BRI MIN	<i>Briza minor</i>	Little quaking grass	FACW-
BRO spe.	<i>Brodiaea</i> species	Brodiaea	--
BRO CAR	<i>Bromus carinatus</i>	California brome	N/L
BRO DIA	<i>Bromus diandrus</i>	Ripgut brome	N/L
BRO HOR	<i>Bromus hordeaceus</i>	Soft brome	FACU-
CAS ATT	<i>Castilleja attenuata</i>	Valley tassels	N/L
CEN SOL	<i>Centaurea solstitialis</i>	Yellow star-thistle	N/L
CEN MUE	<i>Centaureum muehlenbergii</i>	Monterey centaury	FAC
CYN ECH	<i>Cynosurus echinatus</i>	Hedgehog dog-tail grass	N/L
ELE MAC	<i>Eleocharis macrostachya</i>	Creeping spikerush	OBL
ELE spe.	<i>Eleocharis</i> species	Spikerush	FACW
ERO BOT	<i>Erodium botrys</i>	Filaree	N/L
ERO spe.	<i>Erodium</i> species	Filaree	N/L
ERY VAS	<i>Eryngium vaseyi</i>	Vasey's coyote-thistle	FACW
GAS VEN	<i>Gastrium ventricosum</i>	Nit grass	FACU
GER MOL	<i>Geranium molle</i>	Hairy geranium	N/L
HOL VIR	<i>Holocarpus virgata</i>	Sticky tarweed	N/L
HOR MAR	<i>Hordeum marinum</i>	Mediterranean barley	FAC
HOR MUR	<i>Hordeum murinum</i>	Barley	NI
HYP RAD	<i>Hypochaeris radicata</i>	Perennial cat's-ear	N/L
HYP spe.	<i>Hypochaeris</i> species	Cat's-ear	N/L
JUN BUF	<i>Juncus bufonius</i>	Toad rush	FACW+
LAY FRE	<i>Layia fremontii</i>	Fremont's tidy-tips	N/L
LEO TAR	<i>Leontodon taraxacoides</i>	Hairy hawkbit	FACU
LEP NIT	<i>Lepidium nitidum</i>	Pepper grass	N/L
LOL MUL	<i>Lolium multiflorum</i>	Ryegrass	FAC*
LUP BIC	<i>Lupinus bicolor</i>	Bicolored lupine	N/L
LYT HYS	<i>Lythrum hyssopifolia</i>	Hyssop loosestrife	FACW
MEN PUL	<i>Mentha pulegium</i>	Pennyroyal	OBL
MON FON	<i>Montia fontana</i>	Fountain miner's-lettuce	OBL
NAV spe.	<i>Navarretia</i> species	Navarretia	--
NAV TAG	<i>Navarretia tagetina</i>	Marigold navarretia	N/L
PLA STI	<i>Plagiobothrys stipitatus</i>	Slender popcorn-flower	OBL
PLA spe.	<i>Plantago</i> species	Plantain	--
POA ANN	<i>Poa annua</i>	Annual bluegrass	FACW-
POL MON	<i>Polypogon monspeliensis</i>	Annual rabbit-foot grass	FACW+
QUE DOU	<i>Quercus douglasii</i>	Blue oak	N/L
RAN BON	<i>Ranunculus bonariensis</i>	Carter's buttercup	OBL
RUB DIS	<i>Rubus discolor</i>	Himalayan blackberry	FACW*
RUM spe.	<i>Rumex</i> species	Dock	--
SAL GOO	<i>Salix gooddingii</i>	Goodding's black willow	OBL
TAE CAP	<i>Taeniatherum caput-medusae</i>	Medusahead grass	N/L

**Folsom 560**  
**Wetland Delineation**  
**Plants Observed at Data Points**

<b>Abbr.</b>	<b>Scientific Name</b>	<b>Common Name</b>	<b>Indicator Status</b>
TOR ARV	<i>Torilis arvensis</i>	Torilis (hedge parsley)	N/L
TRI DUB	<i>Trifolium dubium</i>	Shamrock clover	FACU*
TRI HIR	<i>Trifolium hirtum</i>	Rose clover	N/L
TRI spe.	<i>Trifolium</i> species	Clover	--
TRI VAR	<i>Trifolium variegatum</i>	White-tip clover	FACW-
TRI spe.	<i>Trifolium</i> species	Clover	--
TRI ERI	<i>Triphysaria eriantha</i>	Butter and eggs	N/L
TRI HYA	<i>Triteleia hyacinthina</i>	Hyacinth brodiaea	FACW*
VUL MYU	<i>Vulpia myuros</i>	Rat-tail vulpia	FACU*
VUL spe.	<i>Vulpia</i> species	Vulpia	--

**Indicator Status Codes**

**OBL** = Obligate Wetland; occur almost always (estimated probability >99%) under natural conditions in wetlands.

**FACW** = Facultative Wetland; usually occur in wetlands (estimated probability 67%-99%) under natural conditions in wetlands.

**FAC** = Facultative; equally likely to occur in wetlands or non-wetlands (estimated probability 34%-66%).

**FACU** = Facultative Upland; usually occur in non-wetlands (estimated probability 67%-99%).

**UPL** = Obligate Upland; occur almost always (estimated probability >99%) in non-wetlands in the region specified.

**N/L** = Not Listed.

**NI** = No indicator was recorded for those species for which insufficient information was available to determine a status.

-- = May or may not occur in wetlands depending upon species.

A positive (+) sign indicates a frequency toward the higher (more frequently found in wetlands) end of the facultative categories.

A negative (-) sign indicates a frequency toward the lower (less frequently found in wetlands) end of the facultative categories.

An asterisk (\*) indicates a tentative assignment based upon limited information or conflicting review.





Data Point 24N, looking west.



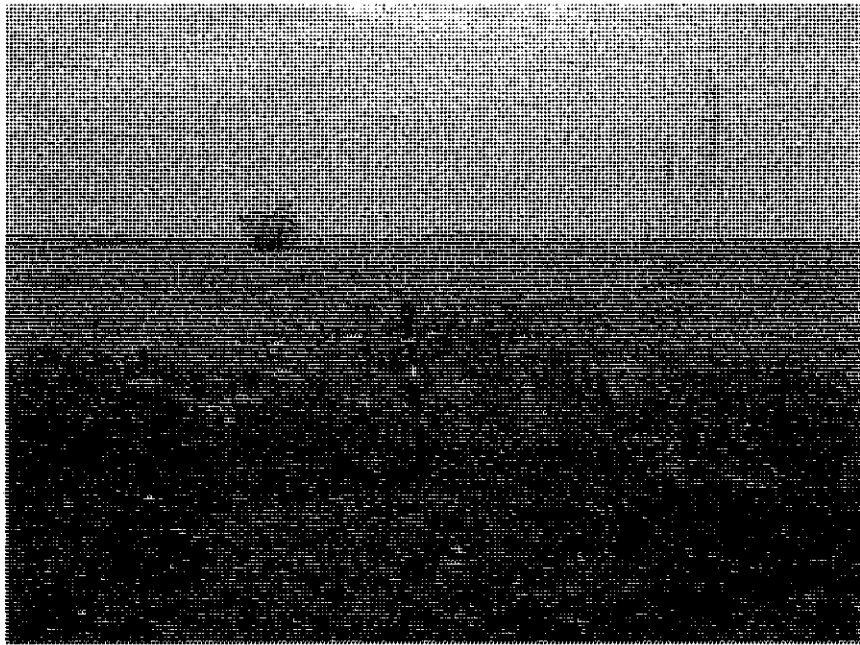
Data Point 25N, looking west.

### **Representative Site Photos**

2005-461 Folsom 560



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Data Point 26N, looking east.



Data Point 27N, looking southwest.

### **Representative Site Photos**

*2005-461 Folsom 560*



**ECORP Consulting, Inc.**  
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Data Point 28N, looking northwest.



Data Point 29N, looking north.

## Representative Site Photos

2005-461 Folsom 560



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Data Point 30N, looking northeast.



Data Point 31N, looking southwest.

## Representative Site Photos

2005-461 Folsom 560



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Data Point 32N, looking southeast.



Data Point 33N, looking southwest.

## Representative Site Photos

2005-461 Folsom 560



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Data Point 34N, looking southeast.



SW-37, looking north.

## Representative Site Photos

2005-461 Folsom 560



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Data Point 35N, looking east.



Data Point 36N, looking south.

## Representative Site Photos

2005-461 Folsom 560



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Data Point 37N, looking west.



Data Point 38N, looking west.

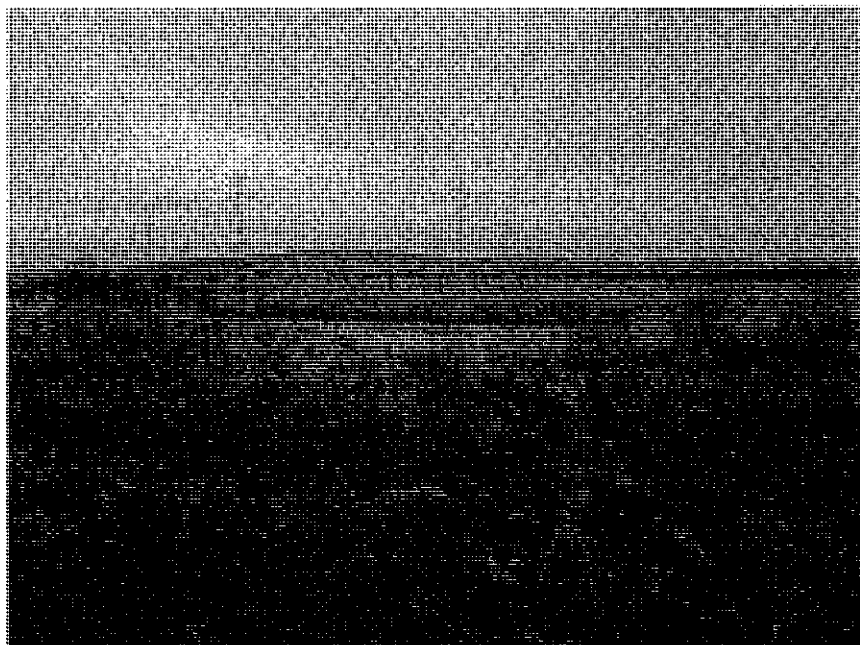
## Representative Site Photos

2005-461 Folsom 560



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SW-34, looking northeast.



Data Point 39N, looking south.

## Representative Site Photos

2005-461 Folsom 560



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Data Point 40N, looking south.



Data Point 41N, looking north.

## Representative Site Photos

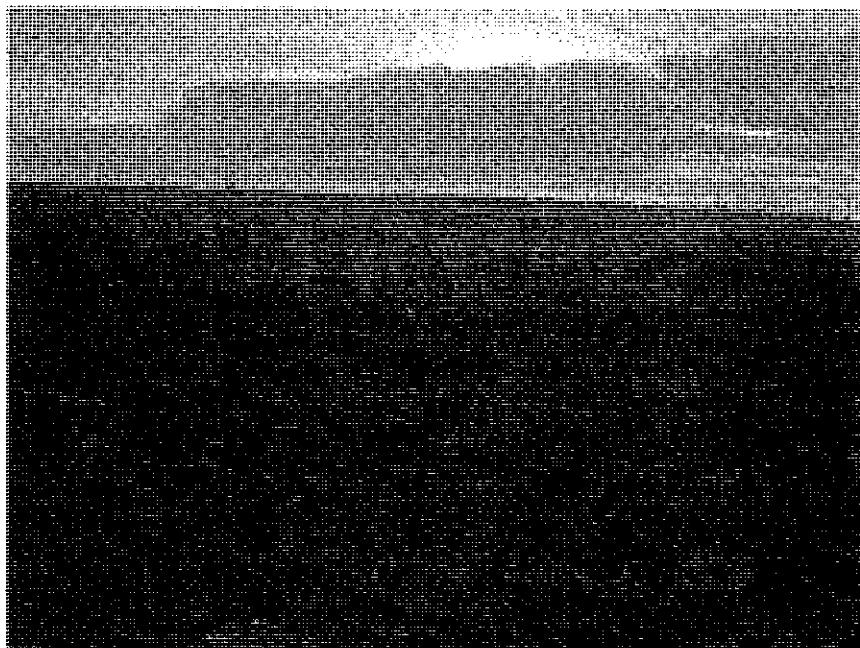
2005-461 Folsom 560



**ECORP Consulting, Inc.**  
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Data Point 42N, looking southeast.



Data Point 43N, looking southwest.

## Representative Site Photos

2005-461 Folsom 560



Data Point 44N, looking west.



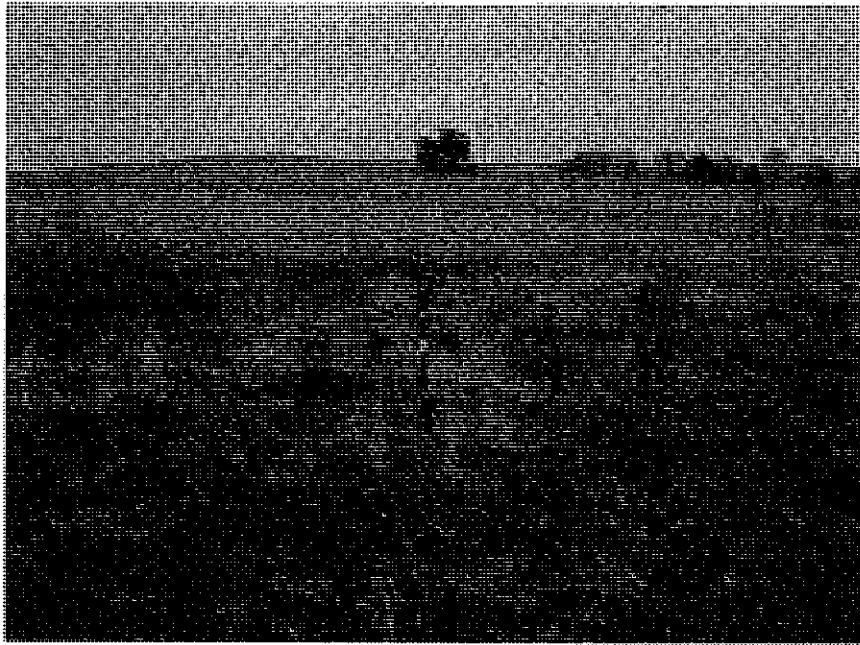
Data Point 45N, looking southwest.

## Representative Site Photos

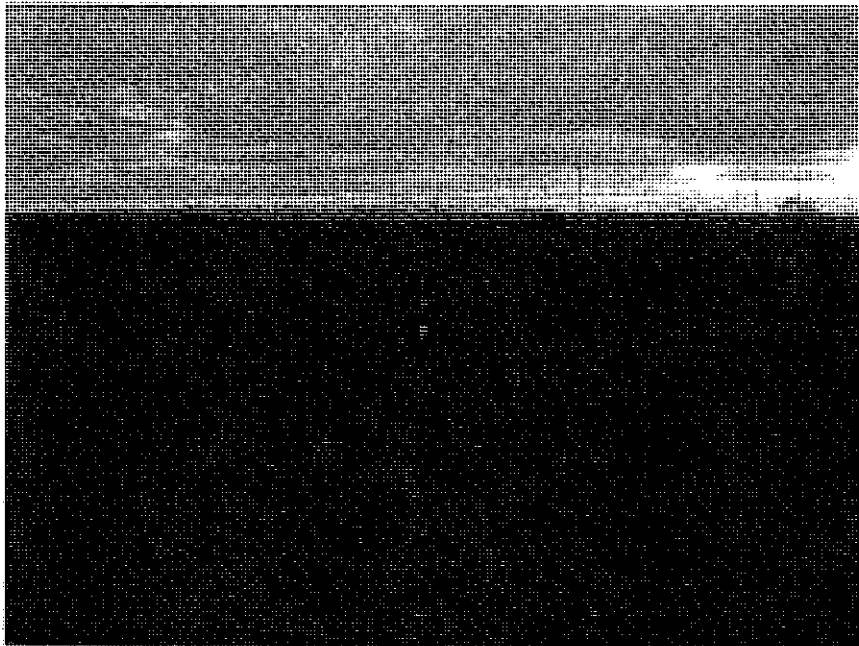
2005-461 Folsom 560



**ECORP Consulting, Inc.**  
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Data Point 46N, looking northeast.



Data Point 47N, looking south.

## Representative Site Photos

2005-461 Folsom 560



**ECORP Consulting, Inc.**  
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Data Point 48N, looking south.



Data Point 49N, looking south.

### **Representative Site Photos**

*2005-461 Folsom 560*

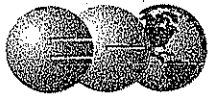


**ECORP Consulting, Inc.**  
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## **APPENDIX D14**

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Prairie City Road Business Park –  
Revised Wetland Delineation



February 22, 2007

Mr. Will Ness  
USACOE, Sacramento District  
ATTN: Regulatory Branch  
1325 J Street, Room 1480  
Sacramento, California 95814

***RE: Prairie City Road Business Park, Sacramento County, California – Revised  
Wetland Delineation (ACOE Reg. File No. 200600538)***

Dear Mr. Ness:

Please find attached the revised wetland delineation for the 66±-acre Prairie City Road Business Park site in Sacramento County, California. The revised wetland delineation (map revision dated: February 7, 2007) is the result of additional data collected in response to your letter request dated January 23, 2007.

The site corresponds to an unsectioned portion of Township 9 North, Range 7 East (MDBM) of the "Folsom, California" 7.5-minute quadrangle (U.S. Department of the Interior, Geological Survey 1980). The approximate center of the site is located at 38° 38' 20" North and 121° 09' 09" West.

Within this submittal, we have included:

- one (1) copy of the January 23, 2007 letter requesting additional information,
- one (1) 1"=100' revised map,
- one (1) 8.5x11 revised map,
- data sheets for fourteen (14) additional data point locations,
- one (1) revised list of plant species observed on-site,
- ten (10) pages of representative photographs, and
- one (1) Compact Disk containing the revised map, shape files, and a PDF version of the revised map.



The project boundary depicted on the wetland delineation was interpreted from features visible on a georeferenced aerial image and data extracted from the Sacramento County GIS parcel database. This boundary should be considered approximate. For the purposes of this delineation, the eastern edge of Prairie City Road represented the western boundary of the project area. The project area did not include the eastern half of Prairie City Road, as the delineation map suggested.

Data was collected at 14 of the 17 data point locations identified in your request for additional information. Copies of the data sheets completed at each of these locations are included with this submittal. Data was not collected at two of the requested locations due to their occurrence within a portion of the Alder Creek floodplain that is now inundated as a result of recent beaver activity. As these locations were inundated, data was collected at Data Point 26N, which is located on an island as close as possible to the requested locations. Data was not collected at another location due to its similarity to the locations represented by Data Point 27N. An additional two requested data points, located north of Alder Creek, occurred in the same blackberry (*Rubus* spp.) thicket under similar conditions; thus, one representative data point (29N) was taken between the two requested locations. Photographs of these data point locations, as well as additional representative site photographs, are included in this submittal.

It appears that the beaver dams on Alder Creek, in place during the initial wetland delineation field work, were destroyed in the time since the last data collection visit, and that beavers have constructed three new dams. As a result, a larger area of inundation now occurs in the eastern portion of the site. The boundaries of Alder Creek (Creek-1) have been revised to show the current limits of inundation. It should be noted that the creek boundary might fluctuate in the future as a result of continued beaver activity.

A significant portion of seasonal wetland-90 (SW-90) has become inundated and contiguous with Alder Creek due to beaver activity. The inundated portion of this feature has been incorporated into the revised Alder Creek boundary, thereby reducing the acreage of this seasonal wetland. A seasonal wetland (SW-91) has also been created on the north edge of the creek as a result of the increased water level. One additional seasonal wetland (SW-92) was mapped on the plateau in the center of the site.

Revisions to the wetland delineation include the addition of two seasonal wetlands (SW-91 and SW-92), a reduction in the size of SW-90, and revisions to the limits of Alder Creek (Creek-1). With the incorporation of these revisions, a total of 3.258 acres of potential waters of the U.S. has been identified within the site.

**Table 1 – Potential Waters of the US**

<b>Type</b>	<b>Original Acreage</b>	<b>Revised Acreage</b>
<i>Wetlands</i>		
Vernal Pool	0.670	0.670
Seasonal Wetland	0.604	0.436
Seasonal Wetland Swale	0.233	0.233
<i>Other Waters</i>		
Ephemeral Drainage	0.109	0.108
Creek	1.078	1.811
<b>TOTAL:</b>	<b>2.694</b>	<b>3.258</b>

In summary, the revisions discussed above have resulted in potential waters of the U.S. totaling 3.258 acres, consisting of 0.670 acre of vernal pool, 0.436 acre of seasonal wetland, 0.233 acre of seasonal wetland swale, 0.108 acre of ephemeral drainage, and 1.811 acres of creek. We hope that the revised map and supplemental information will allow you to complete the verification process and issue a letter to that effect. Please feel free to call me at (916) 782-9100 if you have any questions regarding this issue.

Sincerely,



Daria Snider  
Biologist

Attachment(s)

CC: Mr. David Hatch / GenCorp Realty Investments



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO  
CORPS OF ENGINEERS  
1325 J STREET  
SACRAMENTO, CALIFORNIA 95814-2922

January 23, 2007

Regulatory Branch (200600538)

David Hatch  
GenCorp Realty Investments  
620 Coolidge Drive, Suite 100  
Folsom, California 95630-3182

Dear Mr. Hatch:

This concerns your consultant's July 10, 2006 request for an approved jurisdictional determination for the Prairie City Road Business Park site. We are unable to complete our review or verify this delineation since you have not provided complete information. We have withdrawn your request from our active priority projects until we receive adequate information or can otherwise re-prioritize your request.

An itemized list of the minimal information we need to process your request is enclosed. Once we receive complete information we will continue to evaluate your delineation, including a site visit if necessary. This withdrawal does not preclude the need for a Department of the Army permit for work on this site.

Please refer to identification number 200600538 in any correspondence concerning this project. If you have any questions, please contact William Ness at our Sacramento Office, 1325 J Street, Room 1480, Sacramento, California 95814-2922, email *William.W.Ness@usace.army.mil*, or telephone 916-557-5268. You may also use our website: *www.spk.usace.army.mil/regulatory.html*.

Sincerely,

**ORIGINAL SIGNED**

Will Ness  
Chief, Sacramento Office

Enclosure(s)

Copy furnished with enclosure(s):

Daria Hoyer, ECORP Consulting, Incorporated, 2525 Warren Drive, Rocklin, California  
95677-2167

File # 200600538 Project Title PRAIRIE CITY ROAD BUSINESS PARK Date 10/25/2006  
 County Sacramento State CA Project Manager NESS Project Acreage 66.0  
 Applicant GenCorp Realty Consultant: ECORP CONSULTING, INC.

Minimum Standards for Acceptance of Wetland Delineations

Topography ☒

1987 Corps Manual Statement <input checked="" type="checkbox"/>	Contact Information <input checked="" type="checkbox"/>	ID Data Pts .Wetland Boundaries <input checked="" type="checkbox"/>
Wetland Narrative <input checked="" type="checkbox"/>	Plant List and Discussion <input checked="" type="checkbox"/>	All Potential Waters of US Shown <input type="checkbox"/>
Justify Wetland Boundary <input checked="" type="checkbox"/>	Soil Descriptions, Maps, List <input checked="" type="checkbox"/>	Standard Mapping Conventions <input checked="" type="checkbox"/>
Total Project Acreage <input checked="" type="checkbox"/>	Interstate or Foreign Commerce <input checked="" type="checkbox"/>	Individually ID All Water Features <input checked="" type="checkbox"/>
Existing Field Conditions <input checked="" type="checkbox"/>	Delineation Map Scale <input checked="" type="checkbox"/>	Reference Block <input checked="" type="checkbox"/>
Hydrology Discussion <input checked="" type="checkbox"/>	Project Boundary <input checked="" type="checkbox"/>	Waters Acreage Table <input checked="" type="checkbox"/>
Project Location Map <input checked="" type="checkbox"/>	All Wetlands and Waters Shown <input type="checkbox"/>	Data Sheets Filled Out Correctly <input checked="" type="checkbox"/>
Directions To Site <input checked="" type="checkbox"/>	Color/Thatched Coding <input checked="" type="checkbox"/>	Paired Data Points For All Features <input checked="" type="checkbox"/>

☒ Note: Checked boxes represent information recieved

GIS Data Submitted ☒

Minimum Information Needed to Complete Delineation Review

1: Collect data on the additional points noted on attached map and submit corresponding photographs.

2: Please confirm if the project area includes the eastern half of Prarie City Road as the delineation map suggests.

3:

4:

5:

6:

7:

8:

9:

10:

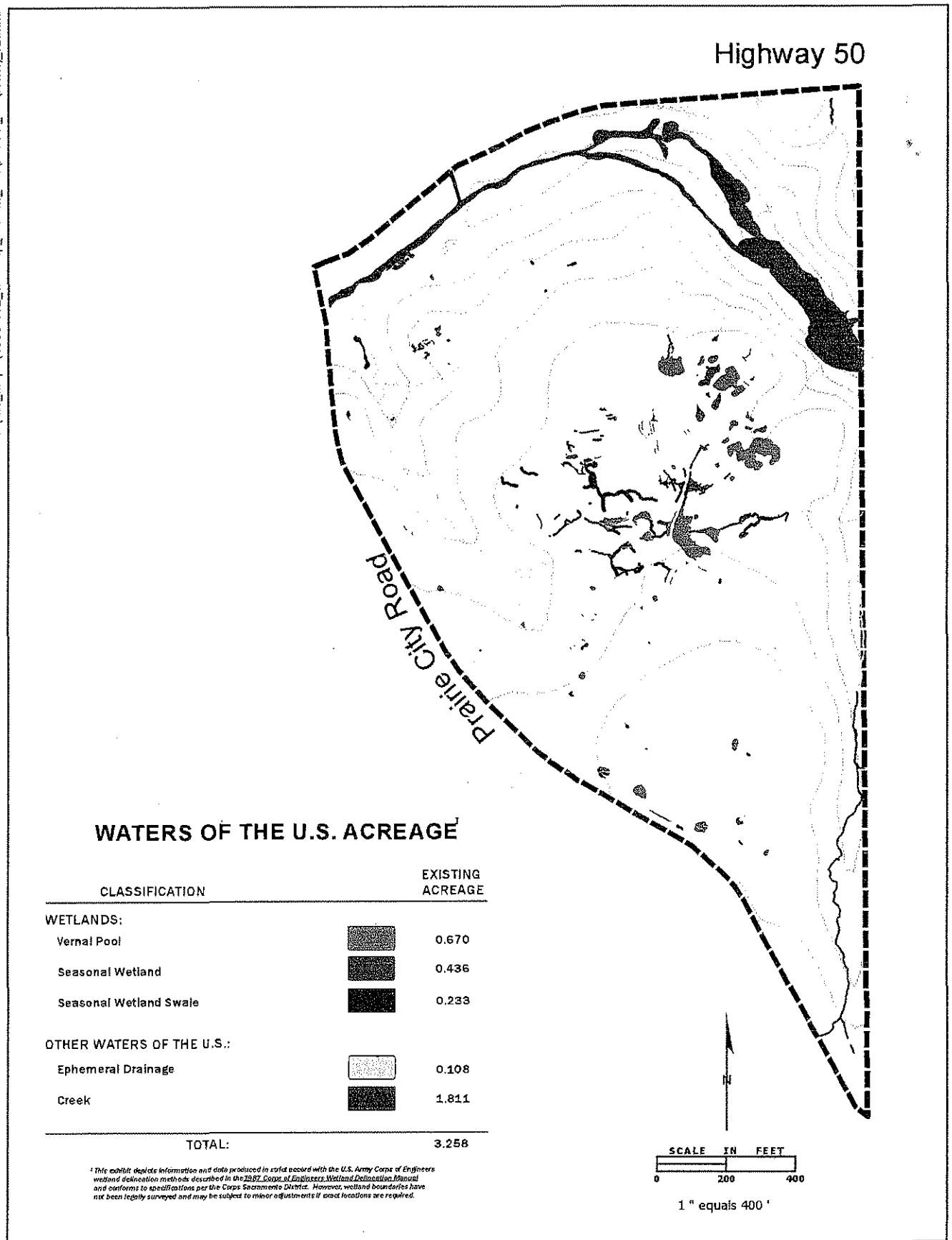


FIGURE 3: Wetland Delineation

2005-461 Prairie City Road Business Park

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Prairie City Business Park Date: 1/31/07 Sample Point: 16N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: N/A/T9N/R7E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☐ No ☐

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>unidentifiable seedlings</u>	<u>—</u>	<u>H</u>	<u>100%</u>	5) _____	_____	_____	_____
2) _____	_____	_____	_____	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: \_\_\_\_\_ = \_\_\_\_\_ %

Comments: Trace HOR VIR and HOR MAR present.

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >4" (in.) Depth to saturated soil: >4" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: This is a very slight topographic depression that was vegetated with upland plants during the prior site visit.

**SOILS**

**HYDRIC SOILS?** Yes ☒ No ☐

Series/Phase: (192) Red Bluff loam, 2-5% slopes Drainage Class: Well drained  
Taxonomy [Subgroup]: Utic Palexeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: Unnamed soils in depressions On Hydric Soils List: Yes ☒ No ☐  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-4"</u>	_____	<u>10YR 4/2</u>	<u>5YR 4/6</u>	<u>Many, fine</u>	<u>Sandy clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

  
Comments: Refusal at 4". DP is in a very slight topographic depression.

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☐ No ☒

Rationale: All 3 wetland criteria have not been met.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
HOR MAR	H	trace	
HOR VIR	H	trace	
unidentifiable seedlings	H	100%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

COVER:

Vegetation 100%

Bare Ground

Rocks

Other

TOTAL = 100%

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**ROUTINE WETLAND DELINEATION**

Project/Site: Prairie City Business Park Date: 1/31/07 Sample Point: 17N  
Applicant/Owner: Gen Cap Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, CA Section/Township/Range: \_\_\_\_\_  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>ERO BOT</u>	<u>N/L</u>	<u>H</u>	<u>20%</u>	5) _____	_____	_____	_____
2) <u>unidentifiable seedlings</u>	<u>—</u>	<u>H</u>	<u>60%</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0-1/2 = 0-50 %

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: N/A (in.) Depth to saturated soil: N/A (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No hydrology indicators observed. This is a berm in the middle of the

**SOILS**

**HYDRIC SOILS?** Yes ☐ No ☒

Series/Phase: (492) Red Bluff loam, 2-5% slopes Drainage Class: Well drained  
Taxonomy [Subgroup]: Ultic Palexeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: Unnamed soils in depressions On Hydric Soils List: Yes ☒ No ☐

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: DP is not in a depression.  
No soil pit dug due to obvious lack of hydrology or vegetation criteria.

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☐ No ☒

Rationale: the wetland criteria are not met.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_



# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
TAE CAP	H	5%	
HDL VIR	H	5%	
ERO BOT	H	20%	
unidentifiable seedlings	H	70%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

<u>COVER:</u>	
Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) =		100%			

# ECORP Consulting, Inc.

ENVIRONMENTAL CONSULTANTS

## ROUTINE WETLAND DELINEATION

Project/Site: Prairie City Business Park Date: 1/31/07 Sample Point: 18N

Applicant/Owner: GenCap Field Investigator(s): Daria Snider

County: Sacramento State: CA Plant Community: Annual Grassland

Quad(s): Folsom, CA Section/Township/Range: N/A / T9N / R7E

Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_

Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_

Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

### VEGETATION

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>unidentifiable seedlings</u>	<u>—</u>	<u>H</u>	<u>85%</u>	5) _____	_____	_____	_____
2) _____	_____	_____	_____	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: ? = ? %

Comments: 3 of 4 non-dominants are upland species; therefore, unidentifiable veg is assumed to be upland species

### HYDROLOGY

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_

Depth of surface water: None (in.) Depth to free water in pit: >4" (in.) Depth to saturated soil: >4" (in.)

Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_

Comments: Data point is located on an elevated area adjacent to a seasonal wetland.

### SOILS

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: (192) Red Bluff loam, 2-5% slopes Drainage Class: Well drained

Taxonomy [Subgroup]: Ultic Palexeralfs Confirm Map Type: Yes ☐ No ☒

☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma

☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_

Inclusions [Series/Phase]: Unnamed soils in depressions On Hydric Soils List: Yes ☒ No ☐

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-4"</u>	_____	<u>10YR 4/2</u>	<u>5YR 4/6</u>	<u>Many fine</u>	<u>sandy clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: Refusal at 4". DP is not in a depression.

### DECISION \*

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: Only 1 wetland criterion is satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

Species Observed	Stratum	Actual Cover	Relative Cover
ERO BOT	H	15%	
LOA MU	H	trace	
BRO HOR	H	trace	
TAE CAP	H	trace	
unidentifiable seedlings	H	85%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

<u>COVER:</u>	
Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

Species (Descending Order)	Stratum	Relative Cover	Cumulative Cover	Indicator Status	Dominants
TOTAL SUM ( $\Sigma$ ) =		100%			

Project/Site: Prairie City Business Park Date: 1/31/07 Sample Point: 19W

Applicant/Owner: GenCorp Field Investigator(s): Daria Snider

County: Sacramento State: CA Plant Community: Annual Grassland

Quad(s): Folsom, CA Section/Township/Range: N/A / T9N / R7E

Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_

Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_

Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

### VEGETATION

HYDROPHYTIC VEGETATION? Yes ☐ No ☐

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>unidentifiable seedlings</u>	<u>—</u>	<u>H</u>	<u>80%</u>	5) _____	_____	_____	_____
2) _____	_____	_____	_____	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: \_\_\_\_\_ = \_\_\_\_\_ %

Comments: Three of five non-dominants are wetland species.

### HYDROLOGY

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_

Depth of surface water: None (in.) Depth to free water in pit: >8" (in.) Depth to saturated soil: >8" (in.)

Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_

Comments: Data point is located on a rise adjacent to a seasonal wetland.

### SOILS

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: (192) Red Bluff loam, 2-5% slopes Drainage Class: Well Drained

Taxonomy [Subgroup]: Ultic Palexeralfs Confirm Map Type: Yes ☐ No ☒

☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma

☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_

Inclusions [Series/Phase]: Unnamed soils in depressions On Hydric Soils List: Yes ☒ No ☐

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-8"</u>	_____	<u>10YR 4/2</u>	<u>5YR 4/6</u>	<u>Many, fine</u>	<u>Sandy clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: Refusal at 8". DP is not in a depression.

DECISION \* WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: All wetland criteria are not met.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
ERO BOT	H	10%	
HOR MAR	H	5%	
JUN BUF	H	5%	
LOL MUL	H	trace	
HZ VIR	H	trace	
Unidentifiable seedlings	H	80%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

<u>COVER:</u>	
Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) =		100%			

# ECORP Consulting, Inc.

ENVIRONMENTAL CONSULTANTS

## ROUTINE WETLAND DELINEATION

Project/Site: Prairie City Business Park Date: 1/31/07 Sample Point: 20N

Applicant/Owner: GenCorp Field Investigator(s): Daria Snider

County: Sacramento State: CA Plant Community: Annual Grassland

Quad(s): Folsom, CA Section/Township/Range: N/A / T9N / R7E

Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_

Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_

Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

### VEGETATION

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>TAE CAP</u>	<u>N/L</u>	<u>H</u>	<u>17%</u>	5) _____	_____	_____	_____
2) <u>ERD BOT</u>	<u>N/L</u>	<u>H</u>	<u>17%</u>	6) _____	_____	_____	_____
3) <u>unidentifiable seedlings</u>	<u>—</u>	<u>H</u>	<u>39%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0-1/3 = 0-33%

Comments: \_\_\_\_\_

### HYDROLOGY

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_

Depth of surface water: None (in.) Depth to free water in pit: >4" (in.) Depth to saturated soil: >4" (in.)

Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_

Comments: DP is elevated above an adjacent seasonal wetland. Insufficient hydrology.

### SOILS

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: (12) Red Bluff loam, 2-5% slopes Drainage Class: Well drained

Taxonomy (Subgroup): Ultic Paleixeralfs Confirm Map Type: Yes ☐ No ☒

☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma

☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☒ Concretions ☐ Other \_\_\_\_\_

Inclusions (Series/Phase): Unnamed soils in depressions On Hydric Soils List: Yes ☒ No ☐

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-4"</u>	_____	<u>10YR4/2</u>	<u>5YR4/6</u>	<u>Many, medium</u>	<u>Gravelly loam</u>

Comments: Refusal at 4". Fe concretions present. DP is not in a depression.

### DECISION \*

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: Only 1 of 3 wetland criteria is satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

Species Observed	Stratum	Actual Cover	Relative Cover
TAE CAP	H	15%	17%
FRO BOT	H	15%	17%
BRO HOR	H	10%	11%
NAV TAG	H	5%	6%
EPI TOR	H	5%	6%
TRI SD.	H	5%	6%
unidentifiable seedlings	H	35%	39%
TOTAL SUM ( $\Sigma$ ) =		90%	100%

<u>COVER:</u>	
Vegetation	90%
Bare Ground	10%
Rocks	
Other	
TOTAL =	100%

Species (Descending Order)	Stratum	Relative Cover	Cumulative Cover	Indicator Status	Dominants
TOTAL SUM ( $\Sigma$ ) =		100%			

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Prairie City Business Park Date: 1/31/07 Sample Point: 21N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom CA Section/Township/Range: N/A / T9N / R7E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>unidentifiable seedlings</u>	<u>—</u>	<u>H</u>	<u>65%</u>	5) _____	_____	_____	_____
2) _____	_____	_____	_____	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: \_\_\_\_\_ = \_\_\_\_\_ %

Comments: Three of four non-dominants are upland species. Therefore, the  
unidentifiable seedlings are assumed to be upland species as well.

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >6" (in.) Depth to saturated soil: >6" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: Insufficient wetland hydrology.

**SOILS**

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: (192) Red Bluff loam, 2-5% slopes Drainage Class: Well drained  
Taxonomy [Subgroup]: Utic Palexeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☒ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: Unnamed soils in depressions On Hydric Soils List: Yes ☒ No ☐

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-6"</u>	_____	<u>10YR 4/2</u>	<u>5YR 4/6</u>	<u>Many, medium</u>	<u>Gravelly loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: Refusal at 6". Fe concretions present. DP is not in a depression.

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: Only 1 of 3 criteria is satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_



# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
BRI MAX	H	15%	
TAE CAP	H	10%	
GER MOL	H	10%	
HOR MAR	H	trace	
unidentifiable seedlings	H	6.5%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

<u>COVER:</u>	
Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) =		100%			

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Prairie City Business Park Date: 1/31/07 Sample Point: 22N

Applicant/Owner: GenCorp Field Investigator(s): Daria Snider

County: Sacramento State: CA Plant Community: Annual Grassland

Quad(s): Folsom, CA Section/Township/Range: N/A / T 9N / R 7E

Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_

Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_

Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>BZI MAX</u>	<u>N/L</u>	<u>H</u>	<u>50%</u>	5) _____	_____	_____	_____
2) <u>unidentifiable seedlings</u>	<u>—</u>	<u>H</u>	<u>35%</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0-1/2 = 0-50 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_

Depth of surface water: None (in.) Depth to free water in pit: >8" (in.) Depth to saturated soil: >8" (in.)

Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_

Comments: No wetland hydrology indicators detected.

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (192) Red Bluff loam, 2-5% slopes Drainage Class: Well drained

Taxonomy [Subgroup]: Ultic Palexeralfs Confirm Map Type: Yes ☐ No ☒

☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma

☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_

Inclusions [Series/Phase]: Unnamed soils in depressions On Hydric Soils List: Yes ☒ No ☐

Depth (in.) Horizon Matrix Color Mottle Color Mottle (Quantity/Contrast/Size) Texture, Concretions, Structure

0-8" \_\_\_\_\_ 7.5YR 4/4 \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ loamy sand

\_\_\_\_\_ DP is not in a depression. \_\_\_\_\_

Comments: Refusal at 8". No hydric soil indicators detected.

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
BRI MAX	H	50%	
ERO BOT	H	10%	
POG DOV	H	5%	
GAS VEN	H	trace	
unidentifiable seedlings	H	35%	
TOTAL SUM ( $\Sigma$ ) =		100%	100%

<u>COVER:</u>	
Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) = 100%					

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: Prairie City Business Park Date: 1/31/07 Sample Point: 23N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Blue oak woodland  
Quad(s): Folsom, CA Section/Township/Range: N/A / T 9 N / R 7 E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>BRO CAR</u>	<u>N/L</u>	<u>H</u>	<u>40%</u>	5) _____	_____	_____	_____
2) <u>HYP SP.</u>	<u>N/L</u>	<u>H</u>	<u>30%</u>	6) _____	_____	_____	_____
3) <u>QUE DOJ</u>	<u>N/L</u>	<u>T</u>	<u>100%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/3 = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >6" (in.) Depth to saturated soil: >6" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: Data point is in a topographic depression between 2 tailings piles. No hydrology ind.

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (196) Red Bluff-xeranthents dredge tailings complex, 2-50% slopes Drainage Class: Well to excessive (y)  
Taxonomy [Subgroup]: Utic Palexeranth's Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: Slickens and unmaned soils in depressions On Hydric Soils List: Yes ☒ No ☐

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-3"</u>	_____	<u>10YR 4/3</u>	<u>7.5YR 4/3</u>	<u>Many, medium</u>	<u>Sandy loam</u>
<u>3"-6"</u>	_____	<u>7.5YR 4/4</u>	<u>10YR 5/2</u>	<u>Many, medium</u>	<u>Sandy loam</u>

DP is in a depression; however, no hydric soil indicators were detected.  
Comments: Refusal at 6". No hydric soil indicators detected.

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.  
General comments: \_\_\_\_\_  
Feature Type: \_\_\_\_\_

.....

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
BRO CAR	H	20%	40%
HYP SP.	H	15%	30%
JUN BUE	H	trace	trace
BRI MIN	H	trace	trace
QUE DOV	T	154 in <sup>2</sup>	154 in <sup>2</sup>
<b>TOTAL SUM (<math>\Sigma</math>) =</b>		<b>50%</b>	<b>100%</b>

<b><u>COVER:</u></b>	
Vegetation	<u>50%</u>
Bare Ground	<u>50%</u>
Rocks	<u>          </u>
Other <u>                    </u>	<u>          </u>
<b>TOTAL =</b>	<b>100%</b>

<u>Species (Descending Order)</u>	<u>Stratum</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
<b>TOTAL SUM (<math>\Sigma</math>) = 100%</b>					

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**ROUTINE WETLAND DELINEATION**

Project/Site: Prairie City Business Park Date: 1/31/07 Sample Point: 24N  
Applicant/Owner: Gen Corp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Blue oak woodland  
Quad(s): Folsom, CA Section/Township/Range: N/A T9N/R7E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>HYP sp.</u>	<u>N/L</u>	<u>H</u>	<u>20%</u>	5) _____	_____	_____	_____
2) <u>unidentifiable seedlings</u>	<u>—</u>	<u>H</u>	<u>50%</u>	6) _____	_____	_____	_____
3) <u>QUE DOU</u>	<u>N/L</u>	<u>T</u>	<u>100%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0-1/3 = 0.33 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: None (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: DP is on a slope between mine tailing piles. No hydrology indicators detected.

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (19b) Red Bluff-Xerorthents dredge tailings complex, 2-5% slopes Drainage Class: Well to excessively  
Taxonomy [Subgroup]: Ultic Palexeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: Slickens and unnamed soils in depressions On Hydric Soils List: Yes ☒ No ☐  
Depth (in.)      Horizon      Matrix Color      Mottle Color      Mottle (Quantity/Contrast/Size)      Texture, Concretions, Structure  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Comments: No pit dug, as substrate is rock below plant roots. DP is not in a depression.

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: None of the wetland criteria have been satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

# VEGETATIVE COVER / DOMINANCE WORK SHEET

Species Observed	Stratum	Actual Cover	Relative Cover
HYP SP.	H	20%	
BRD HOR	H	15%	
HOR MATC	H	10%	
NAV TAG	H	5%	
GAS VEN	H	trace	
unidentifiable seedlings	H	50%	
QUE DOZ	T	113in <sup>2</sup>	
TOTAL SUM ( $\Sigma$ ) =		120%	100%

<u>COVER:</u>	
Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

Species (Descending Order)	Stratum	Relative Cover	Cumulative Cover	Indicator Status	Dominants
TOTAL SUM ( $\Sigma$ ) =		100%			

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**ROUTINE WETLAND DELINEATION**

Project/Site: Drairie City Business Park Date: 1/31/07 Sample Point: 25N  
Applicant/Owner: Gen Corp Field Investigator(s): Daria Swider  
County: Sacramento State: CA Plant Community: Blue oak woodland  
Quad(s): Folsom, CA Section/Township/Range: N/A / T 9 N / R 7 E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>ERO BOT</u>	<u>N/L</u>	<u>H</u>	<u>76%</u>	5) _____	_____	_____	_____
2) <u>BRO HOR</u>	<u>FACU-</u>	<u>H</u>	<u>20%</u>	6) _____	_____	_____	_____
3) <u>QUE DOV</u>	<u>N/L</u>	<u>T</u>	<u>100%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/3 = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: None (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: DP is on a tailings pile. No wetland hydrology indicators detected.

**SOILS**

**HYDRIC SOILS?** Yes ☐ No ☒

Series/Phase: (196) Red Bluff xerorthent dredge tailings complex, 2-50% slopes Drainage Class: well to excessively  
Taxonomy [Subgroup]: Utic Palexerolls Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: Slickens and unnamed soils in depressions On Hydric Soils List: Yes ☒ No ☐  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

  
Comments: No soil pit dug, as substrate is rubble. DP is not in a depression.

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.  
General comments: \_\_\_\_\_  
Feature Type: \_\_\_\_\_



<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
ERO BDT	H	95%	76%
BRO HOL	H	25%	20%
GER MOL	H	5%	4%
VIL SP.	H	trace	trace
QUE DOV	T	113 in <sup>2</sup>	100%
<b>TOTAL SUM (<math>\Sigma</math>) =</b>		<u>150%</u>	100%

**COVER:**

Vegetation                  100%

Bare Ground                 \_\_\_\_\_

Rocks                         \_\_\_\_\_

Other                         \_\_\_\_\_

**TOTAL =**                      100%

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**ROUTINE WETLAND DELINEATION**

Project/Site: Prairie City Business Park Date: 1/31/07 Sample Point: 26N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Riparian  
Quad(s): Folsom, CA Section/Township/Range: N/A / T9N/R7E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☒ No ☐

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>RDB DIS</u>	<u>FACW*</u>	<u>S</u>	<u>95%</u>	5) _____	_____	_____	_____
2) _____	_____	_____	_____	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/1 = 100 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >6" (in.) Depth to saturated soil: >6" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☒ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: Insufficient wetland hydrology indicators.

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (160) Hicksville sandy clay loam, 0-2% slopes, occasionally flooded Drainage Class: Mod. well  
Taxonomy [Subgroup]: Mollic Haploxeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: Columbia and frequently flooded unnamed soils on floodplain On Hydric Soils List: Yes ☒ No ☐

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
<u>0-3"</u>	_____	<u>7.5YR 3/2</u>	_____	_____	<u>Sandy clay loam</u>
<u>3-6"</u>	_____	<u>10YR 4/3</u>	_____	_____	<u>Clayey sand</u>

Comments: DP is on a floodplain; however, hydric soil indicators are lacking.  
Refusal at 6". No hydric soil indicators detected.

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: Only 1 of 3 wetland criteria is satisfied.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

[illegible]

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**ROUTINE WETLAND DELINEATION**

Project/Site: Prairie City Business Park Date: 1/31/07 Sample Point: 27N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Riparian  
Quad(s): Folsom, CA Section/Township/Range: N/A / T9N / R7E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☒ No ☐

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>RUB DIS</u>	<u>FacW*</u>	<u>S</u>	<u>100%</u>	5) _____	_____	_____	_____
2) <u>QUE LOB</u>	<u>Fac*</u>	<u>T</u>	<u>100%</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 2/2 = 100 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☒ No ☐

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☒ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☒ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: Drift lines were likely deposited by massive floods last winter. This DP is outside the OHWM of the adjacent creek.

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (160) Hicksville sandy clay loam, 0-2% slopes, occasionally flooded Drainage Class: Mod. well  
Taxonomy [Subgroup]: Mollic Haploxeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: Columbia and frequently flooded unnamed soils on flood plains On Hydric Soils List: Yes ☒ No ☐  
Depth (in.) Horizon Matrix Color Mottle Color Mottle (Quantity/Contrast/Size) Texture, Concretions, Structure  
0-2" \_\_\_\_\_ 10YR 3/2 \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ Loam  
2"-12" \_\_\_\_\_ 10YR 4/2 \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ Clay loam

Comments: DP is on a flood plain; however, hydric soil indicators are lacking. No hydric soil indicators detected.

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: Only 2 of 3 wetland criteria are satisfied.  
General comments: Data point is located above the OHWM of Alder Creek.  
Feature Type: \_\_\_\_\_

## VEGETATIVE COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u> <small>(numerous indiv.)</small>	<u>Relative Cover</u>
RUB DIS	S	Height class I	100%
QUE LOB	T	215 in <sup>2</sup>	100%
<b>TOTAL SUM (<math>\Sigma</math>) =</b>		<b>100%</b>	<b>100%</b>

**COVER:**

Vegetation 100%

Bare Ground

Rocks

Other

*TOTAL* = 100%

[illegible]

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**ROUTINE WETLAND DELINEATION**

Project/Site: Prairie City Business Park Date: 1/31/07 Sample Point: 28N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Riparian  
Quad(s): Folsom, CA Section/Township/Range: N/A / T9N / R7E  
Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☐ No ☐

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>RUB DIS</u>	<u>FACW*</u>	<u>S</u>	<u>100%</u>	5) _____	_____	_____	_____
2) <u>EPI BRA</u>	<u>N/L</u>	<u>H</u>	<u>50%</u>	6) _____	_____	_____	_____
3) <u>JUN SP.</u>	<u>—</u>	<u>H</u>	<u>50%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1-2/3 = 33-66%

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☒ No ☐

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☒ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: Drift lines were likely deposited by massive floods last winter. This DP is outside of the OTW of the adjacent creek.

**SOILS**

**HYDRIC SOILS?** Yes ☐ No ☒

Series/Phase: (160) Hidesville sandy clay loam, 0-2% slopes, occasionally flooded Drainage Class: Mod. well  
Taxonomy [Subgroup]: Mollic Haploxeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: Columbia and frequently flooded unnamed soils on floodplains On Hydric Soils List: Yes ☒ No ☐  
Depth (in.) Horizon Matrix Color Mottle Color Mottle (Quantity/Contrast/Size) Texture, Concretions, Structure  
0-12" \_\_\_\_\_ 10YR 4/3 \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ Clay loam

Comments: DP is on floodplain; however, hydric soil indicators are lacking.  
No hydric soil indicators detected.

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☐ No ☒

Rationale: At least one of three wetland criteria is lacking.

General comments: \_\_\_\_\_

Feature Type: \_\_\_\_\_

Species Observed	Stratum	Actual Cover (num. indiv.) Height class z	Relative Cover
RUB DIS	S	100%	50%
EPI BRA	H	5%	50%
TUN SP.	H	5%	50%
TOTAL SUM ( $\Sigma$ ) =		50%	100%

COVER:

Vegetation 50%

Bare Ground 50%

Rocks

Other

TOTAL = 100%

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ENVIRONMENTAL CONSULTANTS

## ROUTINE WETLAND DELINEATION

Project/Site: Prairie City Business Park Date: 1/31/07 Sample Point: 29N  
 Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
 County: Sacramento State: CA Plant Community: Riparian  
 Quad(s): Folsom, CA Section/Township/Range: N/A / T9N / R7E  
 Do normal environmental conditions exist on-site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

### VEGETATION

HYDROPHYTIC VEGETATION? Yes ☒ No ☐

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) RUB DIS	FACW*	S	60%	5)			
2) RUB URS	FACW*	S	40%	6)			
3)				7)			
4)				8)			

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 2/2 = 100 %

Comments: \_\_\_\_\_

### HYDROLOGY

WETLAND HYDROLOGY? Yes ☒ No ☐

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
 Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
 Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☒ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
 Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☒ FAC-Neutral Test ☐ Other \_\_\_\_\_  
 Comments: Drift lines were likely deposited by major floods last winter. This DP is outside of the OTW of the creek.

### SOILS

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: (160) Hicksville sandy clay loam, 0-2% slopes, occasionally flooded Drainage Class: Mod. well  
 Taxonomy [Subgroup]: Mollic Haploxeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
 Inclusions [Series/Phase]: Columbia and frequently flooded unnamed soils on flood plains On Hydric Soils List: Yes ☒ No ☐  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Quantity/Contrast/Size)	Texture, Concretions, Structure
0-12"		10YR 3/2			Clay loam

Comments: No hydric soil indicators detected. DP is on a floodplain; however, hydric soil indicators are lacking.

### \* DECISION \*

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: Only two of 3 wetland criteria are satisfied.  
 General comments: Elevation at data point is greater than that of the Alder Creek OTW (i.e., located above the OTW) Feature Type: \_\_\_\_\_



<u>Species Observed</u>	<u>Stratum</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
RUB DIS	S	(num. indiv) Height class 3	60%
RUB VRS	S	(num. indiv) Height class 3	40%
TOTAL SUM ( $\Sigma$ ) = _____			100%

COVER:

Vegetation	_____ 100%
Bare Ground	_____
Rocks	_____
Other	_____
TOTAL =	_____ 100%

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**Prairie City Road Business Park  
Wetland Delineation  
Plant Species Observed On-Site**

<b>Abbr.</b>	<b>Scientific Name</b>	<b>Common Name</b>	<b>Indicator Status</b>
AIR CAR	<i>Aira caryophyllea</i>	Hairgrass	N/L
AVE BAR	<i>Avena barbata</i>	Slender wild oat	N/L
AVE FAT	<i>Avena fatua</i>	Wild oat	N/L
BRI MAX	<i>Briza maxima</i>	Big quaking grass	N/L
BRI MIN	<i>Briza minor</i>	Little quaking grass	FACW-
BRO ELE	<i>Brodiaea elegans</i>	Harvest brodiaea	FACU
BRO CAR	<i>Bromus carinatus</i>	California brome	N/L
BRO DIA	<i>Bromus diandrus</i>	Ripgut brome	N/L
BRO HOR	<i>Bromus hordeaceus</i>	Soft brome	FACU-
CAS ATT	<i>Castilleja attenuata</i>	Valley tassels	N/L
CEN SOL	<i>Centaurea solstitialis</i>	Yellow star-thistle	N/L
CIC QUA	<i>Cicendia quadrangularis</i>	Gentian	N/L
CYP spe.	<i>Cyperus</i> species	Flatsedge	FAC+
DES DAN	<i>Deschampsia danthonioides</i>	Annual hairgrass	FACW
DIG SAN	<i>Digitaria sanguinalis</i>	Hairy crabgrass	FACU
DOW BIC	<i>Downingia bicornuta</i>	Double-horn downingia	OBL
DOW spe.	<i>Downingia</i> species	Downingia	OBL
ELE ACI	<i>Eleocharis acicularis</i>	Least spikerush	OBL
ELE MAC	<i>Eleocharis macrostachya</i>	Creeping spikerush	OBL
ELE spe.	<i>Eleocharis</i> species	Spikerush	FACW
EPI BRA	<i>Epilobium brachycarpum</i>	Panicked willow-herb	N/L
EPI DEN	<i>Epilobium densiflorum</i>	Dense-flower spike-primrose	OBL
EPI TOR	<i>Epilobium torreyi</i>	Brook spike primrose	FACW
ERO BOT	<i>Erodium botrys</i>	Filaree	N/L
ERY VAS	<i>Eryngium vaseyi</i>	Vasey's coyote-thistle	FACW
GAS VEN	<i>Gastridium ventricosum</i>	Nit grass	FACU
GRA EBR	<i>Gratiola ebracteata</i>	Bractless hedgehyssop	OBL
GRA spe.	<i>Gratiola</i> species	Hedgehyssop	--
GER MOL	<i>Geranium molle</i>	Hairy geranium	N/L
GLY DEC	<i>Glyceria declinata</i>	Mannagrass	OBL
HOL VIR	<i>Holocarpha virgata</i>	Sticky tarweed	N/L
HOR MAR	<i>Hordeum marinum</i>	Mediterranean barley	FAC
HYP spe.	<i>Hypochaeris</i> species	Cat's-ear	N/L
JUN BUF	<i>Juncus bufonius</i>	Toad rush	FACW+
JUN EFF	<i>Juncus effusus</i>	Soft rush	OBL
JUN MEX	<i>Juncus mexicanus</i>	Mexican rush	FACW
JUN spe.	<i>Juncus</i> species	Rush	--
LAS GLA	<i>Lasthenia glaberrima</i>	Smooth goldfields	OBL
LAS spe.	<i>Lasthenia</i> species	Goldfields	--
LAY FRE	<i>Layia fremontii</i>	Fremont's tidy-tips	N/L
LOL MUL	<i>Lolium multiflorum</i>	Ryegrass	FAC*
LOL PER	<i>Lolium perenne</i>	Perennial ryegrass	FAC*

Abbr.	Scientific Name	Common Name	Indicator Status
LYT HYS	<i>Lythrum hyssopifolia</i>	Hyssop loosestrife	FACW
MAR VUL	<i>Marrubium vulgare</i>	Common horehound	FAC
NAV LEU	<i>Navarretia leucocephala</i>	White-head navarretia	OBL
NAV TAG	<i>Navarretia tagetina</i>	Marigold navarretia	N/L
PAS DIL	<i>Paspalum dilatatum</i>	Dallis grass	FAC
PLA GRE	<i>Plagiobothrys greenii</i>	Greene's popcorn-flower	FACW
PLA STI	<i>Plagiobothrys stipitatus</i>	Slender popcorn-flower	OBL
PLA MAJ	<i>Plantago major</i>	Broad-leaf plantain	FACW-
POG DOU	<i>Pogogyne douglasii</i>	Douglas' mesamint	OBL
POL MON	<i>Polypogon monspeliensis</i>	Annual rabbit-foot grass	FACW+
PSI spe.	<i>Psilocarphus</i> species	Woolly-heads	--
QUE DOU	<i>Quercus douglasii</i>	Blue oak	N/L
QUE LOB	<i>Quercus lobata</i>	Valley oak	FAC*
RUB DIS	<i>Rubus discolor</i>	Himalayan blackberry	FACW*
RUB URS	<i>Rubus ursinus</i>	California blackberry	FACW*
RUM PUL	<i>Rumex pulcher</i>	Fiddle dock	FAC+
SAL spe.	<i>Salix</i> species	Willow	--
TAE CAP	<i>Taeniatherum caput-medusae</i>	Medusahead grass	N/L
TRI DUB	<i>Trifolium dubium</i>	Shamrock clover	FACU*
TRI HIR	<i>Trifolium hirtum</i>	Rose clover	N/L
TRI HYA	<i>Triteleia hyacinthina</i>	Hyacinth brodiaea	FACW*
TRI spe.	<i>Triteleia</i> species	Brodiaea	--
TYP spe.	<i>Typha</i> species	Cattail	OBL
VER BON	<i>Verbena bonariensis</i>	South American vervain	FACW
VIC spe.	<i>Vicia</i> species	Vetch	--
VUL MYU	<i>Vulpia myuros</i>	Rat-tail vulpia	FACU*

#### Indicator Status Codes

**OBL** = Obligate Wetland; occur almost always (estimated probability >99%) under natural conditions in wetlands.

**FACW** = Facultative Wetland; usually occur in wetlands (estimated probability 67%-99%) under natural conditions in wetlands.

**FAC** = Facultative; equally likely to occur in wetlands or non-wetlands (estimated probability 34%-66%).

**FACU** = Facultative Upland; usually occur in non-wetlands (estimated probability 67%-99%).

**UPL** = Obligate Upland; occur almost always (estimated probability >99%) in non-wetlands in the region specified.

**N/L** = Not Listed.

**NI** = No indicator was recorded for those species for which insufficient information was available to determine a status.

-- = May or may not occur in wetlands depending upon species.

A positive (+) sign indicates a frequency toward the higher (more frequently found in wetlands) end of the facultative categories.

A negative (-) sign indicates a frequency toward the lower (less frequently found in wetlands) end of the facultative categories.

An asterisk (\*) indicates a tentative assignment based upon limited information or conflicting review.



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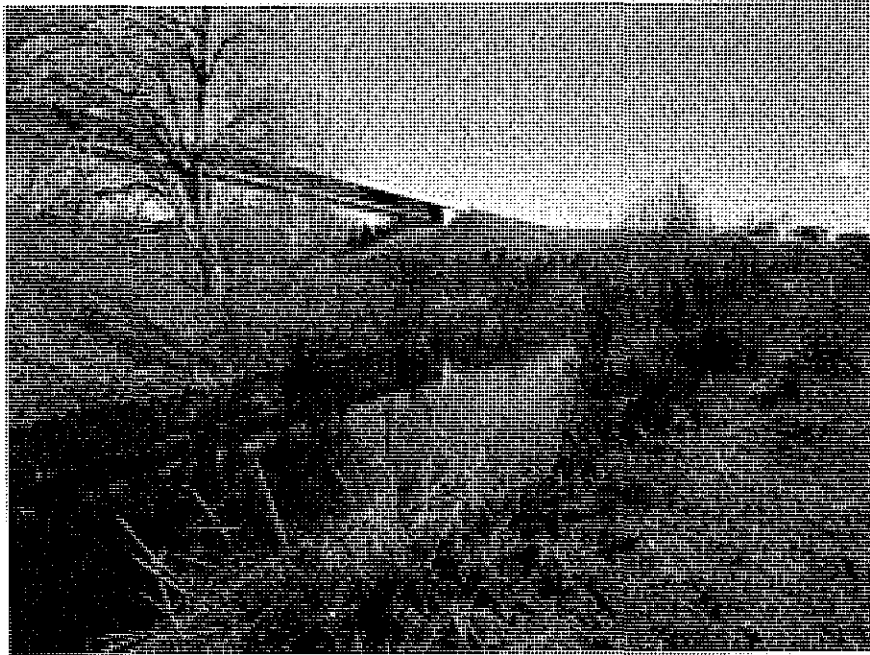
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GenCorp Folsom SOI

Wetland Delineation

2/22/07



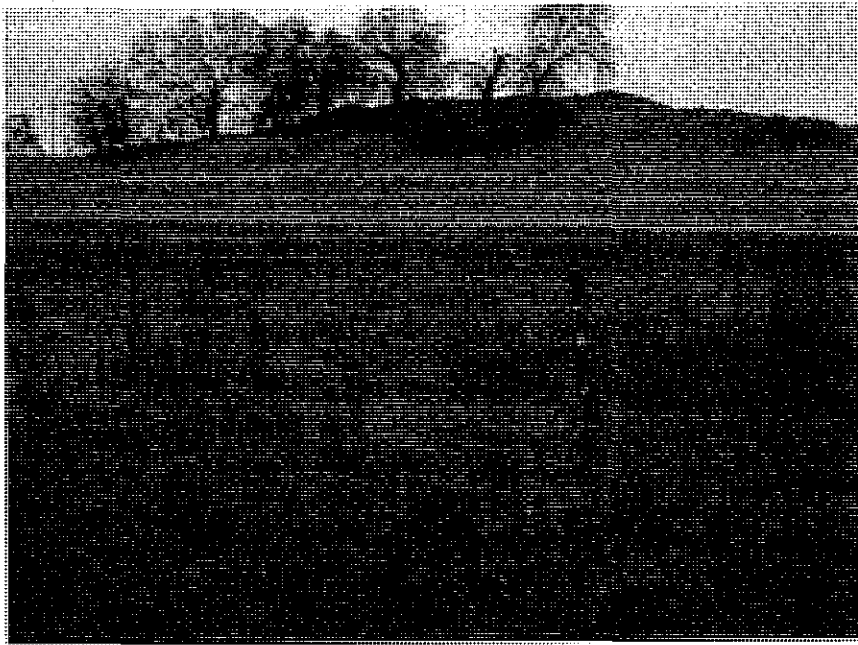
Feature: Alder Creek (Creek-1). Looking northeast from the west side of SW-43.



Features: VP-1 and VP-2. Looking northwest from southeast corner of VP-1.

### **Representative Site Photos**

*2005-461 Prairie City Business Park*



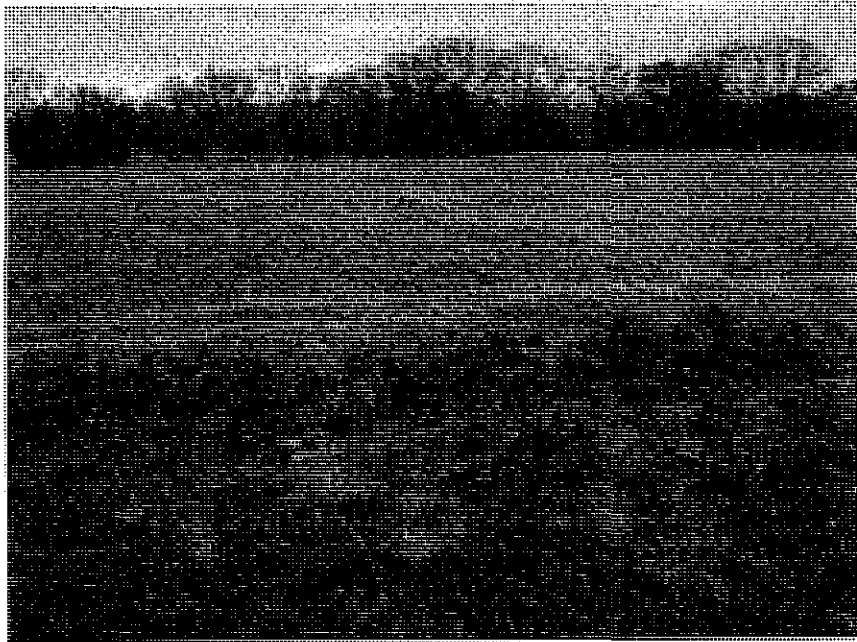
Data Point 16N, looking southwest.



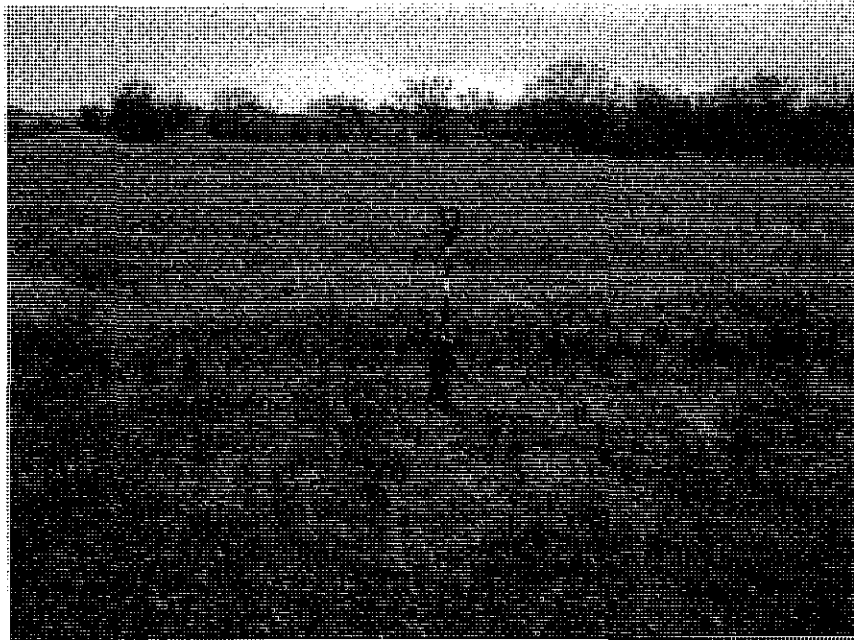
Data Point 17N, looking west.

### Representative Site Photos

2005-461 Prairie City Business Park



Data Point 18N, looking northeast.



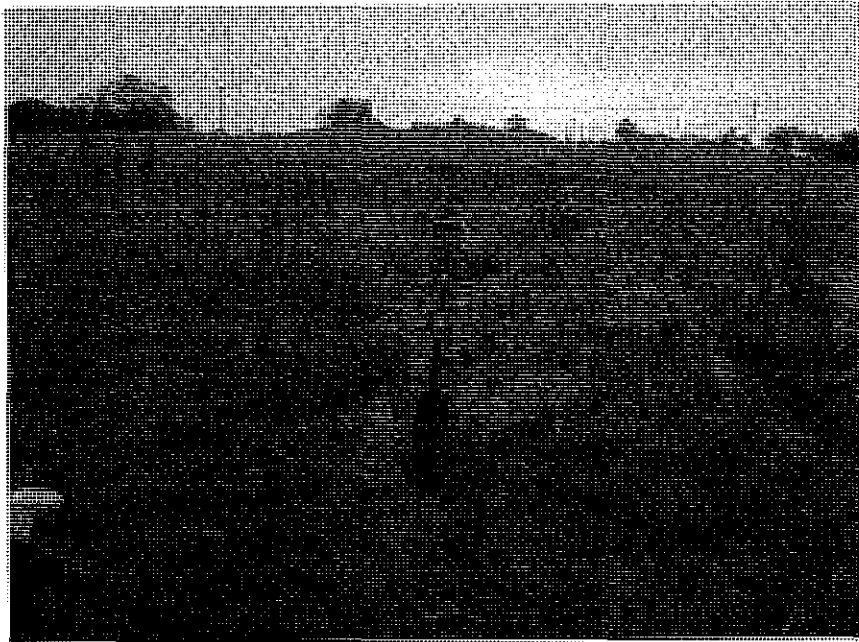
Data Point 19N, looking northeast.

### **Representative Site Photos**

*2005-461 Prairie City Business Park*



Data Point 20N, looking north.



Data Point 21N, looking south.

### **Representative Site Photos**

*2005-461 Prairie City Business Park*



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Data Point 22N, looking southeast.



Seasonal wetland-92 (SW-92) mapped just north of Data Point 22N.

### **Representative Site Photos**

*2005-461 Prairie City Business Park*



Data Point 23N, looking south.



Data Point 24N, looking southeast.

### **Representative Site Photos**

*2005-461 Prairie City Business Park*



Data Point 25N, looking southeast.



Data Point 26N, looking southeast.

### **Representative Site Photos**

*2005-461 Prairie City Business Park*



Photograph of the eastern extent of Alder Creek (Creek-1). One of the requested data points southeast of Data Point 26N would have been in the cattails in the right side of this photograph. Photograph is taken from the northeastern side of the creek, just north of SW-90, looking northwest.



Photograph of increased ponding due to beaver activity. This photograph was taken from just east of Data Point 26N, looking north.

### **Representative Site Photos**



One of the newly-constructed beaver dams, located just downstream of Data Point 26N. Photograph taken from the north side of the dam, looking southeast.

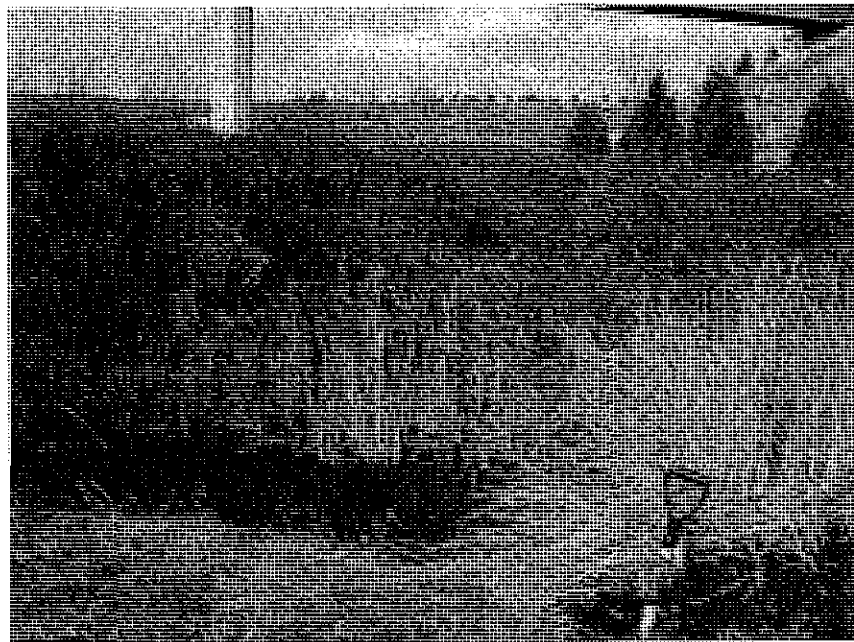


Data Point 27N, looking southeast. The north branch of Alder Creek is visible in the background. Both requested points on this portion of the island are similar, thus the location closest to the creek was sampled as a representative data point.

### **Representative Site Photos**



Data Point 28N, looking northwest. The data point was taken in the approximate center of this photograph.



Data Point 29N, taken from the south bank of Alder Creek, looking north. The data point location is the dark area in the center of the photograph. As both data points requested in this area appeared to be identical, one location was sampled as a representative data point in between these points.

### **Representative Site Photos**

Wetland Delineation  
For  
**Prairie City Road Business Park**  
Sacramento County, California

July 10, 2006

Prepared for:  
**GenCorp Realty Investments**



**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

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Appendix E – Corps-Verified Wetland Map and Verification Letter (to be included in ECORP Consulting master copy only)

## INTRODUCTION

On behalf of GenCorp Realty Investments (GenCorp), ECORP Consulting, Inc. (ECORP) conducted a wetland delineation of the 66±-acre Prairie City Road Business Park site. The site is located south of Highway 50, west of Prairie City Road, and south of the City of Folsom in eastern Sacramento County, California (Figure 1 – *Project Site and Vicinity Map*). The site corresponds to an unsectioned portion of Township 9 North, Range 7 East (MDBM) of the "Folsom, California" 7.5-minute quadrangle (U.S. Department of the Interior, Geological Survey 1980). The approximate center of the site is located at 38° 38' 20" North and 121° 09' 09" West. The site is located within the Lower American Watershed (#18020111, U.S. Department of Interior, Geological Survey 1978).

This report describes waters of the United States, including wetlands, identified within the site that may be regulated by the U.S. Army Corps of Engineers (Corps) pursuant to Section 404 of the Clean Water Act. The information presented in this report provides data required by the Corps Sacramento District's *Minimum Standards for Acceptance of Preliminary Wetland Delineations* (U.S. Army Corps of Engineers 2001). The waters of the U.S. boundaries depicted in this report represent a calculated estimation of the jurisdictional area within the site, and are subject to modification following the Corps verification process.

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### Existing Site Conditions

The central portion of the site consists of a relatively flat terrace with areas of steeper terrain occurring in association with drainage features to the west, north, and east. Elevations range from approximately 240 to 310 feet above mean sea level (MSL). Historic gold mining activities



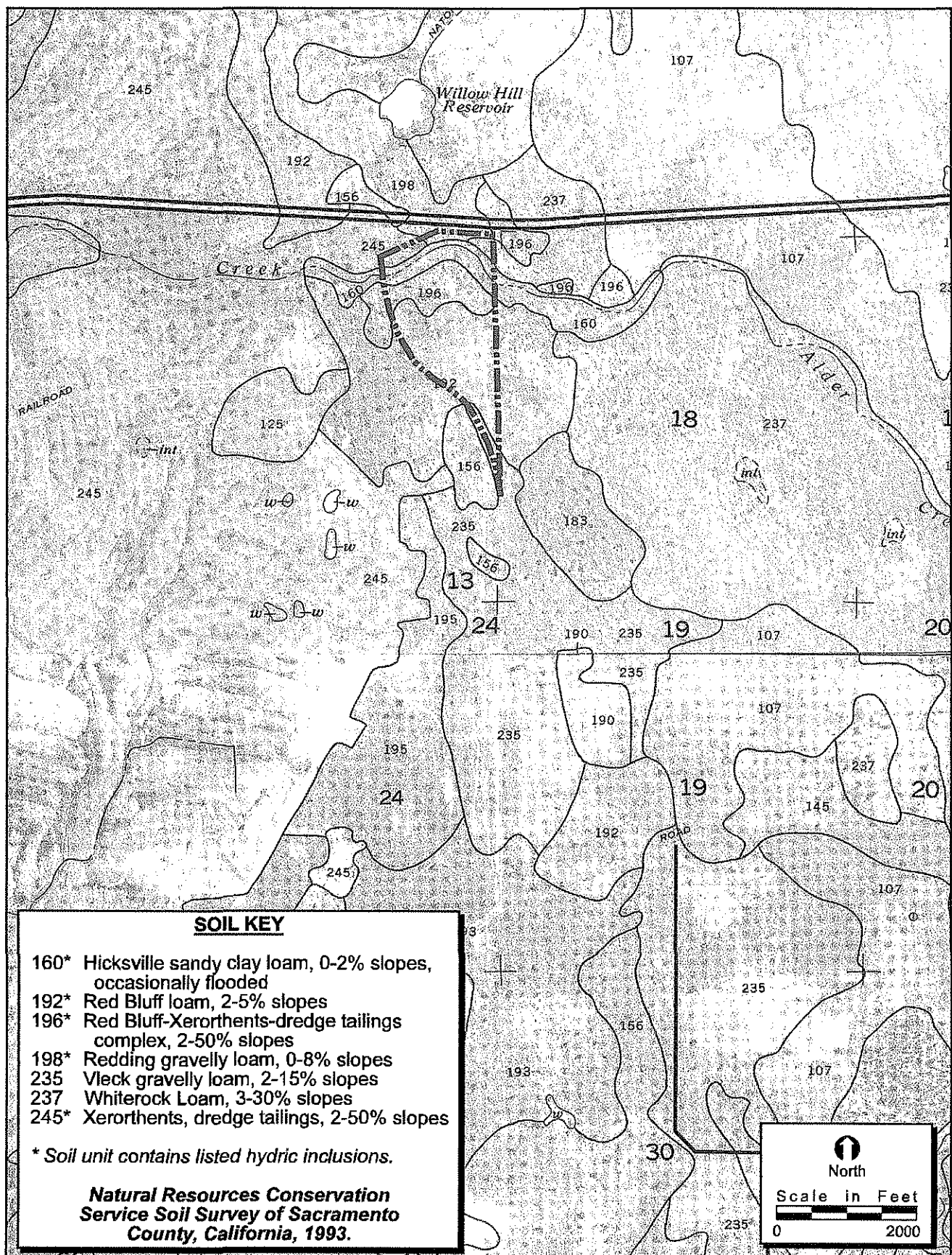
took place on-site, as evidenced by the tailings piles located to the south of Alder Creek. The site is currently used for cattle grazing.

Alder Creek flows from east to west across the northern portion of the site. Other aquatic features identified on-site include vernal pools, seasonal wetlands, seasonal wetland swales, and ephemeral drainages. These features are further described in the Results section.

Annual grassland and blue oak woodland are the predominant plant communities on-site. The annual grassland community is composed primarily of non-native annual grasses, including soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), medusahead grass (*Taeniatherum caput-medusae*), slender wild oat (*Avena barbata*), and little quaking grass (*Briza minor*). Other herbaceous species observed in this community included sticky tarweed (*Holocarpha virgata*), yellow star-thistle (*Centaurea solstitialis*), rose clover (*Trifolium hirtum*), shamrock clover (*Trifolium dubium*), Fremont's tidy-tips (*Layla fremontii*), Valley tassels (*Castilleja attenuata*), and hyacinth brodiaea (*Triteleia hyacinthina*).

Blue oak woodland occurs in the northern portion of the site. Blue oaks (*Quercus douglasii*) represent the dominant tree species in this community. Species observed in the understory were generally similar to those found in the annual grassland.

According to the *Soil Survey of Sacramento County, California* (U.S. Department of Agriculture, Soil Conservation Service 1993), seven soil units, or types, have been mapped within the site (Figure 2 – *Natural Resources Conservation Service Soil Types*). These are: (160) Hicksville sandy clay loam, 0 to 2 percent slopes, occasionally flooded; (192) Red Bluff loam, 2 to 5 percent slopes; (196) Red Bluff-Xerorthents-dredge tailings complex, 2 to 50 percent slopes; (198) Redding gravelly loam, 0 to 8 percent slopes; (235) Vleck gravelly loam, 2 to 15 percent slopes; (237) Whiterock loam, 3 to 30 percent slopes; and (245) Xerorthents, dredge tailings, 2 to 50 percent slopes. While none of these soil units have hydric components, the following have hydric inclusions: (160) Hicksville sandy clay loam (Columbia soils in low floodplains), (192) Red Bluff loam (unnamed soils in depressions), (196) Red Bluff-Xerorthents, dredge tailings complex (Slickens soils and unnamed soils in depressions), (198) Redding gravelly loam (unnamed soils in depressions), and (245) Xerorthents, dredge tailings (Riverwash soils and



**FIGURE 2. Natural Resources Conservation Service Soil Types**

Xerofluents soils in floodplain channels and Slickens soils in depressions) (U.S. Department of Agriculture, Soil Conservation Service 1992).

Much of the surrounding land is used for cattle grazing. Other land uses in the vicinity of the site include the Aerojet facility to the west, Highway 50 to the north, a concrete mine to the east, and an off-road vehicle park to the southwest.

## **METHODS**

This wetland delineation was conducted in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987). The waters of the U.S. boundaries were delineated through standard field methodologies (i.e., paired data set analyses), and all wetland data were recorded on Routine Wetland Determination Forms (Appendix A). A color aerial photograph (1"=100' scale, U.S. Department of the Interior, Geological Survey 2002) was used to assist with mapping and ground-truthing. *Munsell Soil Color Charts* (Kollmorgen Instruments Co. 1990) and the *Soil Survey of Sacramento County, California* (U.S. Department of Agriculture, Soil Conservation Service 1993) were used to aid in identifying hydric soils in the field. *The Jepson Manual* (Hickman, ed. 1993) was used for plant nomenclature and identification.

Field surveys were conducted on January 19 and 20, 2006 and June 7, 2006 by ECORP biologist Daria Hoyer. ECORP field staff walked the entire 66±-acre site to determine the location and extent of potential waters of the U.S. within the site. Eight paired data point locations were sampled to evaluate whether or not the vegetation, hydrology, and soils data supported a determination of wetland or non-wetland status. At each paired data point location, one point was located such that it was within the estimated wetland area, and the other point was situated outside the limits of the estimated wetland area. The total area of wetlands and other waters within the site was recorded in the field using a post-processing capable global positioning system (GPS) unit with sub-meter accuracy (Trimble GeoXT).

## **Waters of the United States**

This report describes waters of the U.S. that may be regulated by the Corps under Section 404 of the Clean Water Act. Wetlands are "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" [33 CFR 328.3(b), 51 FR 41250, November 13, 1986]. Wetlands can be perennial or intermittent, and isolated or adjacent to other waters.

Other waters are non-tidal, perennial, and intermittent watercourses and tributaries to such watercourses [33 CFR 328.3(a), 51 FR 41250, November 13, 1986]. The limit of Corps jurisdiction for non-tidal watercourses (without adjacent wetlands) is defined in 33 CFR 328.4(c)(1) as the "ordinary high water mark" (OHWM). The OHWM is defined as the *"line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas"* [33 CFR 328.3(e), 51 FR 41250, November 13, 1986]. The bank-to-bank extent of the channel that contains the water-flow during a normal rainfall year generally serves as a good first approximation of the lateral limit of Corps jurisdiction. The upstream limits of other waters are defined as the point where the OHWM is no longer perceptible.

## **Routine Determinations**

To be determined a wetland; the following three criteria should be met:

- A majority of dominant vegetation species are wetland associated species;
- Hydrologic conditions exist that result in periods of flooding, ponding, or saturation during the growing season; and
- Hydric soils are present.

## Vegetation

Hydrophytic vegetation is defined as the sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanent or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present (Environmental Laboratory 1987). The definition of wetlands includes the phrase "a prevalence of vegetation typically adapted for life in saturated soil conditions." Prevalent vegetation is characterized by the dominant plant species comprising the plant community (Environmental Laboratory 1987). The "50/20 rule" was used to determine the dominant plant species at each data point location. The rule states that for each stratum in the plant community, dominant species are the most abundant plant species (when ranked in descending order of abundance and cumulatively totaled) that immediately exceed 50 percent of the total dominance measure for the stratum, plus any additional species that individually comprise 20 percent or more of the total dominance measure for the stratum (HQUSACE 1992).

Dominant plant species observed at each data point were then classified according to their indicator status (probability of occurrence in wetlands) (Table 1), in accordance with the U.S. Fish and Wildlife Service's (USFWS) National List of Vascular Plant Species That Occur in Wetlands: California (Region 0) (Reed 1988). If the majority (greater than 50 percent) of the dominant vegetation on a site are classified as obligate (OBL), facultative wetland (FACW), or facultative (FAC) (excluding FAC-), then the site is considered to be dominated by hydrophytic vegetation.

**Table 1 – Classification of Wetland-Associated Plant Species<sup>1</sup>**

<b>Plant Species Classification</b>	<b>Abbreviation<sup>2</sup></b>	<b>Probability of Occurring in Wetland</b>
Obligate	OBL	>99%
Facultative Wetland	FACW	66-99%
Facultative	FAC	33-66%
Facultative Upland	FACU	1-33%
Upland	UPL	<1%
No indicator status	NI	Insufficient information to determine status
Plants That Are Not Listed (assumed upland species)	NL	Does not occur in wetlands in any region.

<sup>1</sup> Source: Reed 1988

<sup>2</sup> A '+' or '-' symbol can be added to the classification to indicate greater or lesser probability, respectively, of occurrence in a wetland.



## *Soils*

A hydric soil is defined as a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (U.S. Department of Agriculture, Natural Resources Conservation Service 2003). Indicators that a hydric soil is present include soil color (gleyed soils and soils with bright mottles and/or low matrix chroma), aquic or preaquic moisture regime, reducing soil conditions, sulfidic material (odor), soils listed on hydric soils list, iron and manganese concretions, organic soils (Histosols), histic epipedon, high organic content in surface layer in sandy soils, and organic streaking in sandy soils.

A soil pit was excavated to a depth of 16 inches or refusal at each data point. The soil was then examined for hydric soil indicators. The matrix color and mottle color (if present) of the soil was determined using the *Munsell Soil Color Charts*.

## *Hydrology*

Wetlands, by definition, are seasonally inundated or saturated at or near (within 12 inches of) the soil surface. To be classified as a wetland, a site should have at least one primary indicator or two secondary indicators of wetland hydrology. Primary indicators of wetland hydrology may include, but are not limited to: water marks, drift lines, sediment deposition, drainage patterns, visual observation of saturated soils, and visual observation of inundation. In addition to the primary indicators, there are a variety of secondary wetland hydrology indicators. Secondary indicators include, but are not limited to: oxidized root channels in the upper 12 inches, water-stained leaves, and local soil survey data. When no primary indicators of wetland hydrology are observed at a data point, two or more secondary indicators are required to confirm wetland hydrology.

## **RESULTS**

A total of 2.694 acres of potential waters of the U.S have been mapped for this site (Table 2). The routine wetland determination forms are included in Appendix A, and a list of plant species

observed at the data points is included in Appendix B. A discussion of the wetlands and other waters is presented below, and wetland delineation maps are presented in Figure 3 and Appendix C.

**Table 2 – Waters of the U.S.**

<b>Type</b>	<b>Acreage<sup>1</sup></b>
<i>Wetlands</i>	
Vernal Pool	0.670
Seasonal Wetland	0.604
Seasonal Wetland Swale	0.233
<i>Other Waters</i>	
Ephemeral Drainage	0.109
Creek	1.078
<b>Total</b>	<b>2.694</b>

<sup>1</sup> Acreages are approximate and are subject to revision during the Corps verification process.

## **Wetlands**

### *Vernal Pool*

In general, vernal pools are topographic basins that are underlain with an impermeable or semi-permeable hardpan or duripan layer. Direct rainfall and surface runoff inundate the pools during the wet season. The pools typically remain inundated and/or the saturated through spring and are dry by late spring through the following wet season. Vernal pools were identified primarily within the central and southern portions of the site. Dominant plant species observed in the vernal pools included Vasey's coyote-thistle (*Eryngium vaseyi*), creeping spikerush (*Eleocharis macrostachya*), double-horn downingia (*Downingia bicornuta*), white-head navarretia (*Navarretia leucocephala*), and slender popcorn flower (*Plagiobothrys stipitatus*).

Wetland hydrology indicators observed within vernal pools on-site included sediment deposits (algal matting) and the FAC-neutral test.

The soil matrix color within VP-43 was 10YR4/6 with mottles (many/medium) colored 7.5YR5/8 and 2.5Y6/2 from the surface to a depth of 10 inches, and 2.5Y7/1 with mottles (few/fine) colored 7.5YR5/6 at depths between 10 and 12 inches. The soil within VP-43 was determined to be hydric based on the presence of a soil matrix chroma of 1 in mottled soils. The soil

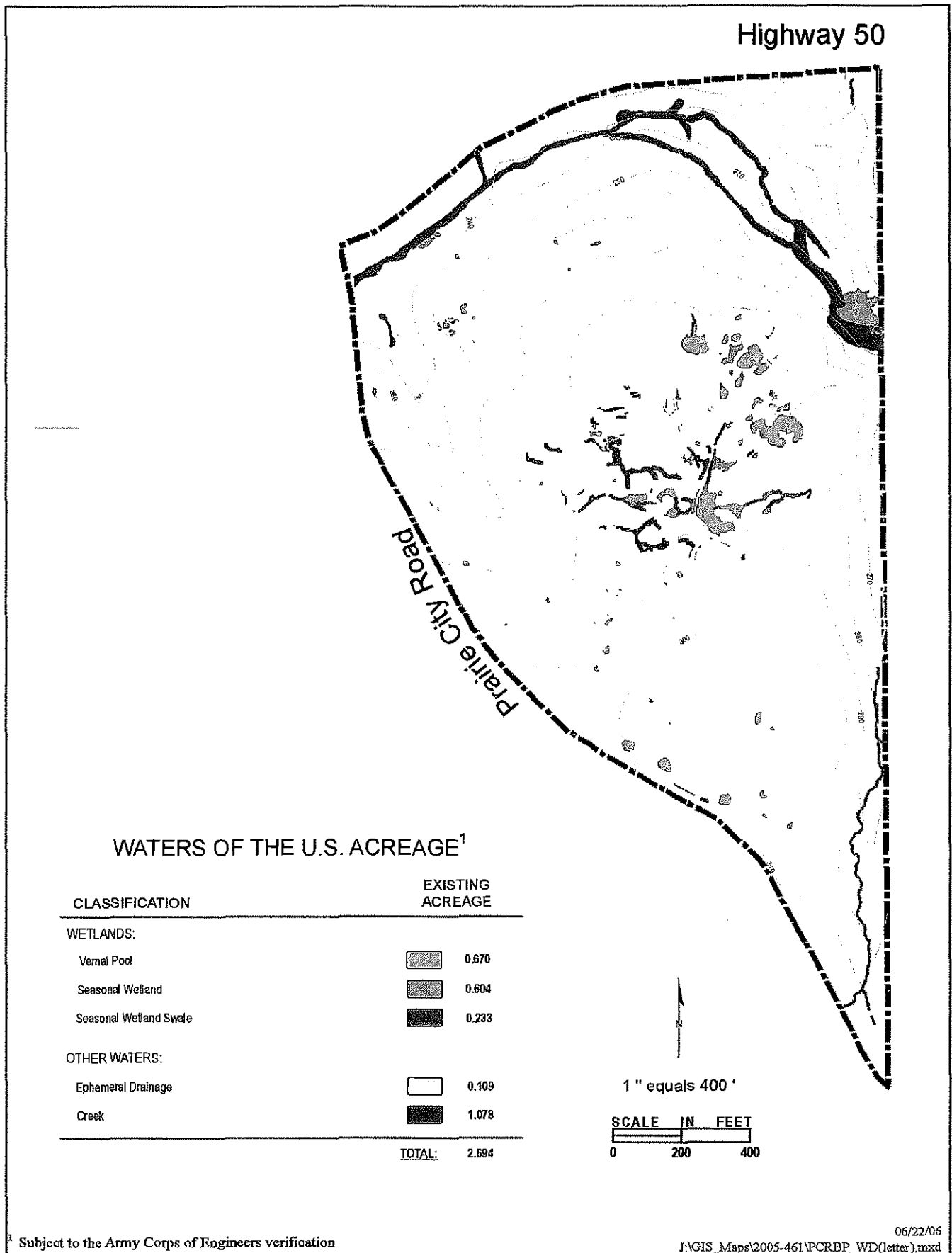


FIGURE 3. Wetland Delineation<sup>1</sup>

2005-461 Prairie City Road Business Park

matrix color in VP-2 was 7.5YR3/4 without mottles from the surface to a depth of 8 inches (refusal at this depth). The soil within VP-2 was determined to be hydric based on the presumed presence of an aquic moisture regime. The soil matrix colors in adjacent upland areas were of high chroma colors including 10YR4/6 without mottles and 7.5YR4/6 without mottles.

### *Seasonal Wetland*

Seasonal wetlands are ephemerally wet due to accumulation of surface runoff and rainwater within low-lying areas. Inundation periods tend to be relatively short and they are commonly dominated by non-native annual, and sometimes perennial, hydrophytic species. Seasonal wetlands occur scattered throughout the site. Dominant plant species identified within the seasonal wetlands included toad rush (*Juncus bufonius*), Vasey's coyote-thistle, annual hairgrass (*Deschampsia danthonioides*), dallis grass (*Paspalum dilatatum*), Mexican rush (*Juncus mexicanus*), Himalayan blackberry (*Rubus discolor*), South American vervain (*Verbena bonariensis*), and nutsedge (*Cyperus* species).

Wetland hydrology indicators observed within seasonal wetlands included soil saturation in the upper 12 inches, drift lines, sediment deposits (algal matting), oxidized root channels, and FAC-neutral test.

The soil matrix color within SW-42 was 5Y3/1 without mottles from the surface to a depth of 4 inches, and Gley1 5/5GY without mottles at depths between 4 and 12 inches. The soil matrix color at SW-88 was 7.5YR4/6 without mottles from the surface to a depth of 10 inches. The soil matrix color at SW-90 was 2.5Y3/1 without mottles from the surface to a depth of 8 inches, where bedrock was encountered. The soils within these seasonal wetlands were determined to be hydric based on the presence of low chroma matrix colors and mottles, or the presence of a presumed aquic moisture regime. Soil matrix colors in adjacent upland areas were of high chroma colors including 7.5YR4/6 without mottles, 10YR4/3 without mottles, and 10YR3/3 without mottles.

### *Seasonal Wetland Swale*

Seasonal wetland swales are linear features that convey stormwater runoff and support a predominance of hydrophytic vegetation. Seasonal wetland swales occur throughout the site, with the majority occurring in the central portion of the site. Plant species observed within the seasonal wetland swales included Vasey's coyote-thistle, annual hairgrass, white-head navarretia, toad rush, and Mediterranean barley.

Wetland hydrology indicators observed within seasonal wetland swales included sediment deposits (algal matting), drainage patterns in wetlands, and the FAC-neutral test.

The soil matrix color within SWS-9 was 7.5YR4/4 without mottles from the surface to a depth of 12 inches. The soil at this location was determined to be hydric based on the presumed presence of an aquic moisture regime. The soil matrix color in an adjacent upland area was 7.5YR5/6 without mottles.

### **Other Waters**

#### *Ephemeral Drainage*

Ephemeral drainages are seasonal features that convey runoff for short periods of time, immediately following rain events and do not receive supplemental water from groundwater sources. These are linear features that exhibit an ordinary high water mark. The primary channel within ephemeral drainages is often un-vegetated due to the scouring effects of flowing water; however, hydrophytic vegetation can become established in scour pools that remain inundated after the feature has stopped flowing. Ephemeral drainages were identified primarily along the western and eastern boundaries of the site. The following plant species were observed on the banks adjacent to the ephemeral drainages: perennial ryegrass (*Lolium perenne*), fiddle dock (*Rumex pulcher*), and cat's-ear (*Hypochaeris* species).

Wetland hydrology indicators observed in ephemeral drainages included sediment deposits and the presence of an ordinary high water mark.

The soil matrix color within ED-6 was 7.5YR4/4 without mottles. The soil matrix color in an adjacent upland area was 7.5YR4/3 without mottles.

### *Creek*

Alder Creek flows east to west through the northern portion of the site. This creek appears as a dashed, blue-line feature on the "Folsom, California" 7.5-minute quadrangle. The portion of Alder Creek located within the site conveys perennial flows; however, the creek becomes intermittent to the east of the site. The creek exhibits an ordinary high water mark with bed and bank characteristics. Plant species observed within and adjacent to Alder Creek included cattail, willows (*Salix* species), South American vervain, soft rush (*Juncus effusus*), nutsedge, dallis grass, and Himalayan blackberry.

Wetland hydrology indicators observed within Alder Creek included soil inundation and saturation, water marks, drift lines, and the presence of an ordinary high water mark. A soil pit was not excavated at the data point location due to the depth of the water. The soil matrix color in an adjacent upland area was 10YR4/3 without mottles.

## **INTERSTATE COMMERCE**

The vernal pools, seasonal wetlands, and seasonal wetland swales appear to be tributary to either ephemeral drainages or Alder Creek via direct connections or overland sheet flows. The ephemeral drainages are tributary to Alder Creek. Alder Creek is tributary to the American River, a navigable waters. Thus, the wetlands and other waters may be considered connected with and/or adjacent to a waters of the U.S., and would therefore be subject to interstate and/or foreign commerce.

## **CONCLUSION**

A total of 2.694 acres of potential waters of the U.S. have been mapped on-site. These acreages represent a calculated estimation of the jurisdictional area within the site, and are

subject to modification following the Corps verification process. Fill within jurisdictional features would require permitting pursuant to Section 404 and 401 of the federal Clean Water Act.

## REFERENCES

- Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. U. S. Army Engineer Waterways Experiment Station. Vicksburg, Mississippi.
- Headquarters, U.S. Army Corps of Engineers (HQUSACE). 1992. Clarification and Interpretation of the 1987 Manual. Memorandum from Major General Arthur E. Williams. Dated: 6 March 1992.
- Hickman, J. C. (ed.). 1993. The Jepson Manual: Higher Plants of California. University of California Press. Berkeley, California.
- Kollmorgen Instruments Company. 1990. Munsell Soil Color Charts. Kollmorgen Corporation. Baltimore, Maryland.
- Reed, P.B., Jr. 1988. National List of Plant Species that Occur in Wetlands: California (Region 0). (Biological Report 88[26.10].) U.S. Fish and Wildlife Service, Ft. Collins, Colorado.
- U.S. Department of Agriculture, Natural Resources Conservation Service. 2003. National Soil Survey Handbook, title 430-VI. Available Online: <http://soils.usda.gov/technical/handbook>.
- U.S. Department of Agriculture, Soil Conservation Service. 1992. Hydric Soils List for Sacramento County. U.S. Department of Agriculture, Soil Conservation Service, Davis, California.
- U.S. Department of Agriculture, Soil Conservation Service. 1993. Soil Survey of Sacramento County, California. U.S. Department of Agriculture, Soil Conservation Service. Davis, California.
- U.S. Department of the Army, Corps of Engineers, Sacramento District. 2001. Minimum Standard for Acceptance of Preliminary Wetland Delineations. Dated: November 30, 2001.
- U.S. Department of the Interior, Geological Survey. 1967 (photorevised 1980). "Folsom, California" 7.5-minute Quadrangle. Geological Survey. Denver, Colorado.
- U.S. Department of the Interior, Geological Survey. 1978. Hydrologic Unit Map, State of California. Geological Survey. Reston, Virginia.
- U.S. Department of the Interior, Geological Survey. 2002. DOQ Orthophoto of the Site. Aerial photograph taken May 2002.



## **LIST OF APPENDICES**

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Appendix A – Routine Wetland Determination Forms

Appendix B – Plant Species Observed at Data Point Locations

Appendix C – Wetland Delineation

Appendix D – Wetland Delineation Shape File (to be included with Corps submittal only)

Appendix E – Corps-Verified Wetland Map and Verification Letter (to be included in  
ECORP Consulting master copy only)

## **APPENDIX A**

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### Routine Wetland Determination Forms



**ECORP Consulting, Inc.**  
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**ROUTINE WETLAND DELINEATION**

Project/Site: PRAIRIE CITY BUSINESS PARK Date: 1/19/06 Sample Point: 1  
Applicant/Owner: GenCorp Field Investigator(s): Daria Hoyer  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, California Section/Township/Range: N/A 19N/7E  
Do normal environmental conditions exist at site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☒ No ☐

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>Paspalum dilatatum</u>	<u>Fac</u>	<u>H</u>	<u>70%</u>	5) _____	_____	_____	_____
2) <u>Juncus mexicanus</u>	<u>FacW</u>	<u>H</u>	<u>20%</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: \_\_\_\_\_ = 100 %

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☒ No ☐

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_

Depth of surface water: None (in.) Depth to free water in pit: None (in.) Depth to saturated soil: None (in.)

Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☒ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetland

Secondary Indicators (2 or more required):

☒ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☒ FAC-Neutral Test ☐ Other \_\_\_\_\_

Comments: Drift lines are due to recent flooding. Feature is adjacent to intermittent creek.

**SOILS**

**HYDRIC SOILS?** Yes ☒ No ☐

Series/Phase: Hicksville sandy clay loam, 0-2% slopes, occasionally flooded. Drainage Class: Mod. well

Taxonomy [Subgroup]: Mollic Haploxeralfs Confirm Map Type: Yes ☐ No ☒

☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma

☒ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☒ Concretions ☐ Other \_\_\_\_\_

Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-4"</u>	_____	<u>5Y 3/1</u>	<u>—</u>	<u>—</u>	<u>Loam</u>
<u>4"-12"</u>	_____	<u>Gley 1 5/5GY</u>	<u>—</u>	<u>—</u>	<u>Sandy loam</u>

Comments: Very large concretions present.

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☒ No ☐

Rationale: Feature satisfies all 3 wetland criteria.

General comments: \_\_\_\_\_

Wetland Type: Seasonal wetland

<u>Species Observed</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
Paspalum dilatatum	70 %	
Juncus mexicanus	20 %	
Eleocharis sp.	10 %	
TOTAL SUM ( $\Sigma$ ) =	100%	100%

COVER:

Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

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**ROUTINE WETLAND DELINEATION**

Project/Site: PRAIRIE CITY BUSINESS PARK Date: 1/19/06 Sample Point: 2  
Applicant/Owner: GenCorp Field Investigator(s): Daria Hoyer  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, California Section/Township/Range: N/A/9N/7E  
Do normal environmental conditions exist at site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>Taeniatherum caput-medusae</u>	<u>NL</u>	<u>H</u>	<u>50%</u>	5) _____	_____	_____	_____
2) <u>Hilaria virgata</u>	<u>NL</u>	<u>H</u>	<u>20%</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: \_\_\_\_\_ = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☒ No ☐

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: None (in.) Depth to saturated soil: None (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☒ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetland  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: Drift Lines are from recent floods.

**SOILS**

**HYDRIC SOILS?** Yes ☐ No ☒

Series/Phase: Hicksville sandy clay loam, 0-2% slopes, occasionally flooded Drainage Class: Mod. well  
Taxonomy [Subgroup]: Mollic Haploxeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	_____	<u>10YR 1/3</u>	_____	_____	<u>Clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: No hydric soil indicators detected.

**DECISION**

**WETLAND / WATERS DETERMINATION?** Yes ☐ No ☒

Rationale: This point does not satisfy two of the three wetland criteria.  
General comments: Upland comparison to DP 1 and 3.  
Wetland Type: \_\_\_\_\_

[illegible]

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**ROUTINE WETLAND DELINEATION**

Project/Site: PRAIRIE CITY BUSINESS PARK Date: 1/19/06 Sample Point: 3  
Applicant/Owner: GenCorp Field Investigator(s): Daria Hoyer  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, California Section/Township/Range: N/A / 9N / 7E  
Do normal environmental conditions exist at site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) _____	_____	_____	_____	5) _____	_____	_____	_____
2) _____	_____	_____	_____	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: \_\_\_\_\_ = \_\_\_\_\_ %

Comments: Feature is primarily unvegetated. Species growing along the banks and within the feature are listed on the back.

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☒ No ☐

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: ~ 24" (in.) Depth to free water in pit: N/A (in.) Depth to saturated soil: N/A (in.)  
Primary Indicators: ☒ Inundated ☒ Saturated in Upper 12 in. ☒ Water Marks ☒ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetland:  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☒ Other scared bed + bar  
Comments: This is an intermittent creek that is 20' wide at this point.

**SOILS**

**HYDRIC SOILS?** Yes ☒ No ☐

Series/Phase: Hicksville sandy clay loam, 0-2% slopes, occasionally flooded Drainage Class: Mod. well  
Taxonomy [Subgroup]: Mollic Haploxeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☒ Other frequently flooded  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☐  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

  
Comments: No pit dug due to depth of water. Scared bed and bank indicates frequent flooding.

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☒ No ☐

Rationale: \_\_\_\_\_  
General comments: This feature is Alder Creek.  
Wetland Type: Intermittent Creek (ALDER)

# HERBACEOUS COVER / DOMINANCE WORK SHEET

Species Observed	Actual Cover	Relative Cover	<u>COVER:</u>	
<i>Typha</i> sp.			Vegetation	
<i>Salix</i> sp.			Bare Ground	
<i>Verbena bonariensis</i>			Rocks	
<i>Juncus effusus</i>			Other	
<i>Cyperus</i> sp.			TOTAL =	100%
<i>Paspalum dilatatum</i>				
TOTAL SUM ( $\Sigma$ ) =		100%		

Species (Descending Order)	Relative Cover	Cumulative Cover	Indicator Status	Dominants
TOTAL SUM ( $\Sigma$ ) =		100%		



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**ROUTINE WETLAND DELINEATION**

Project/Site: PRAIRIE CITY BUSINESS PARK Date: 1/20/06 Sample Point: 4  
Applicant/Owner: Gen Corp Field Investigator(s): Daria Hoyer  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, California Section/Township/Range: N/A/9N/7E  
Do normal environmental conditions exist at site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☒ No ☐

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>Rubus discolor</u>	<u>FacW</u>	<u>S</u>	<u>100%</u>	5) _____	_____	_____	_____
2) <u>Paspalum dilatatum</u>	<u>Fac</u>	<u>H</u>	<u>30%</u>	6) _____	_____	_____	_____
3) <u>Verbena bonariensis</u>	<u>FacW</u>	<u>H</u>	<u>30%</u>	7) _____	_____	_____	_____
4) <u>Cyperus sp.</u>	<u>Fac+</u>	<u>H</u>	<u>30%</u>	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: \_\_\_\_\_ = 100 %

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☒ No ☐

Recorded Data: Yes ☐ No ☐ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: 8" (in.) Depth to saturated soil: top 3" (in.)  
Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 in. ☐ Water Marks ☒ Drift Lines ☒ Sediment Deposits ☐ Drainage Patterns in Wetland  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☒ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: Top 3' of soil is saturated, but soil below is not saturated.

**SOILS**

**HYDRIC SOILS?** Yes ☒ No ☐

Series/Phase: Hicksville sandy clay loam, 0-2% slopes, occasionally flooded Drainage Class: Mod. well  
Taxonomy [Subgroup]: Mollic Haploxeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-8"</u>	_____	<u>2.5Y 3/1</u>	_____	_____	<u>Clay</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: Could not dig deeper due to bedrock. Top 3" high in organics.

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☒ No ☐

Rationale: All 3 wetland criteria are satisfied.

General comments: \_\_\_\_\_

Wetland Type: Seasonal wetland

<u>Species Observed</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
Rubus discolor	50%	100% S
Paspalum dilatatum	10%	30% H
Verbena bonariensis	10%	30% H
Cyperus sp.	10%	30% H
Typha sp.	<1%	2% H
Lithrum hyssopifolia	<1%	2% H
Marrubium vulgare	<1%	2% H
Juncus sp.	<1%	2% H
TOTAL SUM ( $\Sigma$ ) =	80%	100%

COVER:

Vegetation	80%
Bare Ground	20%
Rocks	
Other	
TOTAL =	100%

**TOTAL SUM ( $\Sigma$ ) = 100%**

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**ROUTINE WETLAND DELINEATION**

Project/Site: PRIME CITY BUSINESS PARK Date: 1/20/06 Sample Point: 5  
Applicant/Owner: GenCorp Field Investigator(s): Daria Hoyer  
County: Sacramento State: CA Plant Community: Annual Grassland  
Quad(s): Folsom, California Section/Township/Range: N/A / 9N / 7E  
Do normal environmental conditions exist at site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>Taraxacum</u>	<u>NL</u>	<u>H</u>	<u>50%</u>	5) _____	_____	_____	_____
2) <u>Plantago major</u>	<u>FACW-</u>	<u>H</u>	<u>20%</u>	6) _____	_____	_____	_____
3) <u>Digitaria sanguinalis</u>	<u>FACU</u>	<u>H</u>	<u>20%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: \_\_\_\_\_ = 33 %

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: None (in.) Depth to saturated soil: None (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected.

**SOILS**

**HYDRIC SOILS?** Yes ☐ No ☒

Series/Phase: Hicksville sandy clay loam, 0-2% slopes, occasionally flooded Drainage Class: Mod. well  
Taxonomy [Subgroup]: Mollic Haploxeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-4"</u>	_____	<u>10YR 3/3</u>	_____	_____	<u>Clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

  
Comments: Could not dig deeper due to shale bedrock.

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☐ No ☒

Rationale: This point does not satisfy any of the 3 wetland criteria.  
General comments: Upland comparison to DP#  
Wetland Type: \_\_\_\_\_

# HERBACEOUS COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
<i>Taeniatherum caput-medusae</i>	50%	
<i>Plantago major</i>	20%	
<i>Digitaria sanguinalis</i>	20%	
<i>Erodium botrys</i>	5%	
<i>Holcarrpha virgata</i>	5%	
TOTAL SUM ( $\Sigma$ ) = 100%		100%

## COVER:

Vegetation	100%
Bare Ground	
Rocks	
Other	
TOTAL =	100%

<u>Species (Descending Order)</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM ( $\Sigma$ ) = 100%				

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**ROUTINE WETLAND DELINEATION**

Project/Site: Prairie City Business Park Date: 6/7/06 Sample Point: 6  
Applicant/Owner: GenCorp Field Investigator(s): Daria Hoyer  
County: Sacramento State: CA Plant Community: Non-native annual grassland  
Quad(s): Folsom, California Section/Township/Range: N/A / T9N / R7E  
Do normal environmental conditions exist on site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☒ No ☐ Explain: Seasonally wet area in the dry season

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☒ No ☐

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>ELE MAC</u>	<u>Obl</u>	<u>H</u>	<u>40%</u>	5) _____	_____	_____	_____
2) <u>ERY VAS</u>	<u>FacW</u>	<u>H</u>	<u>30%</u>	6) _____	_____	_____	_____
3) <u>DOW BIC</u>	<u>Obl</u>	<u>H</u>	<u>20%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 3/3 = 100 %

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☒ No ☐

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >14" (in.) Depth to saturated soil: >14" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☒ Sediment Deposits ☐ Drainage Patterns in Wetland:  
Secondary Indicators (2 or more required): algal matting  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☒ FAC-Neutral Test ☒ Other mud cracks  
Comments: Feature is highly depressional.

**SOILS**

**HYDRIC SOILS?** Yes ☒ No ☐

Series/Phase: Red Bluff-Xerorthents, dredge tailings complex, 2-50% slopes Drainage Class: Well to excessively  
Taxonomy [Subgroup]: Ultic Palexeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☒ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☐

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-10"</u>	_____	<u>10YR 4/6</u>	<u>7.5YR 5/4 / 2.5Y 4/2</u>	<u>Many, medium</u>	<u>Clay</u>
<u>10"-12"</u>	_____	<u>2.5Y 7/1</u>	<u>7.5YR 5/6</u>	<u>Few, fine</u>	<u>Clay</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: \_\_\_\_\_

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☒ No ☐

Rationale: All three wetland criteria are satisfied.  
General comments: This feature is located in a depression among mine tailings.  
Wetland Type: Vernal Pool

<u>Species Observed</u>	<u>Actual Cover</u>	<u>Relative Cover</u>	
ELE MAC	20%	40%	
ERY VAS	15%	30%	
DOW BIC	10%	20%	
GRA EBR	5%	10%	
ELE ALI	trace	trace	
LAS GLA	trace	trace	
TOTAL SUM ( $\Sigma$ ) = _____		100%	

**COVER:**

Vegetation                  50%

Bare Ground                50%

Rocks                      \_\_\_\_\_

Other                         \_\_\_\_\_

TOTAL =                      100%

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**ROUTINE WETLAND DELINEATION**

Project/Site: Prairie City Business Park Date: 6/7/06 Sample Point: 7N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Hoyer  
County: Sacramento State: CA Plant Community: Non-native annual grassland  
Quad(s): Folsom, CA Section/Township/Range: N/A / T 9 N / R 7 E  
Do normal environmental conditions exist on site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>AIR CAR</u>	<u>N/L</u>	<u>H</u>	<u>50%</u>	5) _____	_____	_____	_____
2) <u>BRO HOR</u>	<u>FACU-</u>	<u>H</u>	<u>30%</u>	6) _____	_____	_____	_____
3) <u>AVE FAT</u>	<u>N/L</u>	<u>H</u>	<u>20%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/3 = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetland  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected.

**SOILS**

**HYDRIC SOILS?** Yes ☐ No ☒

Series/Phase: Red Bluff-Yerxahts dredge tailings complex, 2-50% slopes Drainage Class: Well to excessive  
Taxonomy [Subgroup]: Udic Palexeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	_____	<u>10YR 4/6</u>	_____	_____	<u>Gravelly clay</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

  
Comments: No hydric soil indicators detected.

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☐ No ☒

Rationale: This point does not satisfy any of the wetland criteria.  
General comments: Upland comparison to DPL6  
Wetland Type: \_\_\_\_\_

<u>Species Observed</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
AIR CAR	50%	
BRO HOR	30%	
AVE FAT	20%	
HOL VIR	trace	
TOTAL SUM ( $\Sigma$ ) =	100%	100%

COVER:

Vegetation      100%

Bare Ground    \_\_\_\_\_

Rocks            \_\_\_\_\_

Other            \_\_\_\_\_

TOTAL =          100%

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**ROUTINE WETLAND DELINEATION**

Project/Site: Prairie City Business Park Date: 6/7/06 Sample Point: 8  
Applicant/Owner: GenCap Field Investigator(s): Daria Hoyer  
County: Sacramento State: CA Plant Community: Non-native annual grassland  
Quad(s): Folsom, CA Section/Township/Range: N/A/T9N/R7E  
Do normal environmental conditions exist on site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☒ No ☐ Explain: Seasonally wet area in the dry season

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☒ No ☐

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>DES DAN</u>	<u>FacW</u>	<u>H</u>	<u>30%</u>	5) _____	_____	_____	_____
2) <u>ERY VAS</u>	<u>FacW</u>	<u>H</u>	<u>20%</u>	6) _____	_____	_____	_____
3) <u>JUN BUF</u>	<u>FacW+</u>	<u>H</u>	<u>20%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 3/3 = 100 %

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☒ No ☐

Recorded Data: Yes ☐ No ☐ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >10" (in.) Depth to saturated soil: >10" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☒ Sediment Deposits ☐ Drainage Patterns in Wetland:  
Secondary Indicators (2 or more required): algal matting  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☒ FAC-Neutral Test ☒ Other mud cracks  
Comments: \_\_\_\_\_

**SOILS**

**HYDRIC SOILS?** Yes ☒ No ☐

Series/Phase: Red Bluff loam, 2-5% slopes Drainage Class: Well  
Taxonomy [Subgroup]: Ultic Palexeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☒ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☐  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-10"</u>	_____	<u>7.5YR 4/6</u>	_____	_____	<u>Clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: Refusal at 10"

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☒ No ☐

Rationale: This feature satisfies all three wetland criteria.

General comments: \_\_\_\_\_

Wetland Type: Seasonal wetland

<u>Species Observed</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
DES DAN	30%	
ERY VAS	20%	
JUN BUF	20%	
NAV LEU	10%	
POG DOV	10%	
HOL VIR	5%	
CIC QUA	5%	
LOL MUL	trace	
BRI MIN	trace	
PLA GRE	trace	
TOTAL SUM ( $\Sigma$ ) =	100%	100%

**COVER:**

Vegetation 100%

Bare Ground           

Rocks           

Other           

TOTAL = 100%

[illegible]

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**ROUTINE WETLAND DELINEATION**

Project/Site: Prairie City Business Park Date: 6/7/06 Sample Point: 9N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Hoyer  
County: Sacramento State: CA Plant Community: Non-native annual grassland  
Quad(s): Folsom, CA Section/Township/Range: N/A / T 9 N / R 7 E  
Do normal environmental conditions exist on site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>HOL VIR</u>	<u>N/L</u>	<u>H</u>	<u>25%</u>	5) _____	_____	_____	_____
2) <u>JUN BUF</u>	<u>FacW+</u>	<u>H</u>	<u>25%</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/2 = 50 %

Comments: 3 of 4 non-dominants are upland species.

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☐ No ☒

Recorded Data: Yes ☐ No ☐ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: 74" (in.) Depth to saturated soil: >4" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetland  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected.

**SOILS**

**HYDRIC SOILS?** Yes ☐ No ☒

Series/Phase: Red Bluff loam, 2-5% slopes Drainage Class: Well  
Taxonomy [Subgroup]: Ultic Palexeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-4"</u>	_____	<u>7.5YR 4/6</u>	<u>—</u>	<u>—</u>	<u>Clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

  
Comments: Refusal at 4". No hydric soil indicators detected.

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.

General comments: Upland comparison to DP 8.

Wetland Type: \_\_\_\_\_

# HERBACEOUS COVER / DOMINANCE WORK SHEET

<u>Species Observed</u>	<u>Actual Cover</u>	<u>Relative Cover</u>	<u>COVER:</u>	
HOL VIR	30%	25%	Vegetation	100%
JUN BUF	30%	25%	Bare Ground	
TAE CAP	20%	17%	Rocks	
AIR CAR	20%	17%	Other	
HYP sp.	20%	17%	TOTAL =	100%
LOL MUL	trace	trace		
TOTAL SUM (Σ) =		120%		100%

<u>Species (Descending Order)</u>	<u>Relative Cover</u>	<u>Cumulative Cover</u>	<u>Indicator Status</u>	<u>Dominants</u>
TOTAL SUM (Σ) =		100%		

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**ROUTINE WETLAND DELINEATION**

Project/Site: Prairie City Business Park Date: 6/7/06 Sample Point: 10  
Applicant/Owner: GenCorp Field Investigator(s): Daria Hoyer  
County: Sacramento State: CA Plant Community: Non-native annual grassland  
Quad(s): Folsom, CA Section/Township/Range: N/A / T 9 N / R 7 E  
Do normal environmental conditions exist on site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☒ No ☐ Explain: Seasonally wet area in the dry season

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☒ No ☐

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>ERY VAS</u>	<u>FacW</u>	<u>H</u>	<u>40%</u>	5) _____	_____	_____	_____
2) <u>NAV LEU</u>	<u>Obl</u>	<u>H</u>	<u>20%</u>	6) _____	_____	_____	_____
3) <u>PLA ST</u>	<u>Obl</u>	<u>H</u>	<u>20%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 3/3 = 100 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☒ No ☐

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_

Depth of surface water: None (in.) Depth to free water in pit: >8" (in.) Depth to saturated soil: >8" (in.)

Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☒ Sediment Deposits ☐ Drainage Patterns in Wetland  
Secondary Indicators (2 or more required): algal matting

☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☒ FAC-Neutral Test ☒ Other mud cracks

Comments: \_\_\_\_\_

**SOILS**

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: Red Bluff loam, 2-5% slopes Drainage Class: Well

Taxonomy [Subgroup]: Ultic Palexeralfs Confirm Map Type: Yes ☐ No ☒

☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☒ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma

☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_

Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☐

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-8"</u>	_____	<u>7.5YR 3/4</u>	_____	_____	<u>Clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: Refusal at 8"

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☒ No ☐

Rationale: This feature satisfies all three wetland criteria.

General comments: \_\_\_\_\_

Wetland Type: Vernal pool

Species Observed	Actual Cover	Relative Cover
ERY VAS	28%	40%
NAV LEU	14%	20%
PLA STI	14%	20%
ELE MAC	7%	10%
EPI DEN	7%	10%
POL MON	trace	trace
DOW sp.	trace	trace
LAS sp.	trace	trace
GRA sp.	trace	trace
PSI sp.	trace	trace
GLY DEC	trace	trace
TOTAL SUM ( $\Sigma$ ) =	70%	100%

COVER:

Vegetation 70%

Bare Ground 30%

Rocks \_\_\_\_\_

Other \_\_\_\_\_

TOTAL = 100%

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**ROUTINE WETLAND DELINEATION**

Project/Site: Prairie City Business Park Date: 6/7/06 Sample Point: 11N  
Applicant/Owner: Gen Corp Field Investigator(s): Daria Hoyer  
County: Sacramento State: CA Plant Community: Non-native annual grassland  
Quad(s): Folsom, CA Section/Township/Range: N/A / T9N / R7E  
Do normal environmental conditions exist on site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>AIR CAR</u>	<u>N/L</u>	<u>H</u>	<u>60%</u>	5) _____	_____	_____	_____
2) <u>HOL VIR</u>	<u>N/L</u>	<u>H</u>	<u>20%</u>	6) _____	_____	_____	_____
3) <u>TAE CAP</u>	<u>N/L</u>	<u>H</u>	<u>20%</u>	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/3 = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_

Depth of surface water: None (in.) Depth to free water in pit: 72" (in.) Depth to saturated soil: 72" (in.)

Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetland

Secondary Indicators (2 or more required):

☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_

Comments: No wetland hydrology indicators detected.

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: Red Bluff loam, 2-5% slopes

Drainage Class: Well

Taxonomy [Subgroup]: Ultic Palexeralfs

Confirm Map Type: Yes ☐ No ☒

☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma

☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_

Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-2"</u>	_____	<u>7.5YR 4/6</u>	<u>—</u>	<u>—</u>	<u>Clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: Refusal at 2". No hydric soil indicators detected.

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.

General comments: Upland comparison to DP10.

Wetland Type: \_\_\_\_\_

<u>Species Observed</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
AIR CAR	60%	
HOL VIR	20%	
TAE CAP	20%	
VUL MYU	trace	
AVE FAT	trace	
BRO ELE	trace	
TOTAL SUM ( $\Sigma$ ) =	<u>100%</u>	100%

**COVER:**

Vegetation	<u>100%</u>
Bare Ground	<u>          </u>
Rocks	<u>          </u>
Other _____	<u>          </u>
TOTAL =	100%

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**ROUTINE WETLAND DELINEATION**

Project/Site: Prairie City Business Park Date: 6/7/06 Sample Point: 12  
Applicant/Owner: GenCorp Field Investigator(s): Daria Hoyer  
County: Sacramento State: CA Plant Community: Non-native annual grassland  
Quad(s): Folsom, CA Section/Township/Range: N/A / T9N / R7E  
Do normal environmental conditions exist on site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☒ No ☐ Explain: Seasonally wet area in the dry season

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☒ No ☐

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>DES DAN</u>	<u>FacW</u>	<u>H</u>	<u>38%</u>	5) _____	_____	_____	_____
2) <u>ERY VAS</u>	<u>FacW</u>	<u>H</u>	<u>19%</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 2/2 = 100 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☒ No ☐

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☒ Sediment Deposits ☒ Drainage Patterns in Wetland:  
Secondary Indicators (2 or more required): algal matting  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☒ FAC-Neutral Test ☒ Other mud cracks  
Comments: \_\_\_\_\_

**SOILS**

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: Red Bluff loam, 2-5% slopes Drainage Class: Well  
Taxonomy [Subgroup]: Ultic Palexeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☒ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☒  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	_____	<u>7.5YR 4/4</u>	_____	_____	<u>Clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: \_\_\_\_\_

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☒ No ☐

Rationale: All three wetland criteria are satisfied.  
General comments: \_\_\_\_\_  
Wetland Type: Seasonal wetland swale

<u>Species Observed</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
DES DAN	60%	38%
ERY VAS	30%	19%
JUN BUF	20%	13%
NAV LEU	20%	13%
HOL VIR	10%	6%
HOR MAR	10%	6%
HYP sp.	10%	6%
LOL MUL	trace	trace
PSI sp.	trace	trace
TOTAL SUM ( $\Sigma$ ) =	160%	100%

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**ROUTINE WETLAND DELINEATION**

Project/Site: Prairie City Business Park Date: 6/7/06 Sample Point: 13N  
Applicant/Owner: GenCorp Field Investigator(s): Daria Snider  
County: Sacramento State: CA Plant Community: Non-native annual grassla  
Quad(s): Folsom, CA Section/Township/Range: N/A / T9N / R7E  
Do normal environmental conditions exist on site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>AIR CAR</u>	<u>N/L</u>	<u>H</u>	<u>30%</u>	5) _____	_____	_____	_____
2) <u>HYP SP.</u>	<u>N/L</u>	<u>H</u>	<u>30%</u>	6) _____	_____	_____	_____
3) <u>VUL MYU</u>	<u>FACU*</u>	<u>H</u>	<u>20%</u>	7) _____	_____	_____	_____
4) <u>HOL VIR</u>	<u>N/L</u>	<u>H</u>	<u>20%</u>	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/4 = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☐ If yes, \_\_\_\_\_

Depth of surface water: None (in.) Depth to free water in pit: >12" (in.) Depth to saturated soil: >12" (in.)

Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetland

Secondary Indicators (2 or more required):

☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_

Comments: No wetland hydrology indicators detected.

**SOILS**

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: Red Bluff loam, 2-5 % slopes Drainage Class: Well

Taxonomy [Subgroup]: Ultic Palexeralfs Confirm Map Type: Yes ☐ No ☒

☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma

☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_

Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☐

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-12"</u>	_____	<u>7.5YR 5/6</u>	_____	_____	<u>clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: No hydric soil indicators detected.

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes ☐ No ☐

Rationale: None of the wetland criteria are satisfied.

General comments: Upland comparison to DP 12.

Wetland Type: \_\_\_\_\_

# HERBACEOUS COVER / DOMINANCE WORK SHEET

Species Observed	Actual Cover	Relative Cover	<u>COVER:</u>	
AIR CAR	30%		Vegetation	100%
HYD SP.	30%		Bare Ground	
VUL MYU	20%		Rocks	
HOL VIR	20%		Other	
AVE FAT	trace		TOTAL =	100%
BRO HOR	trace			
TOTAL SUM ( $\Sigma$ ) =		100%		

Species (Descending Order)	Relative Cover	Cumulative Cover	Indicator Status	Dominants
TOTAL SUM ( $\Sigma$ ) =		100%		

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**ROUTINE WETLAND DELINEATION**

Project/Site: Prairie City Business Park Date: 6/7/06 Sample Point: 14  
Applicant/Owner: GenCorp Field Investigator(s): Daria Hoyer  
County: Sacramento State: CA Plant Community: Oak Woodland  
Quad(s): Folsom, CA Section/Township/Range: N/A / T9N / R7E  
Do normal environmental conditions exist on site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) _____	_____	_____	_____	5) _____	_____	_____	_____
2) _____	_____	_____	_____	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: \_\_\_\_\_ = \_\_\_\_\_ %

Comments: Feature is primarily unvegetated due to the scarring effects of water.

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☒ No ☐

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: >8" (in.) Depth to saturated soil: >8" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☒ Sediment Deposits ☐ Drainage Patterns in Wetland  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☒ Other scoured bed and bank  
Comments: Feature approximately 2' wide.

**SOILS**

**HYDRIC SOILS?** Yes ☒ No ☐

Series/Phase: Red Bluff-Yerwathents dredge tailings complex, 2-50% slopes Drainage Class: Well to excessive  
Taxonomy [Subgroup]: Ultic Palexeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☒ Other frequently flooded  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☐  

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-8"</u>	_____	<u>7.5YR 4/4</u>	_____	_____	<u>Gravelly loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

  
Comments: Scoured bed and bank indicate frequent flooding. Refusal at 8".

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☒ No ☐

Rationale: Although vegetation is absent, it is due to the scarring effects of wa  
General comments: FEATURE EXHIBITS AN OBLW  
Wetland Type: Ephemeral Drainage

<u>Species Observed</u>	<u>Actual Cover</u>	<u>Relative Cover</u>
HYP SP.	10%	
LOL PER	10%	
RUM PUL	10%	
TOTAL SUM ( $\Sigma$ ) =		100%

**COVER:**

Vegetation \_\_\_\_\_ 30%

Bare Ground \_\_\_\_\_ 70%

Rocks \_\_\_\_\_

Other \_\_\_\_\_

TOTAL = \_\_\_\_\_ 100%

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**ROUTINE WETLAND DELINEATION**

Project/Site: Prairie City Business Park Date: 6/7/06 Sample Point: 15N  
Applicant/Owner: GenCap Field Investigator(s): Daria Hoyer  
County: Sacramento State: CA Plant Community: Oak woodland  
Quad(s): Folsom, CA Section/Township/Range: N/A / T9N / R7E  
Do normal environmental conditions exist on site? Yes ☒ No ☐ If no, explain: \_\_\_\_\_  
Atypical Situation? Yes ☐ No ☒ Explain: \_\_\_\_\_  
Is this a potential Problem Area? Yes ☐ No ☒ Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) <u>BRO DIA</u>	<u>N/L</u>	<u>H</u>	<u>60%</u>	5) _____	_____	_____	_____
2) <u>BRO HOR</u>	<u>FacU-</u>	<u>H</u>	<u>20%</u>	6) _____	_____	_____	_____
3) _____	_____	_____	_____	7) _____	_____	_____	_____
4) _____	_____	_____	_____	8) _____	_____	_____	_____

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/2 = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes ☐ No ☒

Recorded Data: Yes ☐ No ☒ If yes, \_\_\_\_\_  
Depth of surface water: None (in.) Depth to free water in pit: 27" (in.) Depth to saturated soil: 27" (in.)  
Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetland  
Secondary Indicators (2 or more required):  
☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other \_\_\_\_\_  
Comments: No wetland hydrology indicators detected.

**SOILS**

**HYDRIC SOILS?** Yes ☐ No ☒

Series/Phase: Red Bluff - Xenorthents dredge tailings complex, 2-50% slope Drainage Class: Well to expressive  
Taxonomy [Subgroup]: Utic Palexeralfs Confirm Map Type: Yes ☐ No ☒  
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Presumed Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma  
☐ Organic Content in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Concretions ☐ Other \_\_\_\_\_  
Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
<u>0-7"</u>	_____	<u>7.5YR4/3</u>	_____	_____	<u>gravelly loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Comments: No hydric soil indicators detected. Refusal at 7".

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes ☐ No ☒

Rationale: None of the wetland criteria are satisfied.

General comments: Upland comparison to DP 14.

Wetland Type: \_\_\_\_\_

**Prairie City Road Business Park  
Wetland Delineation  
Plants Observed at Data Points**

<b>Abbr.</b>	<b>Scientific Name</b>	<b>Common Name</b>	<b>Indicator Status</b>
AIR CAR	<i>Aira caryophyllea</i>	Hairgrass	N/L
AVE FAT	<i>Avena fatua</i>	Wild oat	N/L
BRI MAX	<i>Briza maxima</i>	Big quaking grass	N/L
BRI MIN	<i>Briza minor</i>	Little quaking grass	FACW-
BRO ELE	<i>Brodiaea elegans</i>	Harvest brodiaea	FACU
BRO DIA	<i>Bromus diandrus</i>	Ripgut brome	N/L
BRO HOR	<i>Bromus hordeaceus</i>	Soft brome	FACU-
CIC QUA	<i>Cicendia quadrangularis</i>	Gentian	N/L
CYP spe.	<i>Cyperus</i> species	Flatsedge	FAC+
DES DAN	<i>Deschampsia danthonioides</i>	Annual hairgrass	FACW
DIG SAN	<i>Digitaria sanguinalis</i>	Hairy crabgrass	FACU
DOW BIC	<i>Downingia bicornuta</i>	Double-horn downingia	OBL
DOW spe.	<i>Downingia</i> species	Downingia	OBL
ELE ACI	<i>Eleocharis acicularis</i>	Least spikerush	OBL
ELE MAC	<i>Eleocharis macrostachya</i>	Creeping spikerush	OBL
ELE spe.	<i>Eleocharis</i> species	Spikerush	FACW
EPI DEN	<i>Epilobium densiflorum</i>	Dense-flower spike-primrose	OBL
ERO BOT	<i>Erodium botrys</i>	Filaree	N/L
ERY VAS	<i>Eryngium vaseyi</i>	Vasey's coyote-thistle	FACW
GRA EBR	<i>Gratiola ebracteata</i>	Bractless hedgehyssop	OBL
GRA spe.	<i>Gratiola</i> species	Hedgehyssop	--
GER MOL	<i>Geranium molle</i>	Hairy geranium	N/L
GLY DEC	<i>Glyceria declinata</i>	Mannagrass	OBL
HOL VIR	<i>Holcarpha virgata</i>	Sticky tarweed	N/L
HOR MAR	<i>Hordeum marinum</i>	Mediterranean barley	FAC
HYP spe.	<i>Hypochaeris</i> species	Cat's-ear	N/L
JUN BUF	<i>Juncus bufonius</i>	Toad rush	FACW+
JUN EFF	<i>Juncus effusus</i>	Soft rush	OBL
JUN MEX	<i>Juncus mexicanus</i>	Mexican rush	FACW
JUN spe.	<i>Juncus</i> species	Rush	--
LAS GLA	<i>Lasthenia glaberrima</i>	Smooth goldfields	OBL
LAS spe.	<i>Lasthenia</i> species	Goldfields	--
LOL MUL	<i>Lolium multiflorum</i>	Ryegrass	FAC*
LOL PER	<i>Lolium perenne</i>	Perennial ryegrass	FAC*
LYT HYS	<i>Lythrum hyssopifolia</i>	Hyssop loosestrife	FACW
MAR VUL	<i>Marrubium vulgare</i>	Common horehound	FAC
NAV LEU	<i>Navarretia leucocephala</i>	White-head navarretia	OBL
PAS DIL	<i>Paspalum dilatatum</i>	Dallis grass	FAC
PLA GRE	<i>Plagiobothrys greenei</i>	Greene's popcorn-flower	FACW
PLA STI	<i>Plagiobothrys stipitatus</i>	Slender popcorn-flower	OBL
PLA MAJ	<i>Plantago major</i>	Broad-leaf plantain	FACW-



Abbr.	Scientific Name	Common Name	Indicator Status
POG DOU	<i>Pogogyne douglasii</i>	Douglas' mesamint	OBL
POL MON	<i>Polypogon monspeliensis</i>	Annual rabbit-foot grass	FACW+
PSI spe.	<i>Psilocarphus</i> species	Woolly-heads	--
RUB DIS	<i>Rubus discolor</i>	Himalayan blackberry	FACW*
RUM PUL	<i>Rumex pulcher</i>	Fiddle dock	FAC+
SAL spe.	<i>Salix</i> species	Willow	--
TAE CAP	<i>Taeniatherum caput-medusae</i>	Medusahead grass	N/L
TYP spe.	<i>Typha</i> species	Cattail	OBL
VER BON	<i>Verbena bonariensis</i>	South American vervain	FACW
VUL MYU	<i>Vulpia myuros</i>	Rat-tail vulpia	FACU*

#### Indicator Status Codes

**OBL** = Obligate Wetland; occur almost always (estimated probability >99%) under natural conditions in wetlands.

**FACW** = Facultative Wetland; usually occur in wetlands (estimated probability 67%-99%) under natural conditions in wetlands.

**FAC** = Facultative; equally likely to occur in wetlands or non-wetlands (estimated probability 34%-66%).

**FACU** = Facultative Upland; usually occur in non-wetlands (estimated probability 67%-99%).

**UPL** = Obligate Upland; occur almost always (estimated probability >99%) in non-wetlands in the region specified.

**N/L** = Not Listed.

**NI** = No indicator was recorded for those species for which insufficient information was available to determine a status.

-- = May or may not occur in wetlands depending upon species.

A positive (+) sign indicates a frequency toward the higher (more frequently found in wetlands) end of the facultative categories.

A negative (-) sign indicates a frequency toward the lower (less frequently found in wetlands) end of the facultative categories.

An asterisk (\*) indicates a tentative assignment based upon limited information or conflicting review.

## **APPENDIX C**

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### Wetland Delineation

## **APPENDIX D**

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Wetland Delineation Shape File (to be include with Corps submittal only)

## **APPENDIX D15**

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Delineation of Waters of the United States,  
Folsom South 1,400-acre Site

# **Delineation of Waters of the United States**

Folsom South ±1400-Acre Site  
Sacramento County, California

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Prepared for: U.S. Army Corps of Engineers

Contracted by: MJM Properties, LLC

April 28, 2006

Submitted by:



**FOOTHILL ASSOCIATES**

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# **Delineation of Waters of the United States**

Folsom South ±1400-Acre Site  
Sacramento County, California

---

Prepared for: U.S. Army Corps of Engineers

Contracted by: MJM Properties, LLC

April 28, 2006

Submitted by:



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## 1.0 INTRODUCTION

---

The purpose of this document is to present the results of a formal delineation of jurisdictional waters of the United States, including wetlands, on the ±1400-acre Folsom South site located in eastern Sacramento County (**Figure 1**).

This report presents the results of Foothill Associates' review of available literature, aerial photographs, soil surveys, and fieldwork on the site. These results are summarized to depict jurisdictional waters of the United States following the technical guidelines provided in the 1987 U.S. Army Corps of Engineers Wetlands Delineation Manual for identifying wetlands and distinguishing them from aquatic habitats and other nonwetlands.

The delineation methodology is described in this report, followed by the results of the delineation. Details regarding soils, topography, hydrology, and vegetation are summarized and routine wetland determination data forms are provided in **Appendix B**. A detailed delineation map illustrates waters of the U.S. on the site (**Figure 3**).



## 2.0 REGULATORY BACKGROUND

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The U.S. Army Corps of Engineers (Corps) regulates discharge of dredged or fill material into waters of the United States under Section 404 of the Clean Water Act (CWA).

“Discharges of fill material” is defined as the addition of fill material into waters of the U.S., including, but not limited to the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; fill for intake and outfall pipes and subaqueous utility lines [33 C.F.R. §328.2(f)].

Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Section 404 of the Clean Water Act requires approval prior to discharging dredged or fill material into the waters of the United States. Typical activities requiring Section 404 permits are:

- Depositing of fill or dredged material in waters of the U.S. or adjacent wetlands.
- Site development fill for residential, commercial, or recreational developments.
- Construction of revetments, groins, breakwaters, levees, dams, dikes, and weirs.
- Placement of riprap and road fills.

Section 10 of the Rivers and Harbors Act of 1899 requires approval prior to the accomplishment of any work in or over navigable waters of the United States, or which affects the course, location, condition or capacity of such waters. Typical activities requiring Section 10 permits are:

- Construction of piers, wharves, bulkheads, dolphins, marinas, ramps, floats intake structures, and cable or pipeline crossings.
- Dredging and excavation.

Any person, firm, or agency (including federal, state, and local government agencies) planning to work in navigable waters of the United States, or dump or place dredged or fill material in waters of the United States, must first obtain a permit from the Corps of Engineers. Permits, licenses, variances, or similar authorization may also be required by other federal, state, and local statutes.

## **2.1 Waters of the United States**

Waters of the United States include essentially all surface waters such as all navigable waters and their tributaries, all interstate waters and their tributaries, all wetlands adjacent to these waters, and all impoundments of these waters. Navigable waters of the United States are defined as waters that have been used in the past, are now used, or are susceptible to use as a means to transport interstate or foreign commerce up to the head of navigation. Section 10 and/or Section 404 permits are required for construction activities in these waters. Boundaries between jurisdictional waters and uplands are determined in a variety of ways depending on which type of water is present. Methods for delineating wetlands and non-tidal waters are described below.

Wetlands are defined as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" [33 C.F.R. §328.3(b)]. Presently, to be a wetland, a site must exhibit positive indicators of three wetland criteria: hydrophytic vegetation, hydric soils, and wetland hydrology existing under the "normal circumstances" for the site.

The lateral regulatory extent of non-tidal waters is determined by delineating the ordinary high water mark (OHWM) [33 C.F.R. §328.4(c)(1)]. The OHWM is defined by the Corps as "that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" [33 C.F.R. §328.3(e)].

## **2.2 The Solid Waste Agency of Northern Cook County (SWANCC) Decision**

The Solid Waste Agency of Northern Cook County v. the U.S. Army Corps of Engineers, 531 U.S. 159 (2001), is more commonly referred to as the SWANCC decision. SWANCC involved a challenge to CWA jurisdiction over certain isolated, intrastate, non-navigable ponds in Illinois that formerly had been gravel mine pits, but which, over time, provided habitat for migratory birds. Although these ponds served as migratory bird habitat, they were non-navigable and isolated from the tributary system of other waters regulated under the CWA. In SWANCC, the Supreme Court held that the Army Corps of Engineers had exceeded its authority in asserting CWA jurisdiction pursuant to § 404(a) over the waters at issue based on their use as habitat for migratory birds, pursuant to preamble language, commonly referred to as the Migratory Bird Rule (51 Fed. Reg. 41217 (1986)).

SWANCC squarely eliminates CWA jurisdiction over isolated waters that are intrastate and non-navigable, where the sole basis for asserting CWA jurisdiction is the actual or potential use of the waters as habitat for migratory birds that cross state lines in their migrations. CWA jurisdiction extends to waters, including wetlands, which are adjacent to navigable waters pursuant to the Supreme Court holding in *Riverside Bayview Homes*, which was endorsed in SWANCC as controlling law. Corps of Engineers and EPA regulations currently define the term adjacent as "bordering, contiguous, or neighboring"

33 C.F.R. § 328.3(b). The case law on the precise scope of federal CWA jurisdiction since SWANCC is still developing.

### **2.3 The California Porter-Cologne Water Quality Control Act**

Water quality in California is governed by the Porter-Cologne Water Quality Control Act (Porter Cologne; Ca. Water Code, Div. 7, §13000 et seq.). Under the California Porter-Cologne Water Quality Control Act, discharges to wetlands and other “waters of the state” have been and remain subject to state regulation. Under California State law, “waters of the state” are defined as “any surface water or groundwater, including saline waters, within the boundaries of the state”. This law assigns overall responsibility for water rights and water quality protection to the State Water Resource Control Board (SWRCB) and directs the nine statewide Regional Water Quality Control Boards to develop and enforce water quality standards within their boundaries.

After the Supreme Court decision in *Solid Waste Agency of Northern Cook County v. Army Corps of Engineers* the Office of Chief Counsel of the SWRCB released a legal memorandum confirming the State’s jurisdiction over isolated wetlands. The memorandum stated that under the California Porter-Cologne Water Quality Control Act, discharges to wetlands and other waters of the state are subject to State regulation, including isolated wetlands.

In general, the Regional Water Quality Control Boards regulate discharges to isolated waters in much the same way as they do for Federal-jurisdictional waters, using the Porter-Cologne Act rather than CWA authority.

### 3.0 METHODOLOGY

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#### 3.1 Site-Specific References

Available information pertaining to the natural resources of the region was reviewed. All references reviewed for this delineation are listed in Section 5.0. Pertinent site-specific reports and general references utilized concurrent with the delineation include the following:

- Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. U.S. Army Corps of Engineers Waterways Experiment Station. Vicksburg, MS;
- Foothill Associates. 2001. *Mangini Property North Wetland Delineation*. Map dated February 1, 2001;
- Foothill Associates. 2005. *Folsom South Biological Resource Assessment*;
- GretagMacbeth. 2000. *Munsell Soil Color Charts*. New Windsor, NY;
- Hickman, James C. 1993. *The Jepson Manual: Higher Plants of California*. University of California Press, Berkeley, CA;
- Psomas. 2004. Color aerial photograph;
- Reed, P.B., Jr. 1988. *National List of Plant Species That Occur in Wetlands: California (Region O)*; U.S. Fish & Wildlife Service;
- Sacramento County GIS Department. 2005. Digital base data;
- Spink Corporation. 2000. Topographic base data for the Mangini Property North site;
- U.S. Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS). 1993. *Soil Survey of Sacramento County, California*. USDA, NRCS, in cooperation with the Regents of the University of California (Agricultural Experiment Station);
- USDA, NRCS. 2003. *Field Indicators of Hydric Soils in the United States*, Version 5.01. G.W. Hurt, P.M. Whited, and R.F. Pringle (Eds). USDA, NRCS in cooperation with the National Committee for Hydric Soils. Fort Worth, TX;
- U.S. Geological Survey. 1953 (Photorevised 1980). *Clarksville, California*. 7.5 -minute series topographic quadrangle. U.S. Department of the Interior;
- U.S. Geological Survey. 1967 (Photorevised 1980). *Folsom, California*. 15 -minute series topographic quadrangle. U.S. Department of the Interior; and

- U.S. Geological Survey. 1959 (Photorevised 1980). *Folsom SE, California*. 7.5 - minute series topographic quadrangle. U.S. Department of the Interior.

### 3.2 Research and Field Methodology

This delineation utilized the Corps 1987 three-parameter (vegetation, hydrology, and soils) methodology to delineate jurisdictional waters of the U.S., focusing specifically on jurisdictional wetlands. This methodology requires the collection of data on soils, vegetation, and hydrology at several locations to establish the jurisdictional boundary of wetlands. Additional methods to identify and delineate other waters of the U.S. (e.g. streams, drainages, stock ponds, etc.) were used as applicable. The method typically used for delineation of non-wetland waters of the U.S. was the delineation of the OHWM.

A review of historic and current aerial photographs, topographic maps and soils survey data was conducted before delineating the site in October, November, and December, 2005. Wetland biologists visually inspected the entire site and collected data on vegetation and hydrology. Soils were also examined and correlations were developed between the three parameters to make wetland determinations. Specifically, data points were evaluated to determine the composition and identification of dominant plant species. The indicator status of all dominant plant species (as determined by the U.S. Fish and Wildlife Service National List of Plant Species that Occur in Wetlands: 1988 California (Region 0)) was applied and evaluated as part of the vegetation assessment portion of the wetland determination process. Additionally, immediate sub surface soils conditions were examined for hydric attributes or a lack thereof. Observations were made and recorded for both primary and secondary wetland hydrology indicators, if present. The location of each data point is depicted in **Figure 3** and corresponding routine wetland determination data forms are provided in **Appendix B**.

### 3.3 GPS Data Integration

Boundaries of wetlands and other waters of the U.S. within the site were surveyed and mapped with a Trimble GeoXT GPS (Global Positioning System) hand-held unit. This is a mapping-grade GPS unit capable of real-time differential correction and sub-meter accuracy. The GPS data were downloaded from the unit and differentially corrected utilizing Trimble Pathfinder Office software and appropriate base station data, and then converted to ESRI ® shape file format. Data are typically exported to the Geographic Information System (GIS) software in the State Plane coordinate system (NAD 83) with units as "survey feet." Within the GIS, data are edited and linear features are built into polygons using recorded width information. All wetland shape files are merged to create a single wetland file with calculated acreages. These results are presented in **Figure 3**.

## 4.0 RESULTS

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### 4.1 Study Area Description, Land Use

#### 4.1.1 Study Area Location

The ±1400-acre site is located in eastern Sacramento County immediately south of State Highway 50. The site extends to the vicinity of White Rock Road to the south and is bisected by Scott Road and Old Placerville Road. The site is located within Townships 9 North, Range 8 East and occupies portions of sections 9, 10, 15, 16, 17, 20, 21, and 22 of the U.S.G.S. Clarksville, Folsom and Folsom SE 7.5' quadrangle maps (**Figure 1**).

#### 4.1.2 Land Use

The majority of the site is currently utilized for livestock and horse grazing. In the past, the western portion of the site was managed by Aerojet and portions have been previously mined for gold and other minerals. The Southern Pacific railroad tracks also bisect the site, but are apparently no longer in use.

Local land uses and vegetation communities surrounding the site consist of the following: Highway 50 and commercial complexes to the north; low density single-family residential areas and a cellular phone tower to the east; White Rock Road, single-family residential construction, and ranches on annual grassland to the south; and ranches on oak woodland and annual grassland to the west.

### 4.2 Physical Features

#### 4.2.1 Soils

The Natural Resources Conservation Service (NRCS) has identified and mapped three soil units occurring on the site (**Figure 2**): **Argonaut-Auburn complex, 3 to 8 percent slopes, Auburn-Argonaut-rock outcrop complex, 8 to 30 percent slopes, and Whiterock loam, 3 to 30 percent slopes**. General characteristics and properties associated with these soils are described below.

- **Argonaut-Auburn complex, 3 to 8 percent slopes:** This soil unit is composed of approximately 45 percent Argonaut soil and 35 percent Auburn soil. This soil type is found in foothills from 160 to 660 feet above msl. The native vegetation of this soil type is annual grasses and herbaceous species with a few scattered oaks. The Argonaut soil is moderately deep and well drained. Permeability is very slow. Runoff is medium. It formed in material weathered from metaandesite and metamorphic rocks. The Auburn soil is shallow or moderately deep and well-drained. It formed in material weathered from metabasic and metasedimentary rocks. Permeability is moderate and runoff is medium. The

hydric soils list for Sacramento County does not identify any hydric components or inclusions as present within this soil type.

- **Auburn-Argonaut-rock outcrop complex, 8 to 30 percent slopes:** This unit is composed of approximately 40 percent Auburn soil, 35 percent Argonaut soil, and 10 percent rock outcrop. This soil unit is found in foothills from 150 to 830 feet above msl. Native vegetation on this soil is annual grasses, herbaceous species, and scattered oaks. The Auburn soil is shallow or moderately deep and well-drained. It formed in material weathered from metabasic and metasedimentary rocks. Permeability is moderate and runoff is medium. The Argonaut soil is moderately deep and well drained. Permeability is very slow. Runoff is medium. It formed in material weathered from metaandesite and metamorphic rocks. The hydric soils list for Sacramento County does not identify any hydric components or inclusions as present within this soil type.
- **Whiterock loam, 3 to 30 percent slopes:** This soil is found on foothills from 160 to 530 feet above msl. It formed in material weathered from vertically tilted metasedimentary rocks. The native vegetation is composed primarily of annual grasses and herbaceous species. The soil is very shallow and somewhat excessively drained. Permeability is moderate and runoff is medium or rapid. The hydric soils list for Sacramento County does not identify any hydric components or inclusions as present within this soil type.

In summary, and according to the hydric soils list and soil survey for Sacramento County, there are no hydric components or inclusions identified within these mapped soil units.

#### **4.2.2 Topography**

The topography of the eastern portion of the site is dominated by a series of more or less parallel hilltops and intervening valleys between 400 and 550 feet above msl. Rolling topography and moderate to steep slopes typify the lower, western portions of the site and the surrounding area. The elevations in the western portion of the site range from approximately 330 to 400 feet above msl.

#### **4.2.3 Site-Specific Hydrology**

The hydrologic regime on the site is predominantly seasonal storm water runoff and direct precipitation, which primarily falls between November and March. Annual average precipitation is approximately 15 to 20 inches. The majority of seasonal surface runoff is conveyed throughout the site via ephemeral drainages and riverine seasonal wetlands. These are all tributary to Alder Creek, which is the largest drainage on the site. Alder Creek flows off site to the northwest and is tributary to the American River.

Several stock ponds have been built on the site by the construction of dams on ephemeral drainages. In many of these, the dams have been breached and the structures no longer hold water. Irrigation ditches were also constructed in decades past, and these are also typically in disrepair.

There are also seeps on the site that are fed by shallow groundwater discharge, primarily on the eastern portion of the site, which is the base of the foothills. Some of these seeps contribute runoff to the ephemeral drainages.

Hydrologic features identified and mapped within the site include the following: depressional seasonal wetland, vernal pool, riverine seasonal wetland, pond, seep, ephemeral drainage, and ditch/canal (**Figure 3**). Diagnostic characteristics of the features mapped on the site are defined and discussed in Section 4.4.

### 4.3 Vegetation

The vegetation assemblages found in wetland and other waters habitat types occurring on the site include the following: California annual grassland alliance, depressional seasonal wetland, vernal pool, riverine seasonal wetland, pond, seep, ephemeral drainage, and ditch/canal.

The California annual grassland alliance community is the dominant vegetation community within the study area. This community consists of a myriad of native and non-native annual plant species and occurs in a majority of the state at elevations from sea level to approximately 4,000 feet above msl. Composition of this vegetation community varies depending on distribution, geographic location and land use. Additional major influences on this vegetation community include soil type, annual precipitation and fall temperatures. Dominant plant species within the California annual grassland on the site include the following: Italian ryegrass (*Lolium multiflorum*), soft brome (*Bromus hordeaceus*), medusa head (*Taeniatherum caput-medusae*), wild oat (*Avena* sp.), chick weed (*Stellaria media*), yellow star thistle (*Centaurea solstitialis*), barley (*Hordeum murinum* ssp. *leporinum*), and clover (*Trifolium* sp.).

Northern hardpan vernal pools occur within depressions on cemented soils such as the Corning, Red Bluff, Redding and San Joaquin soil series within and around the Great Central Valley. Plant species occurring in vernal pools are those that have adapted to seasonally aquatic or saturated soils conditions. Typically, dominant plant species (at least temporally) within Northern hardpan vernal pools are perennial plant species that have adapted to withstand such extended conditions. For short periods throughout the year, these features are dominated by a succession of short-lived vegetation communities composed of annual plant species. Dominant plant species occurring within the Northern hardpan vernal pools on the site include the following: manna grass (*Glyceria occidentalis*), buttercup (*Ranunculus bonariensis* var. *trisepalus*), spikerush (*Eleocharis macrostachya*), coyote thistle (*Eryngium vaseyi*) and annual hairgrass (*Deschampsia danthonioides*).

Seasonal wetlands are those depressions within the topography that inundate or flow for short periods of time following intense rains but do not maintain seasonal aquatic or saturated soils conditions for durations long enough to provide habitat suitable for colonization by perennial obligate plant species. As such, plant species in seasonal wetlands are generally of two types: species that can tolerate short periods of inundation but have not adapted to withstand sustained aquatic or saturated soils conditions, and



short-lived (primarily annual) species that take advantage of ephemeral aquatic and/or saturated soils conditions. Plant species observed occurring within the depressional and riverine seasonal wetlands on the site include subterranean clover (*Trifolium subterraneum*), Italian ryegrass (*Lolium multiflorum*), Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), buttercup, and annual hairgrass.

#### **4.4 Classification of Waters of the United States**

Jurisdictional waters of the U.S. are classified into multiple types based on topography, edaphics (soils), vegetation and hydrologic regime. Primarily, the Army Corps of Engineers establishes two distinctions: wetland and non-wetland waters of the U.S. Non-wetland waters are commonly referred to as other waters. Potential jurisdictional wetland types mapped within the site include the following: vernal pools, depressional seasonal wetland, riverine seasonal wetlands, riverine seasonal marsh, and seeps.

Other waters of the U.S. delineated within the site include the following: ponds, ephemeral drainages, ditches/canals, excavated ponds, and stock ponds. A description of all of the features delineated within the site is provided in the following sections.

##### **4.4.1 Vernal Pools**

A total of 0.39 acre of vernal pools have been delineated within the site. Vernal pools are shallow, seasonally inundated depressional wetlands that form in soils with a subsurface layer that restricts the downward flow of water. These layers include hardpans, claypans or thick clay layers. Vernal pools were identified on the site as depressions within the topography with a hydrologic regime dominated by inundation and capable of supporting hydrophytic plant species and hydric soils. Plant species found within vernal pools are those that require extended periods of inundation and, as such, are commonly associated with these seasonal wetland features. Some of the vernal pools mapped within the site are composed of scour pools within riverine seasonal wetlands or ephemeral drainages that pool water for a longer period of time than the surrounding riverine feature (**Figure 3**).

##### **4.4.2 Depressional Seasonal Wetland**

A total of 0.71 acre of depressional seasonal wetlands have been delineated within the site (**Figure 3**). Depressional seasonal wetlands exhibit a hydrologic regime dominated by saturation, rather than inundation. Depressional seasonal wetlands were identified on the site as depressions within the topography with a hydrologic regime dominated by saturation and capable of supporting hydrophytic plant species and hydric soils. Plant species in depressional seasonal wetlands are adapted to withstand short periods of saturation or saturated soils conditions but will not withstand prolonged periods of inundation, as is common in vernal pools.

#### **4.4.3 Riverine Seasonal Wetland**

A total of **9.61** acres of riverine seasonal wetlands have been delineated within the site. Riverine seasonal wetlands are defined by a hydrologic regime dominated by unidirectional flow of water. Riverine seasonal wetlands typically occur in topographic folds or swales and represent natural drainages that convey sufficient water to support wetland vegetation. Riverine seasonal wetlands typically convey water during and shortly after storm events. Riverine seasonal wetlands have a moderately defined bed and bank and often exhibit sufficient gradient to convey water off of the site. As in depressional seasonal wetlands, plant species found within riverine seasonal wetlands are typically adapted to a hydrologic regime dominated by saturation rather than inundation. Riverine seasonal wetlands typically form the headwaters of ephemeral drainages throughout the site (**Figure 3**).

#### **4.4.4 Riverine Seasonal Marsh**

A total of **0.06** acre of riverine seasonal marsh has been delineated within the site. Seasonal marshes are those wetlands that are seasonally saturated and/or inundated and saturation/inundation persists for some period into the warm season but generally not year round. Riverine seasonal marshes are dominated by unidirectional flow of water for some portion of the wet season. Riverine seasonal marsh on the site is represented by areas that receive additional hydrology from nearby seasonal features during high flow or flood level events. Within the Great Central Valley, these features are typically located along the fringes of slow moving, low gradient riverine systems or at the lower extents of the downstream terminus of riverine seasonal features.

#### **4.4.5 Seep**

A total of **6.31** acres of seep have been delineated within the site. Seeps are characterized as areas where groundwater intersects with the soil surface. Typically, flow from seeps continues for some period after the rainy season and may continue all year. Seeps can support isolated wetland vegetation (such as on a hillside) or they may form the headwaters of a riverine seasonal wetland or other jurisdictional drainage feature. Vegetation in seeps often consists of plant species associated with seasonal and perennial marsh habitats. When seeps flow for only short periods beyond the rainy season and into the warm season, herbaceous perennial wetland species typically dominate. Seeps that persist for longer periods may support woody, perennial, obligate species. Seeps on the site are composed of slope seeps and seeps associated with larger riverine features within scoured depressions on the site (**Figure 3**).

#### **4.4.6 Ephemeral Drainage**

A total of **9.72** acres of ephemeral drainage have been delineated within the site. Ephemeral drainages are features that do not meet the three-parameter criteria for vegetation, hydrology and soils but do convey water and exhibit an "ordinary high water mark". Ephemeral drainages are primarily fed by storm water run off. These features convey flows during and immediately after storm events but may stop flowing or begin to

dry if the interval between storm events is long enough. Typically, these features exhibit a defined bed and bank and often show signs of scouring as a result of rapid flow events. Within ephemeral drainages, topographic depressions in the bed of the feature may exhibit vegetation patterns commonly associated with vernal pools or depressional seasonal wetlands. Often these features are lightly vegetated due to seasonal rapid-flow events resulting in a scoured channel, bed and bank. Ephemeral drainages are located throughout the site, typically downstream of riverine seasonal wetland features (**Figure 3**).

#### **4.4.7 Ditch/Canal**

A total of **0.56** acre of ditch/canal have been delineated within the site. Non-tributary water conveyance features excavated in uplands and constructed for the transport and distribution of groundwater between agricultural fields are not jurisdictional features. Conversely, water conveyance features excavated in uplands and constructed for transport and distribution of surface water between agricultural fields may be jurisdictional features, specifically if they are tributary to known waters of the U.S.

A total of **0.14** acre of potentially jurisdictional ditch/canal have been delineated on the site. An additional **0.42** acre of ditches/canals was delineated on the site and are not connected to any other water conveyance feature on or off of the site. At no time was standing or flowing water observed within the interior remnant ditches on the site. As a result, these features or a portion or portions thereof may be considered non-jurisdictional by the Corps. However, the Corps reviews these situations on a case by case basis. The ditches/canals are located throughout the interior of the site.

#### **4.4.8 Excavated Pond**

A total **0.85** acre of excavated pond has been delineated on the site. Ponds are typically the result of the deliberate impoundment of water through artificial damming. When stock ponds occur as the result of the construction of artificial impoundment features that restrict or stop the flow of jurisdictional waters of the U.S., the resulting pond becomes jurisdictional to the limits of the ordinary high water mark or wetland boundary. Conversely, ponds wholly excavated in uplands and supplied by surface run off or groundwater are not jurisdictional features. The ponds on the site are excavated and are not the result of the impoundment of a natural drainageway. Nor are the excavated ponds tributaries to or from any waters of the U.S. The hydrology of the ponds is supplied by seasonal precipitation. Therefore, the Corps will not likely assert jurisdiction of these features.

#### **4.4.9 Stock Pond**

A total of **1.55** acres of stock pond have been delineated within the site. Stock ponds are typically the result of the deliberate impoundment of water through artificial damming. When stock ponds occur as the result of the construction of artificial impoundment features that restrict or stop the flow of jurisdictional waters of the U.S., the resulting pond becomes jurisdictional to the limits of the ordinary high water mark. The stock

ponds on the site are re-charged by seasonal precipitation as well as a riverine seasonal wetlands that are hydrologically connected. As such, these features would likely be subject to Corps jurisdiction.

**Table 1** below provides acreage per class and summarizes the total acreage of wetlands and waters on the site.

**Table 1 — Waters of the U.S: Acreage According to Feature**

CLASS	TOTAL ACREAGE	JURISDICTIONAL	NON- JURISDICTIONAL
Vernal Pools	0.39	0.39	0.0
Depressional Seasonal Wetlands	0.71	0.71	0.0
Riverine Seasonal Wetlands	9.61	9.61	0.0
Riverine Seasonal Marsh	0.06	0.06	0.0
Seeps	6.31	6.31	0.0
Ephemeral Drainages	9.72	9.72	0.0
Ditch/Canal	0.56	0.14	0.42
Ponds	2.40	1.55	0.85
<b>TOTAL</b>	<b>29.76</b>	<b>28.49</b>	<b>1.27</b>

## 5.0 REFERENCES

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- Environmental Laboratories. 1987. Corps of Engineers Wetlands Delineation Manual. U.S. Army Corps of Engineers Waterways Experiment Station. Vicksburg, MS;
- Foothill Associates. 2001. Mangini Property North Wetland Delineation. Map dated February 1, 2001;
- Foothill Associates. 2005. Folsom South Biological Resource Assessment;
- GretagMacbeth. 2000. Munsell Soil Color Charts. New Windsor, NY;
- Hickman, James C. 1993. The Jepson Manual: Higher Plants of California. University of California Press, Berkeley, CA;
- Hitchcock, A.S. 1935. Revised 1971. Manual of the Grasses of the United States. U.S. Department of Agriculture, Dover Publications, NY;
- Hitchcock, Leo C. and Arthur Cronquist. 1996. Flora of the Pacific Northwest. University of Washington Press, Seattle, WA;
- Mason, Herbert L. 1957. A Flora of the Marshes of California. University of California Press, Berkeley, California;
- Munz, Phillip A. 1968. A California Flora and Supplement. University of California Press, Berkeley, CA;
- Natural Resource Conservation Service (NRCS). March 1992. Hydric Soils List for Sacramento County, California. U.S. Department of Agriculture;
- Natural Resource Conservation Service (NRCS). 1993. Soil Survey of Sacramento County, California. U.S. Department of Agriculture;
- Psomas. 2004. Color aerial photograph;
- Reed, P.B., Jr. 1988. National List of Plant Species That Occur in Wetlands: California (Region O); U.S. Fish & Wildlife Service;
- Sacramento County GIS Department. 2005. Digital base data;
- Sawyer, John O. and Todd Keeler-Wolf. 1995. A Manual of California Vegetation. California Native Plant Society (CNPS), Sacramento, CA;
- Spink Corporation. 2000. Topographic base data for the Mangini Property North site;
- U.S. Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS). 1993. Soil Survey of Sacramento County, California. USDA, NRCS,

in cooperation with the Regents of the University of California (Agricultural Experiment Station);

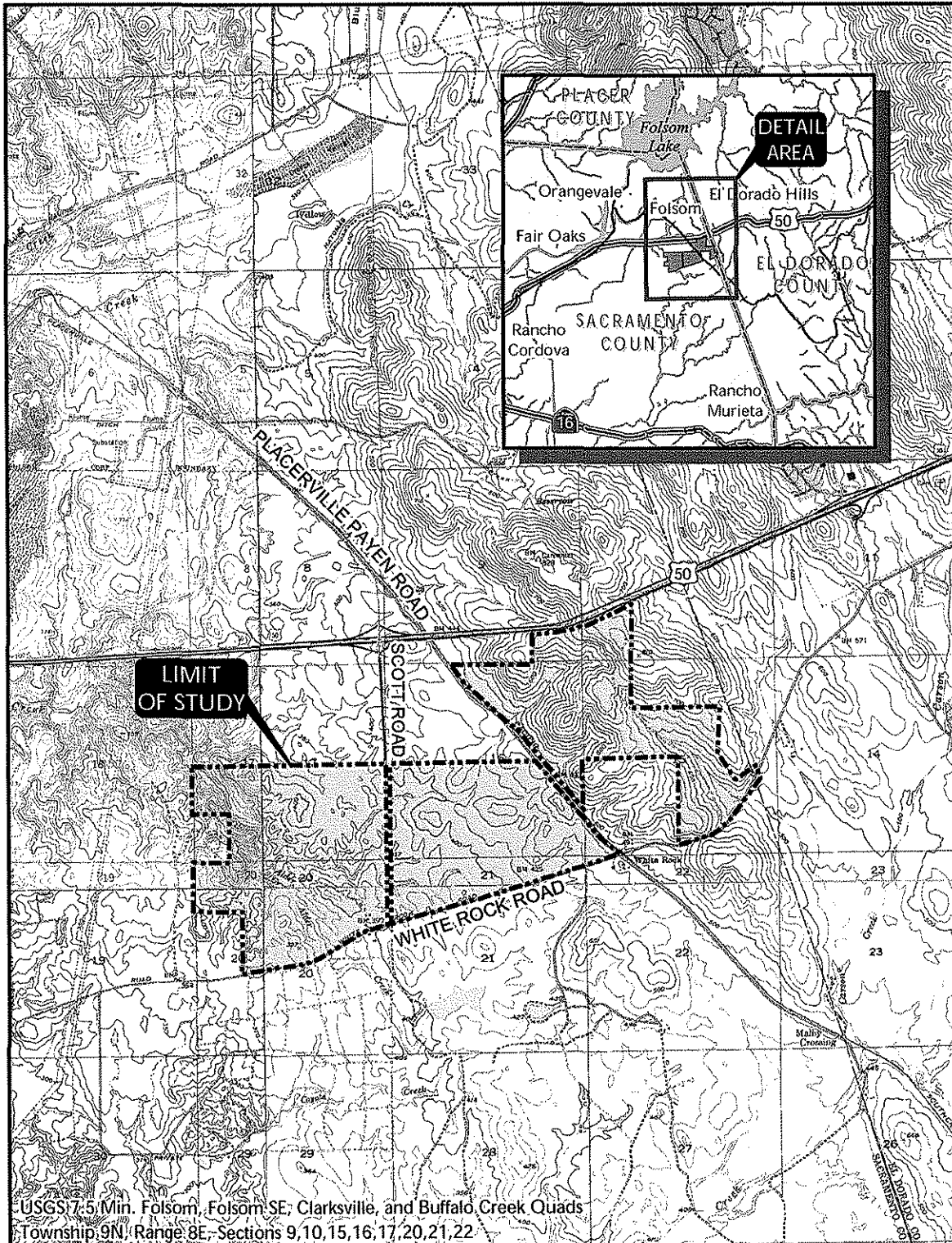
USDA, NRCS. 2003. Field Indicators of Hydric Soils in the United States, Version 5.01. G.W. Hurt, P.M. Whited, and R.F. Pringle (eds). USDA, NRCS in cooperation with the National Committee for Hydric Soils. Fort Worth, TX;

U.S. Geological Survey. 1953 (Photorevised 1980). Clarksville, California. 7.5 -minute series topographic quadrangle. U.S. Department of the Interior;

U.S. Geological Survey. 1959 (Photorevised 1980). Folsom, California. 15 -minute series topographic quadrangle. U.S. Department of the Interior;

U.S. Geological Survey. 1959 (Photorevised 1980). Folsom SE, California. 7.5 -minute series topographic quadrangle. U.S. Department of the Interior; and

U.S. Geological Survey. 1967 (Photorevised 1980). Folsom, California. 15 -minute series topographic quadrangle. U.S. Department of the Interior.



## SITE AND VICINITY



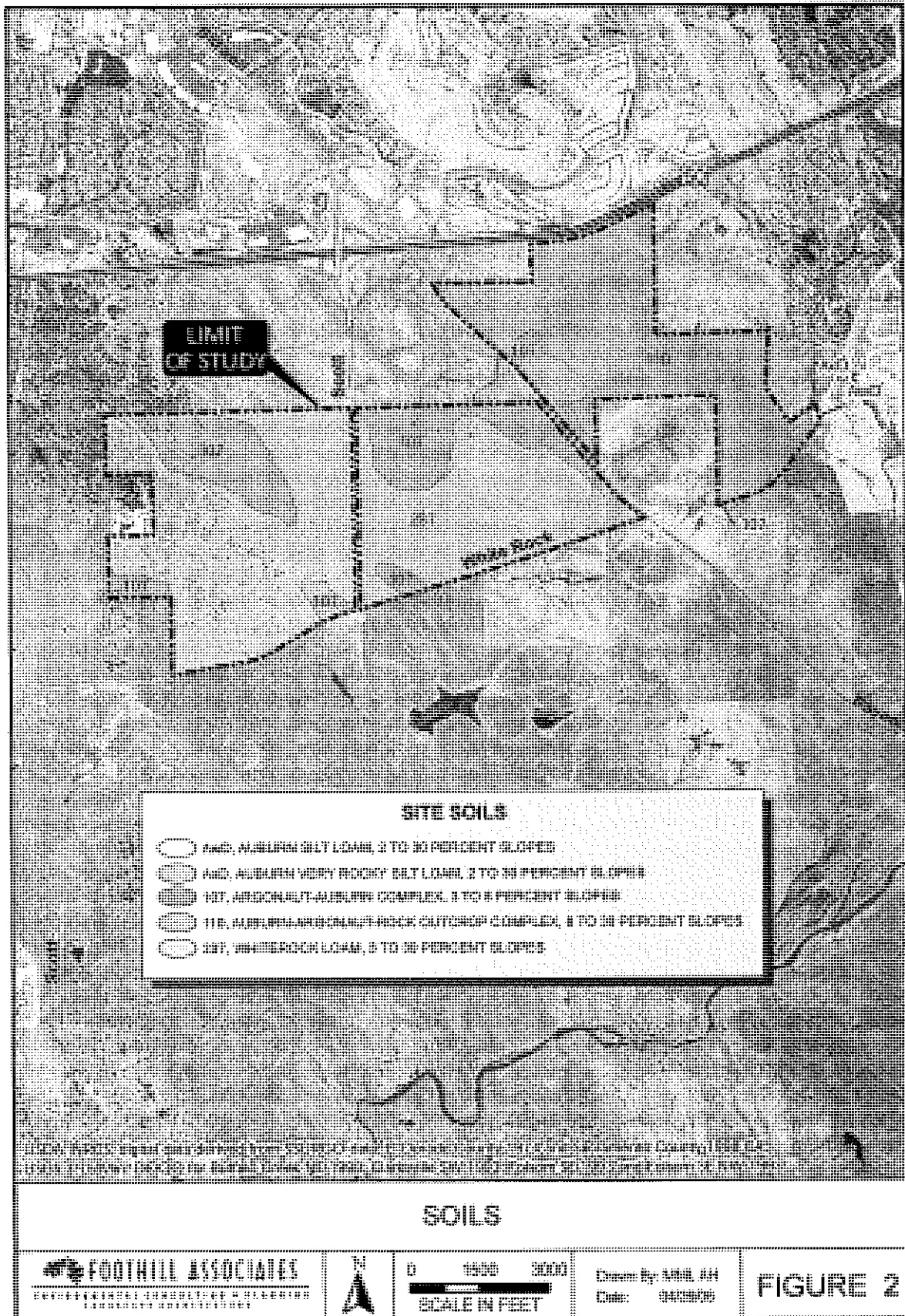
0 2000 4000  
 SCALE IN FEET

Drawn By: BF, AH  
 Date: 04/26/06

**FIGURE 1**

FOLSOM SOUTH

site\_and\_vicinity\_r042606.mxd  
 © 2006





## **Appendix A — Contact Information**

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**Client Contact Information:**

Mike McDougall  
MJM Properties, LLC  
1037 Suncast Lane, Suite 111  
El Dorado Hills, CA 95762

**Delineation Conducted by:**

John Heal, Wetland Scientist  
David Bise, Biologist  
Elaine Flock, Biologist  
Amy Warner, Biologist  
Foothill Associates  
655 Menlo Drive, Suite 100  
Rocklin, CA 95765-3718

## **Appendix B — Routine Determination Data Forms**

**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Folsom South</u> Applicant/Owner: <u>MJM Properties, LLC</u> Investigator: <u>John Heal</u>	Date: <u>12/06/2005</u> County: <u>Sacramento</u> State: <u>California</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: <u>UPL</u> Transect ID: <u>3</u> Plot ID: _____

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Associate Plant Species	Stratum	Indicator
1. <u>Lolium perenne 90%</u>	<u>HERB</u>	<u>FAC</u>	9. _____	_____	_____
2. <u>Holcarcha virgata 20%</u>	<u>HERB</u>	<u>NI</u>	10. _____	_____	_____
3. _____	_____	_____	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):      50    %

Remarks: Hydrophytic vegetation is not dominant.

**HYDROLOGY**

<input checked="" type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available  Field Observations: Depth of Surface Water: <u>N/A</u> (in.) Depth to Free Water in Pit: <u>N/A</u> (in.) Depth to Saturated Soil: <u>N/A</u> (in.)	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Remarks: <u>Insufficient indicators of wetland hydrology.</u>	

## SOILS

Map Unit Name (Series and Phase): <u>Argonaut - Auburn complex, 3-8% slopes</u>				Drainage Class: _____ Field Observations Confirm Mapped Type? <input checked="" type="radio"/> Yes <input type="radio"/> No	
Taxonomy (Subgroup): _____					
<b>Profile Description:</b>					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-8	A	10YR 3/2	5YR 4/6	many, bright	silty clay loam
8-16	A	10YR 2/2	N/A	N/A	silty clay loam

Hydric Soil Indicators:
 

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)
--	--

Remarks: Hydric soils.

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="radio"/> Yes <input checked="" type="radio"/> No Wetland Hydrology Present? <input type="radio"/> Yes <input checked="" type="radio"/> No Hydric Soils Present? <input type="radio"/> Yes <input checked="" type="radio"/> No	Is this Sampling Point Within a Wetland? <input type="radio"/> Yes <input checked="" type="radio"/> No
Remarks: Does not meet all three parameters; upland.	

**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Folsom South</u> Applicant/Owner: <u>MJM Properties, LLC</u> Investigator: <u>John Heal</u>	Date: <u>12/13/2005</u> County: <u>Sacramento</u> State: <u>California</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: <u>UPL</u> Transect ID: <u>4</u> Plot ID: _____

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Associate Plant Species	Stratum	Indicator
1. <u>Lolium perenne 30%</u>	<u>HERB</u>	<u>FAC</u>	9. <u>Eremocarpus setigerus 5%</u>	<u>HERB</u>	<u>NI</u>
2. <u>Juncus mexicanus 20%</u>	<u>HERB</u>	<u>FACW</u>	10. <u>Cirsium sp. 5%</u>	<u>HERB</u>	
3. _____			11. _____		
4. _____			12. _____		
5. _____			13. _____		
6. _____			14. _____		
7. _____			15. _____		
8. _____			16. _____		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100 %

Remarks: Dominance of hydrophytic vegetation.

**HYDROLOGY**

<input checked="" type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators:</b> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands <b>Secondary Indicators (2 or more required):</b> <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
<b>Field Observations:</b> Depth of Surface Water: <u>N/A</u> (in.) Depth to Free Water in Pit: <u>N/A</u> (in.) Depth to Saturated Soil: <u>N/A</u> (in.)	
Remarks: <u>Insufficient indicators of wetland hydrology.</u>	

## SOILS

Map Unit Name (Series and Phase): <u>Argonaut - Auburn complex, 3-8% slopes</u>				Drainage Class: _____	
Taxonomy (Subgroup): _____				Field Observations Confirm Mapped Type? <input checked="" type="radio"/> Yes <input type="radio"/> No	

Profile Description: Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-3	A	10YR 3/2	7.5YR 3/4	bright, few	silt loam
3-16	A	10YR 3/2	N/A	N/A	silt loam

Hydric Soil Indicators:

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)
--	--

Remarks: Hydric soils.

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes <input type="radio"/> No Wetland Hydrology Present? <input checked="" type="radio"/> Yes <input type="radio"/> No Hydric Soils Present? <input checked="" type="radio"/> Yes <input type="radio"/> No	Is this Sampling Point Within a Wetland? <input type="radio"/> Yes <input checked="" type="radio"/> No
Remarks: Does not meet all three parameters; upland.	

**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Folsom South</u> Applicant/Owner: <u>MJM Properties, LLC</u> Investigator: <u>John Heal</u>	Date: <u>12/13/2005</u> County: <u>Sacramento</u> State: <u>California</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: <u>UPL</u> Transect ID: <u>5A</u> Plot ID: _____

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Associate Plant Species	Stratum	Indicator
1. <u>Lolium perenne 50%</u>	HERB	FAC	9. _____		
2. <u>Holocarpha virgata 30%</u>	HERB	NI	10. _____		
3. _____			11. _____		
4. _____			12. _____		
5. _____			13. _____		
6. _____			14. _____		
7. _____			15. _____		
8. _____			16. _____		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):      50      %

Remarks: Hydrophytic vegetation not dominant.

**HYDROLOGY**

<input checked="" type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators:</b> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands <b>Secondary Indicators (2 or more required):</b> <input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
<b>Field Observations:</b> Depth of Surface Water: <u>N/A</u> (in.) Depth to Free Water in Pit: <u>N/A</u> (in.) Depth to Saturated Soil: <u>N/A</u> (in.)	
Remarks: <u>Indicators of wetland hydrology are present.</u>	

## SOILS

Map Unit Name (Series and Phase): <u>Argonaut - Auburn complex, 3-8% slopes</u>				Drainage Class: _____ Field Observations Confirm Mapped Type? <input checked="" type="radio"/> Yes <input type="radio"/> No	
Taxonomy (Subgroup): _____					
<b>Profile Description:</b>					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 4/2	5YR 4/6	many, faint	sandy gravelly loam

Hydric Soil Indicators:	
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors	<input checked="" type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input checked="" type="checkbox"/> Other (Explain in Remarks)

Remarks: Hydric soil indicators include manganese nodules and stains.

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="radio"/> Yes <input checked="" type="radio"/> No Wetland Hydrology Present? <input type="radio"/> Yes <input checked="" type="radio"/> No Hydric Soils Present? <input type="radio"/> Yes <input checked="" type="radio"/> No	Is this Sampling Point Within a Wetland? <input type="radio"/> Yes <input checked="" type="radio"/> No
Remarks: Does not meet all three parameters; upland.	



**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Folsom South</u> Applicant/Owner: <u>MJM Properties, LLC</u> Investigator: <u>John Heal</u>	Date: <u>12/13/2005</u> County: <u>Sacramento</u> State: <u>California</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: <u>UPL</u> Transect ID: <u>5B</u> Plot ID: _____

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Associate Plant Species	Stratum	Indicator
1. <u>Holocarpus virgata</u>	<u>HERB</u>	<u>NI</u>	9. <u>Bromus mollis 5%</u>	<u>HERB</u>	<u>FACU-</u>
2. <u>Taeniatherum caput-medusae</u>	<u>HERB</u>	<u>NI</u>	10. _____	_____	_____
3. _____	_____	_____	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 0 %

Remarks: Hydrophytes not dominant.

**HYDROLOGY**

<input checked="" type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators:</b> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands <b>Secondary Indicators (2 or more required):</b> <input type="checkbox"/> Oxidized Root Channels in Upper 12 inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
<b>Field Observations:</b> Depth of Surface Water: _____ <u>N/A</u> (in.) Depth to Free Water in Pit: _____ <u>N/A</u> (in.) Depth to Saturated Soil: _____ <u>N/A</u> (in.)	
Remarks: <u>No indicators of wetland hydrology.</u>	

[illegible]

Hydrophytic Vegetation Present? <input type="radio"/> Yes <input checked="" type="radio"/> No Wetland Hydrology Present? <input type="radio"/> Yes <input checked="" type="radio"/> No Hydric Soils Present? <input type="radio"/> Yes <input checked="" type="radio"/> No	Is this Sampling Point Within a Wetland? <input type="radio"/> Yes <input checked="" type="radio"/> No
Remarks: Does not meet all three parameters; upland.	

**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Folsom South</u> Applicant/Owner: <u>MJM Properties, LLC</u> Investigator: <u>John Heal</u>	Date: <u>12/13/2005</u> County: <u>Sacramento</u> State: <u>California</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: <u>WET</u> Transect ID: <u>6A</u> Plot ID: _____

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Associate Plant Species	Stratum	Indicator
1. <u>Lolium perenne 70%</u>	<u>HERB</u>	<u>FAC</u>	9. <u>Eryngium vaseyi 15%</u>	<u>HERB</u>	<u>FACW</u>
2. _____	_____	_____	10. <u>Polypogon monspeliensis 15%</u>	<u>HERB</u>	<u>FACW+</u>
3. _____	_____	_____	11. <u>Hordeum marinum 5%</u>	<u>HERB</u>	<u>FAC</u>
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):      100    %

Remarks: Dominance of hydrophytic vegetation.

**HYDROLOGY**

<input checked="" type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations:  Depth of Surface Water: <u>N/A</u> (in.)  Depth to Free Water in Pit: <u>N/A</u> (in.)  Depth to Saturated Soil: <u>N/A</u> (in.)	
Remarks: <u>Hydrologic indicators present.</u>	

## SOILS

Map Unit Name (Series and Phase): <u>Argonaut - Auburn complex, 3-8% slopes</u>				Drainage Class: _____ Field Observations Confirm Mapped Type? <input checked="" type="radio"/> Yes <input type="radio"/> No	
Taxonomy (Subgroup): _____					
<b>Profile Description:</b>					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3.5/2	5YR 4/6	many, bright	silty clay loam

Hydric Soil Indicators:	
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input checked="" type="checkbox"/> Other (Explain in Remarks)

Remarks: Hydric soil indicators are present, including manganese stains.
--

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes <input type="radio"/> No Wetland Hydrology Present? <input checked="" type="radio"/> Yes <input type="radio"/> No Hydric Soils Present? <input checked="" type="radio"/> Yes <input type="radio"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes <input type="radio"/> No
Remarks: Wetland that has formed in ditch.	

**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Folsom South</u> Applicant/Owner: <u>MJM Properties, LLC</u> Investigator: <u>John Heal</u>	Date: <u>12/13/2005</u> County: <u>Sacramento</u> State: <u>California</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: <u>UPL</u> Transect ID: <u>6B</u> Plot ID: _____

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Associate Plant Species	Stratum	Indicator
1. <u>Bromus mollis 20%</u>	<u>HERB</u>	<u>FACU-</u>	9. _____	_____	_____
2. <u>Holocarphs virgata 40%</u>	<u>HERB</u>	<u>NI</u>	10. _____	_____	_____
3. <u>Taeniatherum caput-medusae 20%</u>	<u>HERB</u>	<u>NI</u>	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):      0      %

Remarks: Hydrophytic vegetation is not dominant.

**HYDROLOGY**

<input checked="" type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators:</b> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands <b>Secondary Indicators (2 or more required):</b> <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
<b>Field Observations:</b>  Depth of Surface Water: <u>N/A</u> (in.) Depth to Free Water in Pit: <u>N/A</u> (in.) Depth to Saturated Soil: <u>N/A</u> (in.)	Remarks: <u>No hydrologic indicators.</u>

## SOILS

Map Unit Name (Series and Phase): <u>Argonaut - Auburn complex, 3-8% slopes</u>				Drainage Class: _____	
Taxonomy (Subgroup): _____				Field Observations Confirm Mapped Type? <input checked="" type="radio"/> Yes <input type="radio"/> No	
<b>Profile Description:</b>					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-1	A	10YR 3/3	N/A	N/A	silt loam
1-2	A	10YR 4/3	5YR 4/6	few, faint	silt loam
2-14	B	7.5YR 4/4	N/A	N/A	sandy gravelly loam
<b>Hydric Soil Indicators:</b>					
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)			
Remarks: <u>Insufficient hydric soil indicators.</u>					

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="radio"/> Yes <input checked="" type="radio"/> No Wetland Hydrology Present? <input type="radio"/> Yes <input checked="" type="radio"/> No Hydric Soils Present? <input type="radio"/> Yes <input checked="" type="radio"/> No	Is this Sampling Point Within a Wetland? <input type="radio"/> Yes <input checked="" type="radio"/> No
Remarks: <u>Does not meet all three parameters; upland.</u>	

## **APPENDIX D16**

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Wetland Delineation for Folsom South Owners Group  
Javanifard and Zhargami Parcel

Wetland Delineation  
For  
**Folsom South Owners Group**  
**Javanifard and Zhargami Parcel**  
Sacramento County, California

7 May 2007

I approve this document to be submitted to the U.S. Army Corps of Engineers

---

Signature

---

Date

Prepared for:  
**The Hodgson Company**



**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS



Wetland Delineation  
For  
**Folsom South Owners Group**  
**Javanifard and Zhargami Parcel**  
Sacramento County, California

7 May 2007

Prepared for:  
**The Hodgson Company**



ECORP Consulting, Inc.  
ENVIRONMENTAL CONSULTANTS

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## INTRODUCTION

On behalf of The Hodgson Company, ECORP Consulting, Inc. (ECORP) conducted a wetland delineation of the 30±-acre Javanifard and Zhargami parcel, located south of Highway 50 and north of White Rock Road: between Prairie City Road and Scott Road in Sacramento County, California (Figure 1. *Project Site and Vicinity*). The site corresponds to a portion of Section 17, Township 9 North, and Range 8 East (MDBM) of the "Folsom, California" 7.5-minute quadrangle (U.S. Department of the Interior, Geological Survey 1980). The approximate center of the site is located at 38° 37' 45" North and 121° 07' 55" West within the Lower American River Watershed (#18020111, U.S. Department of the Interior, Geological Survey 1978).

This report describes potential waters of the United States, including wetlands, identified within the site that may be regulated by the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act. The information presented in this report provides data required by the USACE Sacramento District's *Minimum Standards for Acceptance of Preliminary Wetland Delineations* (U.S. Army Corps of Engineers 2001). The waters of the U.S. boundaries depicted in this report represent a calculated estimation of the jurisdictional area within the site, and are subject to modification following the USACE verification process.

### APPLICANT:

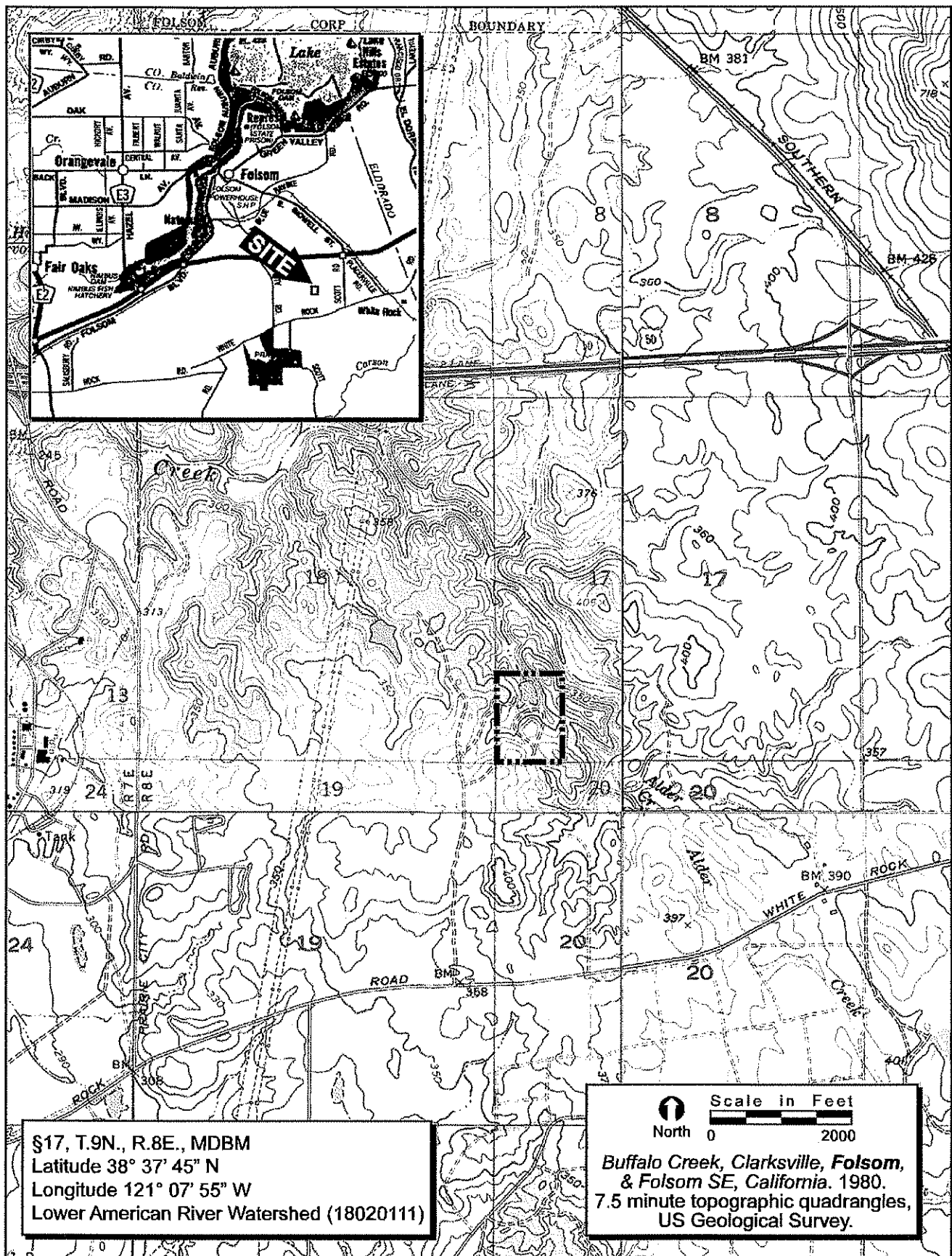
Attn: Mr. John Hodgson  
The Hodgson Company  
7700 College Town Drive, Suite 220  
Sacramento, California 95826  
Phone: (916) 383-6091  
Fax: (916) 383-6099

### AGENT:

Attn: Mr. Dustin Brown  
ECORP Consulting, Inc.  
2525 Warren Drive  
Rocklin, California 95677  
Phone: (916) 782-9100  
Fax: (916) 782-9134

### Existing Site Conditions

The site is composed of gently rolling terrain and is situated at an elevational range of approximately 320 feet to 390 feet above mean sea level. Surrounding land uses include rangeland.



**FIGURE 1. Project Site and Vicinity**

The site consists of annual grassland and oak woodland and is currently used for livestock grazing. A rural residence and associated barns and outbuildings are located in the central and southwestern portions of the site. The annual grassland is composed of a variety of non-native plant species such as medusahead grass (*Taeniatherum caput-medusae*), wild oats (*Avena fatua*), filaree (*Erodium botrys*), ryegrass (*Lolium multiflorum*), barley (*Hordeum murinum*), and vetch (*Vicia* species).

Much of the site consists of an oak woodland community. Dominant trees include blue oak (*Quercus douglasii*) and Interior live oak (*Q. wislizenii*). The understory of the woodland is made up of non-native grassland plant species.

Aquatic features on-site include one stock pond, ephemeral drainages, seasonal wetland swales, two seasonal wetlands, one vernal pool, and one seep. These features are further described in the Results section.

The National Wetlands Inventory database (USFWS 1993) was queried for the "Folsom, California" 7.5 minute quadrangle (Figure 2. *National Wetlands Inventory*). One "Palustrine, Unconsolidated Bottom, Permanently Flooded" feature was mapped within the northern portion of the site. This area corresponds to the stock pond on-site.

According to the *Soil Survey of Sacramento County, California* (U.S. Department of Agriculture, Soil Conservation Service 1993), one soil unit, or type, has been mapped within the site (Figure 3. *Natural Resources Conservation Service Soil Types*). This unit is: (237) Whiterock Loam, 3-30 percent slopes. This soil unit does not contain hydric components or hydric inclusions (U.S. Department of Agriculture, Soil Conservation Service 1992).

## **METHODS**

This wetland delineation was conducted in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Arid West Region



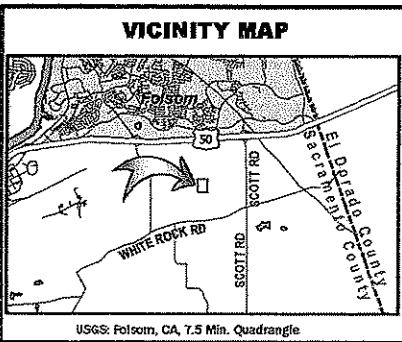
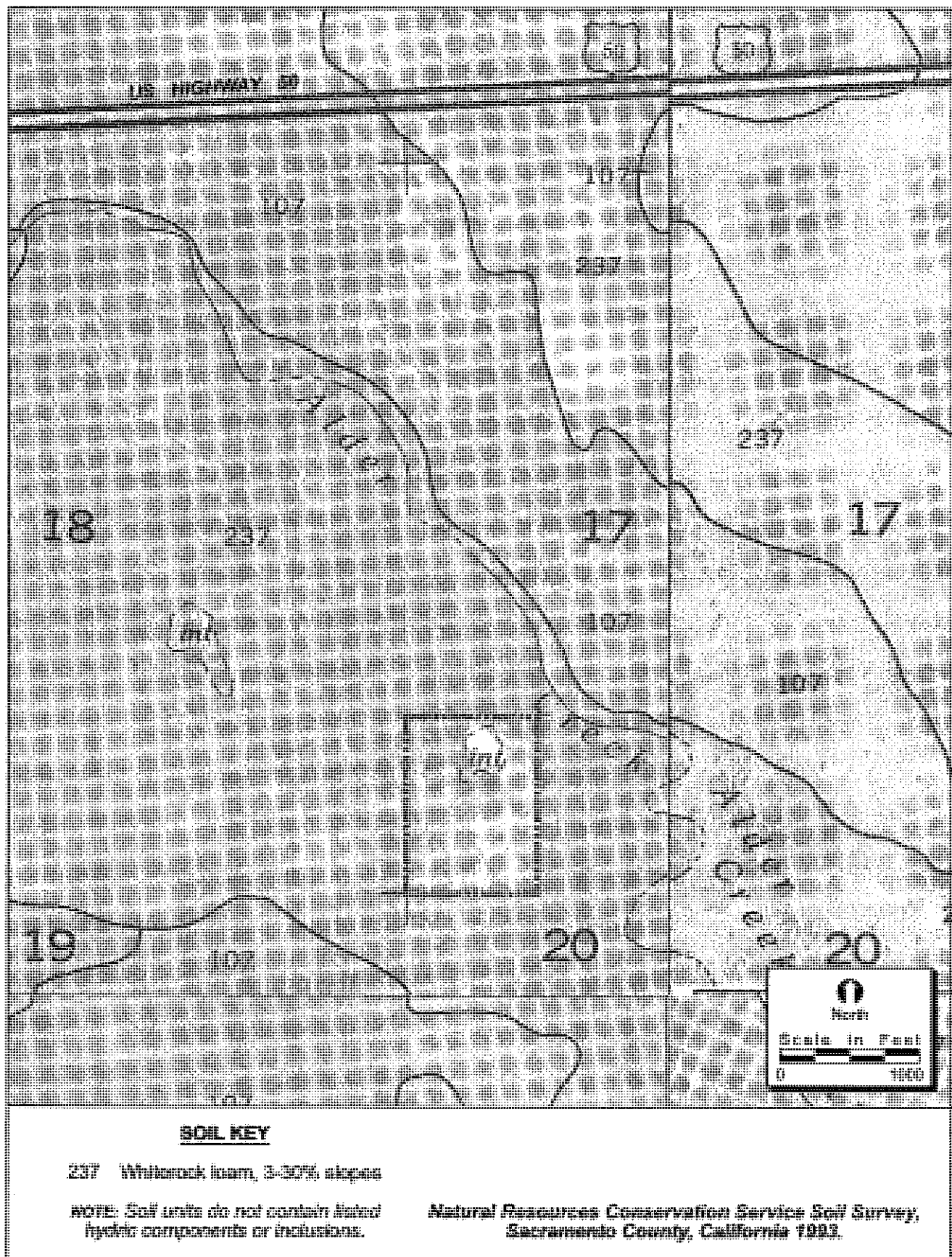


FIGURE 2. NATIONAL WETLANDS INVENTORY			
2005-429 FSAG Javanifard and Zhargami			
Location: K:\GIS_Maps\2005-429_Folsom_Area_South_Group\Javanifard_Zhargami	Map Name: JZ_NWI.mxd	Project Number	2005-429
Original Production Date: 03/30/07	Revision:	Project Manager:	GREGB
Printing Date: 03/30/07	Scale: 1" equals 100'	GIS Specialist:	JDS
 <b>ECORP Consulting, Inc.</b> ENVIRONMENTAL CONSULTANTS			
Northern California 2525 Warren Drive Rocklin, CA 95677 Ph: (916) 782-9100	Bay Area 2100 Embarcadero, Ste. 202 Oakland, CA 94606 Ph: (510) 434-0150	Orange County 1801 Park Court Place Building B, Ste. 103 Santa Ana, CA 92701 Ph: (714) 648-0630	Inland Empire 215 North 5th St. Redlands, CA 92374 Ph: (909) 307-0046

NOTES
Gross Project Acreage: +/- 29 ac.
<sup>1</sup> Project Boundary: Approximation based on aerial interp.
<sup>2</sup> USFWS National Wetlands Inventory Wetland Mapper - 1996
Aerial Photo Source: AirPhoto USA May 2006





**FIGURE 3. Natural Resources Conservation Service Soil Types**



Supplement) (U.S. Army Corps of Engineers 2006). The boundaries of potential waters of the U.S. were delineated through aerial photograph interpretation and standard field methodologies (i.e., paired data set analyses), and all wetland data were recorded on Arid West Region - Wetland Determination Data Forms (Attachment A). A color aerial photograph (1"=100' scale, Airphoto 2004) was used to assist with mapping and ground-truthing (Attachment B). *Munsell Soil Color Charts* (Kollmorgen Instruments Co. 1990) and the *Soil Survey of Sacramento County, California* (U.S. Department of Agriculture, Soil Conservation Service 1993) were used to aid in identifying hydric soils in the field. *The Jepson Manual* (Hickman, ed. 1993) was used for plant nomenclature and identification.

Field surveys were conducted on 21 and 29 March 2007 by ECORP biologist Dustin Brown. Mr. Brown walked the entire 30±-acre site to determine the location and extent of potential waters of the U.S. within the property. Twelve paired data point locations were sampled to evaluate whether the vegetation, hydrology, and soils data supported a determination of wetland or non-wetland status. At each paired location, one point was located such that it was within the estimated wetland area, and the other point was situated outside the limits of the estimated wetland area. The total area of the wetlands and other waters within the site was recorded in the field using a post-processing capable global positioning system (GPS) unit with sub-meter accuracy (Trimble GeoXT).

## **Waters of the United States**

This report describes potential waters of the U.S., including wetlands, which may be regulated by the USACE under Section 404 of the Clean Water Act. Wetlands are "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" [33 CFR 328.3(b), 51 FR 41250, November 13, 1986]. Wetlands can be perennial or intermittent, and isolated or adjacent to other waters.

Other waters are non-tidal, perennial, and intermittent watercourses and tributaries to such watercourses [33 CFR 328.3(a), 51 FR 41250, November 13, 1986]. The limit of USACE jurisdiction for non-tidal watercourses (without adjacent wetlands) is defined in 33 CFR 328.4(c)(1) as the

"ordinary high water mark". The ordinary high water mark is defined as the *"line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas"* [33 CFR 328.3(e), 51 FR 41250, November 13, 1986]. The bank-to-bank extent of the channel that contains the water-flow during a normal rainfall year generally serves as a good first approximation of the lateral limit of USACE jurisdiction. The upstream limits of other waters are defined as the point where the ordinary high water mark is no longer perceptible.

### **Routine Determinations**

To be determined a wetland; the following three criteria should be met:

- A majority of dominant vegetation species are wetland associated species;
- Hydrologic conditions exist that result in periods of flooding, ponding, or saturation during the growing season; and
- Hydric soils are present.

### *Vegetation*

Hydrophytic vegetation is defined as the sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanent or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present (Environmental Laboratory 1987). The definition of wetlands includes the phrase "a prevalence of vegetation typically adapted for life in saturated soil conditions." Prevalent vegetation is characterized by the dominant plant species comprising the plant community (Environmental Laboratory 1987). The dominance test is the basic hydrophytic vegetation indicator and was applied at each data point location. The "50/20 rule" was used to select the dominant plant species from each stratum of the community. The rule states that for each stratum in the plant community, dominant species are the most abundant plant species (when ranked in descending order of coverage and cumulatively totaled) that immediately

exceed 50 percent of the total coverage for the stratum, plus any additional species that individually comprise 20 percent or more of the total cover in the stratum (HQUSACE 1992, U.S. Army Corps of Engineers 2006).

Dominant plant species observed at each data point were then classified according to their indicator status (probability of occurrence in wetlands) (Table 1), in accordance with the U.S. Fish and Wildlife Service's (USFWS) National List of Vascular Plant Species That Occur in Wetlands: California (Region 0) (Reed 1988). If the majority (greater than 50 percent) of the dominant vegetation on a site are classified as obligate (OBL), facultative wetland (FACW), or facultative (FAC), then the site was considered to be dominated by hydrophytic vegetation. Pursuant to the Arid West Region Supplement, plus (+) and minus (-) modifiers were not used (e.g., FAC-, FAC, and FAC+ plants are all considered to be FAC). Plant species not listed in Reed 1988 were assumed to be upland (UPL) species.

**Table 1 – Classification of Wetland-Associated Plant Species<sup>1</sup>**

<b><u>Plant Species Classification</u></b>	<b><u>Abbreviation</u></b>	<b><u>Probability of Occurring in Wetland</u></b>
Obligate	OBL	>99%
Facultative Wetland	FACW	66-99%
Facultative	FAC	33-66%
Facultative Upland	FACU	1-33%
Upland	UPL	<1%
No indicator status	NI	Insufficient information to determine status
Plants That Are Not Listed (assumed upland species)	NL	Does not occur in wetlands in any region.

<sup>1</sup> Source: Reed 1988

In instances where indicators of hydric soil and wetland hydrology were present, but the plant community failed the dominance test, the vegetation was re-evaluated using the prevalence index. The prevalence is a weighted-average wetland indicator status of all plant species in the sampling plot, where each indicator status category is given a numeric code (OBL=1, FACW=2, FAC=3, FACU=4, and UPL=5) and weighting is by abundance (percent cover). If the plant community failed the prevalence index, the presence/absence of plant morphological adaptations was evaluated.

## *Soils*

A hydric soil is defined as a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (USDA-NRCS 2003). Indicators that a hydric soil is present include, but are not limited to, histosols, histic epipedon, hydrogen sulfide, depleted below dark surface, sandy redox, loamy gleyed matrix, depleted matrix, redox dark surface, redox depressions, and vernal pools.

A soil pit was excavated to the depth needed to document an indicator, to confirm the absence of indicators, or until refusal at each data point. The soil was then examined for hydric soil indicators. Soil colors were determined while the soil was moist using the *Munsell Soil Color Charts*.

## *Hydrology*

Wetlands, by definition, are seasonally or perennially inundated or saturated at or near (within 12 inches of) the soil surface. Primary indicators of wetland hydrology include, but are not limited to: visual observation of saturated soils, visual observation of inundation, surface soil cracks, inundation visible on aerial imagery, water-stained leaves, oxidized rhizospheres along living roots, aquatic invertebrates, water marks (secondary indicator in riverine environments), drift lines (secondary indicator in riverine environments), and sediment deposits (secondary indicator in riverine environments). The occurrence of one primary indicator is sufficient to conclude that wetland hydrology is present. If no primary indicators are observed, two or more secondary indicators are required to conclude wetland hydrology is present. Secondary indicators include, but are not limited to: drainage patterns, crayfish burrows, FAC-neutral test, and shallow aquitard. The occurrence of at least one primary indicator or two secondary indicators is required to confirm the presence of wetland hydrology.

## **RESULTS**

A total of 2.830 acres of potential waters of the U.S have been mapped for this site (Table 2). The wetland determination data forms are included in Attachment A, and a list of plant species

observed on-site is included in Attachment C. A discussion of the wetlands and other waters is presented below, and a wetland delineation map is presented in Figure 4 and Attachment D.

**Table 2 – Potential Waters of the U.S.**

<b>Type</b>	<b>Acreage<sup>1</sup></b>
<i>Wetlands</i>	
Vernal Pool	0.004
Seasonal Wetland	0.002
Seasonal Wetland Swale	0.119
Seep	0.067
<i>Other Waters</i>	
Ephemeral Drainage	0.103
Stock Pond	2.535
<b>Total</b>	<b>2.830</b>

<sup>1</sup> Acreages represent a calculated estimation and are subject to modification following the Corps' verification process.

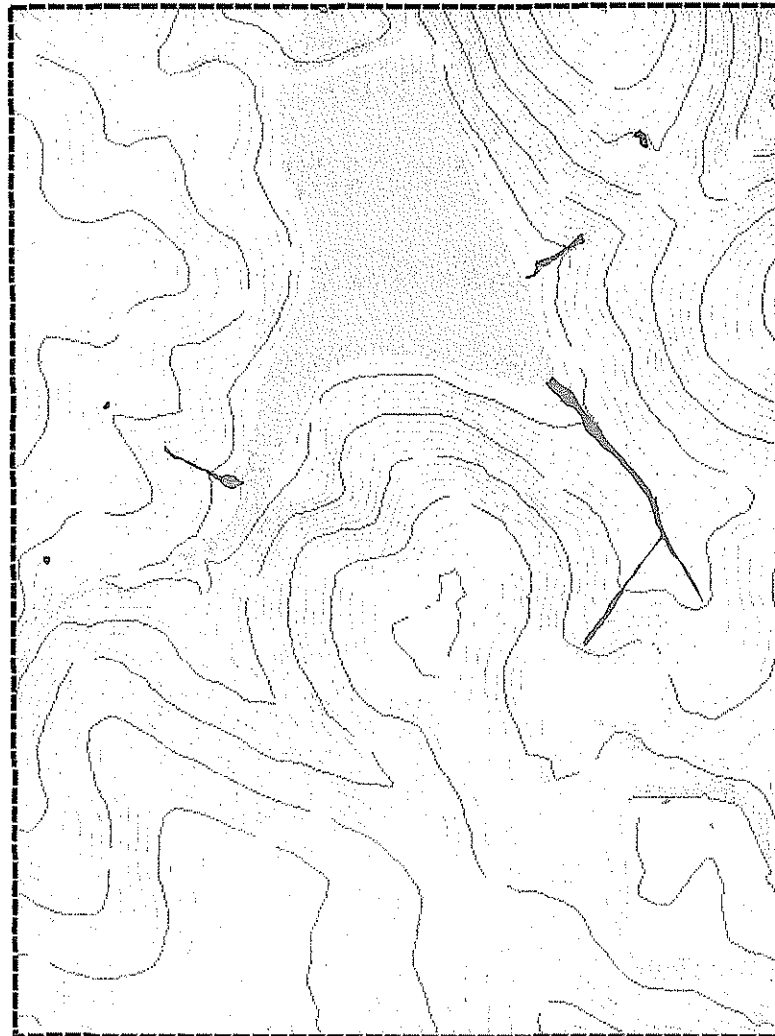
## Wetlands

### *Vernal Pool*

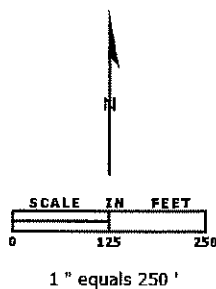
In general, vernal pools are topographic basins that are underlain with an impermeable or semi-permeable hardpan or duripan layer. Direct rainfall and surface runoff inundate the pools during the wet season. They pools remain inundated and/or the soil maintains saturation through spring and are dry by late spring through the following wet season. A single vernal pool was identified in the northwestern portion of the site. Dominant plants within the vernal pool included Carter's buttercup (*Ranunculus bonariensis*) and ryegrass.

Indicators of wetland hydrology observed within VP-1 included biotic crust (i.e., algal matting) (B12) and water stained leaves (B9). Soil saturation and inundation were most likely not observed due to the below average seasonal rain totals.

The soil matrix color within VP-1 was 10YR5/2 with redox concentrations (common/medium) colored 10YR4/6. The soil was determined to be hydric based on the presence of indicators F9 (vernal pools) and F3 (depleted matrix). Soil matrix colors in upland areas adjacent to VP-1 were of high chroma, including 10YR4/4 without redox features.



## WATERS OF THE U.S. ACREAGE <sup>1</sup>



Delineator: D. Brown

CLASSIFICATION	EXISTING ACREAGE
<b>WETLANDS:</b>	
Vernal Pool	0.004
Seasonal Wetland	0.002
Seasonal Wetland Swale	0.119
Seep	0.067
<b>OTHER WATERS:</b>	
Ephemeral Drainage	0.103
Stock Pond	2.535
<b>TOTAL:</b>	<b>2.830</b>

<sup>1</sup> This exhibit depicts information and data produced in strict accord with the wetland delineation methods described in the 1987 Corps of Engineers, Wetland Delineation Manual and the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual, Arid West Region and conforms to Sacramento District specifications. However, wetland boundaries have not been highly surveyed and may be subject to minor adjustments if exact locations are required.

FIGURE 4. Wetland Delineation

2005-429 Javanifard and Zhargami (FSAG)

### *Seasonal Wetland*

Seasonal wetlands are ephemeral wet due to accumulation of surface runoff and rainwater within low-lying areas. Inundation periods tend to be relatively short and they are commonly dominated by non-native annual, and sometimes perennial, hydrophytic species. The two seasonal wetlands observed on-site are located within the western central portion of the site. Plant species identified within the seasonal wetlands included meadowfoam (*Limnanthes* species), Carter's buttercup, and ryegrass.

Indicators of wetland hydrology observed within SW-1 included biotic crust (i.e., algal matting) (B12). Soil saturation and inundation were most likely not observed due to the below average seasonal rain totals.

The soil matrix color within SW-1 was 10YR3/2 with redox concentrations (few/fine) colored 10YR4/6. The soil was determined to be hydric based on the presence of indicator F6 (redox dark surface). Soil matrix colors in upland areas adjacent to SW-1 were of high chroma, including 10YR4/3 without redox features.

### *Seasonal Wetland Swale*

Seasonal wetland swales are linear wetland features that do not exhibit an ordinary high water mark. Plant species identified within SWS-1 included meadowfoam, spikerush (*Eleocharis obtuse*), curly dock (*Rumex crispus*), cut-leaved geranium (*Geranium dissectum*), hyssop loosestrife (*Lythrum hyssopifolia*), white-tip clover (*Trifolium variegatum*), clustered field sedge (*Carex praegracilis*), and ryegrass.

Indicators of wetland hydrology observed within SWS-1 included saturation (A3). The soil matrix color within SWS-1 was 10YR3/2 with redox concentrations (few/fine) colored 10YR4/6. The soil was determined to be hydric based on the presence of indicator F6 (redox dark surface). Soil matrix colors in upland areas adjacent to SWS-1 were of high chroma, including 10YR4/4 without redox features.

## *Seep*

Seeps are seasonally or perennially wet areas resulting from discharge of groundwater to the surface. A single seep was observed in the northern portion of the site. Dominant plants within the seep included spikerush, hyssop loosestrife, pennyroyal (*Mentha pulegium*), and cut-leaved geranium. Other plant species observed within the seep included curly dock, willow (*Salix* species), and Himalayan blackberry (*Rubus armeniacus*).

Indicators of wetland hydrology observed within the seep included high water table (A2), saturation (A3), FAC-neutral test (D5), and water stained leaves (B9).

The soil matrix color within seep-1 was 10YR3/2 and 10YR5/1 with redox concentrations (common/medium) colored 10YR5/6. The soil was determined to be hydric based on the presence of indicator F3 (depleted matrix). Soil matrix colors in upland areas adjacent to seep-1 were of high chroma, including 10YR4/3 without redox features.

## **Other Waters**

### *Ephemeral Drainage*

Ephemeral drainages are linear features that exhibit an ordinary high water mark. These are seasonal features that typically convey runoff for short periods of time, immediately following rain events and do not receive supplemental water from groundwater sources. The channel is largely unvegetated due to the scouring effects of flowing water. Plant species identified along the upper edges of the ephemeral drainages on-site include meadowfoam, Carter's buttercup, prickly lettuce, and curly dock.

The limits of the ephemeral drainages were delineated at the ordinary high water mark, which was identified based on water marks, scour, and shifts in vegetation.



Soil matrix color within ED-3 was 10YR3/1 with redox concentrations (few/fine) colored 10YR4/3. Soil matrix colors in upland areas adjacent to ED-3 were of high chroma, including 10YR5/3 without redox features.

### *Stock Pond*

One stock pond occurs within the northern portion of the site. This pond was likely constructed to impound water for cattle grazing. The pond is mapped on the 7.5-minute quadrangle as an area of open water. This feature is also depicted as a seasonally inundated area in the *Soil Survey of Sacramento County, California* (U.S. Department of Agriculture, Soil Conservation Service 1993). The National Wetlands Inventory identified this feature as a "Palustrine, Unconsolidated Bottom, Permanently Flooded" (PUBHH) feature. Plant species identified at the shallow edge of the stock pond include spikerush, pennyroyal, water primrose (*Ludwigia peploides* var. *peploides*), duckweed (*Lemna* species), and cut-leafed geranium.

The limits of the stock pond were delineated at the ordinary high water mark, which was identified based on water marks and shifts in vegetation.

Soil matrix colors within the stock pond were 10YR4/2, 3/2, and 4/1 with redox concentrations (common/medium) colored 10YR4/4. Soil matrix colors in upland areas adjacent to the stock pond were of high chroma, including 10YR3/4 without redox features.

## **INTERSTATE COMMERCE**

The seasonal wetlands and vernal pool on-site are tributary to the seasonal wetland swales and ephemeral drainages on-site. The seasonal wetland swales and ephemeral drainages are tributary to the stock pond on-site. The stock pond is tributary to Alder Creek via off-site drainages. Alder Creek is tributary to the American River. The lower American River is considered a navigable water. Thus, the wetlands and other waters may be considered connected with and/or adjacent to a waters of the U.S., and would therefore be subject to interstate and/or foreign commerce.

## **CONCLUSION**

A total of 2.830 acres of potential waters of the U.S. have been mapped on-site. These acreages represent a calculated estimation of the jurisdictional area within the site, and are subject to modification following the USACE verification process. Fill within jurisdictional features would require permitting pursuant to Section 404 and 401 of the federal Clean Water Act.

## REFERENCES

- AirPhoto USA. 2004. Aerial photograph of the site. Photo Dated: March 2004.
- Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. U. S. Army Engineer Waterways Experiment Station. Vicksburg, Mississippi.
- Headquarters, U.S. Army Corps of Engineers (HQUSACE). 1992. Clarification and Interpretation of the 1987 Manual. Memorandum from Major General Arthur E. Williams. Dated: 6 March 1992.
- Hickman, J. C. (ed.). 1993. The Jepson Manual: Higher Plants of California. University of California Press. Berkeley, California.
- Kollmorgen Instruments Company. 1990. Munsell Soil Color Charts. Kollmorgen Corporation. Baltimore, Maryland.
- Reed, P.B., Jr. 1988. National List of Plant Species that Occur in Wetlands: California (Region 0). (Biological Report 88[26.10].) U.S. Fish and Wildlife Service, Ft. Collins, Colorado.
- U.S. Army Corps of Engineers, Sacramento District. 2001. Minimum Standard for Acceptance of Preliminary Wetland Delineations. Dated: 30 November 2001.
- U.S. Army Corps of Engineers. 2006. Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region. ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-06-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- U.S. Department of Agriculture, Natural Resources Conservation Service. 2003. National Soil Survey Handbook, title 430-VI. Available Online: <http://soils.usda.gov/technical/handbook>.
- U.S. Department of Agriculture, Soil Conservation Service. 1993. Soil Survey of Sacramento County, California. U.S. Department of Agriculture, Soil Conservation Service. Davis, California.
- U.S. Department of Agriculture, Soil Conservation Service. 1992. Hydric Soils List for Sacramento County. U.S. Department of Agriculture, Soil Conservation Service, Davis, California.
- U.S. Department of the Interior, Geological Survey. 1978. Hydrologic Unit Map, State of California. Geological Survey. Reston, Virginia.
- U.S. Department of the Interior, Geological Survey. 1992. "Folsom, California" 7.5-minute Quadrangle. Geological Survey. Denver, Colorado.

## **LIST OF ATTACHMENTS**

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Attachment A – Wetland Determination Data Forms - Arid West Region

Attachment B – Aerial Photograph of the Site

Attachment C – Plant Species Observed On-Site

Attachment D – Wetland Delineation

Attachment E – Wetland Delineation Shape File (to be included with USACE submittal only)

Attachment F – USACE-Verified Wetland Map and Verification Letter (to be included in ECORP Consulting master copy only)



## **ATTACHMENT A**

---

Wetland Determination Data Forms - Arid West Region

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Javansford + Zhargami City/County: Sacramento County Sampling Date: 29 Mar 07  
 Applicant/Owner: Folsom South Owners Group State: CA Sampling Point: 1  
 Investigator(s): D. Brown Section, Township, Range: 17, 9 N, 8 E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 0  
 Subregion (LRR): Mediterranean California Lat: 38.62996 Long: -121.12962 Datum: NAD 83  
 Soil Map Unit Name: (237) Whiterock Loom, 3-30% Slopes NWI classification: NONE

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? no Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? no (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: <u>Seasonal rainfall totals are below average for this time of the year.</u> <u>Data point sampled in a vernal pool.</u>			

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Quercus douglasii</u>	<u>50</u>	<input checked="" type="checkbox"/>	<u>N/L</u>	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>66.6</u> (A/B)
4. _____	_____	_____	_____		
Total Cover:	<u>50</u>				
Sapling/Shrub Stratum				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL species <u>20</u>	x 1 = <u>20</u>
3. _____	_____	_____	_____	FACW species _____	x 2 = _____
4. _____	_____	_____	_____	FAC species <u>30</u>	x 3 = <u>90</u>
5. _____	_____	_____	_____	FACU species _____	x 4 = _____
Total Cover:	<u>0</u>	UPL species <u>30</u> x 5 = <u>150</u>			
Herb Stratum				Column Totals:	<u>80</u> (A) <u>260</u> (B)
1. <u>Ranunculus bonariensis</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>OBL</u>	Prevalence Index = B/A = <u>3.25</u>	
2. <u>Lolium multiflorum</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FAC</u>		
3. _____	_____	_____	_____	Hydrophytic Vegetation Indicators:	
4. _____	_____	_____	_____	<input checked="" type="checkbox"/> Dominance Test is >50%	
5. _____	_____	_____	_____	<input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
6. _____	_____	_____	_____	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
7. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
8. _____	_____	_____	_____		
Total Cover:	<u>50</u>	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.			
Woody Vine Stratum				Hydrophytic Vegetation Present?	
1. _____	_____	_____	_____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
2. _____	_____	_____	_____		
Total Cover:	<u>0</u>				
% Bare Ground in Herb Stratum <u>50</u> % Cover of Biotic Crust <u>0</u>					
Remarks: <u>Vegetation passes the dominance test.</u>					

# SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-10	10YR 5/2	60	10YR 4/6	40	C	PL	Loamy clay	Soil consists of small chunks of hardpan w/ low clay

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input checked="" type="checkbox"/> Vernal Pools (F9)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
--	---	--

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

<b>Restrictive Layer: (If present):</b> Type: <u>hard pan clay</u> Depth (inches): <u>10</u>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	--

Remarks: Hydric soil indicators F3 and F9 were observed at the sampling point.

# HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (any one indicator is sufficient)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input checked="" type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) <input type="checkbox"/> Other (Explain in Remarks)	<b>Secondary Indicators (2 or more required)</b> <input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)
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<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </u> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Primary indicator B9 present at sampling point. Algal matting observed. (B12)

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Javanifard + Zhargami City/County: Sacramento County Sampling Date: 29-Mar-07  
 Applicant/Owner: Folsom South Owners Group State: CA Sampling Point: 2  
 Investigator(s): D. Brown Section, Township, Range: 17, 9N, 8E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 4  
 Subregion (LRR): Mediterranean California Lat: 38.63001 Long: -121.12958 Datum: NAD 83  
 Soil Map Unit Name: (237) Whiterock Loam, 3-30% slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? no Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? no (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: <u>Rainfall totals are below average for this time of the year. Sampling point was taken within an upland area.</u>	

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u>	(A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u>	(B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u>	(A/B)
4. _____	_____	_____	_____		
Total Cover: <u>0</u>					
Sapling/Shrub Stratum				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of: _____	Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____	
3. _____	_____	_____	_____	FACW species _____ x 2 = _____	
4. _____	_____	_____	_____	FAC species _____ x 3 = _____	
5. _____	_____	_____	_____	FACU species <u>50</u> x 4 = <u>200</u>	
Total Cover: <u>0</u>				UPL species <u>50</u> x 5 = <u>250</u>	
				Column Totals: <u>100</u> (A)	<u>450</u> (B)
				Prevalence Index = B/A = <u>4.5</u>	
Herb Stratum				Hydrophytic Vegetation Indicators:	
1. <u>Amsinckia species</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>N/L</u>	<input type="checkbox"/> Dominance Test is >50%	
2. <u>Bromus diandrus</u>	<u>10</u>		<u>N/L</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
3. <u>Dichelostemma capitatum</u>	<u>5</u>		<u>N/L</u>	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
4. <u>Bromus hordeaceus</u>	<u>50</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
5. <u>Vicia species</u>	<u>5</u>		<u>N/L</u>		
6. <u>Geranium dissectum</u>	<u>10</u>		<u>N/L</u>		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
Total Cover: <u>100</u>					
Woody Vine Stratum				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
2. _____	_____	_____	_____		
Total Cover: <u>0</u>					
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>					

Remarks: Vegetation observed at sampling point is not hydrophytic.



## SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 4/4	100	-	-	-	-	loamy clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Redox (S5)           | <input type="checkbox"/> 1 cm Muck (A9) (LRR C)     |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Stripped Matrix (S6)       | <input type="checkbox"/> 2 cm Muck (A10) (LRR B)    |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Loamy Mucky Mineral (F1)   | <input type="checkbox"/> Reduced Vertic (F18)       |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   | <input type="checkbox"/> Red Parent Material (TF2)  |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)    | <input type="checkbox"/> Depleted Matrix (F3)       | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D)            | <input type="checkbox"/> Redox Dark Surface (F6)    |   |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) |   |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Redox Depressions (F8)     |   |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Vernal Pools (F9)          |   |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)          |   |   |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer, (if present):

Type: hard panDepth (inches): 6Hydric Soil Present? Yes ☐ No ☒Remarks: Soil observed at sampling point is not hydric.

## HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> Water Marks (B1) (Riverine)               |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)            | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                 | <input type="checkbox"/> Thin Muck Surface (C7)                    |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    | <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |  | <input type="checkbox"/> Shallow Aquitard (D3)                     |
|  |  | <input type="checkbox"/> FAC-Neutral Test (D5)                     |

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):         Water Table Present? Yes ☐ No ☒ Depth (inches):         Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches):         Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No wetland hydrology indicators were observed at sampling point.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Javanifard and Zhargami City/County: Sacramento County Sampling Date: 29 Mar 07  
 Applicant/Owner: Folsom South Owners Group State: CA Sampling Point: 3  
 Investigator(s): D. Brown Section, Township, Range: 17, 9 N, 8 E  
 Landform (hillslope, terrace, etc.): drainageway Local relief (concave, convex, none): concave Slope (%): 2  
 Subregion (LRR): Mediterranean California Lat: 38.63032 Long: -121.13112 Datum: NAD 83  
 Soil Map Unit Name: (237) Whiterock Loam, 3-30% slopes NWI classification: NONE

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? NO Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? NO (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: <u>Seasonal rainfall totals are below average for this time of year. Sampling point is located within a seep.</u>			

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____				
2. _____				Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)
4. _____				
Total Cover: <u>0</u>				
Sapling/Shrub Stratum				Prevalence Index worksheet:
1. _____				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species <u>45</u> x 1 = <u>45</u>
3. _____				FACW species <u>35</u> x 2 = <u>70</u>
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
Total Cover: <u>0</u>				UPL species <u>20</u> x 5 = <u>100</u>
Herb Stratum				Column Totals: <u>100</u> (A) <u>215</u> (B)
1. <u>Lythrum hyssopifolia</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	Prevalence Index = B/A = <u>2.15</u>
2. <u>Eleocharis obtusa</u>	<u>25</u>	<input checked="" type="checkbox"/>	<u>OBL</u>	
3. <u>Rumex crispus</u>	<u>15</u>		<u>FACW</u>	
4. <u>Geranium dissectum</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>N/L</u>	
5. <u>Mentha pulegium</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>OBL</u>	
6. _____				
7. _____				
8. _____				
Total Cover: <u>100</u>				
Woody Vine Stratum				Hydrophytic Vegetation Indicators:
1. _____				<input checked="" type="checkbox"/> Dominance Test is >50%
2. _____				<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>
				<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				

Remarks: Vegetation observed at this sampling point passes the dominance test and the prevalence index.

## SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-8	10YR 3/2	100	-	-	-	-	Sandy loam	
8-12	10YR 5/1	80	10YR 5/6	20	C	PL	loamy clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |  |
|--|--|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Redox (S5)                |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Stripped Matrix (S6)            |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Loamy Mucky Mineral (F1)        |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Gleyed Matrix (F2)        |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)    | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D)            | <input type="checkbox"/> Redox Dark Surface (F6)         |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7)      |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Redox Depressions (F8)          |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Vernal Pools (F9)               |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)          |  |

- |   |
|---|
| <input type="checkbox"/> 1 cm Muck (A9) (LRR C)     |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR B)    |
| <input type="checkbox"/> Reduced Vertic (F18)       |
| <input type="checkbox"/> Red Parent Material (TF2)  |
| <input type="checkbox"/> Other (Explain in Remarks) |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer: (If present):

Type: hard panDepth (inches): 12Hydric Soil Present? Yes ☒ No ☐Remarks: Soil observed at this sampling point meets hydric soil indicator (F3).

## HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> Water Marks (B1) (Riverine)               |
| <input checked="" type="checkbox"/> High Water Table (A2)          | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |
| <input checked="" type="checkbox"/> Saturation (A3)                | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)            | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                 | <input type="checkbox"/> Thin Muck Surface (C7)                    |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    | <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input checked="" type="checkbox"/> Water-Stained Leaves (B9)      |  | <input type="checkbox"/> Shallow Aquitard (D3)                     |
|  |  | <input checked="" type="checkbox"/> FAC-Neutral Test (D5)          |

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):  Water Table Present? Yes ☒ No ☐ Depth (inches): 8 inchesSaturation Present? Yes ☒ No ☐ Depth (inches): at surfaceWetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Wetland hydrology indicators observed at this sampling point include A2, A3, B9, B3, and D5.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Javanifard + Zhorgani City/County: Sacramento County Sampling Date: 29 MAR 07  
 Applicant/Owner: Folsom South Owners Group State: CA Sampling Point: 4  
 Investigator(s): D. Brown Section, Township, Range: 17, 9 N, 8 E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Convex Slope (%): 3  
 Subregion (LRR): Mediterranean California Lat: 38.63031 Long: -121.13123 Datum: NAD 83  
 Soil Map Unit Name: (237) Whitetack Loam, 3-30% slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? ☒ No ☐ Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? ☒ No (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: <u>Rainfall totals are below average for this time of the year.</u> <u>This sampling point was taken within an upland area.</u>	

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. _____				
Total Cover: <u>0</u>				
Sapling/Shrub Stratum				Prevalence Index worksheet:
1. _____				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species <u>15</u> x 2 = <u>30</u>
4. _____				FAC species <u>15</u> x 3 = <u>45</u>
5. _____				FACU species <u>30</u> x 4 = <u>120</u>
Total Cover: <u>0</u>				UPL species <u>40</u> x 5 = <u>200</u>
Herb Stratum				Column Totals: <u>100</u> (A) <u>395</u> (B)
1. <u>Lolium multiflorum</u>	<u>15</u>		<u>FAC</u>	Prevalence Index = B/A = <u>3.95</u>
2. <u>Geranium dissectum</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>N/L</u>	
3. <u>Rumex crispus</u>	<u>10</u>		<u>FACW</u>	
4. <u>Lythrum hyssopifolia</u>	<u>5</u>		<u>FACW</u>	
5. <u>Bromus hordeaceus</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
6. _____				
7. _____				
8. _____				
Total Cover: <u>100</u>				
Woody Vine Stratum				Hydrophytic Vegetation Indicators:
1. _____				<input type="checkbox"/> Dominance Test is >50%
2. _____				<input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>
Total Cover: <u>0</u>				<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
% Bare Ground in Herb Stratum <u>100</u> % Cover of Biotic Crust <u>0</u>				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Remarks: Vegetation observed at this sampling point doesn't pass the dominance test or the prevalence index.

## SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
16	10YR 4/3	100	—	—	—	—	loamy clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: NONE

Depth (inches):

Hydric Soil Present? Yes ☐ No ☒Remarks: Soil observed at this sampling point doesn't contain any hydric soil indicators.

## HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquifer (D3)
		<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):Water Table Present? Yes ☐ No ☒ Depth (inches):Saturation Present? Yes ☐ No ☒ Depth (inches):

(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No indicators of wetland hydrology were observed at this sampling point.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Javanifard and Zhargami City/County: Sacramento County Sampling Date: 29 MAR 07  
 Applicant/Owner: Folsom South Owners Group State: CA Sampling Point: 5  
 Investigator(s): D. Brown Section, Township, Range: 17, 9N, 8E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 1  
 Subregion (LRR): Mediterranean California Lat: 38.62960 Long: -121.13112 Datum: NAD 83  
 Soil Map Unit Name: (237) Whiterock Loam, 3-30% slopes NWI classification: PUBHH

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? No ☒ Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? No ☒ (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: <u>Rainfall totals are below average for this time of the year. This sampling point was taken within a stock pond (water of the U.S.).</u>		

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: <u>0</u>				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species <u>85</u> x 1 = <u>85</u> FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species <u>5</u> x 5 = <u>25</u> Column Totals: <u>90</u> (A) <u>110</u> (B)  Prevalence Index = B/A = <u>1.22</u>
Sapling/Shrub Stratum 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: <u>0</u>				
Herb Stratum 1. <u>Eleocharis obtusa</u> <u>60</u> <input checked="" type="checkbox"/> <u>OBL</u> 2. <u>Mentha pulegium</u> <u>10</u> <input type="checkbox"/> <u>OBL</u> 3. <u>Geranium dissectum</u> <u>5</u> <input type="checkbox"/> <u>N/L</u> 4. <u>Lemna species</u> <u>5</u> <input type="checkbox"/> <u>OBL</u> 5. <u>Ludwigia peploides var peploides</u> <u>10</u> <input type="checkbox"/> <u>OBL</u> 6. _____ 7. _____ 8. _____ Total Cover: <u>90</u>				
Woody Vine Stratum 1. _____ 2. _____ Total Cover: <u>0</u>				
% Bare Ground in Herb Stratum <u>10</u> % Cover of Biotic Crust _____				
Remarks: <u>Vegetation observed at this sampling point passes the dominance test and the prevalence index.</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

## SOIL

Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 4/2	100	-	-	-	-	silty loam	
2-3	10YR 3/2	100	-	-	-	-	loamy sand	
3-10	10YR 4/1	50	10YR 4/4	50	C	M	loamy clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |  |
|--|--|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Redox (S5)                |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Stripped Matrix (S6)            |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Loamy Mucky Mineral (F1)        |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Gleyed Matrix (F2)        |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)    | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D)            | <input type="checkbox"/> Redox Dark Surface (F6)         |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7)      |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Redox Depressions (F8)          |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Vernal Pools (F9)               |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)          |  |

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer: (If present):

Type: hardpanDepth (inches): 10Hydric Soil Present? Yes ☒ No ☐

Remarks: Soil observed at this sampling point meets criteria for hydric soil indicator F3.

## HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- |  |  |  |
|--|--|--|
| <input checked="" type="checkbox"/> Surface Water (A1)             | <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> Water Marks (B1) (Riverine)               |
| <input checked="" type="checkbox"/> High Water Table (A2)          | <input checked="" type="checkbox"/> Biotic Crust (B12)                 | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |
| <input checked="" type="checkbox"/> Saturation (A3)                | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |
| <input checked="" type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                 | <input type="checkbox"/> Thin Muck Surface (C7)                    |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    | <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |  | <input type="checkbox"/> Shallow Aquitard (D3)                     |
|  |  | <input checked="" type="checkbox"/> FAC-Neutral Test (D5)          |

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 1 inchWater Table Present? Yes ☒ No ☐ Depth (inches): at surfaceSaturation Present? Yes ☒ No ☐ Depth (inches): at surface  
(includes capillary fringe)Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Algal matting present. Wetland hydrology indicators A1, A2, A3, B1, B2, and D5 were observed at this sampling point.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Javanaford + Zhargami City/County: Sacramento County Sampling Date: 29 Mar 07  
 Applicant/Owner: Folsom South Owners Group State: CA Sampling Point: 6  
 Investigator(s): D. Brown Section, Township, Range: 17, 9 N, 8 E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 3  
 Subregion (LRR): Mediterranean California Lat: 38.62959 Long: -121.13118 Datum: NAD 83  
 Soil Map Unit Name: (237) Whitetock Lm, 3-30% slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? no Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? no (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Remarks: Rainfall totals are below average for this time of the year.  
This sampling point is located within an upland area.

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
Total Cover: <u>0</u>				
<b>Sapling/Shrub Stratum</b>				
1. _____				Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 <sup>1</sup> ___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. _____				
3. _____				
4. _____				
Total Cover: <u>0</u>				
<b>Herb Stratum</b>				
1. <u>Trifolium species</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>N/L</u>	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
2. <u>Bromus diandrus</u>	<u>25</u>	<input checked="" type="checkbox"/>	<u>N/L</u>	
3. <u>Gallium species</u>	<u>5</u>		<u>--</u>	
4. <u>Geranium dissectum</u>	<u>10</u>		<u>N/L</u>	
5. <u>Erodium botrys</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>N/L</u>	
6. _____				
7. _____				
8. _____				
Total Cover: <u>100</u>				
<b>Woody Vine Stratum</b>				
1. _____				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
2. _____				
Total Cover: <u>0</u>				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				

Remarks: Vegetation observed at this sampling point fails the dominance test and the prevalence index.



## SOIL

Sampling Point: 6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 3/4	100	-	-	-	-	clay loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5) (LRR C)  
☐ 1 cm Muck (A9) (LRR D)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Sandy Mucky Mineral (S1)  
☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Loamy Mucky Mineral (F1)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Vernal Pools (F9)

- ☐ 1 cm Muck (A9) (LRR C)  
☐ 2 cm Muck (A10) (LRR B)  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (TF2)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: hardpanDepth (inches): 6Hydric Soil Present? Yes ☐ No ☒Remarks: No hydric soil indicators were observed at this sampling point.

## HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)  
☐ High Water Table (A2)  
☐ Saturation (A3)  
☐ Water Marks (B1) (Nonriverine)  
☐ Sediment Deposits (B2) (Nonriverine)  
☐ Drift Deposits (B3) (Nonriverine)  
☐ Surface Soil Cracks (B6)  
☐ Inundation Visible on Aerial Imagery (B7)  
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)  
☐ Biotic Crust (B12)  
☐ Aquatic Invertebrates (B13)  
☐ Hydrogen Sulfide Odor (C1)  
☐ Oxidized Rhizospheres along Living Roots (C3)  
☐ Presence of Reduced Iron (C4)  
☐ Recent Iron Reduction in Plowed Soils (C6)  
☐ Other (Explain in Remarks)
- ☐ Water Marks (B1) (Riverine)  
☐ Sediment Deposits (B2) (Riverine)  
☐ Drift Deposits (B3) (Riverine)  
☐ Drainage Patterns (B10)  
☐ Dry-Season Water Table (C2)  
☐ Thin Muck Surface (C7)  
☐ Crayfish Burrows (C8)  
☐ Saturation Visible on Aerial Imagery (C9)  
☐ Shallow Aquitard (D3)  
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No indicators of wetland hydrology were observed at this sampling point.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Javanaford and Zhargani City/County: Sacramento County Sampling Date: 29 Mar 07  
 Applicant/Owner: Folsom South Owners Group State: CA Sampling Point: 7  
 Investigator(s): D. Brown Section, Township, Range: 17, 9 N, 8 E  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 1  
 Subregion (LRR): Mediterranean California Lat: 38.62874 Long: -121.13151 Datum: NAD 83  
 Soil Map Unit Name: (237) Whiterock Loam, 3-30% slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? NO Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? NO (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: <u>Rainfall totals are below average for this time of the year. Sampling point was taken within a seasonal wetland swale.</u>			

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC:	<u>3</u> (A)
2. _____				Total Number of Dominant Species Across All Strata:	<u>3</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100</u> (A/B)
4. _____					
Total Cover:	<u>0</u>				
<u>Sapling/Shrub Stratum</u>				<u>Prevalence Index worksheet:</u>	
1. _____				Total % Cover of:	Multiply by:
2. _____				OBL species <u>5</u>	x 1 = <u>5</u>
3. _____				FACW species <u>80</u>	x 2 = <u>160</u>
4. _____				FAC species <u>5</u>	x 3 = <u>15</u>
5. _____				FACU species _____	x 4 = _____
Total Cover:	<u>0</u>			UPL species <u>10</u>	x 5 = <u>50</u>
<u>Herb Stratum</u>				Column Totals:	<u>100</u> (A) <u>230</u> (B)
1. <u>Eleocharis obtusa</u>	<u>5</u>		<u>OBL</u>	Prevalence Index = B/A = <u>2.3</u>	
2. <u>Rumex crispus</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	<u>Hydrophytic Vegetation Indicators:</u>	
3. <u>Linanthus species</u>	<u>10</u>		<u>FACW</u>	<input checked="" type="checkbox"/> Dominance Test is >50%	
4. <u>Lolium multiflorum</u>	<u>5</u>		<u>FAC</u>	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
5. <u>Geranium dissectum</u>	<u>10</u>		<u>N/L</u>	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
6. <u>Lythrum hyssopifolia</u>	<u>5</u>		<u>FACW</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
7. <u>Trifolium variegatum</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
8. <u>Carex praegracilis</u>	<u>35</u>	<input checked="" type="checkbox"/>	<u>FACW</u>		
Total Cover:	<u>100</u>			<u>Hydrophytic Vegetation Present?</u> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
<u>Woody Vine Stratum</u>					
1. _____					
2. _____					
Total Cover:	<u>0</u>				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>					
Remarks: <u>Vegetation observed at this sampling point passes the dominance test and the prevalence index.</u>					

Sampling Point: 7

## HYDROLOGY

Arid West – Version 11-1-2006

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Javahard and Zhargami City/County: Sacramento County Sampling Date: 29 Mar 07  
 Applicant/Owner: Folsom South Owners Group State: CA Sampling Point: 8  
 Investigator(s): D. Brown Section, Township, Range: 17, 9 N, 8 E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): CONVEX Slope (%): 3  
 Subregion (LRR): Mediterranean California Lat: 38.62871 Long: -121.13154 Datum: NAD 83  
 Soil Map Unit Name: (237) Whiterock Loam, 3-30% Slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? no Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? no (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: <u>Rainfall totals are below average for this time of the year. This sampling point was taken within an upland area.</u>	

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. _____				
Total Cover: <u>0</u>				
Sapling/Shrub Stratum				Prevalence Index worksheet:
1. _____				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species <u>10</u> x 3 = <u>30</u>
5. _____				FACU species <u>60</u> x 4 = <u>240</u>
Total Cover: <u>0</u>				UPL species <u>30</u> x 5 = <u>150</u>
Herb Stratum				Column Totals: <u>100</u> (A) <u>420</u> (B)
1. <u>Erodium botrys</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>N/L</u>	Prevalence Index = B/A = <u>4.2</u>
2. <u>Lactuca serriola</u>	<u>10</u>		<u>FAC</u>	
3. <u>Bromus hordeaceus</u>	<u>60</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
Total Cover: <u>100</u>				
Woody Vine Stratum				Hydrophytic Vegetation Indicators:
1. _____				<input type="checkbox"/> Dominance Test is >50%
2. _____				<input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>
				<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: <u>Vegetation observed at this sampling point fails to pass the dominance test and the prevalence index.</u>				

## SOIL

Sampling Point: 8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-10	10YR 4/4	100	—	—	—	—	clay loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (LRR C)
- ☐ 1 cm Muck (A9) (LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer: (If present):

Type: hardpanDepth (inches): 10Hydric Soil Present? Yes ☐ No ☒Remarks: Soil observed at this sampling point isn't hydric.

## HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (Nonriverine)
- ☐ Sediment Deposits (B2) (Nonriverine)
- ☐ Drift Deposits (B3) (Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)

- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):           Water Table Present? Yes ☐ No ☒ Depth (inches):           Saturation Present? Yes ☐ No ☒ Depth (inches):             
(includes capillary fringe)Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No indicators of wetland hydrology were observed at this sampling point.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Javanafard and Zhargami City/County: Sacramento County Sampling Date: 29 Mar 07  
 Applicant/Owner: Folsom South Owners Group State: CA Sampling Point: 9  
 Investigator(s): D. Brown Section, Township, Range: 17, 9N, 8E  
 Landform (hillslope, terrace, etc.): drainageway Local relief (concave, convex, none): concave Slope (%): 3  
 Subregion (LRR): Mediterranean California Lat: 38.62841 Long: -121.13189 Datum: NAD 83  
 Soil Map Unit Name: (237) Whiterock Loam 3-30% slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? NO Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? NO (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: <u>Rainfall totals are below average for this time of the year. This sampling point is located within an ephemeral drainage (other waters of the US). Limits of the feature were mapped at the O.H.W.M.</u>	

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____				
Total Cover: <u>0</u>				
Sapling/Shrub Stratum				Prevalence Index worksheet:
1. _____				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species <u>85</u> x 2 = <u>170</u>
4. _____				FAC species <u>10</u> x 3 = <u>30</u>
5. _____				FACU species _____ x 4 = _____
Total Cover: <u>0</u>				UPL species _____ x 5 = _____
Herb Stratum				Column Totals: <u>95</u> (A) <u>200</u> (B)
1. <u>Lactuca scariola</u>	<u>10</u>		<u>FAC</u>	Prevalence Index = B/A = <u>2.1</u>
2. <u>Limnanthus species</u>	<u>70</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
3. <u>Ranunculus muricatus</u>	<u>10</u>		<u>FACW</u>	Hydrophytic Vegetation Indicators:
4. <u>Rumex crispus</u>	<u>5</u>		<u>FACW</u>	<input checked="" type="checkbox"/> Dominance Test is >50%
5. _____				<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>
6. _____				____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
7. _____				____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
8. _____				
Total Cover: <u>95</u>				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
Woody Vine Stratum				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. _____				
2. _____				
Total Cover: <u>0</u>				
% Bare Ground in Herb Stratum <u>5</u> % Cover of Biotic Crust <u>0</u>				
Remarks: <u>Vegetation observed at this sampling point passes the dominance test and the prevalence index. Sampling point was located within a vegetated section of the drainage. Most of the drainage channel is un vegetated due to scour.</u>				

## SOIL

Sampling Point: 9

Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of Indicators.)

Depth (inches)	Matrix		Redox Features		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-8	10YR 3/1	90	10YR 4/3	10	L	PL	loamy clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5) (LRR C)  
☐ 1 cm Muck (A9) (LRR D)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Sandy Mucky Mineral (S1)  
☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Loamy Mucky Mineral (F1)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☒ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Vernal Pools (F9)

- ☐ 1 cm Muck (A9) (LRR C)  
☐ 2 cm Muck (A10) (LRR B)  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (TF2)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer, (if present):

Type: bedrockDepth (inches): 8Hydric Soil Present? Yes ☒ No ☐Remarks: Soil observed at this sampling point has Redox Dark Surface (F6)

## HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)  
☐ High Water Table (A2)  
☒ Saturation (A3)  
☐ Water Marks (B1) (Nonriverine)  
☐ Sediment Deposits (B2) (Nonriverine)  
☐ Drift Deposits (B3) (Nonriverine)  
☐ Surface Soil Cracks (B6)  
☐ Inundation Visible on Aerial Imagery (B7)  
☐ Water-Stained Leaves (B9)

- ☐ Salt Crust (B11)  
☐ Biotic Crust (B12)  
☐ Aquatic Invertebrates (B13)  
☐ Hydrogen Sulfide Odor (C1)  
☐ Oxidized Rhizospheres along Living Roots (C3)  
☐ Presence of Reduced Iron (C4)  
☐ Recent Iron Reduction in Flowed Soils (C6)  
☐ Other (Explain in Remarks)

- ☐ Water Marks (B1) (Riverine)  
☐ Sediment Deposits (B2) (Riverine)  
☐ Drift Deposits (B3) (Riverine)  
☐ Drainage Patterns (B10)  
☐ Dry-Season Water Table (C2)  
☐ Thin Muck Surface (C7)  
☐ Crayfish Burrows (C8)  
☐ Saturation Visible on Aerial Imagery (C9)  
☐ Shallow Aquitard (D3)  
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes ☒ No ☐ Depth (inches): 6  
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Saturation was observed at a depth of 6 inches at this sampling point.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Javanafard and Zhargami City/County: Sacramento County Sampling Date: 29 Mar 07  
 Applicant/Owner: Folsom South Owners Group State: CA Sampling Point: 10  
 Investigator(s): D. Brown Section, Township, Range: 17, 9 N, 8 E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 4  
 Subregion (LRR): Mediterranean California Lat: 38.62846 Long: -121.13193 Datum: NAD 83  
 Soil Map Unit Name: (237) Whiterock Loam, 3-30% slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? no Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? no (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: <u>Rainfall totals are below average for this time of the year. Sampling point is located within an upland area.</u>		

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. _____				
Total Cover: <u>0</u>				
Sapling/Shrub Stratum				Prevalence Index worksheet:
1. _____				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species <u>trace</u> x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species <u>25</u> x 4 = <u>100</u>
Total Cover: <u>0</u>				UPL species <u>75</u> x 5 = <u>375</u>
Herb Stratum				Column Totals: <u>100</u> (A) <u>475</u> (B)
1. <u>Erodium Botrys</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>N/L</u>	Prevalence Index = B/A = <u>4.75</u>
2. <u>Bromus hordeaceus</u>	<u>25</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
3. <u>Carduus pycnocephalus</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>N/L</u>	Hydrophytic Vegetation Indicators:
4. <u>Geranium dissectum</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>N/L</u>	___ Dominance Test is >50%
5. <u>Briza minor</u>	<u>trace</u>		<u>FACW</u>	___ Prevalence Index is ≤3.0 <sup>1</sup>
6. <u>Amsinckia species</u>	<u>5</u>		<u>N/L</u>	___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
7. _____				___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
8. _____				
Total Cover: <u>100</u>				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
Woody Vine Stratum				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
1. _____				
2. _____				
Total Cover: <u>0</u>				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				
Remarks: <u>Vegetation observed at this sampling point fails the dominance test and the prevalence index.</u>				



## SOIL

Sampling Point: 10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-4	10YR 5/3	100	-	-	-	-	clay loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer: (If present):

Type: hardpanDepth (inches): 4Hydric Soil Present? Yes ☐ No ☒Remarks: Soil observed at this sampling point does not contain any hydric soil indicators.

## HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
		<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Water Table Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Saturation Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
(includes capillary fringe)Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No indicators of wetland hydrology were observed at this sampling point.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Javanafard and Zhargami City/County: Sacramento County Sampling Date: 29 Mar 07  
 Applicant/Owner: Folsom South Owners Group State: CA Sampling Point: 11  
 Investigator(s): D. Brown Section, Township, Range: 17, 9 N, 8 E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 0  
 Subregion (LRR): Mediterranean California Lat: 38.62848 Long: -121.13237 Datum: NAD 83  
 Soil Map Unit Name: (237) Whiterock Loam, 3-30% slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? no Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? no (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: <u>Rainfall totals are below average for this time of the year. Sampling point is located within a seasonal wetland.</u>	

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____				
Total Cover: <u>0</u>				
Sapling/Shrub Stratum				Prevalence Index worksheet:
1. _____				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species <u>30</u> x 1 = <u>30</u>
3. _____				FACW species <u>5</u> x 2 = <u>10</u>
4. _____				FAC species <u>15</u> x 3 = <u>45</u>
5. _____				FACU species _____ x 4 = _____
Total Cover: _____				UPL species _____ x 5 = _____
Herb Stratum				Column Totals: <u>50</u> (A) <u>85</u> (B)
1. <u>Ranunculus bonariensis</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>OBL</u>	Prevalence Index = B/A = <u>1.7</u>
2. <u>Limnathes species</u>	<u>5</u>		<u>FACW</u>	Hydrophytic Vegetation Indicators:
3. <u>Lolium multiflorum</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	<input checked="" type="checkbox"/> Dominance Test is >50%
4. _____				<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>
5. _____				____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
6. _____				____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
7. _____				
8. _____				
Total Cover: <u>50</u>				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
Woody Vine Stratum				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. _____				
2. _____				
Total Cover: _____				
% Bare Ground in Herb Stratum <u>50</u>				
% Cover of Biotic Crust _____				

Remarks: Vegetation observed at this sampling point passes the dominance test and the prevalence index.

## SOIL

Sampling Point: 11

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)	
Primary Indicators (any one indicator is sufficient)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)	
<input type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)	
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)	
		<input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations:			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____		
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (includes capillary fringe)	Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: algal matting was observed at this sampling point			

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Javanaford and Zhargami City/County: Sacramento County Sampling Date: 29 Mar 07

Applicant/Owner: Folsom South Owners Group State: CA Sampling Point: 12

Investigator(s): D. Brown Section, Township, Range: 17, 9 N, 8 E

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 3

Subregion (LRR): Mediterranean California Lat: 38.62850 Long: -120.13236 Datum: NAD83

Soil Map Unit Name: (273) Whiterock Loam, 3-30% slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)

Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? NO Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? NO (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: <u>Rainfall totals are below average for this time of the year. Sampling point is located within an upland area.</u>	

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
Total Cover: <u>0</u>				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species <u>10</u> x 2 = <u>20</u> FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species <u>90</u> x 5 = <u>450</u> Column Totals: <u>100</u> (A) <u>470</u> (B)  Prevalence Index = B/A = <u>4.7</u>
<b>Sapling/Shrub Stratum</b> 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: <u>0</u>				
<b>Herb Stratum</b> 1. <u>Erodium cicutarium</u> <u>40</u> <input checked="" type="checkbox"/> <u>N/L</u> 2. <u>Triphysaria eriantha</u> <u>10</u> <input type="checkbox"/> <u>N/L</u> 3. <u>Trifolium species</u> <u>5</u> <input type="checkbox"/> <u>--</u> 4. <u>Bromus diandrus</u> <u>25</u> <input checked="" type="checkbox"/> <u>N/L</u> 5. <u>Trifolium variegatum</u> <u>10</u> <input type="checkbox"/> <u>FACW</u> 6. <u>Vicia species</u> <u>5</u> <input type="checkbox"/> <u>N/L</u> 7. <u>Geranium dissectum</u> <u>5</u> <input type="checkbox"/> <u>N/L</u> 8. _____ Total Cover: <u>100</u>				
<b>Woody Vine Stratum</b> 1. _____ 2. _____ Total Cover: <u>0</u>				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				
<b>Remarks:</b> <u>Vegetation observed at this sampling point doesn't pass the prevalence index or the dominance test.</u>				<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

## SOIL

Sampling Point: 12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

### Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Redox (S5)           | <input type="checkbox"/> 1 cm Muck (A9) (LRR C)     |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Stripped Matrix (S6)       | <input type="checkbox"/> 2 cm Muck (A10) (LRR B)    |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Loamy Mucky Mineral (F1)   | <input type="checkbox"/> Reduced Vertic (F18)       |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   | <input type="checkbox"/> Red Parent Material (TF2)  |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)    | <input type="checkbox"/> Depleted Matrix (F3)       | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D)            | <input type="checkbox"/> Redox Dark Surface (F6)    |   |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) |   |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Redox Depressions (F8)     |   |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Vernal Pools (F9)          |   |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)          |   |   |
- <sup>a</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

<sup>3</sup>indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (If present):

Type: hardpan

Depth (inches): 2

Hydric Soil Present? Yes \_\_\_\_\_ No ☒

Remarks: Soil observed at this sampling point does not have any hydric soil indicators.

## HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- |   |   |   |
|---|---|---|
| ___ Surface Water (A1)                        | ___ Salt Crust (B11)                              | ___ Sediment Deposits (B2) (Riverine)         |
| ___ High Water Table (A2)                     | ___ Biotic Crust (B12)                            | ___ Drift Deposits (B3) (Riverine)            |
| ___ Saturation (A3)                           | ___ Aquatic Invertebrates (B13)                   | ___ Drainage Patterns (B10)                   |
| ___ Water Marks (B1) (Nonriverine)            | ___ Hydrogen Sulfide Odor (C1)                    | ___ Dry-Season Water Table (C2)               |
| ___ Sediment Deposits (B2) (Nonriverine)      | ___ Oxidized Rhizospheres along Living Roots (C3) | ___ Thin Muck Surface (C7)                    |
| ___ Drift Deposits (B3) (Nonriverine)         | ___ Presence of Reduced Iron (C4)                 | ___ Crayfish Burrows (C8)                     |
| ___ Surface Soil Cracks (B6)                  | ___ Recent Iron Reduction in Plowed Soils (C6)    | ___ Saturation Visible on Aerial Imagery (C9) |
| ___ Inundation Visible on Aerial Imagery (B7) | ___ Other (Explain in Remarks)                    | ___ Shallow Aquitard (D3)                     |
| ___ Water-Stained Leaves (B9)                 |   | ___ FAC-Neutral Test (D5)                     |

Field Observations:

Surface Water Present? Yes \_\_\_\_\_ No ☒ Depth (inches): \_\_\_\_\_

Water Table Present? Yes \_\_\_\_\_ No ☒ Depth (inches): \_\_\_\_\_

Saturation Present? Yes \_\_\_\_\_ No ☒ Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes \_\_\_\_\_ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No indicators of wetland hydrology were observed at this sampling point.

## **ATTACHMENT B**

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Aerial Photograph of the Site



## ATTACHMENT C

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Plant Species Observed On-Site

**Folsom South Owners Group – Javanifard and Zhargami Parcel**  
**Wetland Delineation**  
**Plant Species Observed On-Site**

<b>Abbr.</b>	<b>Scientific Name</b>	<b>Common Name</b>	<b>Indicator Status</b>
ALN spe.	<i>Alnus</i> species	Alder	N/L
AMS spe.	<i>Amsinckia</i> species	Fiddle-neck	--
AVE FAT	<i>Avena fatua</i>	Wild oat	N/L
BRA spe.	<i>Brassica</i> species	Mustard	N/L
BRI MIN	<i>Briza minor</i>	Little quaking grass	FACW-
BRO HOR	<i>Bromus hordeaceus</i>	Soft brome	FACU-
BRO DIA	<i>Bromus diandrus</i>	Ripgut brome	N/L
CAR PYC	<i>Carduus pycnocephalus</i>	Italian thistle	N/L
CAR PRA	<i>Carex praegracilis</i>	Clustered field sedge	FACW-
DIC CAP	<i>Dichelostemma capitatum</i>	Blue dicks	N/L
ELE OBT	<i>Eleocharis obtusa</i>	Spikerush	OBL
ERO BOT	<i>Erodium botrys</i>	Filaree	N/L
EUC GLO	<i>Eucalyptus globules</i>	Blue gum	N/L
GAL spe.	<i>Galium</i> species	Bedstraw	--
GER DIS	<i>Geranium dissectum</i>	Cut-leaved geranium	N/L
HOL VIR	<i>Holocarpha virgata</i>	Sticky tarweed	N/L
HOR MAR	<i>Hordeum marinum</i>	Mediterranean barley	FAC
HOR MUR	<i>Hordeum murinum</i>	Barley	NI
LAC SER	<i>Lactuca serriola</i>	Prickly lettuce	FAC
LAG IND	<i>Lagerstroemia indica</i>	Crape myrtle	N/L
LEM spe.	<i>Lemna</i> species	Duckweed	OBL
LIL spe.	<i>Lilium</i> species	Lily	N/L
LIM spe.	<i>Limnathes</i> species	Meadowfoam	FACW
LOL MUL	<i>Lolium multiflorum</i>	Mediterranean ryegrass	FAC*
LUD PEP	<i>Ludwigia peploides</i> var. <i>peploides</i>	Water primrose	OBL
LYT HYS	<i>Lythrum hyssopifolia</i>	Hyssop loosestrife	FACW
MAL PAR	<i>Malva parviflora</i>	Cheeseweed	N/L
MEN PUL	<i>Mentha pulegium</i>	Pennyroyal	OBL
PAS DIL	<i>Paspalum dilatatum</i>	Dallis grass	FAC
PLA LAN	<i>Plantago lanceolata</i>	English plantain	FAC-
QUA DOU	<i>Quercus douglasii</i>	Blue oak	N/L
QUA WIS	<i>Quercus wislizenii</i>	Interior live oak	N/L
RAN BON	<i>Ranunculus bonariensis</i>	Carter's buttercup	OBL
RAN MUR	<i>Ranunculus muricatus</i>	Spiny-fruit buttercup	FACW+
RUB ARM	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW
RUM CON	<i>Rumex conglomeratus</i>	Clustered dock	FACW
RUM CRI	<i>Rumex crispus</i>	Curly dock	FACW
SAL BAB	<i>Salix babylonica</i>	Weeping willow	FACW-
TAE CAP	<i>Taeniatherum caput-medusae</i>	Medusahead grass	N/L
TRI HIR	<i>Trifolium variegatum</i>	White-tip clover	N/L
TRI ERI	<i>Triphysaria eriantha</i>	Butter and eggs	N/L
VIC spe.	<i>Vicia</i> species	Vetch	--



**Folsom South Owners Group – Javanifard and Zhargami Parcel**  
**Wetland Delineation**  
**Plant Species Observed On-Site (Continued)**

**Indicator Status Codes**

**OBL** = Obligate Wetland; occur almost always (estimated probability >99%) under natural conditions in wetlands.

**FACW** = Facultative Wetland; usually occur in wetlands (estimated probability 67%-99%) under natural conditions in wetlands.

**FAC** = Facultative; equally likely to occur in wetlands or non-wetlands (estimated probability 34%-66%).

**FACU** = Facultative Upland; usually occur in non-wetlands (estimated probability 67%-99%).

**UPL** = Obligate Upland; occur almost always (estimated probability >99%) in non-wetlands in the region specified.

**N/L** = Not Listed.

**NI** = No indicator was recorded for those species for which insufficient information was available to determine a status.

-- = May or may not occur in wetlands depending upon species.

A positive (+) sign indicates a frequency toward the higher (more frequently found in wetlands) end of the facultative categories.

A negative (-) sign indicates a frequency toward the lower (less frequently found in wetlands) end of the facultative categories.

An asterisk (\*) indicates a tentative assignment based upon limited information or conflicting review.

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## **ATTACHMENT D**

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Wetland Delineation

## **ATTACHMENT E**

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Wetland Delineation Shape File (to be include with USACE submittal only)



## **ATTACHMENT F**

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USACE-Verified Wetland Map and Verification Letter (to be included in ECORP  
Consulting master copy only)

## **APPENDIX D17**

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Preliminary Delineation of Waters of the  
United States Folsom Heights Property

# Preliminary Delineation of Waters of the United States Folsom Heights Property



Prepared by:  
EDAW  
2022 J Street  
Sacramento, CA 95814

March 18, 2008



Preliminary Delineation of Waters of the United States  
**Folsom Height Property**



Prepared for:

Centex Homes  
3700 Douglas Blvd., Suite 150  
Roseville, CA 95661

Attn: John Jarecki

Prepared by:

EDAW  
2022 J Street  
Sacramento, CA 95814

Contact:

Petra Unger or Tammie Beyerl  
916/414-5800

March 18, 2008





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## ACRONYMS AND ABBREVIATIONS

CWA	Clean Water Act
FAC	facultative
FACU	facultative upland
FACW	facultative wetland
FS	freshwater seep
GPS	global positioning system
ID	intermittent drainage
msl	mean sea level
NI	no indicator
NL	not listed
NRCS	Natural Resources Conservation Service
OBL	obligate
OHWM	ordinary high water mark
S	Swale
SP	Seep
SW	Seasonal Wetland
UPL	upland
USACE	U.S. Army Corps of Engineers
USFS	United States Forest Service
USGS	U.S. Geological Survey
WS	Willow Scrub

## INTRODUCTION

The Folsom Heights project site is located on the Sacramento-El Dorado County line and is bordered by Highway 50 to the north and White Rock Road to the south (Exhibits 1 and 2). The site is within Sacramento County, adjacent to the El Dorado County line. The site (APN numbers 072 0270 028, 072 0070 001 and 072 0070 023) is within the watershed of Carson Creek, a tributary to Deer Creek, which is tributary to the Cosumnes River. The approximately 189-acre project site has an elevation range of approximately 550 to 800 feet and is within the Clarksville USGS 7.5-minute quadrangle.

The project site is predominantly characterized by annual grassland on gently sloping to steep topography. Also present on the project site are seasonal wetland, freshwater seeps, swales, intermittent drainage, and willow scrub. The site is currently undeveloped but traversed by a number of dirt roads. Current surrounding land use includes residential, commercial, and cattle grazing with residential and commercial development planned for much of the undeveloped land immediately adjacent to the south and east.

This report presents the results of the delineation of waters of the United States, as defined by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA), for the project site. It is considered preliminary until verified by the Sacramento District of the USACE.

## DELINEATION METHODS

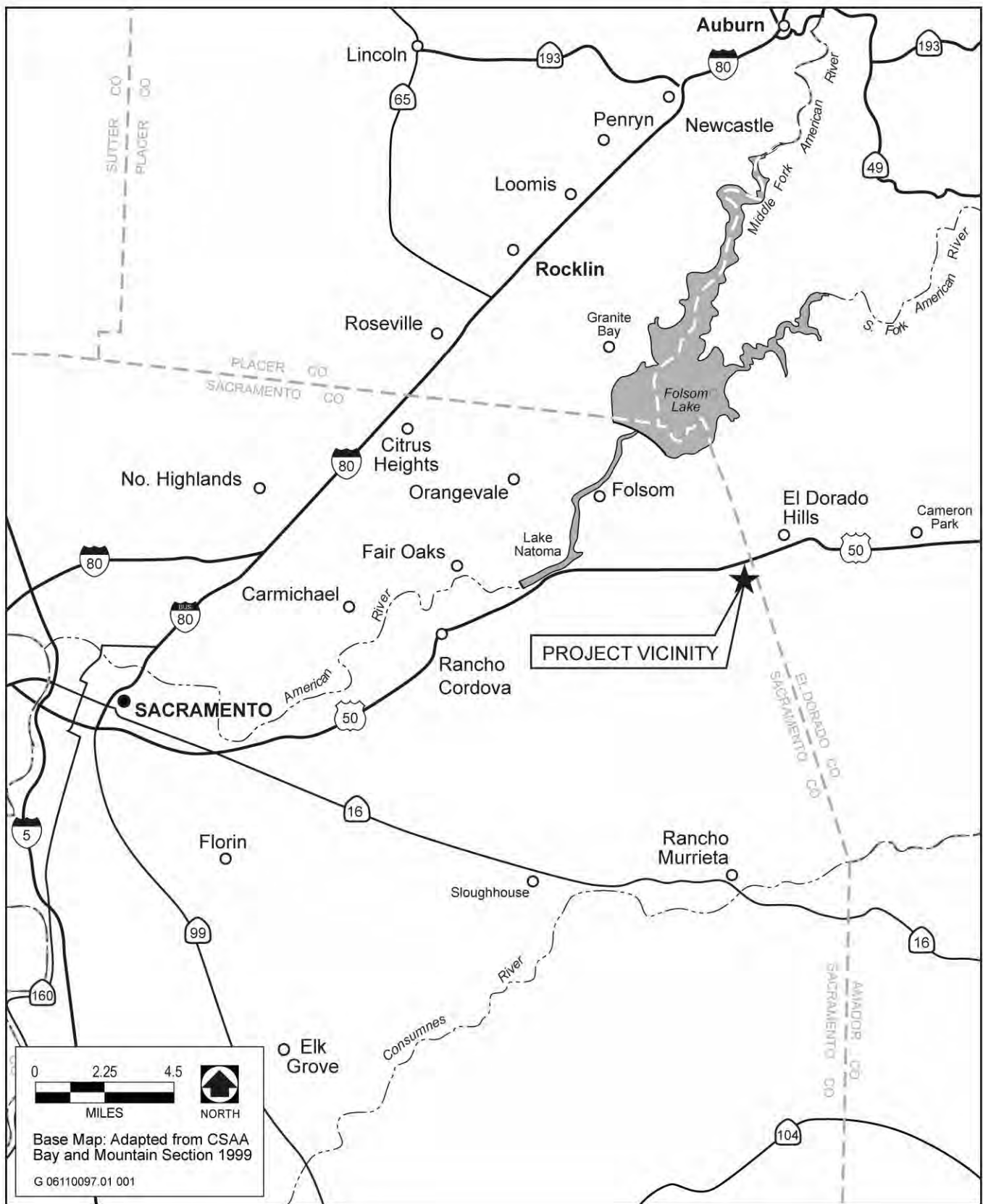
Before conducting the field delineation survey of the project site, EDAW biologists reviewed a color aerial photograph of the study site (1 inch = 200 feet scale) obtained from Centex Homes and the previously prepared biological constraints report (Foothill Associates 2005) to determine areas of potential USACE jurisdiction. The project site was surveyed on May 11 and 18, 2006 by EDAW wetland ecologists Tammie Beyerl and Petra Unger. There were no precipitation events in the area in the weeks immediately preceding the delineation but there was above average precipitation in the area through March and early April 2006.

## WETLANDS

The methods identified in the USACE 1987 wetlands delineation manual (Environmental Laboratory 1987) were used to delineate wetlands that are potentially subject to USACE jurisdiction under Section 404 of the federal CWA. The 1987 manual provides technical guidelines and methods for the three-parameter approach to determining the location and boundaries of jurisdictional wetlands. This approach requires that an area support positive indicators of hydrophytic vegetation, hydric soils, and wetland hydrology to be considered a jurisdictional wetland. Routine wetland determination forms were completed for 23 sample points. Potentially jurisdictional areas and sample point locations were recorded digitally using a global positioning system (GPS) data logger (Thales Mobile Mapper CE) and imported onto an electronic version of the aerial photograph. All other areas not recorded with the GPS data logger were mapped in the field and later digitized onto the aerial photograph.

## HYDROPHYTIC VEGETATION

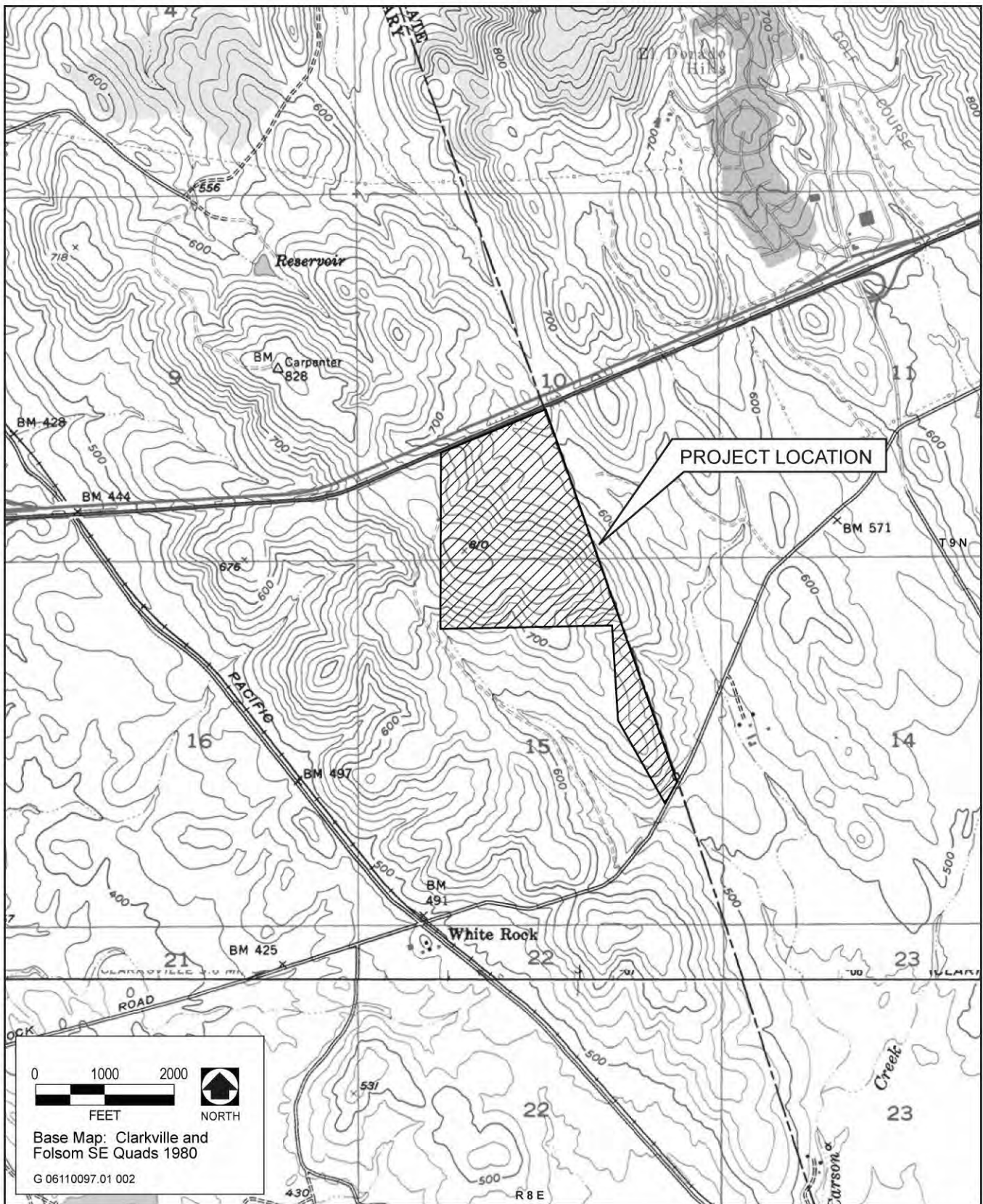
To determine whether the area at a sample point was dominated by hydrophytic vegetation, plant species at each sample site were recorded and the wetland indicator status was designated for the dominant species using the U.S. Fish and Wildlife Service National List of Plants that Occur in Wetlands: 1988 California (Region 0) (Reed 1988). Hydrophytic species include those listed as obligate (OBL), facultative wetland (FACW, FACW\*), or facultative (FAC; FAC\*, FAC+, but not FAC-), which corresponds to a percent probability for a given species to occur in wetlands. An asterisk is assigned to indicators derived from limited ecological information. The plus (+)



**Project Vicinity Map**

**Exhibit 1**





**Project Location Map**

**Exhibit 2**

and minus (-) designations specify the higher or lower part of the frequency range. The plant indicator categories are defined as follows:

- ▶ OBL – greater than 99% occurrence in wetlands,
- ▶ FACW – between 67% and 99% occurrence in wetlands, and
- ▶ FAC – between 34% and 67% occurrence in wetlands.

The sample site was considered dominated by hydrophytic vegetation if the percentage of hydrophytic species was greater than 50%.

Species that usually occur in nonwetlands (67–99% estimated probability), but are occasionally found in wetlands (1–33% estimated probability), are identified as facultative upland (FACU). Obligate upland (UPL) species occur in wetlands in another region, but occur almost always (>99%) in nonwetlands under natural conditions in California (Region 0). An NI (no indicator) designation is recorded for those species for which insufficient information was available to determine an indicator status. Species not listed in Reed (1988) are indicated by NL. These four indicators are used to identify species not considered hydrophytic.

## **WETLAND HYDROLOGY**

Wetland hydrology was assessed by recording observations such the presence of drift lines, flooded or saturated soil conditions, drainage patterns in wetlands, and other indicators of wetland hydrology. In addition, all potential jurisdictional areas were evaluated in terms of their status as a navigable waterway or their adjacency or hydrological connection to a navigable waterway.

## **HYDRIC SOILS**

Soils were examined by digging soil test pits to determine whether positive hydric soil indicators exist in the project site. Soils were described in terms of depth, matrix color, mottle color (when present), moisture status, and other diagnostic features indicative of hydric soils, such as the presence of concretions and oxidized rhizospheres (a redoximorphic feature, according to Vepraskas [1992]). Hydric soil indicators were based on those provided in the 1987 USACE manual and Vepraskas (1992). Where these sources disagree, determinations were based on Vepraskas (1992) because it reflects more current research on identification of hydric soils, including a list of redoximorphic features that develop under saturated, anaerobic conditions. Potential jurisdictional wetlands that did not have redoximorphic features were evaluated further to determine if they have hydric soils (SCS 1991). According to Natural Resource Conservation Service (NRCS) (formerly SCS) criteria 3 and 4, soils are considered hydric if they pond or flood frequently for long durations during the growing season.

## **DRAINAGES**

Drainages were delineated based on their ordinary high-water mark (OHWM). A drainage's OHWM typically corresponds with characteristics such as shelving, scour lines, and other natural linear features that define the bed and bank portion of the channel that floods under normal conditions.

## **SOIL SURVEY**

According to the Soil Surveys of El Dorado County (NRCS 1974) and Sacramento County, California (NRCS 1993), the soils in the project site belong to the Argonaut and Auburn soils series. A description of the soil units present on the project site is provided below. None of the soils mapped on the project site are included on the list of hydric soils of California. A soils map with the project site boundaries is included in Appendix B.



## **Argonaut Series**

The Argonaut series consists of well-drained soils underlain by metabasic or basic rocks at a depth of 20 to 40 inches. These soils are found on undulating to moderately steep, broad ridges with slopes of 2 to 30% and at elevations from 500 to 1,600 feet. Soils of this series primarily support annual grassland but include areas of oaks, foothill pine, and brush. The surface layer is strong brown, medium acid gravelly loam and gravelly silt loam about 7 inches thick. The subsoil is yellowish-red, yellowish-brown, and brown; medium acid and slightly acid heavy silt loam, clay, and gravelly clay. Weathered metaandesite is present at a depth of 30 inches.

### ***Argonaut gravelly loam, 2 to 15% slopes***

Permeability of this Argonaut soil is very slow, surface runoff is slow to medium, and the erosion hazard is slight to moderate. Less than 5 percent of the surface of this soil has bedrock outcrops. Included in this mapping unit are small areas of Auburn very rocky silt loam.

## **Auburn Series**

The Auburn series consists of well-drained soils that are underlain by hard metamorphic rocks at a depth of 12 to 26 inches. These soils are found on undulating to very steep foothills with slopes of 2 to 70% at elevations from 500 to 1,800 feet. Soils of this series primarily support annual grasses and oaks with scattered foothill pine and brush in some areas. The surface layer of Argonaut soils is brown, slightly acidic silt loam about 3 inches thick. The subsoil is reddish-yellow, slightly acidic silt loam. Weathered metabasic rock occurs at a depth of about 14 inches.

### ***Auburn silt loam, 2 to 30% slopes***

Permeability of this Auburn soil is moderate, surface runoff is medium or rapid, and erosion hazard is slight to moderate. Included in this unit are small areas of Argonaut, Creviscreek, Hicksville, and Mokelumne soils and Rock outcrop. Also included are soils that are less than 10 inches deep over bedrock. Creviscreek soils are very deep and occur along drainages, Hicksville soils are on low stream terraces, and Mokelumne soils are at the bases of slopes. Rock outcrop occurs as scattered ledges.

### ***Auburn very rocky silt loam, 2 to 30% slopes***

This Auburn soil is found on gently sloping to moderately steep slopes and the surface consists of 5 to 25% bedrock outcrops. Permeability is moderate, surface runoff is slow to medium, and the erosion hazard is slight to moderate. Included in this mapping unit are small areas of Argonaut very rocky loam, Boomer very rocky loam, and Sobrante very rocky silt loam.

### **Auburn-Argonaut-Rock outcrop complex, 8 to 30% slopes**

This soil unit is on foothills at elevations ranging from 150 to 830 feet. It primarily supports annual grassland plant communities and scattered oaks. The unit consists of approximately 40% Auburn soil, 35% Argonaut soil, and 10% Rock outcrop. Included in this mapping unit are small areas of Mokelumne soils at the bases of slopes, soils that have slopes of greater than 30%, and soils that have bedrock at a depth of 10 inches or less. The Argonaut and Auburn soils are each described above.

### **Argonaut-Auburn complex, 3 to 8% slopes**

This soil unit is on foothills at elevations ranging from 160 to 660 feet. It primarily supports annual grassland with some scattered oaks. The unit consists of 45% Argonaut soil and 35% Auburn soil. Included in this mapping unit are small areas of Creviscreek, Hicksville, and Mokelumne soils and also Xerothents and Rock outcrop. Creviscreek soils occur along drainages, Hicksville soils are on low stream terraces, and Mokelumne soils are on

hills, and Xerothents are in dredge tailings. Also included are soils that have a clay surface layer and occur in swales, moderately deep soils that do not have a claypan, and areas that have 0 to 3 or 8 to 15% slopes. The Argonaut and Auburn soils are each described above.

## DELINEATION RESULTS

Sites qualifying as waters of the United States according to Section 404 of the CWA are depicted on the map in Appendix A. The locations of delineation sample sites are also depicted in Appendix A and are cross-referenced to the wetland determination data forms provided in Appendix C. Habitat descriptions for waters of the United States and non-jurisdictional habitats are included below. Representative photographs of the habitat types described below are provided in Appendix D.

A total of 5.899 acres of jurisdictional waters of the United States occur within the approximately 189-acre project site (Table 1). Wetlands in the project site consist of 0.625 acre of seasonal wetland, 2.214 acres of seep, 1.840 acres of swale, and 0.114 acre of willow scrub. The project site also includes approximately 1.106 acres of intermittent drainage. The remaining 183.483 acres in the project site consist of annual grassland, a non-jurisdictional habitat, as listed in Table 2.

<b>Table 1</b>				
<b>Acreeages of Potentially Jurisdictional Waters of the United States</b>				
Habitat	Wetlands	Hydrological Connectivity	Adjacency *	Acreeage
<b>Seasonal Wetland (SW)</b>				
	SW1	Carson Creek (D)		0.473
	SW2	Carson Creek (D)	ID1	0.131
	SW3	Carson Creek (D)	ID4	0.021
	<b>SW Total</b>			<b>0.625</b>
<b>Seep (SP)</b>				
	SP1	Carson Creek (D)	ID2	0.416
	SP2	Carson Creek (D)	S5	0.297
	SP3	ID3 (F)	ID3	0.151
	SP4	Carson Creek (D)	ID3	0.330
	SP5	Carson Creek (D)		0.058
	SP6	Carson Creek (D)		0.843
	SP7	ID3 (F)	ID3, SP3	0.119
	<b>SP Total</b>			<b>2.214</b>
<b>Swale (S)</b>				
	S1	Carson Creek (D)	ID2	0.121
	S2	Carson Creek (D)		0.815
	S3	Carson Creek (D)		0.078
	S4	Carson Creek (D)		0.414
	S5	Carson Creek (D)		0.412
	<b>S Total</b>			<b>1.840</b>

Table 1 Acreages of Potentially Jurisdictional Waters of the United States				
Habitat	Wetlands	Hydrological Connectivity	Adjacency *	Acreage
<b>Willow Scrub (WS)</b>				
	WS1	Carson Creek (D)	ID2	0.114
	<b>WS Total</b>			<b>0.114</b>
<b>Intermittent Drainage (ID)</b>				
	ID1	Carson Creek (D)		0.148
	ID2	Carson Creek (C)		0.729
	ID3	Carson Creek (D)		0.198
	ID4	Carson Creek (D)		0.030
	<b>ID Total</b>			<b>1.106</b>
	<b>Total</b>			<b>5.899</b>
<b>Total- Potentially Jurisdictional Waters of the United States</b>				
* Adjacency / Hydrological Connectivity to USACE Jurisdictional Waters of the U.S. (see Jurisdictional Determination section for rationale). F = Connects, or potentially connects, by surface flow during flood or heavy rain events C = Confluent with, contiguous with, or located within, the listed feature D = Connected by ditch or other drainage feature CV = Connected by culvert				

## JURISDICTIONAL HABITAT TYPES

### Seasonal Wetlands

Three seasonal wetlands (SW) totaling 0.625 acre were mapped on the project site. Seasonal wetlands form in areas that pond or flood during rains and remain saturated for long periods during the growing season; seasonal wetlands typically dry up by summer.

The seasonal wetlands on the project site are located in natural depressions or low flood terraces along intermittent drainages (ID1, ID2, and ID4). Plant species present include common yellow monkeyflower (*Mimulus guttatus*, OBL), Baltic rush (*Juncus balticus*, OBL), rabbitsfoot grass (*Polypogon monspeliensis*, FACW+), dense-flowered willowherb (*Epilobium densiflorum*, OBL), and iris-leaved rush (*Juncus xiphioides*, OBL).

Hydric soil indicators including gleyed and low chroma color with mottles were observed in seasonal wetlands SW1 and SW2. A soil pit could not be dug deeper than 6 inches in SW3 due to the presence of cobbles but the soil was presumed to be hydric based on saturated soil conditions and dominance by an obligate perennial plant species. Soils in the seasonal wetlands were saturated to the surface with areas of inundation. Inundation and saturation in the upper 12 inches are primary indicators of wetland hydrology.

The boundaries of the seasonal wetlands were determined based upon abrupt changes in vegetation composition and topography. Data forms 1, 18, and 22 in Appendix C contain information on the seasonal wetlands and data forms 2 and 19 contain information on the upland habitat immediately adjacent to the seasonal wetlands. All three seasonal wetlands on the project site are located on unnamed intermittent drainages that are tributaries to Carson Creek. Carson Creek is ultimately connected to the Cosumnes River, a jurisdictional water of the United States that is tributary to the Sacramento River. Therefore, the seasonal wetlands were delineated as jurisdictional



wetlands based upon the presence of hydrophytic vegetation, wetland hydrology, and hydric soils and connectivity to jurisdictional waters of the United States.

## Seeps

Seven seeps (SP1-SP7) totaling approximately 2.214 acres are present on the project site. A seep is a perennial wetland plant community characterized by dense cover of perennial herb species usually dominated by rushes, sedges, and grasses. Seep communities occur on sites with permanently moist or wet soils resulting from daylighting groundwater. Dominant species identified in the seeps include Baltic rush, iris-leaved rush, common spikerush (*Eleocharis macrostachya*, OBL), and white hedge-nettle (*Stachys albens*, OBL). Hydric soil indicators including gleyed or low chroma colors were observed in the seeps. Primary indicators of wetland hydrology observed in the seeps include saturation in the upper 12 inches, inundation, and drainage patterns in wetlands.

The boundaries of the seeps were determined based upon abrupt changes in vegetation composition. Data forms 9, 10, 14, 15, 20, and 21 in Appendix C provide information about the seeps on the project site. Data forms 11 and 13 in Appendix C provide information about the upland habitat immediately adjacent to the seeps. All of the seeps with the exception of SP3 and SP7 are directly connected to intermittent drainage channels that are tributary to Carson Creek. While not directly connected to any drainage features, SP3 and SP7 are adjacent within 50 feet or less of an intermittent drainage channel that is tributary to Carson Creek and are connected to the intermittent drainage channel by surface flow during flood or heavy rain events. Carson Creek is ultimately connected to the Cosumnes River, a jurisdictional water of the United States. The seeps were delineated as jurisdictional wetlands based on the presence of hydrophytic vegetation, wetland hydrology, and hydric soils and connectivity to jurisdictional waters of the United States.

## Swales

Five swales (S1-S5) totaling approximately 1.840 acres are present on the project site. Swales are seasonal wetlands that have a drainage pattern but do not typically have a well-defined channel. Swales differ from seeps because they are supported by direct precipitation and runoff, not by groundwater. Dominant plant species observed in the on-site swales include hyssop loosestrife (*Lythrum hyssopifolium*, FACW), foothill meadowfoam (*Limnanthes striata*, OBL), iris-leaved juncus, rabbitsfoot grass, common spikerush, and Italian ryegrass (*Lolium multiflorum*, FAC). Hydric soil indicators including gleyed or low chroma colors were observed in the seeps. Primary indicators of wetland hydrology observed in the seeps include saturation in the upper 12 inches, drift lines, and drainage patterns in wetlands.

The boundaries of the swales were determined based upon abrupt changes in vegetation composition and topography. Data forms 6, 8, 16, and 23 in Appendix C provide information about the swales on the project site. Data forms 7 and 17 in Appendix C provide information about the upland habitat immediately adjacent to the swales. All of the swales on the project site are directly connected to intermittent drainage channels that are tributary to Carson Creek. Therefore, the swales were delineated as jurisdictional wetlands based upon the presence of hydrophytic vegetation, wetland hydrology, and hydric soils and connectivity to jurisdictional waters of the United States.

## Willow Scrub

A small area (0.114 acre) of willow scrub is present on the project site at the point where ID2 enters the project site via culvert beneath Highway 50. The willow scrub habitat is characterized by black willow (*Salix goodingii*, OBL) and arroyo willow (*Salix lasiolepis*, FACW) with a sparse herbaceous understory that includes tall flatsedge (*Cyperus eragrostis*, FACW), dense-flowered willowherb, and fiddle dock (*Rumex pulcher*, FAC+). Soil at sample point 5 in the willow scrub habitat had a gleyed color indicating hydric soil and primary indicators of wetland hydrology observed include water marks, drift lines, and drainage patterns in wetlands. The willow scrub is contiguous with ID2, a tributary of Carson Creek. Therefore, the willow scrub habitat was delineated as a

jurisdictional wetland based upon the presence of hydrophytic vegetation, wetland hydrology, and hydric soils and connectivity to jurisdictional waters of the United States.

## Intermittent Drainages

A total of approximately 1.106 acres of intermittent drainage occur on the project site. Intermittent drainages are supported by both groundwater sources and rainwater runoff and have continuous flow seasonally, typically during the winter rainy season. Four intermittent drainages (ID1-ID4) that range from approximately 5 to 50 feet in width at the ordinary high water mark (OHWM) were mapped on the project site. These intermittent drainages meet the USACE definition of relatively permanent waters.

ID1 and ID2 are located in the northeast corner of the project site. ID1 flows from north to south and converges with ID2 inside the project boundary. ID2 flows in a southeasterly direction and converges with Carson Creek approximately 1.75 miles from the point where it flows off the project site. ID3 is located in the southeastern portion of the project site and flows in an easterly direction, converging with ID2 approximately 0.17 mile east of the project boundary. ID4 traverses the southwest corner of the site and flows in a southeasterly direction, converging with ID2 approximately 1.20 miles southeast of the project boundary. Hydrophytic vegetation occurs within the OHWM of the on-site intermittent drainage channels and becomes dense in flatter portions of the drainages where the channels are wide and relatively shallow. Dominant species observed within the OHWM include dense sedge (*Carex densa*, OBL), slender rush (*Juncus tenuis*, FACW), white hedge-nettle, and rabbitsfoot grass. The beds of the drainages contain rock and cobble. All of the intermittent drainages, with the exception of ID4, supported shallow water in the low flow channel during the time this delineation was conducted in April 2006.

Hydric soil indicators (low chroma color with mottles) were observed at sample point 3 in ID2 and ID1 was presumed to exhibit hydric soil indicators due to its similarity to and immediate connectivity with ID2. Soils in ID3 are presumed hydric based on an aquic moisture regime (i.e., saturated to the surface five weeks after the last precipitation event). ID4 does not exhibit hydric soil indicators within the OHWM.

Data forms 3 and 12 in Appendix C contain information about the intermittent drainages on the project site. Data forms 4 and 13 in Appendix C contain information about the upland habitat immediately adjacent to the intermittent drainages. All of the on-site intermittent drainages are hydrologically connected to Carson Creek, which is connected to the Cosumnes River via Deer Creek. The intermittent drainages were delineated as jurisdictional waters of the United States based upon connectivity to other jurisdictional waters of the United States.

## NON-JURISDICTIONAL HABITATS

### Annual Grassland

Annual grassland characterized primarily by non-native grasses and weedy forbs covers the majority of the project site. This habitat type is characterized by dense cover of nonnative annual grasses with numerous species of nonnative annual forbs, as well as native wildflowers. The annual grassland within the project site is not currently grazed or subject to any maintenance such as mowing. Grass species observed in the annual grassland include ripgut (*Bromus diandrus*, NL), soft chess (*Bromus hordeaceus*, FACU-), Italian ryegrass (*Lolium multiflorum*, FAC\*), purple needlegrass (*Nassella pulchra*, NL), and medusahead (*Taeniatherum caput-medusae*, NL). Stands of purple needlegrass (*Nassella pulchra*, NL) are present in the northeast corner of the project site, adjacent to ID2. Additional stands of purple needlegrass are present in the southeast portion of the project site along ID3. Common nonnative forbs include cut-leaved geranium (*Geranium dissectum*, FAC), Klamath weed (*Hypericum perforatum*), prickly sow thistle (*Sonchus asper*, FAC), and Italian thistle (*Carduus pycnocephalus*). Native wildflowers observed in the annual grassland within the project site include wild hyacinth (*Triteleia*

*hyacinthina*, FACW\*), Ithuriel's spear (*Triteleia laxa*, NL), purple owl's-clover (*Castilleja exserta*, NL), harvest brodiaea (*Brodiaea elegans*, FACU), and Spanish lotus (*Lotus purshianus*, UPL).

## JURISDICTIONAL DETERMINATION

The project site contains 5.899 acres of potentially jurisdictional waters of the United States. These potentially jurisdictional waters of the United States consist of 0.625 acre of seasonal wetland, 2.214 acres of seep, 1.840 acres of swale, 0.114 acre of willow scrub, and 1.106 acres of intermittent drainage (i.e., relatively permanent waters). Because these features are all hydrologically connected to Carson Creek, a feature that is connected to the Cosumnes River and ultimately to the Sacramento River, a traditional navigable water, it was determined that these features are subject to USACE jurisdiction under Section 404 of the CWA. This jurisdictional determination is considered preliminary until verified by the USACE.

## REFERENCES

- Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. (Technical Report Y-87-1.) U.S. Army Engineer Waterways Experiment Station.
- Foothill Associates. 2005. *Preliminary Biological Constraints Analysis for the 185-acre Folsom Heights Parcels*. Letter Report Prepared for Centex Homes.
- Natural Resources Conservation Service (NRCS). 1993. *Soil Survey of Sacramento County*. U.S. Department of Agriculture in cooperation with Regents of the University of California (Agricultural Experiment Station). Washington, DC.
- Natural Resources Conservation Service (NRCS). 1974. *Soil Survey of El Dorado County*. U.S. Department of Agriculture in cooperation with Regents of the University of California (Agricultural Experiment Station). Washington, DC.
- Reed, P.B., Jr. 1988. *National List of Plant Species That Occur In Wetlands: California (Region 0)*. (Biological report 88[26.10].) U.S. Fish and Wildlife Service. Fort Collins, CO.
- Reed, P.B., Jr. 1997. *Draft Revisions to the National List of Plant Species That Occur In Wetlands: California (Region 0)*. (Biological report 88[26.10].) U.S. Fish and Wildlife Service. Fort Collins, CO.
- U.S. Soil Conservation Service (SCS). 1991. *Hydric Soils List of the United States*. U.S. Department of Agriculture. Washington, DC.
- Vepraskas, M. J. 1992. *Redoximorphic Features for Identifying Aquic Conditions*. (Technical bulletin 301.) North Carolina Agricultural Research Service, North Carolina State University. Raleigh, NC.

## **APPENDIX A**

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### Wetland Delineation Map





## **APPENDIX B**

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Soils Map





## Soils Map

## Appendix B

## **APPENDIX C**

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### Wetland Delineation Data Forms



**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/11/06
APPLICANT/OWNER:	Centex	COUNTY:	Sac
INVESTIGATOR:	T. Bayerl, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?		<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID: ID ①
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?		Yes <input type="radio"/> <input checked="" type="radio"/> no	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)		yes <input type="radio"/> <input checked="" type="radio"/> no	PLOT ID: ①

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. Mimulus guttatus	H	60 OBL	9. Briza minor		
2. Polypogon monspeliensis	H	20 FACW+	10. Potentilla glandulosa		
3. Epilobium densifl.	H	20 OBL	11. Rorippa nasturtium-aquaticum		
4.			12. Juncus xiphioides		
5.			13. Typha latifolia		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: dominated by hydrophytes - total cover = 95%

**HYDROLOGY**

<input checked="" type="checkbox"/>	RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS:
	STREAM, LAKE OR TIDE GAUGE	PRIMARY INDICATORS:
		<input checked="" type="checkbox"/> INUNDATED
<input checked="" type="checkbox"/>	AERIAL PHOTOGRAPHS	SATURATED IN UPPER 12 INCHES
	OTHER	WATER MARKS
	NO RECORDED DATA AVAILABLE	<input checked="" type="checkbox"/> DRIFT LINES
FIELD OBSERVATIONS:		SEDIMENT DEPOSITS
DEPTH OF SURFACE WATER	— in.	DRAINAGE PATTERNS IN WETLANDS
DEPTH TO FREE WATER IN PIT	6 in.	SECONDARY INDICATORS (2 OR MORE REQUIRED)
DEPTH TO SATURATED SOIL	0 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
Site is on low terrace immediately adjacent to intermittent drainage in gently sloping terrain		WATER-STAINED LEAVES
		LOCAL SOIL SURVEY DATA
		FAC-NEUTRAL TEST
		OTHER (EXPLAIN IN REMARKS)
Remarks:		

[illegible]

HYDROPHYTIC VEGETATION PRESENT?	<u>YES</u> NO	IS THIS SAMPLING POINT WITHIN A WETLAND? <u>YES</u> NO <sup>(CIRCLE)</sup>
WETLAND HYDROLOGY PRESENT?	<u>YES</u> NO	
HYDRIC SOILS PRESENT?	<u>YES</u> NO	
REMARKS:		

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/11/06
APPLICANT/OWNER:	Center	COUNTY:	Sac
INVESTIGATOR:	T. Bayerl, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?		<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID: ID ②
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?		Yes <input type="radio"/> <input checked="" type="radio"/> no	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)		yes <input type="radio"/> <input checked="" type="radio"/> no	PLOT ID: ③

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. Carex densa	H	50% OBL	9. Typha latifolia		
2. Juncus tenuis	H	50% FACW	10. Epilobium densiflorum		
3.			11. Conium maculatum		
4.			12. Poa pratensis		
5.			13. Potentilla glandulosa		
6.			14. Lactuca scariola		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: total cover 100%  
 site is dominated by hydrophytes

**HYDROLOGY**

<input checked="" type="checkbox"/>	RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS: PRIMARY INDICATORS:
	STREAM, LAKE OR TIDE GAUGE	INUNDATED
<input checked="" type="checkbox"/>	AERIAL PHOTOGRAPHS	<input checked="" type="checkbox"/> SATURATED IN UPPER 12 INCHES
	OTHER	WATER MARKS
	NO RECORDED DATA AVAILABLE	DRIFT LINES
FIELD OBSERVATIONS:		SEDIMENT DEPOSITS
	DEPTH OF SURFACE WATER — in.	<input checked="" type="checkbox"/> DRAINAGE PATTERNS IN WETLANDS
	DEPTH TO FREE WATER IN PIT 7 1/2 in.	SECONDARY INDICATORS (2 OR MORE REQUIRED)
	DEPTH TO SATURATED SOIL 0 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
point is on low lying terrace		WATER-STAINED LEAVES
		LOCAL SOIL SURVEY DATA
		FAC-NEUTRAL TEST
		OTHER (EXPLAIN IN REMARKS)
Remarks:		

MAP UNIT NAME (SERIES AND PHASE):		DRAINAGE CLASS:			
TAXONOMY (SUBGROUP)		FIELD OBSERVATIONS CONFIRM MAPPED TYPE?      YES    NO			
PROFILE DESCRIPTION					
DEPTH (IN.)	HORIZON	MATRIX COLOR (MUNSELL MOIST)	MOTTLE COLORS (MUNSELL MOIST)	MOTTLE ABUNDANCE/CONTRAST	TEXTURE, CONCRETIONS, STRUCTURE, ETC.
0-4		10YR4/2			sandy clay
4-12+		10YR4/2	7.5YR4/4	abundant	↓
			Gray 3.4/5BC	abundant	
HYDRIC SOIL INDICATORS					
HISTOSOL HISTIC EPIPEDON SULFIDIC ODOR <input checked="" type="checkbox"/> AQUIC MOISTURE REGIME REDUCING CONDITIONS <input checked="" type="checkbox"/> GLEYED OR LOW-CHROMA COLORS			CONCRETIONS HIGH ORGANIC CONTENT IN SURFACE LAYER IN SANDY SOILS ORGANIC STREAKING IN SANDY SOILS LISTED ON LOCAL HYDRIC SOILS LIST LISTED ON NATIONAL HYDRIC SOILS LIST OTHER (EXPLAIN IN REMARKS)		
REMARKS:					

HYDROPHYTIC VEGETATION PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	IS THIS SAMPLING POINT WITHIN A WETLAND? <input checked="" type="radio"/> YES <input type="radio"/> NO (CIRCLE)
WETLAND HYDROLOGY PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
HYDRIC SOILS PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Height	DATE:	5/11/04
APPLICANT/OWNER:	Center	COUNTY:	San
INVESTIGATOR:	T. Baycol, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?		<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID: willow scrub
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?		Yes <input type="radio"/> <input checked="" type="radio"/> no	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)		yes <input type="radio"/> <input checked="" type="radio"/> no	PLOT ID: (5)

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. Salix goodingii	50% T	OBL	9. Cyperus eragrostis		
2. Salix lasiolepis	50% T	FACW	10. Epilobium densiflorum		
3.			11. Rhamnus torreyana		
4.			12. Rumex pulcher		
5.			13. Polygonum sp		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks:

**HYDROLOGY**

<input checked="" type="checkbox"/>	RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS:
	STREAM, LAKE OR TIDE GAUGE	PRIMARY INDICATORS:
		INUNDATED
<input checked="" type="checkbox"/>	AERIAL PHOTOGRAPHS	<input checked="" type="checkbox"/> SATURATED IN UPPER 12 INCHES
	OTHER	<input checked="" type="checkbox"/> WATER MARKS
	NO RECORDED DATA AVAILABLE	<input checked="" type="checkbox"/> DRIFT LINES
	FIELD OBSERVATIONS:	<input checked="" type="checkbox"/> SEDIMENT DEPOSITS
	DEPTH OF SURFACE WATER      — in.	<input checked="" type="checkbox"/> DRAINAGE PATTERNS IN WETLANDS
	DEPTH TO FREE WATER IN PIT      3 in.	SECONDARY INDICATORS (2 OR MORE REQUIRED)
	DEPTH TO SATURATED SOIL      0 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
on sand/gravel bar immediately adjacent to intermittent drainage		WATER-STAINED LEAVES
		LOCAL SOIL SURVEY DATA
		FAC-NEUTRAL TEST
		OTHER (EXPLAIN IN REMARKS)
Remarks:		

[illegible]

HYDROPHYTIC VEGETATION PRESENT?	<u>YES</u>	NO	IS THIS SAMPLING POINT WITHIN A WETLAND? <u>YES</u> NO (CIRCLE)
WETLAND HYDROLOGY PRESENT?	<u>YES</u>	NO	
HYDRIC SOILS PRESENT?	<u>YES</u>	NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/11/06
APPLICANT/OWNER:	Center	COUNTY:	Sac
INVESTIGATOR:	T. Bayol, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?	<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID:	Swale 1
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?	Yes <input type="radio"/> <input checked="" type="radio"/> no	TRANSECT ID:	
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)	yes <input type="radio"/> <input checked="" type="radio"/> no	PLOT ID:	(6)

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. Eleocharis macrostachya	80%	OBL	9. Rumex pulcherr		
2. Lythrum hyssopifolium	20%	FACW	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: total cov = 40-60%

**HYDROLOGY**

<input checked="" type="checkbox"/>	RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS:
	STREAM, LAKE OR TIDE GAUGE	PRIMARY INDICATORS:
<input checked="" type="checkbox"/>	AERIAL PHOTOGRAPHS	INUNDATED
	OTHER	SATURATED IN UPPER 12 INCHES
	NO RECORDED DATA AVAILABLE	WATER MARKS
		<input checked="" type="checkbox"/> DRIFT LINES
		<input checked="" type="checkbox"/> SEDIMENT DEPOSITS
	FIELD OBSERVATIONS:	<input checked="" type="checkbox"/> DRAINAGE PATTERNS IN WETLANDS
	DEPTH OF SURFACE WATER	SECONDARY INDICATORS (2 OR MORE REQUIRED)
	— in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
	DEPTH TO FREE WATER IN PIT	WATER-STAINED LEAVES
	> 8 in.	LOCAL SOIL SURVEY DATA
	DEPTH TO SATURATED SOIL	FAC-NEUTRAL TEST
	> 8 in.	OTHER (EXPLAIN IN REMARKS)
Swale is in low lying landscape position conducive to intermittent drainage		
Remarks:		



[illegible]

HYDROPHYTIC VEGETATION PRESENT?	<u>YES</u>	NO	IS THIS SAMPLING POINT WITHIN A WETLAND? <u>YES</u> NO (CIRCLE)
WETLAND HYDROLOGY PRESENT?	<u>YES</u>	NO	
HYDRIC SOILS PRESENT?	<u>YES</u>	NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/11/06
APPLICANT/OWNER:	Lentex	COUNTY:	Sac
INVESTIGATOR:	T. Bayol, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?	<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID:	swale2
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?	Yes <input type="radio"/> <input checked="" type="radio"/> no	TRANSECT ID:	
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)	yes <input type="radio"/> <input checked="" type="radio"/> no	PLOT ID:	(8)

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. Juncus xiphioides	H 20%	OBL	9. Tritelera hypericifolia		
2. Limnolobos striata	H 80%	OBL	10. Bromus hordeaceus		
3.			11. Lactuca seticola		
4.			12. Hordeum murinum ssp. leporinum		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: total cover ~ 75%, site is dominated by hydrophytes

**HYDROLOGY**

<input checked="" type="checkbox"/> RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS: PRIMARY INDICATORS:
<input type="checkbox"/> STREAM, LAKE OR TIDE GAUGE	<input type="checkbox"/> INUNDATED
<input checked="" type="checkbox"/> AERIAL PHOTOGRAPHS	<input type="checkbox"/> SATURATED IN UPPER 12 INCHES
<input type="checkbox"/> OTHER	<input type="checkbox"/> WATER MARKS
<input type="checkbox"/> NO RECORDED DATA AVAILABLE	<input checked="" type="checkbox"/> DRIFT LINES
FIELD OBSERVATIONS:	<input checked="" type="checkbox"/> SEDIMENT DEPOSITS
DEPTH OF SURFACE WATER — in.	<input checked="" type="checkbox"/> DRAINAGE PATTERNS IN WETLANDS
DEPTH TO FREE WATER IN PIT > 8 in.	SECONDARY INDICATORS (2 OR MORE REQUIRED)
DEPTH TO SATURATED SOIL > 8 in.	<input type="checkbox"/> OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
in broad shallow depression in landscape	<input type="checkbox"/> WATER-STAINED LEAVES
	<input type="checkbox"/> LOCAL SOIL SURVEY DATA
	<input type="checkbox"/> FAC-NEUTRAL TEST
	<input type="checkbox"/> OTHER (EXPLAIN IN REMARKS)
Remarks:	

[illegible]

HYDROPHYTIC VEGETATION PRESENT?	YES	NO	IS THIS SAMPLING POINT WITHIN A WETLAND? YES NO
WETLAND HYDROLOGY PRESENT?	YES	NO	
HYDRIC SOILS PRESENT?	YES	NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/11/06
APPLICANT/OWNER:	Certex	COUNTY:	Sac
INVESTIGATOR:	T. Bayerl, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?		<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID: 5451
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?		Yes <input type="radio"/> <input checked="" type="radio"/> no	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)		yes <input type="radio"/> <input checked="" type="radio"/> no	PLOT ID: (9)

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Juncus tenuis</i>	50 %	FACW	9. <i>Lactuca scariola</i>		
2. <i>Juncus xiphioides</i>	50 %	OBL	10. <i>Stachys albens</i>		
3.			11. <i>Polypogon monspeliensis</i>		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks:

**HYDROLOGY**

<input checked="" type="checkbox"/>	RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS: PRIMARY INDICATORS:
	STREAM, LAKE OR TIDE GAUGE	<input checked="" type="checkbox"/> INUNDATED
<input checked="" type="checkbox"/>	AERIAL PHOTOGRAPHS	<input checked="" type="checkbox"/> SATURATED IN UPPER 12 INCHES
	OTHER	<input checked="" type="checkbox"/> WATER MARKS
	NO RECORDED DATA AVAILABLE	<input checked="" type="checkbox"/> DRIFT LINES
FIELD OBSERVATIONS:		SEDIMENT DEPOSITS
	DEPTH OF SURFACE WATER 0 in.	DRAINAGE PATTERNS IN WETLANDS
	DEPTH TO FREE WATER IN PIT 0 in.	SECONDARY INDICATORS (2 OR MORE REQUIRED)
	DEPTH TO SATURATED SOIL 0 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
Site is in broad depression, soils are saturated to surface		WATER-STAINED LEAVES
		LOCAL SOIL SURVEY DATA
		FAC-NEUTRAL TEST
		OTHER (EXPLAIN IN REMARKS)
Remarks:		



[illegible]

HYDROPHYTIC VEGETATION PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	IS THIS SAMPLING POINT WITHIN A WETLAND? <input checked="" type="radio"/> YES <input type="radio"/> NO (CIRCLE)
WETLAND HYDROLOGY PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
HYDRIC SOILS PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/11/06
APPLICANT/OWNER:	Center	COUNTY:	Sac
INVESTIGATOR:	T. Beyers, P. Ungar	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?	<input checked="" type="radio"/> Yes <input type="radio"/> NO	COMMUNITY ID:	scsp
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?	Yes <input type="radio"/> <input checked="" type="radio"/> NO	TRANSECT ID:	
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)	yes <input type="radio"/> <input checked="" type="radio"/> NO	PLOT ID:	10

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. Eleocharis macrochaeta	H	OBL	9. Rumex pulchrum		
2. Cyperus dactyloides	H	FAC	10. Carex praeacutis		
3.			11. Polypogon monsp.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		
Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):					
Remarks:					

**HYDROLOGY**

<input checked="" type="checkbox"/> RECORDED DATA (DESCRIBE IN REMARKS)	<b>WETLAND HYDROLOGY INDICATORS:</b> PRIMARY INDICATORS:
<input type="checkbox"/> STREAM, LAKE OR TIDE GAUGE	INUNDATED
<input checked="" type="checkbox"/> AERIAL PHOTOGRAPHS	SATURATED IN UPPER 12 INCHES
<input type="checkbox"/> OTHER	WATER MARKS
<input type="checkbox"/> NO RECORDED DATA AVAILABLE	DRIFT LINES
FIELD OBSERVATIONS:	<input checked="" type="checkbox"/> SEDIMENT DEPOSITS
DEPTH OF SURFACE WATER	<input checked="" type="checkbox"/> DRAINAGE PATTERNS IN WETLANDS
DEPTH TO FREE WATER IN PIT	78 in.
DEPTH TO SATURATED SOIL	78 in.
in shallow depression in landscape on gentle hillside	SECONDARY INDICATORS (2 OR MORE REQUIRED)
	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
	WATER-STAINED LEAVES
	LOCAL SOIL SURVEY DATA
	FAC-NEUTRAL TEST
	OTHER (EXPLAIN IN REMARKS)
Remarks:	

[illegible]

HYDROPHYTIC VEGETATION PRESENT?	<u>YES</u>	NO	IS THIS SAMPLING POINT WITHIN A WETLAND? <u>YES</u> <sup>(CIRCLE)</sup> NO
WETLAND HYDROLOGY PRESENT?	<u>YES</u>	NO	
HYDRIC SOILS PRESENT?	<u>YES</u>	NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/18/86
APPLICANT/OWNER:	Centex	COUNTY:	Sac
INVESTIGATOR:	T. Bayrol, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?	<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID:	I.D.3
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?	Yes <input type="radio"/> <input checked="" type="radio"/> no	TRANSECT ID:	
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)	yes <input type="radio"/> <input checked="" type="radio"/> no	PLOT ID:	(12)

**VEGETATION**

other

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Polypogon monspeliensis</i>	H	35% FACW+	9. <i>Rumex pulcher</i>		
2. <i>Stachys albens</i>	H	35% OBL	10. <i>Humulus guthriei</i>		
3. <i>Potentilla glandulosa</i>	H	20% FAC	11. <i>Cirsium arvense</i>		
4.			12. <i>Lolium multiflorum</i>		
5.			13. <i>Carex praeacutis</i>		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: total cover 100%

**HYDROLOGY**

<input checked="" type="checkbox"/>	RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS: PRIMARY INDICATORS:
	STREAM, LAKE OR TIDE GAUGE	INUNDATED
<input checked="" type="checkbox"/>	AERIAL PHOTOGRAPHS	<input checked="" type="checkbox"/> SATURATED IN UPPER 12 INCHES
	OTHER	WATER MARKS
	NO RECORDED DATA AVAILABLE	<input checked="" type="checkbox"/> DRIFT LINES
FIELD OBSERVATIONS:		SEDIMENT DEPOSITS
	DEPTH OF SURFACE WATER: — in.	<input checked="" type="checkbox"/> DRAINAGE PATTERNS IN WETLANDS
	DEPTH TO FREE WATER IN PIT: 0 in.	SECONDARY INDICATORS (2 OR MORE REQUIRED)
	DEPTH TO SATURATED SOIL: 0 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
increased drainage in gently rolling hills algal matting on surface		WATER-STAINED LEAVES
		LOCAL SOIL SURVEY DATA
		FAC-NEUTRAL TEST
		OTHER (EXPLAIN IN REMARKS)
Remarks: soil pit filled w/ water after several minutes		

[illegible]

HYDROPHYTIC VEGETATION PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	IS THIS SAMPLING POINT WITHIN A WETLAND? <input checked="" type="radio"/> YES <input type="radio"/> NO
WETLAND HYDROLOGY PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
HYDRIC SOILS PRESENT?	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
REMARKS: f			

Soil does not have low chroma colors or mottles, but qualifies as hydric based on MRCSS criterion # 4 (flooding for long durations) as it is saturated to the surface long after the last rain fall events. Standing water observed in occasional pools in drainage.



**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/16/06
APPLICANT/OWNER:	Center	COUNTY:	Sac
INVESTIGATOR:	T. Bayel, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?	<input checked="" type="radio"/> Yes <input type="radio"/> NO	COMMUNITY ID:	seep 3
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?	Yes <input type="radio"/> <input checked="" type="radio"/> NO	TRANSECT ID:	
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)	yes <input type="radio"/> <input checked="" type="radio"/> NO	PLOT ID:	(14)

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. Juncus roemerianus	H	50% OBL	9. Rumex crispus		
2. Juncus balticus	H	30% OBL	10. Lolium multiflorum		
3. Pilobolus densiflorus	H	20% OBL	11. Triteleia laxa		
4.			12. Ulpia sp		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: total cover ~ 80 %, remaining surface area matted w/ dead vegetation

**HYDROLOGY**

RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS:
STREAM, LAKE OR TIDE GAUGE	PRIMARY INDICATORS:
<input checked="" type="checkbox"/> AERIAL PHOTOGRAPHS	INUNDATED
OTHER	SATURATED IN UPPER 12 INCHES
NO RECORDED DATA AVAILABLE	<input checked="" type="checkbox"/> WATER MARKS
	<input checked="" type="checkbox"/> DRIFT LINES
FIELD OBSERVATIONS:	SEDIMENT DEPOSITS
DEPTH OF SURFACE WATER	<input checked="" type="checkbox"/> DRAINAGE PATTERNS IN WETLANDS
DEPTH TO FREE WATER IN PIT	SECONDARY INDICATORS (2 OR MORE REQUIRED)
DEPTH TO SATURATED SOIL	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
Soil slightly moist but not saturated; site is on gently sloping hill side; water appears to seep out of hillside -	WATER-STAINED LEAVES
	LOCAL SOIL SURVEY DATA
	FAC-NEUTRAL TEST
	OTHER (EXPLAIN IN REMARKS)
Remarks:	seep is connected to intermittent drainage

MAP UNIT NAME (SERIES AND PHASE):		DRAINAGE CLASS:			
TAXONOMY (SUBGROUP)		FIELD OBSERVATIONS CONFIRM MAPPED TYPE?      YES    NO			
PROFILE DESCRIPTION					
DEPTH (IN.)	HORIZON	MATRIX COLOR (MUNSELL MOIST)	MOTTLE COLORS (MUNSELL MOIST)	MOTTLE ABUNDANCE/CONTRAST	TEXTURE, CONCRETIONS, STRUCTURE, ETC.
0-10+		7.5 YR 3/3	10 YR 3/2	Abundant, subtle	clay loam
0-1		10 YR 3/2			clay loam
HYDRIC SOIL INDICATORS					
HISTOSOL HISTIC EPIPEDON SULFIDIC ODOR AQUIC MOISTURE REGIME REDUCING CONDITIONS <input checked="" type="checkbox"/> GLEYED OR LOW-CHROMA COLORS			CONCRETIONS HIGH ORGANIC CONTENT IN SURFACE LAYER IN SANDY SOILS ORGANIC STREAKING IN SANDY SOILS LISTED ON LOCAL HYDRIC SOILS LIST LISTED ON NATIONAL HYDRIC SOILS LIST OTHER (EXPLAIN IN REMARKS)		
REMARKS:					

HYDROPHYTIC VEGETATION PRESENT?	<u>YES</u>	NO	IS THIS SAMPLING POINT WITHIN A WETLAND? <u>YES</u> <sup>(CIRCLE)</sup> NO
WETLAND HYDROLOGY PRESENT?	<u>YES</u>	NO	
HYDRIC SOILS PRESENT?	<u>YES</u>	NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/18/06
APPLICANT/OWNER:	Centex	COUNTY:	Sac
INVESTIGATOR:	T. Beyerl, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?		<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID:
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?		Yes <input type="radio"/> <input checked="" type="radio"/> no	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)		yes <input type="radio"/> <input checked="" type="radio"/> no	PLOT ID: (15)

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Juncus balticus</i>	80%	OBL	9. <i>Cordurus pycnancephalus</i>		
2.			10. <i>Potentilla glandulose</i>		
3.			11. <i>Stoddy's alben</i>		
4.			12. <i>Juncus sp.</i>		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: Total cover 95%

**HYDROLOGY**

<input checked="" type="checkbox"/> RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS: PRIMARY INDICATORS:
<input type="checkbox"/> STREAM, LAKE OR TIDE GAUGE	INUNDATED
<input checked="" type="checkbox"/> AERIAL PHOTOGRAPHS	SATURATED IN UPPER 12 INCHES
<input type="checkbox"/> OTHER	WATER MARKS
<input type="checkbox"/> NO RECORDED DATA AVAILABLE	DRIFT LINES
FIELD OBSERVATIONS:	SEDIMENT DEPOSITS
DEPTH OF SURFACE WATER: — in.	<input checked="" type="checkbox"/> DRAINAGE PATTERNS IN WETLANDS
DEPTH TO FREE WATER IN PIT: > 10 in.	SECONDARY INDICATORS (2 OR MORE REQUIRED)
DEPTH TO SATURATED SOIL: > 10 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
seep is on gently sloping hillside; evidence of surface flow from matted vegetation; soil is moist to surface, but not saturated	WATER-STAINED LEAVES
	LOCAL SOIL SURVEY DATA
	FAC-NEUTRAL TEST
	OTHER (EXPLAIN IN REMARKS)
Remarks: seep is directly connected to intermittent drainage	



[illegible]

HYDROPHYTIC VEGETATION PRESENT?	<u>YES</u>	NO	IS THIS SAMPLING POINT WITHIN A WETLAND? <u>YES</u> (CIRCLE) NO
WETLAND HYDROLOGY PRESENT?	<u>YES</u>	NO	
HYDRIC SOILS PRESENT?	<u>YES</u>	NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/18/06
APPLICANT/OWNER:	Center	COUNTY:	Sac
INVESTIGATOR:	T. Beyerl, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?		<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID: Sude 4
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?		Yes <input type="radio"/> <input checked="" type="radio"/> no	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)		yes <input type="radio"/> <input checked="" type="radio"/> no	PLOT ID: 16

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. Juncus roemerianus	6%	OBL	9. Carex lasiocarpa		
2. Polypogon monspeliensis	20%	FACW+	10. Sandbar aspen		
3. Eleocharis acicularis	20%	OBL	11. Rumex crispus		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks:

**HYDROLOGY**

<input checked="" type="checkbox"/>	RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS: PRIMARY INDICATORS:
	STREAM, LAKE OR TIDE GAUGE	INUNDATED
<input checked="" type="checkbox"/>	AERIAL PHOTOGRAPHS	<input checked="" type="checkbox"/> SATURATED IN UPPER 12 INCHES
	OTHER	WATER MARKS
	NO RECORDED DATA AVAILABLE	DRIFT LINES
FIELD OBSERVATIONS:		SEDIMENT DEPOSITS
DEPTH OF SURFACE WATER	— in.	<input checked="" type="checkbox"/> DRAINAGE PATTERNS IN WETLANDS
DEPTH TO FREE WATER IN PIT	0 in.	SECONDARY INDICATORS (2 OR MORE REQUIRED)
DEPTH TO SATURATED SOIL	0 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
Seep is on gently sloping hillside, feed by ground seepage		WATER-STAINED LEAVES
		LOCAL SOIL SURVEY DATA
		FAC-NEUTRAL TEST
		OTHER (EXPLAIN IN REMARKS)
Remarks:	Soils are saturated to surface	

[illegible]

HYDROPHYTIC VEGETATION PRESENT?	YES	NO	IS THIS SAMPLING POINT WITHIN A WETLAND? (CIRCLE) YES NO
WETLAND HYDROLOGY PRESENT?	YES	NO	
HYDRIC SOILS PRESENT?	YES	NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/18/06
APPLICANT/OWNER:	Center	COUNTY:	Sac
INVESTIGATOR:	T. Beyers, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?		<input checked="" type="radio"/> Yes <input type="radio"/> No	COMMUNITY ID:
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?		Yes <input type="radio"/> <input checked="" type="radio"/> No	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)		yes <input type="radio"/> <input checked="" type="radio"/> no	PLOT ID:
			(18)

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Juncus roemerianus</i>	90%	OBL	9. <i>Rumex pulcher</i>		
2.			10. <i>Lolium multiflorum</i>		
3.			11. <i>Lactuca scariola</i>		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

other

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: narrow intermittent drainage - channel bottom is vegetated with hydrophytic vegetation; total cover 90%

**HYDROLOGY**

RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS:
STREAM, LAKE OR TIDE GAUGE	PRIMARY INDICATORS:
<input checked="" type="checkbox"/> AERIAL PHOTOGRAPHS	INUNDATED
OTHER	SATURATED IN UPPER 12 INCHES
No RECORDED DATA AVAILABLE	WATER MARKS
	DRIFT LINES
FIELD OBSERVATIONS:	SEDIMENT DEPOSITS
DEPTH OF SURFACE WATER	<input checked="" type="checkbox"/> DRAINAGE PATTERNS IN WETLANDS
DEPTH TO FREE WATER IN PIT	SECONDARY INDICATORS (2 OR MORE REQUIRED)
DEPTH TO SATURATED SOIL	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
Soil is moist to surface drainage is slightly incised an meander through low spot in gently sloping terrain	WATER-STAINED LEAVES
	LOCAL SOIL SURVEY DATA
	FAC-NEUTRAL TEST
	OTHER (EXPLAIN IN REMARKS)
Remarks:	

[illegible]

HYDROPHYTIC VEGETATION PRESENT?	<u>YES</u>	NO	IS THIS SAMPLING POINT WITHIN A WETLAND? <u>YES</u> NO (CIRCLE)
WETLAND HYDROLOGY PRESENT?	<u>YES</u>	NO	
HYDRIC SOILS PRESENT?	<u>YES</u>	NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/18/06
APPLICANT/OWNER:	Center	COUNTY:	Sec
INVESTIGATOR:	T. Beyorl, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?		<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID:
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?		<input type="radio"/> Yes <input checked="" type="radio"/> no	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)		<input type="radio"/> yes <input checked="" type="radio"/> no	PLOT ID:
			(20)

**VEGETATION**

other

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. Juncus bellicus	80%	OBL	9. Potentilla glandulosa		
2. Stachys albens	20%	OBL	10. Carex densa		
3.			11. Polypogon monspeliensis		
4.			12. Salix gooddingii		
5.			13. Sonchus asper		
6.			14. Ranipha hast. aquatica		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: site is dominated by hydrophytes; dominants vary locally from Juncus to Stachys to Carex to Polypogon

**HYDROLOGY**

✓	RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS:
	STREAM, LAKE OR TIDE GAUGE	PRIMARY INDICATORS:
		INUNDATED
✓	AERIAL PHOTOGRAPHS	✓ SATURATED IN UPPER 12 INCHES
	OTHER	WATER MARKS
	NO RECORDED DATA AVAILABLE	DRIFT LINES
FIELD OBSERVATIONS:		SEDIMENT DEPOSITS
	DEPTH OF SURFACE WATER — in.	✓ DRAINAGE PATTERNS IN WETLANDS
	DEPTH TO FREE WATER IN PIT 0 in.	SECONDARY INDICATORS (2 OR MORE REQUIRED)
	DEPTH TO SATURATED SOIL 0 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
seep on gently sloping hill side, soils saturated to surface		WATER-STAINED LEAVES
		LOCAL SOIL SURVEY DATA
		FAC-NEUTRAL TEST
		OTHER (EXPLAIN IN REMARKS)
Remarks:		

MAP UNIT NAME (SERIES AND PHASE):		DRAINAGE CLASS:			
TAXONOMY (SUBGROUP)		FIELD OBSERVATIONS CONFIRM MAPPED TYPE?      YES      NO			
PROFILE DESCRIPTION					
DEPTH (IN.)	HORIZON	MATRIX COLOR (MUNSELL MOIST)	MOTTLE COLORS (MUNSELL MOIST)	MOTTLE ABUNDANCE/CONTRAST	TEXTURE, CONCRETIONS, STRUCTURE, ETC.
		not investigated, but observed saturation ponding on surface - see data pt.			
		21 per soils data in			
		same wetland feature			
HYDRIC SOIL INDICATORS					
HISTOSOL HISTIC EPIPEDON SULFIDIC ODOR AQUIC MOISTURE REGIME REDUCING CONDITIONS GLEYED OR LOW-CHROMA COLORS			CONCRETIONS HIGH ORGANIC CONTENT IN SURFACE LAYER IN SANDY SOILS ORGANIC STREAKING IN SANDY SOILS LISTED ON LOCAL HYDRIC SOILS LIST LISTED ON NATIONAL HYDRIC SOILS LIST OTHER (EXPLAIN IN REMARKS)		
REMARKS:					

HYDROPHYTIC VEGETATION PRESENT?	<u>YES</u> NO	IS THIS SAMPLING POINT WITHIN A WETLAND? <u>YES</u> NO (CIRCLE)
WETLAND HYDROLOGY PRESENT?	<u>YES</u> NO	
HYDRIC SOILS PRESENT?	<u>YES</u> NO	
REMARKS:		

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/18/06
APPLICANT/OWNER:	Center	COUNTY:	Sec
INVESTIGATOR:	T. Bayot, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?		Yes <input checked="" type="radio"/> no <input type="radio"/>	COMMUNITY ID: seep 6
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?		Yes <input type="radio"/> no <input checked="" type="radio"/>	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)		yes <input type="radio"/> no <input checked="" type="radio"/>	PLOT ID: (21)

**VEGETATION**

other

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Limnanthus striata</i>	50%	OBL	9. <i>Rumex pulcher</i>		
2. <i>Eleocharis macrospora</i>	50%	OBL	10. <i>Sonchum asper</i>		
3.			11. <i>Hardium murrayi</i> ssp. <i>geniculatum</i>		
4.			12. <i>Lolium multiflorum</i>		
5.			13. <i>Epilobium densiflorum</i>		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks:

**HYDROLOGY**

<input checked="" type="checkbox"/> RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS: PRIMARY INDICATORS:
<input type="checkbox"/> STREAM, LAKE OR TIDE GAUGE	INUNDATED
<input checked="" type="checkbox"/> AERIAL PHOTOGRAPHS	<input checked="" type="checkbox"/> SATURATED IN UPPER 12 INCHES
<input type="checkbox"/> OTHER	<input checked="" type="checkbox"/> WATER MARKS
<input type="checkbox"/> NO RECORDED DATA AVAILABLE	DRIFT LINES
FIELD OBSERVATIONS:	SEDIMENT DEPOSITS
DEPTH OF SURFACE WATER — in.	<input checked="" type="checkbox"/> DRAINAGE PATTERNS IN WETLANDS
DEPTH TO FREE WATER IN PIT 70 in.	SECONDARY INDICATORS (2 OR MORE REQUIRED)
DEPTH TO SATURATED SOIL 0 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
Seep on gently sloping hillsides Soils are saturated to surface	WATER-STAINED LEAVES
Remarks:	LOCAL SOIL SURVEY DATA
Remarks:	FAC-NEUTRAL TEST
Remarks:	OTHER (EXPLAIN IN REMARKS)



[illegible]

HYDROPHYTIC VEGETATION PRESENT? <u>YES</u> NO WETLAND HYDROLOGY PRESENT? <u>YES</u> NO HYDRIC SOILS PRESENT? <u>YES</u> NO	IS THIS SAMPLING POINT WITHIN A WETLAND? <u>YES</u> NO (CIRCLE)
REMARKS:	

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/18/06
APPLICANT/OWNER:	Cent+	COUNTY:	Sac
INVESTIGATOR:	T. Beyers, & Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?		<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID:
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?		<input type="radio"/> Yes <input checked="" type="radio"/> no	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)		<input type="radio"/> yes <input checked="" type="radio"/> no	PLOT ID: (22)

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Tuncus tenuis</i>	100%	FACW	9. <i>Sarcocornus</i>		
2.			10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: site dominated by hydrophytes, over 100%

**HYDROLOGY**

<input checked="" type="checkbox"/> RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS: PRIMARY INDICATORS:
<input type="checkbox"/> STREAM, LAKE OR TIDE GAUGE	<input type="checkbox"/> INUNDATED
<input checked="" type="checkbox"/> AERIAL PHOTOGRAPHS	<input checked="" type="checkbox"/> SATURATED IN UPPER 12 INCHES
<input type="checkbox"/> OTHER	<input type="checkbox"/> WATER MARKS
<input type="checkbox"/> NO RECORDED DATA AVAILABLE	<input type="checkbox"/> DRIFT LINES
FIELD OBSERVATIONS:	<input type="checkbox"/> SEDIMENT DEPOSITS
DEPTH OF SURFACE WATER — in.	<input checked="" type="checkbox"/> DRAINAGE PATTERNS IN WETLANDS
DEPTH TO FREE WATER IN PIT > 0 in.	SECONDARY INDICATORS (2 OR MORE REQUIRED)
DEPTH TO SATURATED SOIL 0 in.	<input type="checkbox"/> OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
wetland in low landscape position; also fed by runoff from surrounding upland areas	<input type="checkbox"/> WATER-STAINED LEAVES
	<input type="checkbox"/> LOCAL SOIL SURVEY DATA
	<input type="checkbox"/> FAC-NEUTRAL TEST
	<input type="checkbox"/> OTHER (EXPLAIN IN REMARKS)
Remarks: located at the head of a tributary of ID 2	

[illegible]

HYDROPHYTIC VEGETATION PRESENT?	<u>YES</u>	NO	IS THIS SAMPLING POINT WITHIN A WETLAND? <u>YES</u> NO
WETLAND HYDROLOGY PRESENT?	<u>YES</u>	NO	
HYDRIC SOILS PRESENT?	<u>YES</u>	NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/16/06
APPLICANT/OWNER:	Center	COUNTY:	Sec
INVESTIGATOR:	T. Bayol, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?	<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID:	Swale 3
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?	Yes <input type="radio"/> <input checked="" type="radio"/> no	TRANSECT ID:	
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)	yes <input type="radio"/> <input checked="" type="radio"/> no	PLOT ID:	(23)

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Lolium multiflorum</i>	30 ft	FAC*	9. <i>Leptochloa pulegioides</i>		
2. <i>Crucianella striata</i>	30 ft	OBL	10. <i>Cyperus tenuis</i>		
3. <i>Echinochloa macrostachya</i>	30 ft	OBL	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: total cover 40%

**HYDROLOGY**

<input checked="" type="checkbox"/> RECORDED DATA (DESCRIBE IN REMARKS)	<b>WETLAND HYDROLOGY INDICATORS:</b> PRIMARY INDICATORS:
<input type="checkbox"/> STREAM, LAKE OR TIDE GAUGE	<input type="checkbox"/> INUNDATED
<input checked="" type="checkbox"/> AERIAL PHOTOGRAPHS	<input type="checkbox"/> SATURATED IN UPPER 12 INCHES
<input type="checkbox"/> OTHER	<input type="checkbox"/> WATER MARKS
<input type="checkbox"/> NO RECORDED DATA AVAILABLE	<input checked="" type="checkbox"/> DRIFT LINES
<b>FIELD OBSERVATIONS:</b>	<input checked="" type="checkbox"/> SEDIMENT DEPOSITS
DEPTH OF SURFACE WATER: — in.	<input checked="" type="checkbox"/> DRAINAGE PATTERNS IN WETLANDS
DEPTH TO FREE WATER IN PIT: > 8 in.	<b>SECONDARY INDICATORS (2 OR MORE REQUIRED)</b>
DEPTH TO SATURATED SOIL: > 8 in.	<input type="checkbox"/> OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
Soil moist to surface - Swale is in low-lying landscape position	<input type="checkbox"/> WATER-STAINED LEAVES
Remarks:	<input type="checkbox"/> LOCAL SOIL SURVEY DATA
	<input type="checkbox"/> FAC-NEUTRAL TEST
	<input type="checkbox"/> OTHER (EXPLAIN IN REMARKS)

[illegible]

HYDROPHYTIC VEGETATION PRESENT?	<u>YES</u>	NO	IS THIS SAMPLING POINT WITHIN A WETLAND? <u>YES</u> (CIRCLE) NO
WETLAND HYDROLOGY PRESENT?	<u>YES</u>	NO	
HYDRIC SOILS PRESENT?	<u>YES</u>	NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/11/06
APPLICANT/OWNER:	Center	COUNTY:	Sac
INVESTIGATOR:	T Bayest, P Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?	<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID:	AG
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?	Yes <input type="radio"/> <input checked="" type="radio"/> no	TRANSECT ID:	
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)	yes <input type="radio"/> <input checked="" type="radio"/> no	PLOT ID:	2

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Bromus hordeaceus</i>	A 60	FACU-	9. <i>Geranium dissectum</i>		
2. <i>Hypericum perforatum</i>	H 20	NL	10. <i>Colium multiflorum</i>		
3. <i>Lactuca serriola</i>	H 20	FAC	11. <i>Tamaliaherum caput medusae</i>		
4.			12. <i>Beta minor</i>		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: total cover 80% - site is clearly dominated by upland vegetation

**HYDROLOGY**

<input checked="" type="checkbox"/> RECORDED DATA (DESCRIBE IN REMARKS)	<b>WETLAND HYDROLOGY INDICATORS:</b> PRIMARY INDICATORS:
<input type="checkbox"/> STREAM, LAKE OR TIDE GAUGE	INUNDATED
<input checked="" type="checkbox"/> AERIAL PHOTOGRAPHS	SATURATED IN UPPER 12 INCHES
<input type="checkbox"/> OTHER	WATER MARKS
<input type="checkbox"/> NO RECORDED DATA AVAILABLE	DRIFT LINES
FIELD OBSERVATIONS:	SEDIMENT DEPOSITS
DEPTH OF SURFACE WATER      — in.	DRAINAGE PATTERNS IN WETLANDS
DEPTH TO FREE WATER IN PIT      >12 in.	SECONDARY INDICATORS (2 OR MORE REQUIRED)
DEPTH TO SATURATED SOIL      >12 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
site is on gently sloping hillside above intermittent drainage	WATER-STAINED LEAVES
	LOCAL SOIL SURVEY DATA
	FAC-NEUTRAL TEST
	OTHER (EXPLAIN IN REMARKS)
Remarks:	

[illegible]

HYDROPHYTIC VEGETATION PRESENT?	YES	NO	(CIRCLE) IS THIS SAMPLING POINT WITHIN A WETLAND? YES NO
WETLAND HYDROLOGY PRESENT?	YES	NO	
HYDRIC SOILS PRESENT?	YES	NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	T. Beyerl, P. Unger	DATE:	5/11/06
APPLICANT/OWNER:	Centex	COUNTY:	Sac
INVESTIGATOR:	T. Beyerl, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?		<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID:
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?		Yes <input type="radio"/> <input checked="" type="radio"/> no	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)		yes <input type="radio"/> <input checked="" type="radio"/> no	PLOT ID:
			④

**VEGETATION**

other

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Bomus hordeaceus</i>	H 50%	FACW-	9. <i>Taraxacum officinale</i>		
2. <i>Nasella pulchra</i>	H 30%	IX	10. <i>Vulpia myuros</i>		
3.			11. <i>Triticale</i>		
4.			12. <i>Avena fatua</i>		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: site is dominated by upland vegetation

**HYDROLOGY**

<input checked="" type="checkbox"/>	RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS:
	STREAM, LAKE OR TIDE GAUGE	PRIMARY INDICATORS:
<input checked="" type="checkbox"/>	AERIAL PHOTOGRAPHS	INUNDATED
	OTHER	SATURATED IN UPPER 12 INCHES
	NO RECORDED DATA AVAILABLE	WATER MARKS
	FIELD OBSERVATIONS:	DRIFT LINES
	DEPTH OF SURFACE WATER	SEDIMENT DEPOSITS
	— in.	DRAINAGE PATTERNS IN WETLANDS
	DEPTH TO FREE WATER IN PIT	SECONDARY INDICATORS (2 OR MORE REQUIRED)
	712 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
	DEPTH TO SATURATED SOIL	WATER-STAINED LEAVES
	712 in.	LOCAL SOIL SURVEY DATA
	on gently sloping hillside above intermittent drainage	FAC-NEUTRAL TEST
		OTHER (EXPLAIN IN REMARKS)
Remarks:	—	

[illegible]

HYDROPHYTIC VEGETATION PRESENT?	YES	<input type="radio"/> NO	IS THIS SAMPLING POINT WITHIN A WETLAND? YES <input type="radio"/> NO <input type="radio"/>
WETLAND HYDROLOGY PRESENT?	YES	<input type="radio"/> NO	
HYDRIC SOILS PRESENT?	YES	<input type="radio"/> NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/11/06
APPLICANT/OWNER:	Center	COUNTY:	Sac
INVESTIGATOR:	T. Bayol, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?	Yes <input checked="" type="radio"/> no <input type="radio"/>	COMMUNITY ID:	AG
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?	Yes <input type="radio"/> no <input checked="" type="radio"/>	TRANSECT ID:	
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)	yes <input type="radio"/> no <input checked="" type="radio"/>	PLOT ID:	⑦

**VEGETATION**

*Other*

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Taraxacum officinale</i>	40 %	NL	9. <i>Vulpia myuros</i>		
2.			10. <i>Geranium dissectum</i>		
3. <i>Bromus hordeaceus</i>	30 %	FACW	11. <i>Triticum hyemale</i>		
4. <i>Lolium multiflorum</i>	30 %	FAC*	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: total cover = 75%

**HYDROLOGY**

<input checked="" type="checkbox"/>	RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS:
	STREAM, LAKE OR TIDE GAUGE	PRIMARY INDICATORS:
		INUNDATED
<input checked="" type="checkbox"/>	AERIAL PHOTOGRAPHS	SATURATED IN UPPER 12 INCHES
	OTHER	WATER MARKS
	NO RECORDED DATA AVAILABLE	DRIFT LINES
	FIELD OBSERVATIONS:	SEDIMENT DEPOSITS
	DEPTH OF SURFACE WATER	in.
	DEPTH TO FREE WATER IN PIT	28 in.
	DEPTH TO SATURATED SOIL	28 in.
Site is on gently sloping hill side		SECONDARY INDICATORS (2 OR MORE REQUIRED)
		OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
		WATER-STAINED LEAVES
		LOCAL SOIL SURVEY DATA
		FAC-NEUTRAL TEST
Remarks:		OTHER (EXPLAIN IN REMARKS)



[illegible]

HYDROPHYTIC VEGETATION PRESENT?	YES	<u>NO</u>	IS THIS SAMPLING POINT WITHIN A WETLAND? YES <u>NO</u> (CIRCLE)
WETLAND HYDROLOGY PRESENT?	YES	<u>NO</u>	
HYDRIC SOILS PRESENT?	YES	<u>NO</u>	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/11/06
APPLICANT/OWNER:	Center	COUNTY:	Sac
INVESTIGATOR:	T. Bayless, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?	<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID:	AG
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?	Yes <input type="radio"/> <input checked="" type="radio"/> no	TRANSECT ID:	
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)	yes <input type="radio"/> <input checked="" type="radio"/> no	PLOT ID:	(11)

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. Bromus hordeaceus	H	FACU-	9. Trifolium repens		
2. Bromus diandrus	H	NL	10. Sonchus asper		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: site dominated by upland vegetation

**HYDROLOGY**

<input checked="" type="checkbox"/>	RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS: PRIMARY INDICATORS:
	STREAM, LAKE OR TIDE GAUGE	INUNDATED
<input checked="" type="checkbox"/>	AERIAL PHOTOGRAPHS	SATURATED IN UPPER 12 INCHES
	OTHER	WATER MARKS
	NO RECORDED DATA AVAILABLE	DRIFT LINES
FIELD OBSERVATIONS:		SEDIMENT DEPOSITS
DEPTH OF SURFACE WATER	— in.	DRAINAGE PATTERNS IN WETLANDS
DEPTH TO FREE WATER IN PIT	78 in.	SECONDARY INDICATORS (2 OR MORE REQUIRED)
DEPTH TO SATURATED SOIL	78 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
in gently sloping hillside above deep		WATER-STAINED LEAVES
		LOCAL SOIL SURVEY DATA
		FAC-NEUTRAL TEST
		OTHER (EXPLAIN IN REMARKS)
Remarks:		

MAP UNIT NAME (SERIES AND PHASE):		DRAINAGE CLASS:			
TAXONOMY (SUBGROUP)		FIELD OBSERVATIONS CONFIRM MAPPED TYPE?      YES    NO			
PROFILE DESCRIPTION					
DEPTH (IN.)	HORIZON	MATRIX COLOR (MUNSELL MOIST)	MOTTLE COLORS (MUNSELL MOIST)	MOTTLE ABUNDANCE/CONTRAST	TEXTURE, CONCRETIONS, STRUCTURE, ETC.
D-8 <sup>+</sup>		7.5YR3/4			loam
HYDRIC SOIL INDICATORS					
HISTOSOL HISTIC EPIPEDON SULFIDIC ODOR AQUIC MOISTURE REGIME REDUCING CONDITIONS GLEIED OR LOW-CHROMA COLORS			CONCRETIONS HIGH ORGANIC CONTENT IN SURFACE LAYER IN SANDY SOILS ORGANIC STREAKING IN SANDY SOILS LISTED ON LOCAL HYDRIC SOILS LIST LISTED ON NATIONAL HYDRIC SOILS LIST OTHER (EXPLAIN IN REMARKS)		
REMARKS:					

HYDROPHYTIC VEGETATION PRESENT?	YES	NO	IS THIS SAMPLING POINT WITHIN A WETLAND? YES NO
WETLAND HYDROLOGY PRESENT?	YES	NO	
HYDRIC SOILS PRESENT?	YES	NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/18/06
APPLICANT/OWNER:	Center	COUNTY:	Sac
INVESTIGATOR:	T. Bayerl, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?	<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID:	AG
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?	Yes <input type="radio"/> <input checked="" type="radio"/> no	TRANSECT ID:	
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)	yes <input type="radio"/> <input checked="" type="radio"/> no	PLOT ID:	(13)

**VEGETATION**

other

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Taraxacum officinale</i>	70%	NL	9. <i>Bromus hordeaceus</i>		
2.	H		10. <i>Lolium multiflorum</i>		
3.			11. <i>Carduus pycnostachyus</i>		
4.			12. <i>Hypericum perforatum</i>		
5.			13. <i>Bromus diandrus</i>		
6.			14. <i>Nasella pulchra</i>		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: total cover 100% - site is dominated by dense annual grassland vegetation

**HYDROLOGY**

RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS:
STREAM, LAKE OR TIDE GAUGE	PRIMARY INDICATORS:
<input checked="" type="checkbox"/> AERIAL PHOTOGRAPHS	INUNDATED
<input type="checkbox"/> OTHER	SATURATED IN UPPER 12 INCHES
<input type="checkbox"/> NO RECORDED DATA AVAILABLE	WATER MARKS
	DRIFT LINES
FIELD OBSERVATIONS:	SEDIMENT DEPOSITS
DEPTH OF SURFACE WATER > 8 in.	DRAINAGE PATTERNS IN WETLANDS
DEPTH TO FREE WATER IN PIT > 8 in.	SECONDARY INDICATORS (2 OR MORE REQUIRED)
DEPTH TO SATURATED SOIL > 8 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
Site is on gently sloped hillside above intermittent drainage	WATER-STAINED LEAVES
	LOCAL SOIL SURVEY DATA
	FAC-NEUTRAL TEST
	OTHER (EXPLAIN IN REMARKS)
Remarks:	

MAP UNIT NAME (SERIES AND PHASE):		DRAINAGE CLASS:			
TAXONOMY (SUBGROUP)		FIELD OBSERVATIONS CONFIRM MAPPED TYPE?      YES    NO			
PROFILE DESCRIPTION					
DEPTH (IN.)	HORIZON	MATRIX COLOR (MUNSELL MOIST)	MOTTLE COLORS (MUNSELL MOIST)	MOTTLE ABUNDANCE/CONTRAST	TEXTURE, CONCRETIONS, STRUCTURE, ETC.
0-8"		7.5 YR 3/4	—		clay loam
HYDRIC SOIL INDICATORS					
HISTOSOL HISTIC EPIPEDON SULFIDIC ODOR AQUIC MOISTURE REGIME REDUCING CONDITIONS GLEYPED OR LOW-CHROMA COLORS			CONCRETIONS HIGH ORGANIC CONTENT IN SURFACE LAYER IN SANDY SOILS ORGANIC STREAKING IN SANDY SOILS LISTED ON LOCAL HYDRIC SOILS LIST LISTED ON NATIONAL HYDRIC SOILS LIST OTHER (EXPLAIN IN REMARKS)		
REMARKS:					

HYDROPHYTIC VEGETATION PRESENT?	YES	<u>NO</u>	IS THIS SAMPLING POINT WITHIN A WETLAND? YES <u>NO</u> (CIRCLE)
WETLAND HYDROLOGY PRESENT?	YES	<u>NO</u>	
HYDRIC SOILS PRESENT?	YES	<u>NO</u>	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/18/06
APPLICANT/OWNER:	Center	COUNTY:	Sac
INVESTIGATOR:	T. Bayol, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?		<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID:
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?		Yes <input type="radio"/> <input checked="" type="radio"/> no	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)		yes <input type="radio"/> <input checked="" type="radio"/> no	PLOT ID: (17)

**VEGETATION**

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Polygonum multiflorum</i>	80%	FAC*	9. <i>Avena pectus</i>		
2. _____			10. <i>Carduus pycnostachyus</i>		
3. _____			11. <i>Bromus hordeaceus</i>		
4. _____			12. <i>Bromus diandrus</i>		
5. _____			13. _____		
6. _____			14. _____		
7. _____			15. _____		
8. _____			16. _____		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):

Remarks: dense cover (100%) of annual grasses + rustles

**HYDROLOGY**

<input checked="" type="checkbox"/> RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS: PRIMARY INDICATORS:
<input type="checkbox"/> STREAM, LAKE OR TIDE GAUGE	INUNDATED
<input checked="" type="checkbox"/> AERIAL PHOTOGRAPHS	SATURATED IN UPPER 12 INCHES
<input type="checkbox"/> OTHER	WATER MARKS
<input type="checkbox"/> NO RECORDED DATA AVAILABLE	DRIFT LINES
FIELD OBSERVATIONS:	SEDIMENT DEPOSITS
DEPTH OF SURFACE WATER _____ in.	DRAINAGE PATTERNS IN WETLANDS
DEPTH TO FREE WATER IN PIT > 8 in.	SECONDARY INDICATORS (2 OR MORE REQUIRED)
DEPTH TO SATURATED SOIL > 8 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
Site is on gently sloping hillside above adjacent seep	WATER-STAINED LEAVES
	LOCAL SOIL SURVEY DATA
	FAC-NEUTRAL TEST
	OTHER (EXPLAIN IN REMARKS)
Remarks:	



[illegible]

HYDROPHYTIC VEGETATION PRESENT?	YES	NO	IS THIS SAMPLING POINT WITHIN A WETLAND? YES NO
WETLAND HYDROLOGY PRESENT?	YES	NO	
HYDRIC SOILS PRESENT?	YES	NO	
REMARKS:			

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**DATA FORM**  
**Routine Wetland Determination**  
**(1987 COE Wetlands Delineation Manual)**

PROJECT/SITE:	Folsom Heights	DATE:	5/18/02
APPLICANT/OWNER:	Center	COUNTY:	Sac
INVESTIGATOR:	T. Beyer, P. Unger	STATE:	CA
DO NORMAL CIRCUMSTANCES EXIST ON THE SITE?		<input checked="" type="radio"/> Yes <input type="radio"/> no	COMMUNITY ID:
IS THE SITE SIGNIFICANTLY DISTURBED (ATYPICAL SITUATION)?		Yes <input type="radio"/> <input checked="" type="radio"/> no	TRANSECT ID:
IS THE AREA A POTENTIAL PROBLEM AREA? (IF NEEDED, EXPLAIN ON REVERSE)		yes <input type="radio"/> <input checked="" type="radio"/> no	PLOT ID: (19)

**VEGETATION**

other

DOMINANT PLANT SPECIES	STRATUM	INDICATOR	DOMINANT PLANT SPECIES	STRATUM	INDICATOR
1. <i>Bromus hordeaceus</i>	50%	FACU-	9. <i>Taraxacum officinale</i>		
2. <i>Lolium multiflorum</i>	50%	FAC#	10. <i>Trifolium hybridum</i>		
3.			11. <i>Lotus purshianus</i>		
4.			12. <i>Beta vulgaris</i>		
5.			13.		
6.			14.		
7.			15.		
8.			16.		
Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):					
Remarks: total cover 100%; dense annual grass and vegetation					

**HYDROLOGY**

<input checked="" type="checkbox"/>	RECORDED DATA (DESCRIBE IN REMARKS)	WETLAND HYDROLOGY INDICATORS:
	STREAM, LAKE OR TIDE GAUGE	PRIMARY INDICATORS:
		INUNDATED
<input checked="" type="checkbox"/>	AERIAL PHOTOGRAPHS	SATURATED IN UPPER 12 INCHES
	OTHER	WATER MARKS
	NO RECORDED DATA AVAILABLE	DRIFT LINES
FIELD OBSERVATIONS:		SEDIMENT DEPOSITS
DEPTH OF SURFACE WATER	— in.	DRAINAGE PATTERNS IN WETLANDS
DEPTH TO FREE WATER IN PIT	> 4 in.	SECONDARY INDICATORS (2 OR MORE REQUIRED)
DEPTH TO SATURATED SOIL	> 4 in.	OXIDIZED ROOT CHANNELS IN UPPER 12 INCHES
on gently sloping hillside about intermittent drainage		WATER-STAINED LEAVES
		LOCAL SOIL SURVEY DATA
		FAC-NEUTRAL TEST
		OTHER (EXPLAIN IN REMARKS)
Remarks:		

[illegible]

HYDROPHYTIC VEGETATION PRESENT?	YES	<u>NO</u>	IS THIS SAMPLING POINT WITHIN A WETLAND? YES <u>NO</u> (CIRCLE)
WETLAND HYDROLOGY PRESENT?	YES	<u>NO</u>	
HYDRIC SOILS PRESENT?	YES	<u>NO</u>	
REMARKS:			

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## **APPENDIX D**

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### Representative Photographs





Seasonal wetland 2 at sample point 1



Seasonal wetland 3 at sample point 18

## Representative Photographs

## Appendix D





Seep 1 at sample point 9



Seep 3

## Representative Photographs

## Appendix D





Seep 4 at sample point 15



Seep 6 at sample point 20

## Representative Photographs

## Appendix D





Swale 1



Swale 2 at sample point 8

## Representative Photographs

## Appendix D





Swale 4 looking north from sample point 16



Willow scrub habitat

## Representative Photographs

## Appendix D





Intermittent drainage 1 looking downstream (south)



Intermittent drainage 2 looking upstream (northwest)

## Representative Photographs

## Appendix D





Intermittent drainage 3 looking downstream (east)



Annual grassland habitat

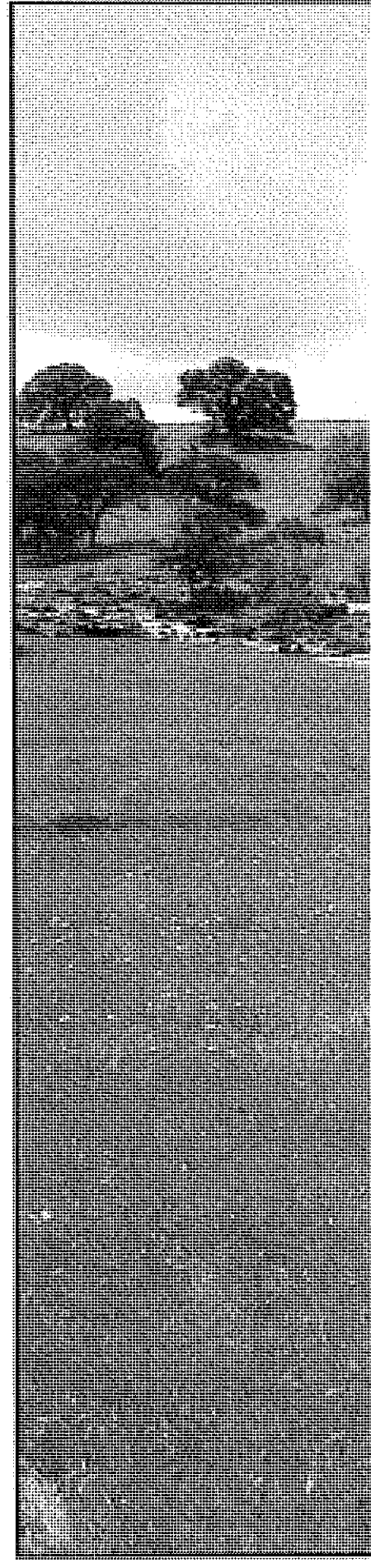
## Representative Photographs

## Appendix D

## **APPENDIX D18**

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Comprehensive Clean Water Act Section 404 Application,  
Folsom Plan Area Specific Plan



# **Comprehensive Clean Water Act, Section 404 Application**

## **Folsom Plan Area Specific Plan**

*Submitted on behalf of:*

**City of Folsom  
Hospitality Consultants  
MJM Properties  
Folsom White Rock Investors  
FPA Land Development  
GenCorp Realty Investments**

**November 20, 2008**

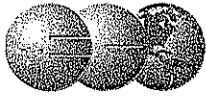
*Submitted to:*

**U.S. Army Corps of Engineers  
Regulatory Branch  
1325 J Street, 14th Floor  
Sacramento, CA 95814**

*Prepared by:*

**ECORP Consulting, Inc.  
Foothill Associates  
Gibson & Skardal, LLC  
MacKay & Soms, Inc.  
Sheppard Mullin, LLP**





20 November 2008

Ms. Lisa Gibson  
U.S. Army Corps of Engineers  
Regulatory Branch  
1325 J Street, 14<sup>th</sup> Floor  
Sacramento, California 95814

**RE: *Comprehensive Clean Water Act, Section 404, Permit Applications for the Folsom Plan Area Specific Plan Project, Sacramento County, California***

Dear Ms. Gibson:

On behalf of the City of Folsom (City) and the Folsom Area South Group, we are submitting the enclosed application package for Department of the Army permits under the authority of Section 404 of the Clean Water Act for the discharge of dredged or fill material to a total of 49.296 acres of aquatic features, including 47.897 acres of waters of the United States. The Folsom Plan Area Specific Plan (SPA) proposes the development of approximately 3,502 acres and the construction of associated on-site and off-site infrastructure. A map illustrating the total project area is shown as Figure 1. *Project Site and Vicinity*. The SPA, and the areas that might be affected by off-site improvements include portions of the Buffalo Creek, Clarksville, Folsom, and Folsom SE, California, 7.5-minute topographic quadrangles (USGS 1980), Township 9 North, Range 7 East: unsectioned, and Township 9 North, Range 8 East: Sections 15 to 22 (Figure 2. *Folsom Plan Area Components*).

In December 2007, the City of Folsom applied for a general permit from the U.S. Army Corps of Engineers (Corps). The Corps issued a public notice announcing the City's application, stating the Corps' intent to prepare an environmental impact statement (EIS), and announcing the scoping meeting for the combined environmental impact report/environmental impact statement (EIR/EIS). These applications are for the specific development and infrastructure projects described in the public notice for the City's general permit.

## **STRUCTURE OF THE APPLICATION PACKAGES AND REVIEW PROCESS**

Consistent with the approach taken in other large plan areas, and as discussed with the Corps, we are submitting a bundled application package that consists of 1) a comprehensive overview of the SPA and associated infrastructure, 2) two infrastructure applications, and 3) six individual permit applications for the private development projects within the SPA. The applications have been completed to enable each development project to proceed, relying on common infrastructure improvements, but independent of the other development projects. (Figures 3. and 4. *Land Use Plan – Map 1 and 2*).

The overall infrastructure plan has been designed to serve the comprehensive needs of the entire plan area (Figure 5. *Backbone Infrastructure*). A separate backbone infrastructure application which includes the roadways, sewer trunks, water distribution lines, and drainage improvements required for any SPA development project to proceed is submitted as part of this package. Also submitted is the application for the necessary off-site water supply line improvements.

The intent is that the Corps will issue an individual Section 404 permit for each application. This approach will enable the coordinated review of the SPA and allow each project to move forward with construction independent of the other projects once a permit is issued. The applicants are requesting the permits be valid for 20 years from the date of issuance. The City also requests that the Corps continue to process its general permit application.

Each participant in this application package (Applicant) is listed below. Each is submitting an application or applications for an individual Section 404 permit at this time.

### **PROJECTS**

Folsom Heights

### **APPLICANTS**

Hospitality Consultants  
8525 Oak Arbor Court  
Fair Oaks, California 95628  
Contact: Bob Robinson

Folsom South

MJM Properties  
1037 Suncastr Lane, Suite 111  
El Dorado Hills, California 95762  
Contact: Mike McDougal

Folsom 138

Folsom White Rock Investors, LLC  
111 Woodmere Drive, Suite 190  
Folsom, California 95630  
Contact: Brian Cutting

Carpenter Ranch

FPA Land Development  
4665 MacArthur Court, Suite 200  
Newport Beach, California 92660  
Contact: Tim Kihm

Folsom 560 (Hillsborough)

GenCorp Realty Investments  
620 Coolidge Drive, Suite 100  
Folsom, California 95630  
Contact: David Hatch

Prairie City Road Business Park

GenCorp Realty Investments  
620 Coolidge Drive, Suite 100  
Folsom, California 95630  
Contact: David Hatch

Backbone Infrastructure  
Off-site Water Line\*  
Prairie City Interchange\*  
Oak Avenue Interchange\*  
Scott Road Interchange\*  
Empire Ranch Interchange\*  
Rowberry Crossing\*

City of Folsom  
Community Development Department  
50 Natoma Street, Folsom, California 95630  
Contact: Gail Furness de Pardo

\*Applications for the interchanges and Rowberry Crossing will be submitted at a later date

The SPA includes development projects on the Javanifard & Zarghami and the Country Day School properties. The owners of those projects are not participating in the Section 404 application process at this time. It is anticipated that they will submit applications at a later date and are likely to proceed under the City's general permit.

For each of the enclosed application packages, we have included the following documents for your use:

- ENG FORM 4345;
- Continuation Sheet for ENG Form 4345;
- Corps Verification Letter, if any;
- Section 7 Consultation Information; and
- Cultural Resource Information.

Also, we have included a draft public notice (softcopy on enclosed CD, Attachment A) which describes these applications and a mailing list for adjacent property owners (Attachment B). We understand that the Corps is likely to issue a single public notice for these projects at the same time that the availability of the draft EIR/EIS is announced.

Background reports that have been prepared for the individual development projects or infrastructure projects, such as wetland delineation reports, special-status species/rare plant surveys, determinate-level branchiopod surveys, tree surveys, and cultural resource reports, are not included in this submittal. Existing documents will be submitted by December 1, 2008 in bundled-fashion, and any subsequent new information or reports will be submitted as it becomes available.

## **PROJECT PURPOSE**

The purpose of the Folsom Plan Area Specific Plan is: (1) to construct a large-scale, mixed-use master-planned community consisting of mixed-density residential uses, a regional shopping center, and other employment-generating uses; (2) to provide associated supporting

infrastructure including on-site backbone infrastructure, a water treatment plant, schools, parks, an on-site trail system, off-site sewer improvements, off-site roadway improvements, off-site highway interchanges, and an off-site water supply pipeline from the Freeport Regional Water Authority diversion facility to the site; and (3) to permanently protect 30 percent of the site as open space for the preservation of oak woodlands and sensitive habitat areas in a manner consistent with Measure W, a local initiative passed by the voters of Folsom requiring the City to take certain actions in the planning of the SPA prior to the approval of the annexation of this area.

## **OVERVIEW OF THE FOLSOM PLAN AREA SPECIFIC PLAN**

The SPA consists of approximately 3,502 acres bordered by Highway 50, Prairie City Road, White Rock Road and the El Dorado County line. The Local Agency Formation Commission (LAFCO) designated this land as part of the City's Sphere of Influence (SOI) in 2001. The City of Folsom intends to annex the SOI Area in order to develop and preserve the property. The proposed development includes mixed-density residential uses, employment-generating land uses (i.e., public, commercial, office and industrial), and active parkland. In addition, the City will maintain 30 percent of the SPA as natural open space that does not include the active parkland. The open space area will contain preserve areas intended to preserve and protect aquatic features, sensitive habitat areas, and cultural resources (Preserve).

The Specific Plan was developed in accordance with the principles of "Smart Growth" embodied by the Sacramento Area Council of Governments (SACOG) Blueprint. As proposed, the SPA will include:

- 1,482.8 acres of residential development,
- 506.7 acres of commercial and employment-generating land uses,
- 106.9-acre site for a regional shopping mall,
- a police station,
- a fire station,
- a municipal services center,

- five elementary schools,
- a joint high school/middle school,
- a water treatment plant,
- associated on-site infrastructure,
- an off-site water supply line
- highway interchanges and crossover roads, and
- an off-site sewer line extension
- a minimum of 1,050 acres of open space including the Preserve.

Measure W and Resolution No. LAFC 1196 passed by the Local Agency Formation Commission (LAFCO) approving the SOI require that a minimum of 30% of the SPA be preserved as natural, undeveloped open space. Approximately 1,050 acres of open space (Open Space) would be included in the proposed project, the majority of which would be located in the western portion of the project site. The Open Space includes Alder Creek, a large concentration of cultural resources sites, and the highest concentration of oak woodland habitat within the project site. The Preserve will be located within the Open Space. The Preserve is intended to preserve and protect aquatic features, such as wetlands, creeks, and vernal pools. The boundary of the Preserve will be determined during this permitting process.

## **EXISTING CONDITIONS**

### **Adjacent Land Uses**

The SPA is surrounded by agricultural and rural residential land uses to the south. Land west of the project site is owned by the Aerojet-General Corporation and is planned for future residential/commercial development and ongoing Aerojet operations. Land east of the project site lies within El Dorado County and consists of residential housing. Residential and commercial development is located north of the project site, on the opposite side of U.S. 50. Regional access to the project site would be provided from U.S. 50, which also forms the site's northern boundary. Local access to the project site is provided by Prairie City Road, East Bidwell Street, and White Rock Road. Alder Creek transects the SPA diagonally from the south-central portion to the northwest corner of the plan area.

## Vegetative Communities

The majority of the land within the SPA is comprised of annual grassland community, composed primarily of non-native annual grasses, including soft chess (*bromus hordeaceus*), ripgut brome (*bromus diandrus*), medusahead grass (*taeniatherum caput-medusae*), slender wild oat (*avena barbata*), and little quaking grass (*briza minor*). Other herbaceous species observed in this community include filaree (*erodium botrys*), bicolored lupine (*lupinus bicolor*), sticky tarweed (*holocarpha virgata*), yellow star-thistle (*centaurea solstitialis*), rose clover (*trifolium hirtum*), shamrock clover (*trifolium dubium*), fremont's tidy-tips (*layia fremontii*), Valley tassels (*castilleja attenuata*), dwarf brodiaea (*brodiaea minor*), and hyacinth brodiaea (*triteleia hyacinthina*). Some areas within the SPA also include Blue oak woodland. Blue oaks (*quercus douglasii*) represent the dominant tree species in this community. Species observed in the understory were generally similar to those found in the annual grassland.

## Soils

According to the Soil Survey of Sacramento County, California (U.S. Department of Agriculture, Soil Conservation Service 1993), 36 soil units, or types, have been mapped within the site (Figures 10 and 11. *Soil Types – Map 1 and 2*).

## Hydrology

The SPA is located within the Lower American Watershed (#18020111), the Lower Sacramento Watershed (#18020109), the Lower Consumnes-Lower Mokelumne Watershed (#18040005), and the Upper Consumnes Watershed (#18040013) (U.S. Department of Interior, Geological Survey [USGS] 1978). These watersheds are illustrated on Figure 12. *USGS Watersheds*.

## **AVOIDANCE AND OPEN SPACE PLAN**

The SPA (excluding the offsite waterline and interchanges) covers approximately 3,502 acres and contains approximately 86.317 acres of wetlands and other "waters" including 1.436 acres of non-jurisdictional features. A total of 45.590 acres of creek, seasonal swale or other aquatic features are to be avoided within a 1,050-acre minimum open space area. The open space consists of a large block of habitat and open space corridors that are proposed throughout the SPA. The Avoidance and Open Space Plan is expected to incorporate over 1,050 acres of open space within the SPA land use plan, and is based upon the goal of establishing interconnected open space. The Open Space includes significant wetland/swale corridors identified within the SPA. These corridors which are central to the preserve design, promote connectivity of waters and watersheds, avoid isolating wetlands and drainages, avoid natural occurring wetlands over those created artificially through agricultural manipulation, and promote avoidance efficiency by maximizing wetlands avoided per total open space area.

Within this open space area will be a preserve within which waters of the United States will be avoided, preserved, and protected. The SPA Avoidance and Open Space Plan is designed to avoid and minimize impacts to key on-site aquatic resources based on plan and field level investigation of existing wetlands and wetland/swale corridor configurations and planned adjacent land uses. The design of the Preserve maintains the functions and values of significant waters on-site.

In addition, the Avoidance and Open Space Plan places detention basins off-line. Detention basins previously planned to be in-line basins were moved off-line to avoid and minimize impacts to waters of the United States throughout the SPA.

Wetlands within the open space areas will have a minimum of 75 feet of open space buffers. The first 25 feet will be undisturbed natural landscape where no grading, trails or improvements will be allowed. The next 50 feet will be permanent open space, but may include temporary disturbance associated with contour grading, mitigation plantings, trails, benches and other passive recreational amenities. Alder Creek, from the northwest corner of the project to the point



point where it crosses Street "A" will have 50 foot undisturbed natural landscape buffers (Figure 17 Typical Open Space Sections).

As detailed land use plans and grading exhibits have not been prepared for the project or infrastructure components within the SPA, impacts have been assessed to all drainages and wetlands that fall within 30 feet of the open space boundary. This area will allow for construction activities and catch-slopes that may be required to implement the project(s).

## **IMPACTS TO WATERS OF THE UNITED STATES**

### **On-Site Impacts**

Wetland delineations have been conducted and submitted for each of the participating properties. The following delineations have been verified by the Corps: Carpenter Ranch, Prairie City Business Park, and Folsom 560 (Hillsborough). Verification of the delineations for the other participating development projects are being processed by the Corps (Figure 6 and 7. *Wetland Delineation/Assessment – Map 1 and 2*). Based upon the best available information, approximately 84.880 acres of waters of the United States (U.S.) have been delineated within the SPA (see Figure 3). Of the 84.880 acres mapped on-site, development will result in direct impacts to approximately 39.329 acres of waters of the U.S. and avoidance/preservation of approximately 45.553 acres of waters of the U.S.

Each individual property application package provides more detail regarding wetland type and source of impact. In addition to the impacts on the individual participating projects, development of the common infrastructure elements would result in direct and indirect impacts both within and outside of the participating properties.

## **Off-site Impacts**

Because access rights to all of the off-site areas have not yet been secured, impact estimates for these areas are based upon Sacramento County Wetland Data, aerial photo interpretation, and roadside ground-truthing. Delineations will be submitted as access rights are secured.

Infrastructure construction, inclusive of drainage facilities, may be completed in phases over the course of the SPA build-out. Off-Site Infrastructure development (waterline and interchange improvements) would result in impacts to approximately 8.569 acres of waters of the U.S. Of the 8.569 acres of impact, 5.695 acres are associated with the Offsite Waterline and 2.874 acres are attributed to the Interchanges. As detailed construction plans are not available at this time, the total acreage within the interchange parcels have been calculated as impact.

## **Total Impacts**

The combined impact total for all elements of this comprehensive permit application is estimated at 47.897 acres (Figure 8 and 9. *Proposed Preserve/Impact Plan – Map 1 and 2*). Table 1, below summarizes the existing wetlands/waters and anticipated impacts associated with each of the applications submitted. To allow the Corps to assess overall SPA impacts, estimates of impacts likely to result from non-participating SPA projects are included and further information is expected to be submitted at a later date.

**Table 1. Wetlands/Waters and Anticipated Impacts by Property**

<b>Project Name</b>	<b>Gross Property Acres</b>	<b>Existing Wetland Acres</b>	<b>Impact Acres</b>	<b>Open Space Wetland Acres</b>
Backbone Infrastructure	N/A	2.354	13.278	
Off-site Water Line	N/A	5.695	5.695	-
Prairie City Interchange <sup>1</sup>	N/A	1.052	1.065	-
Oak Avenue Interchange <sup>1</sup>	N/A	0.954	1.622	-
Scott Road Interchange <sup>1</sup>	N/A	0.001	0.001	-
Empire Ranch Interchange <sup>1</sup>	N/A	0.000	0.240	-
Rowberry Crossing	N/A	0.000	0.000	-
Carpenter Ranch	1023.6	27.666	8.817	13.778
Folsom 138	137	2.533	1.462	1.058
Folsom 560	557.5	10.484	3.409	6.014
Folsom Heights	178.8	5.784	3.257	2.039
Folsom South	1410	29.002	7.247	17.109
Javanifard and Zarghami	30	2.829	0.163	2.644
Prairie City Road Business	71	4.108	1.531	2.327
Sacramento Country Day	78.7	0.99	0.166	0.583
<b>Total:</b>	<b>-</b>	<b>93.450</b>	<b>47.897</b>	<b>45.553</b>

**NOTES:**

- \* As detailed Improvement Plans were not available at this time, all wetlands within interchange parcels are considered impact.
- Existing acreage for Backbone Infrastructure and Interchanges is the total impacts less any acreage that is included in the delineations of Prairie City Business Park, Carpenter Ranch, and Folsom Heights.
- Totals may be off due to rounding.
- Acreages include small portions that have or may be deemed non-jurisdictional by the Corps of Engineers

**ALTERNATIVES ANALYSIS**

The applicants have endeavored to avoid, minimize and mitigate impacts to waters of the United States to the maximum extent practicable. They have provided information to the Corps concerning project alternatives and are in the process of evaluating alternatives to comply with Section 404(b)(1) of the Clean Water Act. These alternatives will consider other potential project locations that are available, practicable, and can achieve the stated project purpose as well as practicable measures to avoid or minimize impacts on site. Other on-site alternatives will include a Resource Impact Minimization Alternative, a Centralized Development Alternative, a Reduced Hillside Development Alternative, a No Federal Action, and a No Project Alternative, as described in Corps Public Notice No. SPK-2007-02159. Other alternatives might be developed during the review process for this permit application. All reasonable project alternatives, in particular those which may be less damaging to the aquatic environment, will be considered.

## **MITIGATION STATEMENT**

The Corps requires that Applicants consider and use all reasonable and practical measures to avoid and minimize impacts to aquatic resources to address the Corps' goal of no-net loss of wetland acreages and functions. Once applicants have taken appropriate steps to avoid and minimize impacts, then compensatory mitigation might be appropriate.

The Open Space will avoid and preserve approximately 45.553 acres of wetlands and waters of the United States. The protections for aquatic resources within the Preserve that will be implemented include execution of conservation easements, long-term funding and management in perpetuity, and minimization of drainage and runoff generated from adjacent development areas.

Approximately 47.897 acres of waters of the United States will be impacted. For these waters that are not protected within the Open Space and cannot practicably be avoided, compensatory mitigation will be provided. The Applicants propose to mitigate unavoidable impacts to waters of the United States through a combination of the on-site enhancement, on-site creation or restoration, and the purchase of credits at Corps-approved mitigation facilities. This compensatory mitigation proposal will offset the loss of functions and values caused by unavoidable impacts to waters of the United States and will implement the Corps' Mitigation Rule. In addition, the Project Applicants will ensure that there is no net increase in floodwater surface elevations downstream of the project in accordance with the LAFCO Resolution.

### **On-Site Mitigation**

The proposed mitigation will be located where it is most likely to successfully replace lost functions and values. To the extent possible, the type and location of compensatory mitigation will account for watershed scale features such as aquatic habitat diversity, habitat connectivity, relationships to hydrologic sources, on-site and adjacent development and land use, and ecological benefits.

The vast majority of the site is within the Alder Creek watershed. Therefore, on-site compensatory mitigation will consist of restoration or enhancement of the Alder Creek corridor and restoration or enhancement of other features within on-site preservation corridors also within the Alder Creek watershed. Measures will be taken to ensure water quality, no obstruction of flows, and no erosion. To the extent that the Applicants are able, the mitigation plan will be consistent with the Alder Creek Watershed Project which is underway but on a slower schedule.

To ensure that the on-site mitigation adequately replaces the aquatic resource functions lost at the site, the Applicant will monitor the mitigation project for a minimum of five years or until it has demonstrated that performance standards have been achieved for at least two consecutive years. Monitoring reports assessing the status of the mitigation project will be submitted to the Corps on an annual basis. This is consistent with the Corps Regulatory Guidance Letter 08-03.

### **Mitigation Bank**

Mitigation bank credits will supplement the proposed on-site mitigation. Credits will be purchased at a 1:1 ratio for any impacts not compensated for on-site and for impacts resulting from the construction of off-site infrastructure. The Folsom South Group has identified Corps-approved mitigation banks where seasonal wetland credits may be purchased. See Table 2 for a list of mitigation banks with available credits for waters of the United States. The SPA is within the service area of each mitigation bank listed. Mitigation credits for off-site infrastructure impacts will be purchased at mitigation banks with service areas encompassing the impact area. Some or all of these credits compensating for off-site impacts might be purchased at banks not currently identified in the following table.

**Table 2 – Potential Mitigation Banks**

<b>Bank Name and location</b>	<b>Owner</b>	<b>Credit Types</b>
Bryte Ranch (Sacramento County)	Stephan Hughes	Swainson's hawk foraging habitat** Vernal pool preservation**
Clay Station(Sacramento County)	Elliott Homes, Inc.	Seasonal Marsh** Vernal pool creation**
Deer Creek* (Sacramento County)	Wildlands	Swainson's hawk foraging habitat**
Elsie Gridley (Solano County)	Wetland Resources	Seasonal wetland **
Fitzgerald Ranch (San Joaquin County)	Lane Family Trust	Vernal pool preservation** California tiger salamander**
Laguna Terrace East* (Sacramento County)	Wildlands	Swainson's hawk** Vernal pool preservation**
North Suisun (Solano County)	Wildlands	California tiger salamander breeding pond** California tiger salamander upland** Vernal pool creation** Vernal pool preservation**
Twin City* (Sacramento County)	Wildlands	Riparian scrub** Seasonal wetland/riparian** Vernal pool creation** Vernal pool preservation**
Gill Ranch*	Conservation Resources	Vernal pool preservation**
Mariner* (Placer County)	Westervelt	Unknown
Dillard Road Mitigation Bank***	Westervelt	Unknown
Van Vleck Mitigation Bank***	Westervelt	Unknown

\*These banks are currently going through the entitlement process and have yet to receive approval regarding the number of allowed credits and/or service area status.

\*\*Subject to availability and is typically on first come, first served basis.

\*\*\*Bank is not yet listed as agency approved mitigation bank and information is currently unavailable on what type of habitat will become available

## Off-Site Mitigation

Additional off-site mitigation will occur in areas affected by construction of the off-site water supply line. Mitigation will occur in the same watershed as the proposed impacts and will consist of enhancement of aquatic resources.

The goal of this strategy is to achieve a mixed mosaic of habitats within the mitigation areas that will preserve ecosystem stability and result in the long-term conservation of important biological resources. The proposed compensatory mitigation will offset impacts to listed vernal pool crustaceans also. This mitigation will ensure that the continued existence of these species is not

is not jeopardized. No critical habitat will be adversely modified, because there is no critical habitat within the Folsom Specific Plan area.

## **ENDANGERED SPECIES**

The project might affect state and federal species that are known to exist in the project vicinity (Figure 13. *CNDDB Occurrences of Special Status Species*). Each individual project application includes an assessment of potential endangered species habitat, the status of surveys, and other information to support formal Section 7 consultation with the U.S. Fish and Wildlife Service (Service). It is anticipated that the Service will conduct a single consultation for all the SPA projects, issue a single biological opinion, and issue separate incidental take authorizations for each development or infrastructure project.

Vernal pool and associated seasonal wetland habitat that may be considered by the USFWS to be potential habitat for vernal pool fairy shrimp occur in the SPA. Several projects, specifically Carpenter Ranch and Folsom South, have conducted wet and/or dry season determinate-level surveys for federally-listed aquatic invertebrates. No federally-listed aquatic invertebrates were found present. Several others (Prairie City Road Business Park, Folsom 560, and Folsom 138) are scheduled to conduct surveys during the 2008/2009 rainy season.

In addition, several elderberry shrubs (*Sambucus* species), the exclusive host plant to the Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus* – VELB) have been identified within the SPA and along the proposed waterline (Figure 16. *Elderberry Locations*).

## **CULTURAL RESOURCES**

It is expected that the Corps will consult with the State Historic Preservation Office on Section 106 of the National Historic Preservation Act for properties listed or potentially eligible for listing on the National Register of Historic Places and the California Register of Historical Resources, as appropriate. Each development application provides information regarding the cultural resources identified on the site. Based on the cultural resources studies conducted to date, the proposed

proposed project has the potential to affect cultural resources eligible for inclusion in the National Register of Historic Places (NRHP). Cultural resources inventories conducted between 1993 and 2008 indicate the presence of at least seven prehistoric archaeological sites, 187 historical archaeological sites, and one prehistoric isolate (Figures 14 and 15. *Cultural Resources Overview Map 1 and 2*). Many of the historical archaeological sites recorded inside the SPA are elements of at least two significant historical districts: the Alder Creek Corridor Mining District and the Rhode's Diggings District. Evaluations recently conducted or currently in progress indicate that at least 72 of the resources are either individually eligible or are contributing elements to an eligible historic district.

A records search and literature review has been conducted for the offsite waterline and interchanges. Twenty-three cultural resources studies were conducted along portions of the waterline between 1971 and 2008, resulting in the identification of four cultural resources. The majority of the waterline remains unsurveyed.

A records search and literature review for a one-mile corridor, centered on Highway 50 between Prairie City Road and the county line, was conducted to assess the status of cultural resources studies for the proposed interchanges. Thirteen cultural resources studies were conducted within the corridor between 1978 and 2008. The cultural resources identified in the southern half of the corridor are included in the onsite totals, above. The one-half mile north of Highway 50, between Prairie City Road and the El Dorado/Sacramento County line, a total of 21 cultural resources have been identified. Portions of the corridor north of Highway 50 remain unsurveyed. The evaluation status of the 25 recorded cultural resources within the offsite waterline and interchanges is currently under review.

## **OTHER AUTHORIZATIONS**

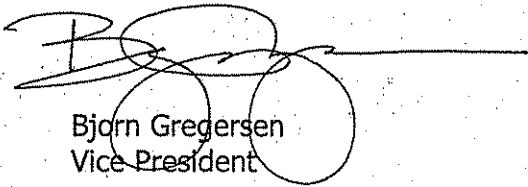
Pursuant to Section 401 of the Clean Water Act, a request for water quality certification will be submitted to the Central Valley Regional Water Quality Control Board upon adoption of the EIR by Sacramento County, as evidenced by the filing of a Notice of Determination (NOD) with the State Clearinghouse.



Some of the wetland/waters impacts proposed in this application would also require the submittal of Streambed Alteration Notifications to the California Department of Fish and Game pursuant to Section 1602 of the California Fish & Game Code, and the subsequent negotiation of Streambed Alteration Agreements. These notifications will be filed when the EIR is adopted and the NOD is filed.

Should you have questions, or require additional information, please let me know.

Sincerely,



Bjorn Gregersen  
Vice President

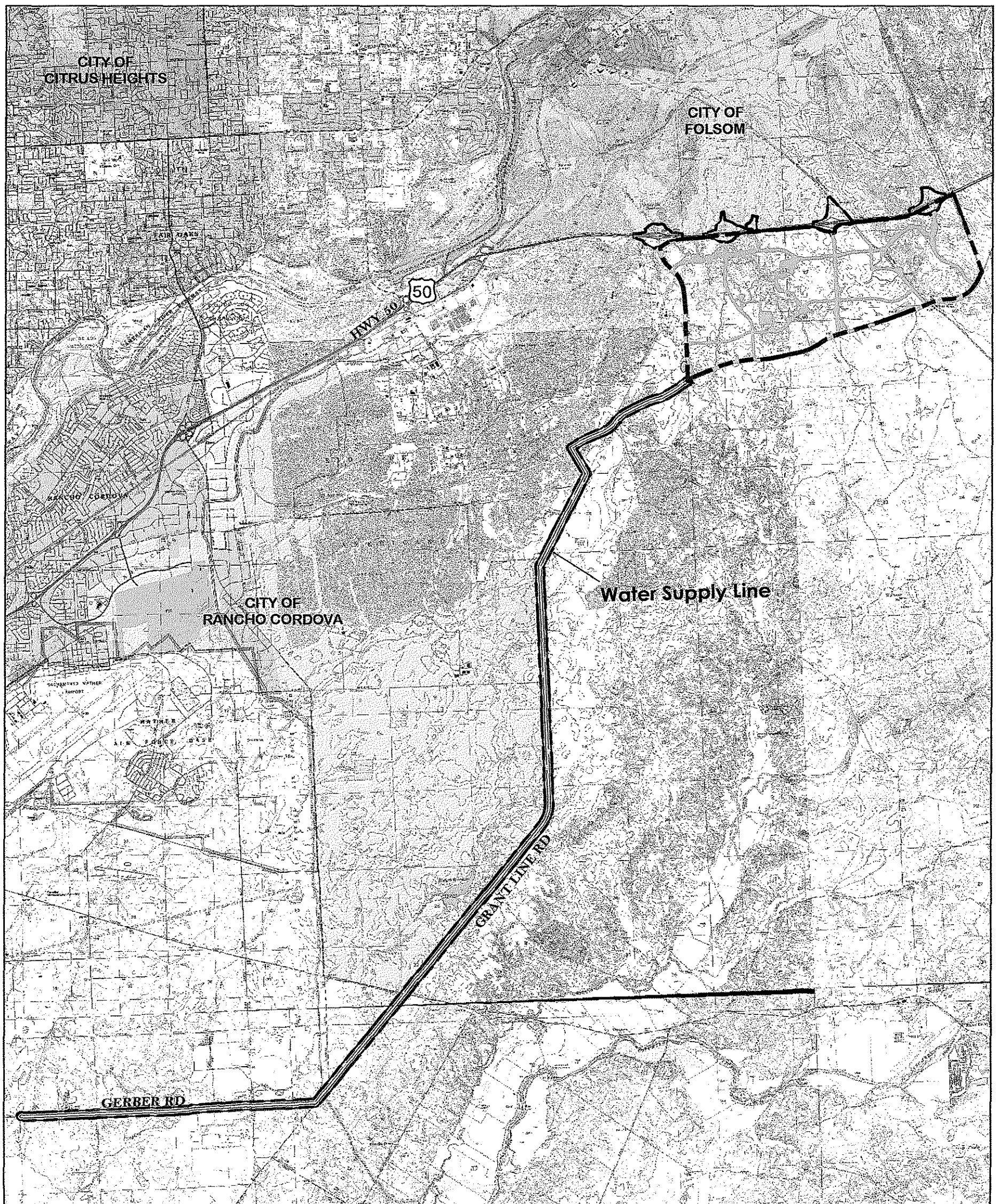
Attachment(s)

Cc: Ardie Zahedani / The Hodgson Company  
Robert Uram / Sheppard, Mullin, Richter & Hampton, LLP  
Jim Ray / MacKay and Soms

## **LIST OF FIGURES**

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- Figure 1. Project Site And Vicinity
- Figure 2. Participating Parcels
- Figure 3. Land Use – Map 1
- Figure 4. Land Use – Map 2
- Figure 5. Backbone Infrastructure
- Figure 6. Wetland Delineation/Assessment – Map 1
- Figure 7. Wetland Delineation/Assessment – Map 2
- Figure 8. Proposed Preserve/Impact Plan – Map 1
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- Figure 10. Soil Types – Map 1
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- Figure 14. Cultural Resources Overview – Map 1
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- Figure 16. Elderberry Locations
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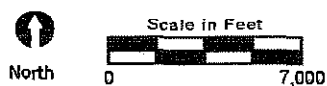
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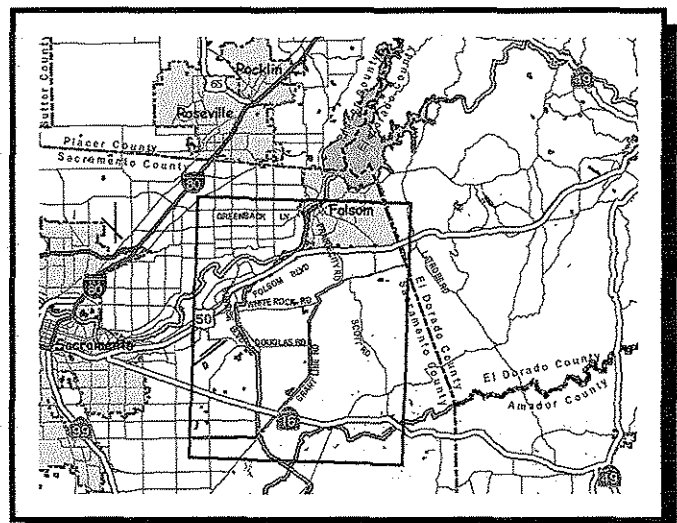
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**STR:** §1-3, §10-12 (T.07N, R. 06E. MDBM.)  
§5-7, (T.07N R. 07E. MDBM.)  
§2,3,10,11,14,15,22,23,27,28,32,33  
(T.08N, R. 07E. MDBM.)  
§13,24-26,35 (T.09N R. 07E. MDBM.)  
§7-10,15-22,30 (T.09N R. 08E. MDBM.)

(Portions of project located on  
unsectioned Rio de los Americanos Landgrant)

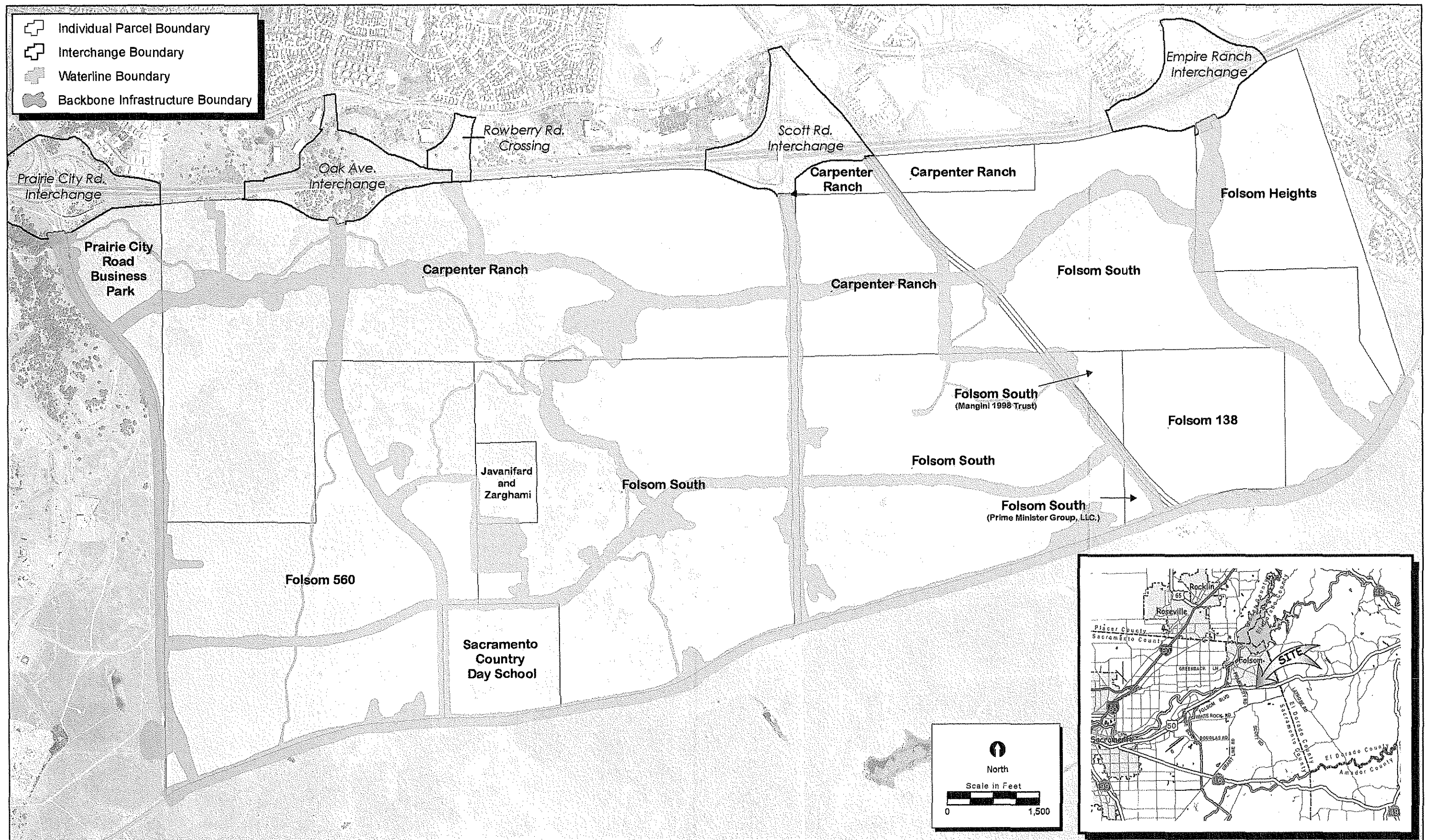


**Buffalo Creek (1980),  
Clarksville (1980),  
Folsom (1980),  
Folsom SE (1980),  
Elk Grove (1980)  
and Sloughhouse (1980),  
7.5' Topographic Quadrangles,  
US Geological Survey.**



**Figure 1. Project Site and Vicinity**



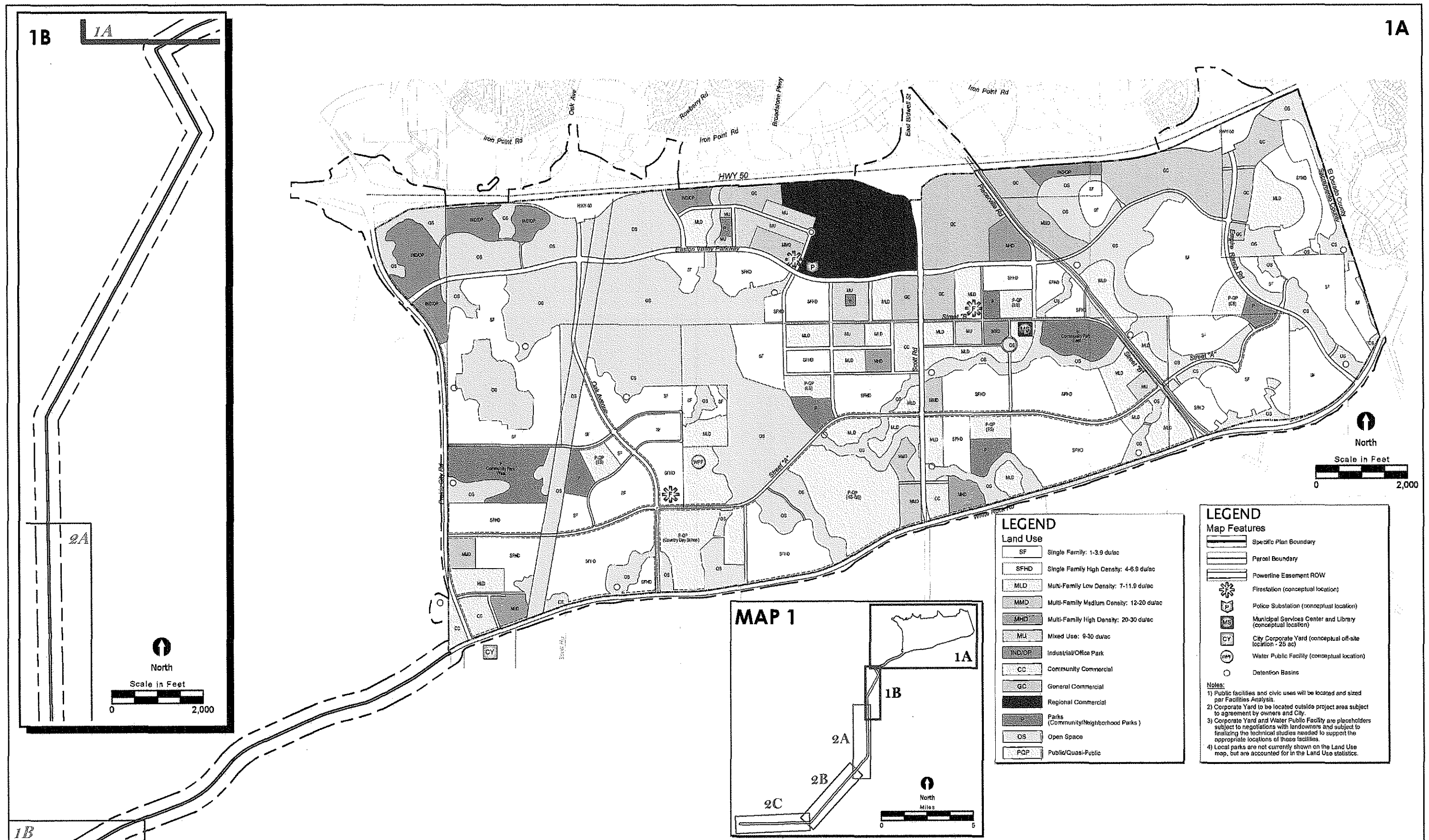


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**Figure 2. Folsom Plan Area Components**

2005-429 Folsom Plan Area Specific Plan



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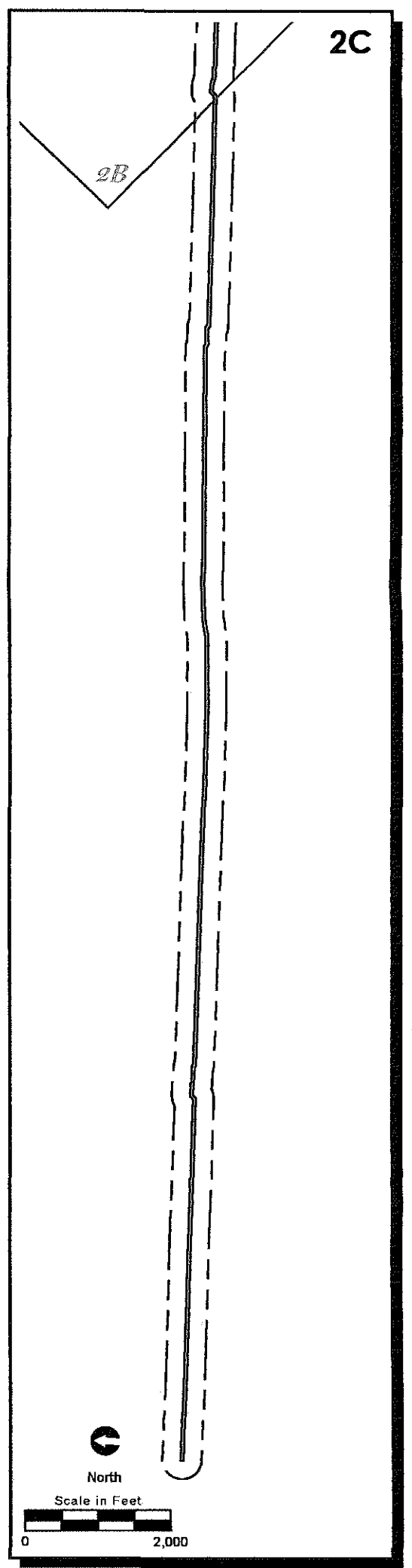
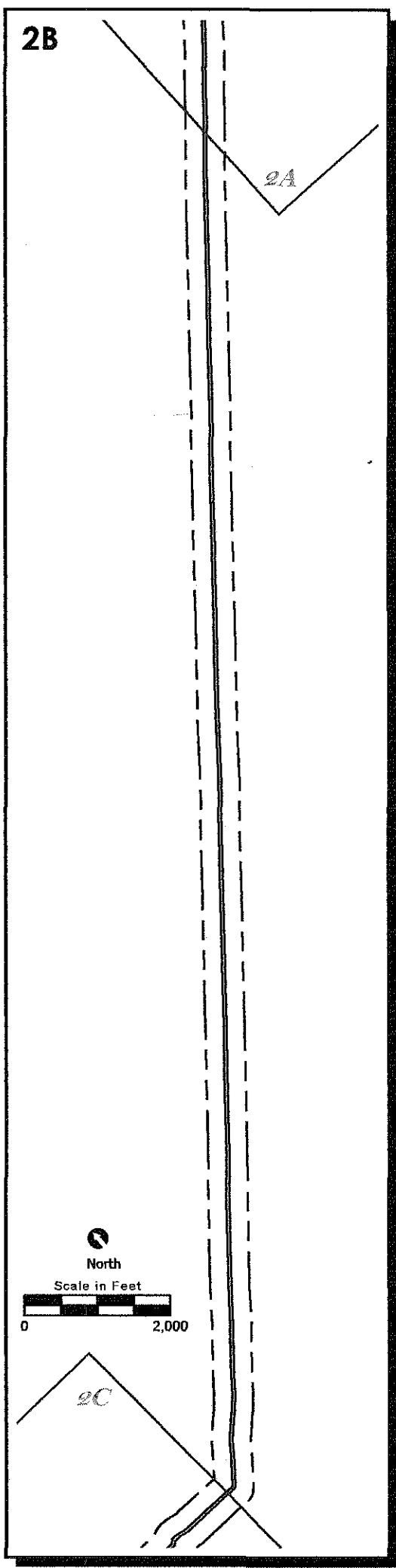
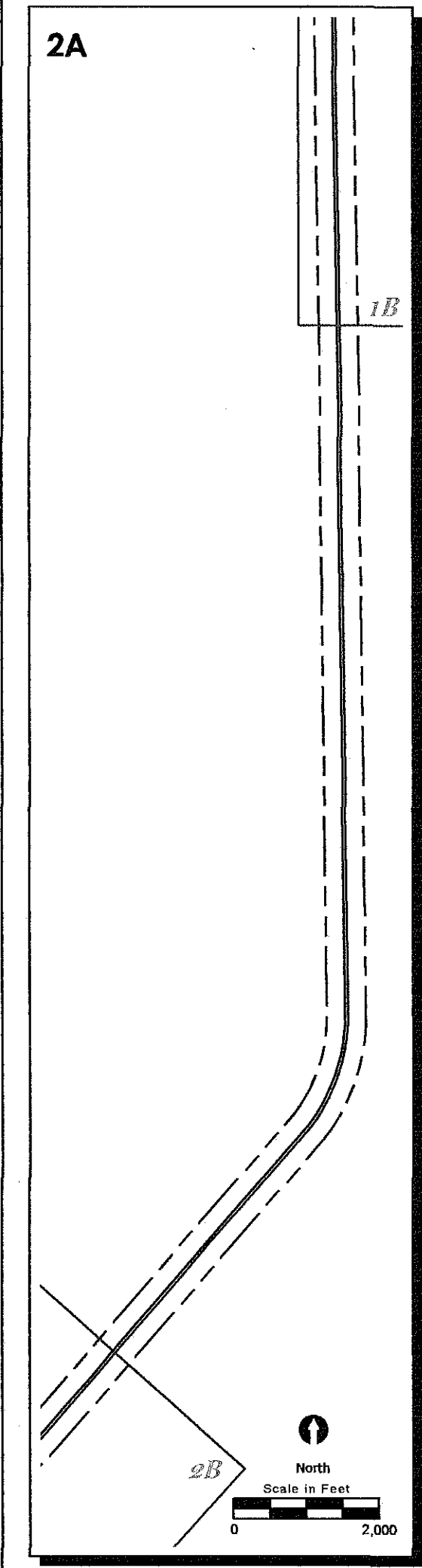
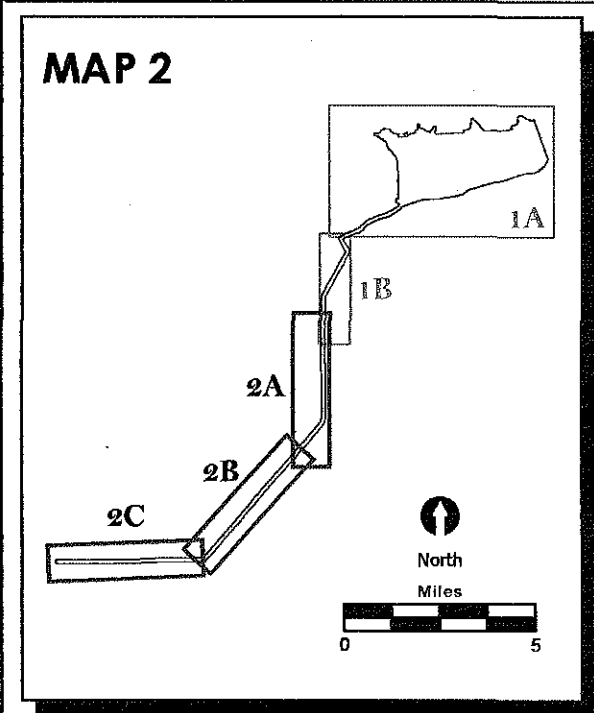
**Figure 3. Land Use Plan - Map 1**  
2005-429 Folsom Plan Area Specific Plan

**Mackay & Somp**  
CIVIL ENGINEERS, INC.  
CIVIL ENGINEERING AND LAND PLANNING  
SACRAMENTO, CALIFORNIA  
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Date: 09/15/08

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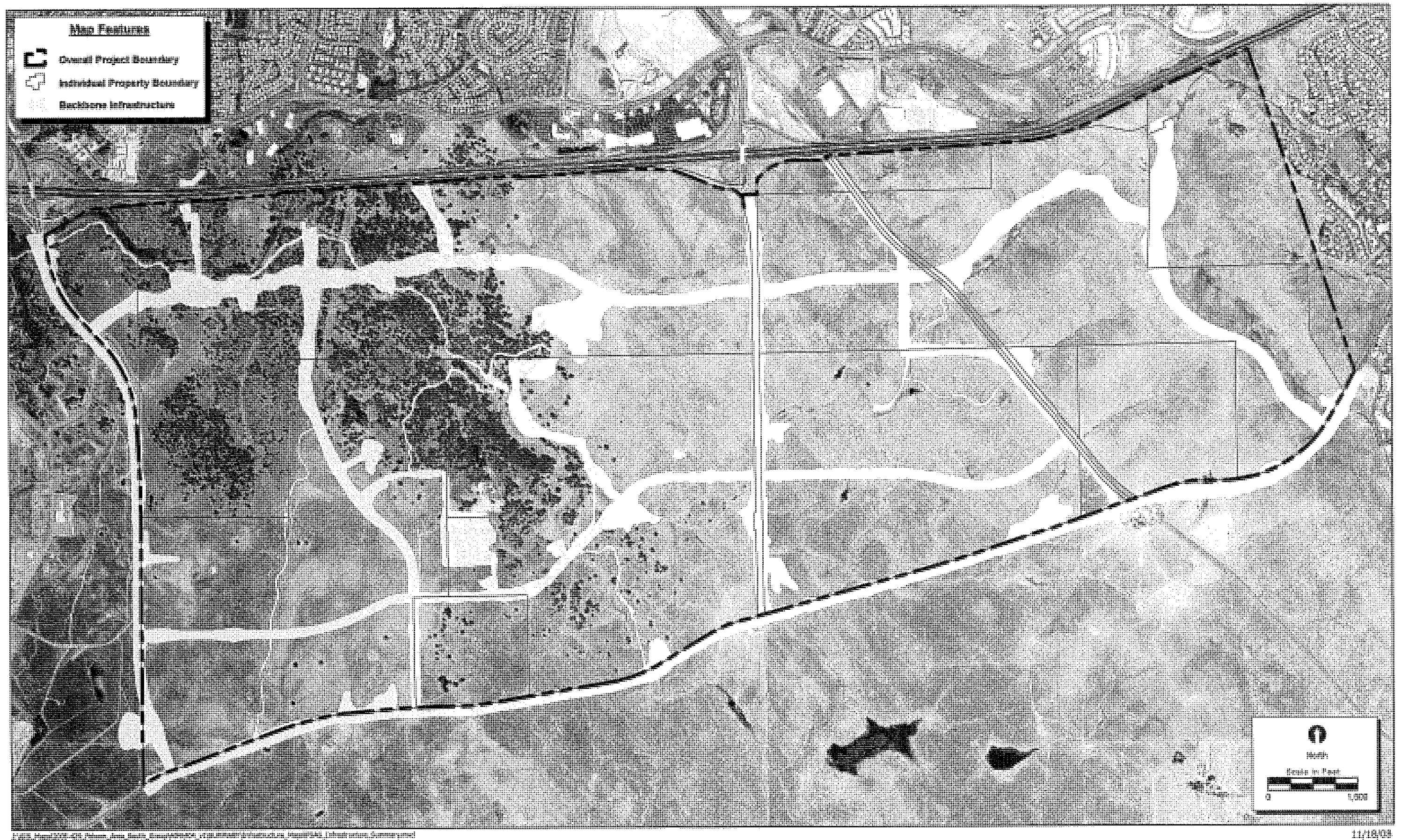
**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

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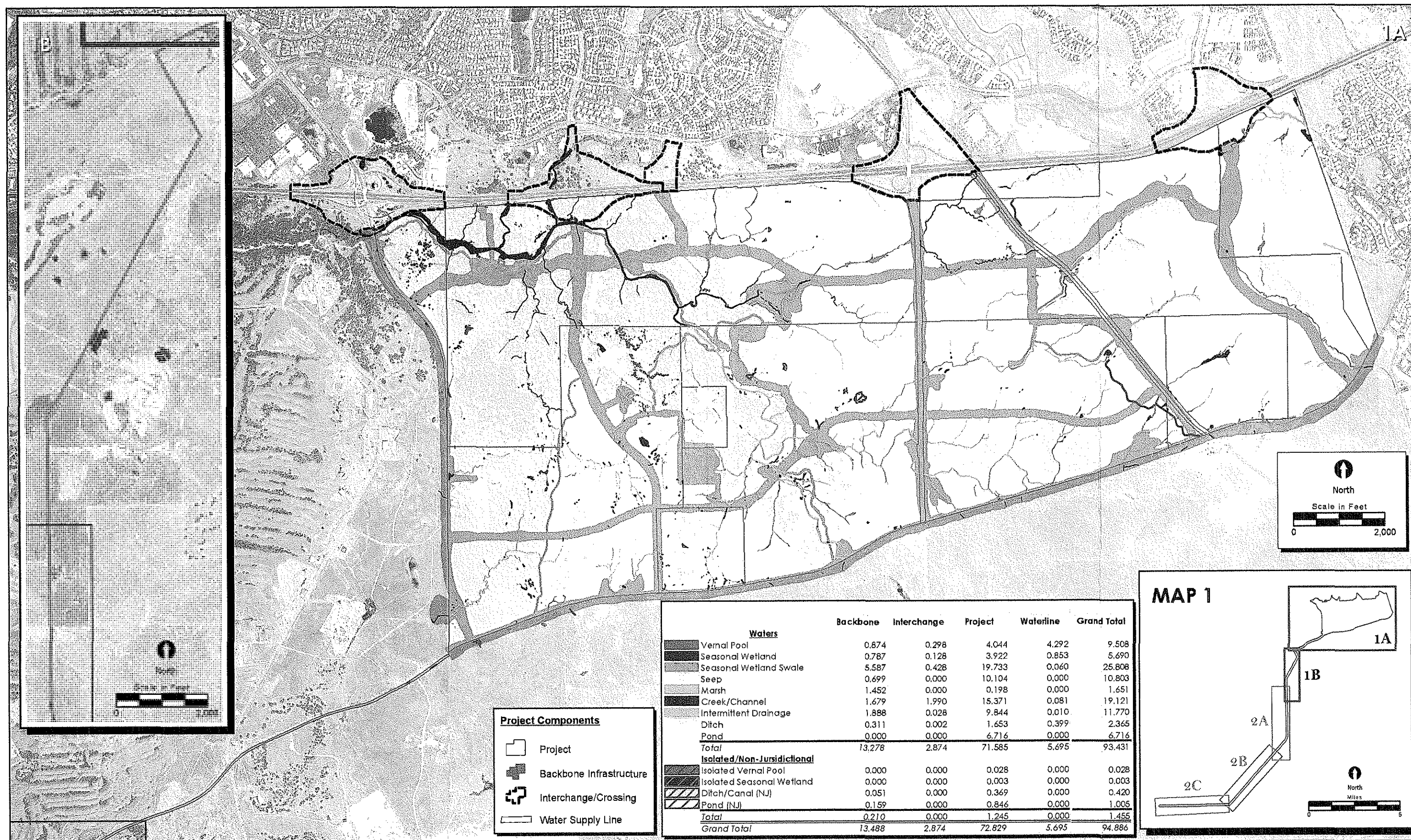
**Figure 4. Land Use Plan - Map 2**  
 2005-429 Folsom Plan Area Specific Plan





**Figure 5. Backbone Infrastructure**  
 2005-429 Folsom Plan Area Specific Plan





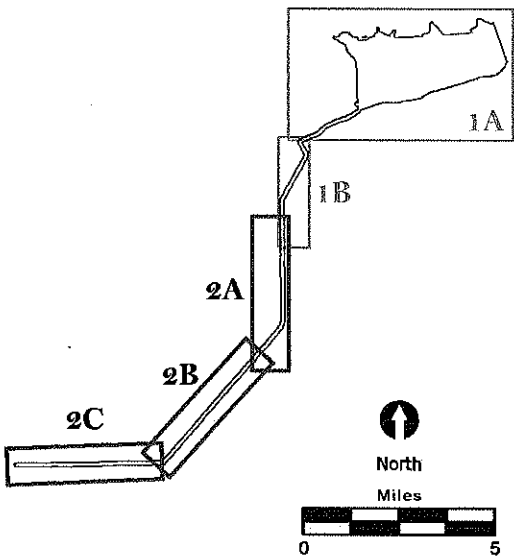
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**Figure 6. Wetland Delineation/Assessment - Map 1**  
2005-429 Folsom Plan Area Specific Plan



MAP 2



	Backbone	Interchange	Project	Waterline	Grand Total
<b>Waters</b>					
Vernal Pool	0.874	0.298	4.044	4.292	9.508
Seasonal Wetland	0.787	0.128	3.922	0.853	5.690
Seasonal Wetland Swale	5.587	0.428	19.733	0.060	25.808
Seep	0.699	0.000	10.104	0.000	10.803
Marsh	1.452	0.000	0.198	0.000	1.651
Creek/Channel	1.679	1.990	15.371	0.081	19.121
Intermittent Drainage	1.888	0.028	9.844	0.010	11.770
Ditch	0.311	0.002	1.653	0.399	2.365
Pond	0.000	0.000	6.716	0.000	6.716
Total	13.278	2.874	71.585	5.695	93.431
<b>Isolated/Non-Jurisdictional</b>					
Isolated Vernal Pool	0.000	0.000	0.028	0.000	0.028
Isolated Seasonal Wetland	0.000	0.000	0.003	0.000	0.003
Ditch/Canal (NJ)	0.051	0.000	0.369	0.000	0.420
Pond (NJ)	0.159	0.000	0.846	0.000	1.005
Total	0.210	0.000	1.245	0.000	1.455
Grand Total	13.488	2.874	72.829	5.695	94.886

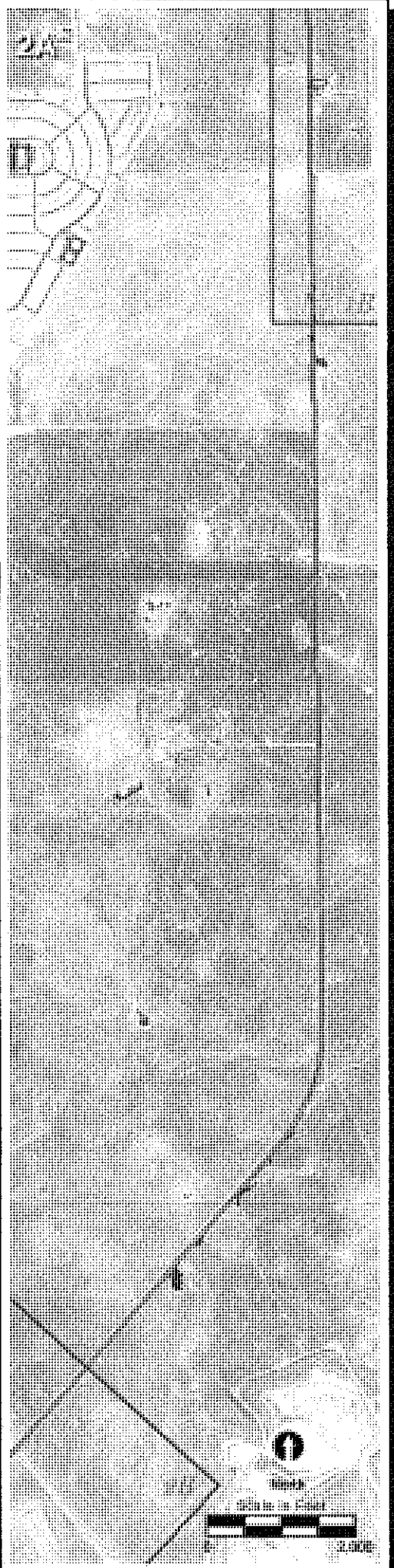
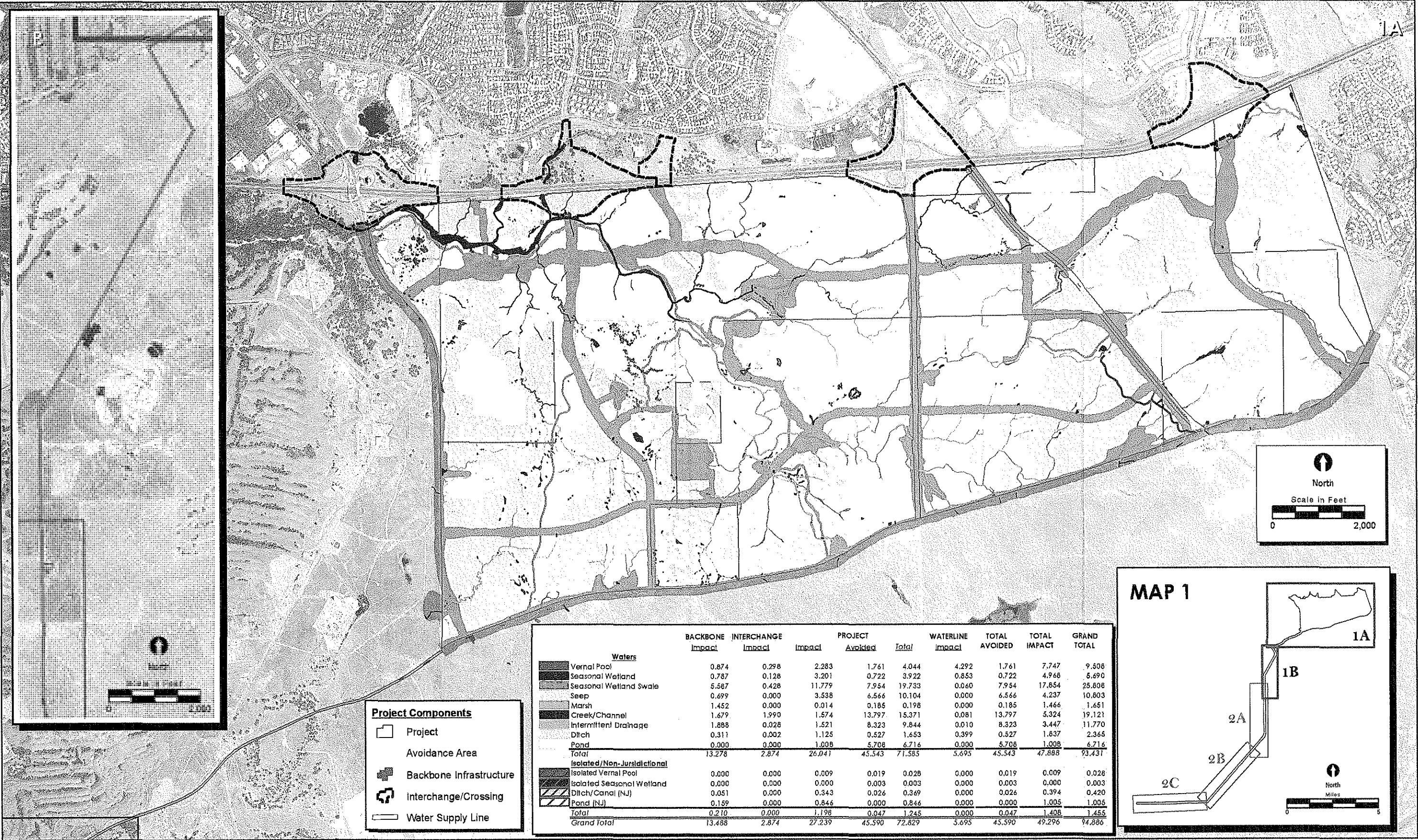


Figure 7. Wetland Delineation/Assessment - Map 2  
2005-429 Folsom Plan Area Specific Plan





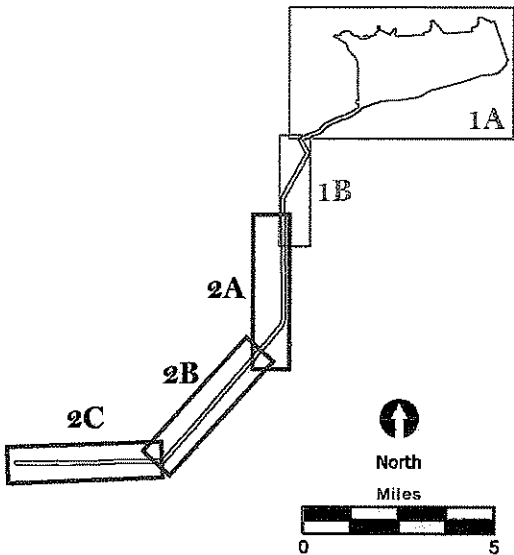
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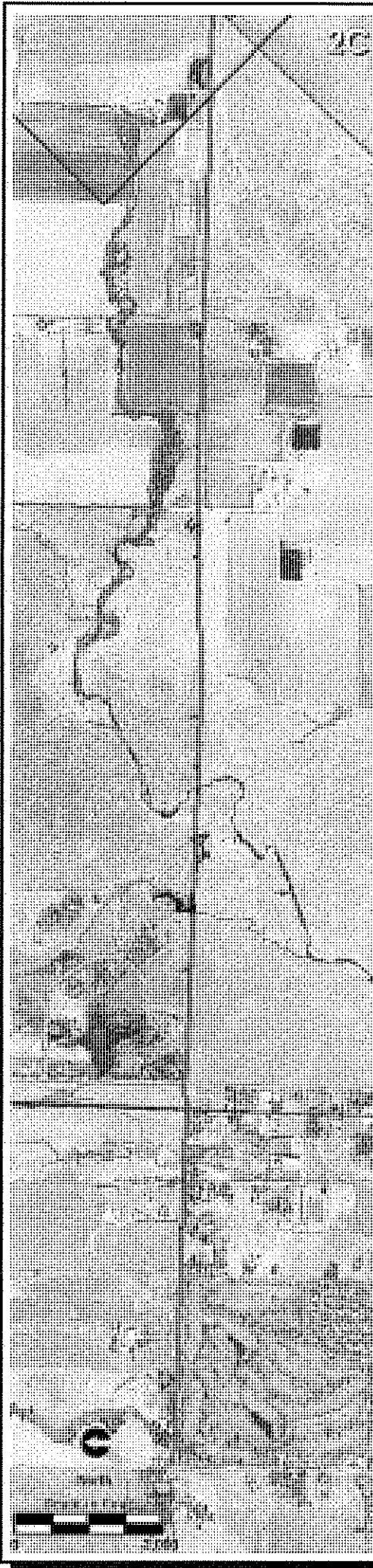
**Figure 8. Proposed Avoidance/Impact Plan - Map 1**  
2005-429 Folsom Plan Area Specific Plan



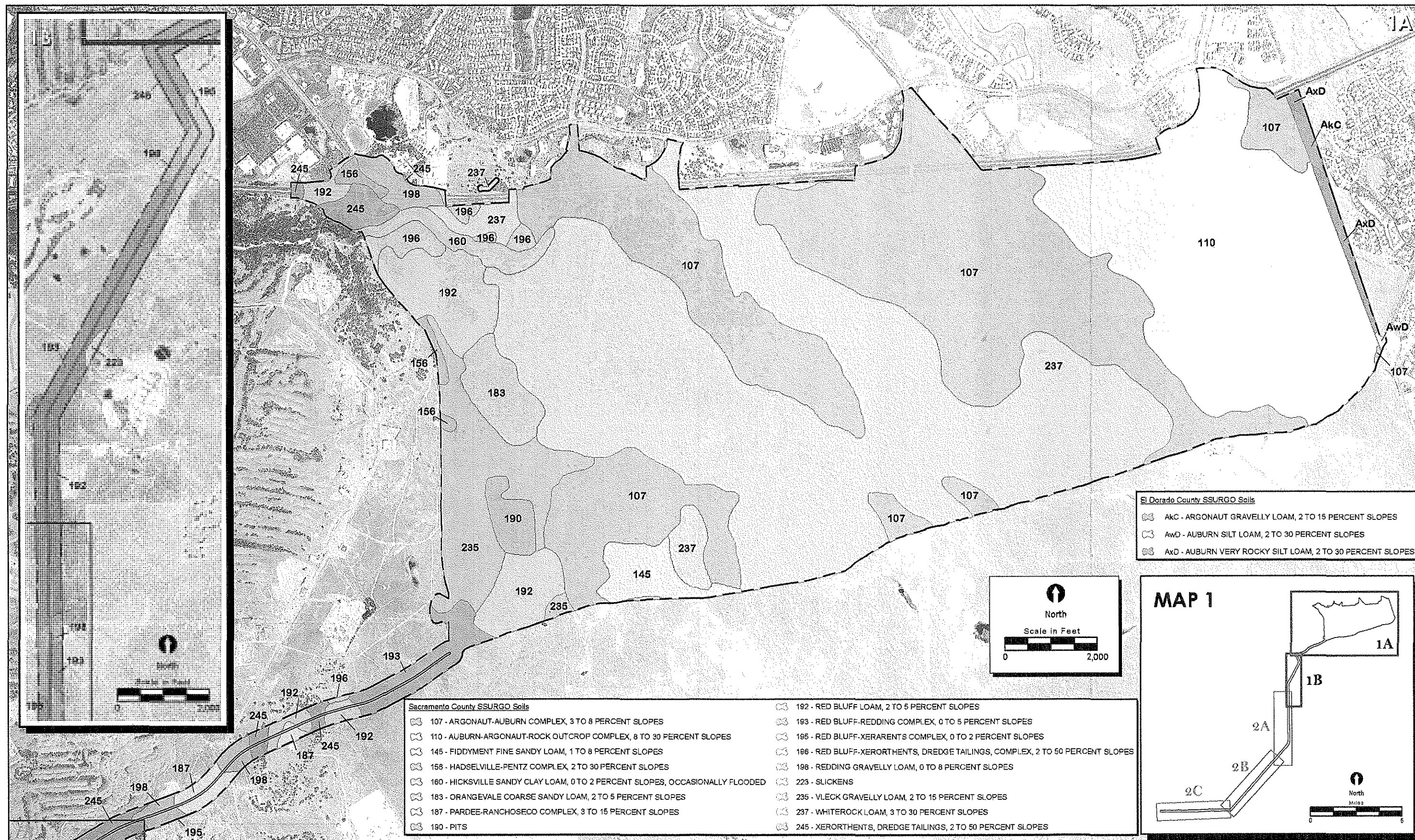
MAP 2



	BACKBONE	INTERCHANGE	PROJECT		WATERLINE	TOTAL	TOTAL	GRAND
	Impact	Impact	Impact	Avoided	Impact	AVOIDED	IMPACT	TOTAL
<b>Waters</b>								
Vernal Pool	0.874	0.298	2.283	1.761	4.044	4.292	7.747	9.508
Seasonal Wetland	0.787	0.128	3.201	0.722	3.922	0.853	4.968	5.690
Seasonal Wetland Swale	5.587	0.428	11.779	7.954	19.733	0.060	17.854	25.808
Seep	0.699	0.000	3.538	6.566	10.104	0.000	6.566	10.803
Marsh	1.452	0.000	0.014	0.185	0.198	0.000	0.185	1.466
Creek/Channel	1.679	1.990	1.574	13.797	15.371	0.081	13.797	19.121
Intermittent Drainage	1.888	0.028	1.521	8.323	9.844	0.010	8.323	11.770
Ditch	0.311	0.002	1.125	0.527	1.653	0.399	0.527	2.365
Pond	0.000	0.000	1.008	5.708	6.716	0.000	5.708	6.716
Total	13.278	2.874	26.041	45.543	71.585	5.695	45.543	93.431
<b>Isolated/Non-Jurisdictional</b>								
Isolated Vernal Pool	0.000	0.000	0.009	0.019	0.028	0.000	0.019	0.028
Isolated Seasonal Wetland	0.000	0.000	0.000	0.003	0.003	0.000	0.003	0.003
Ditch/Canal (NJ)	0.051	0.000	0.343	0.026	0.369	0.000	0.026	0.420
Pond (NJ)	0.159	0.000	0.846	0.000	0.846	0.000	0.000	1.005
Total	0.210	0.000	1.198	0.047	1.245	0.000	0.047	1.455
Grand Total	13.488	2.874	27.239	45.590	72.829	5.695	45.590	94.886





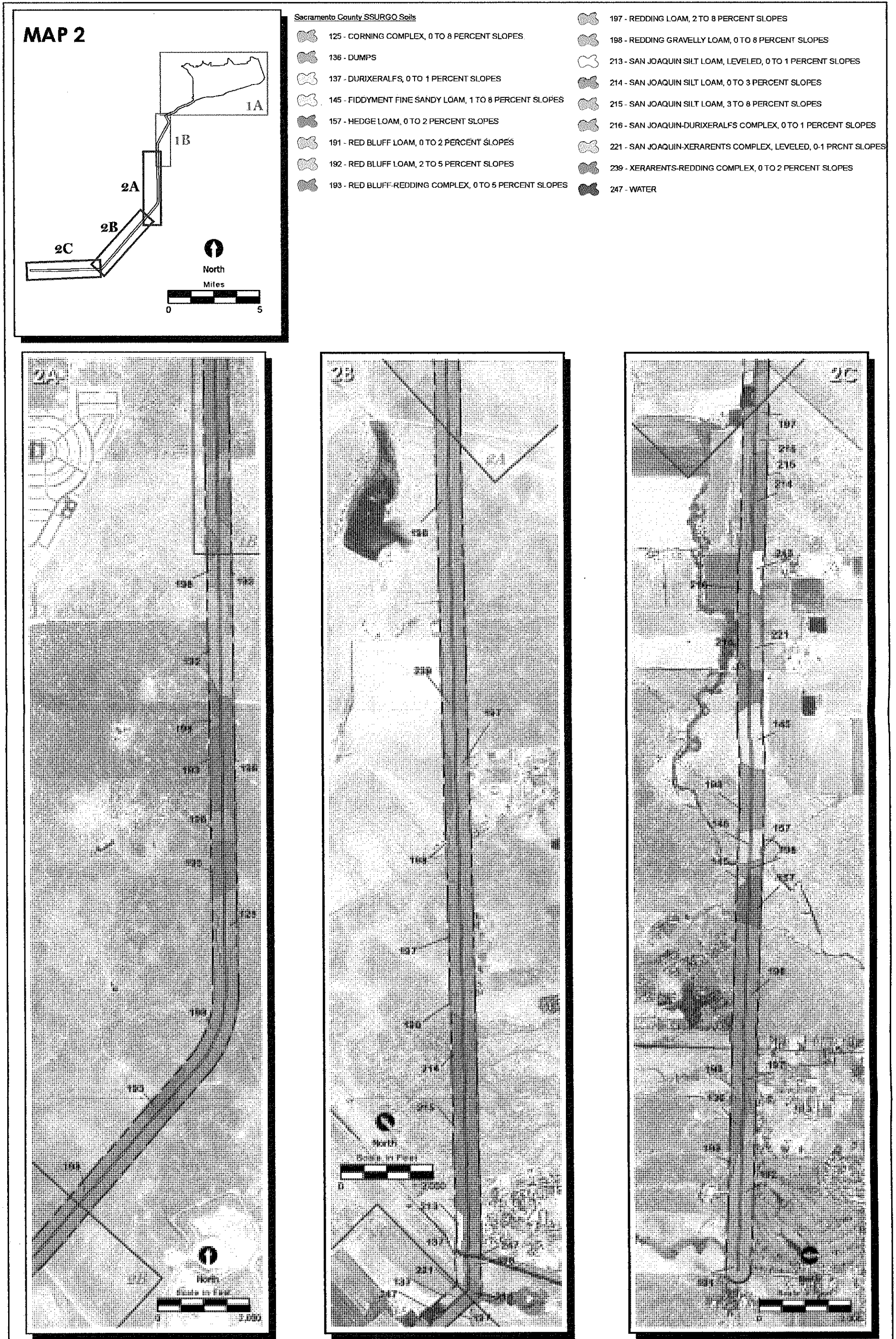


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**Figure 10. Soil Types - Map 1**  
2005-429 Folsom Plan Area Specific Plan

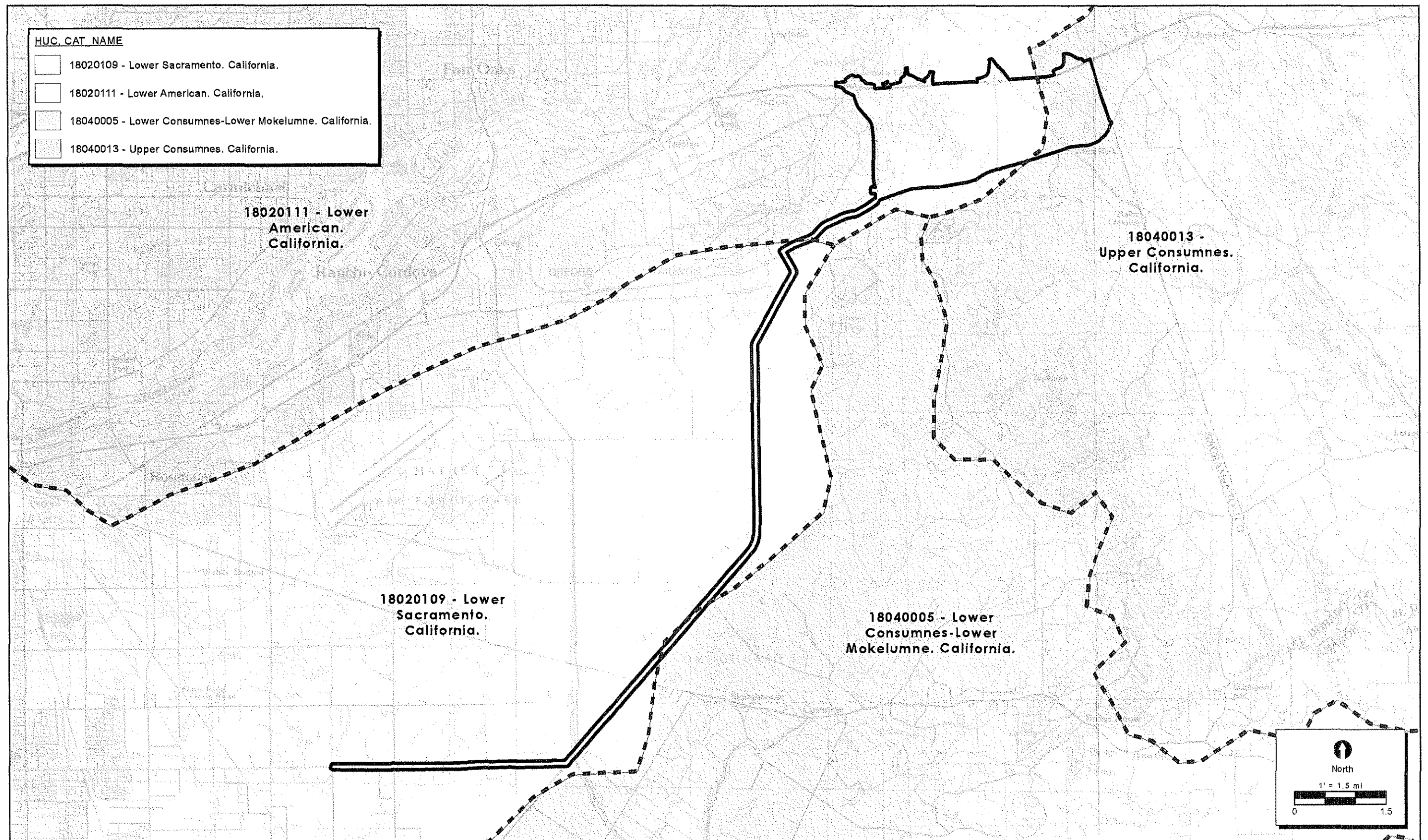




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**Figure 11. Soil Types - Map 2**  
2005-429 Folsom Plan Area Specific Plan

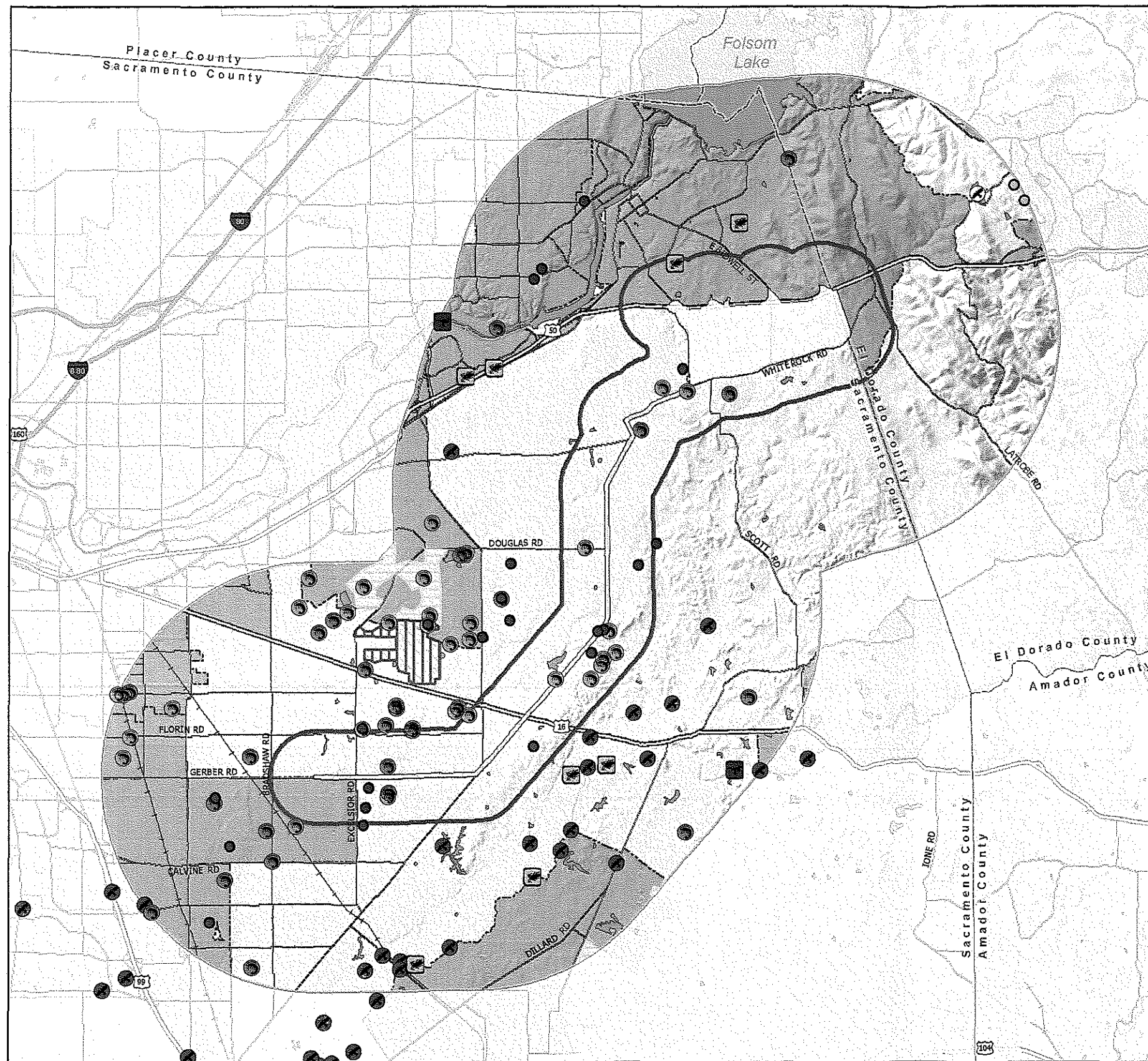


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**Figure 12. USGS Watersheds**  
2005-429 Folsom Plan Area Specific Plan





## Map Features

### Administrative Boundaries

- Project Boundary <sup>1</sup>
- City Boundary
- County Boundary

### Distance From Project

- 1 mile
- 5 mile

### Transportation

- Interstate
- State Highway
- Roads
- Railroads

### Aquatic Features

- Lakes and Reservoirs
- Rivers

### CNDDDB Occurrences <sup>2</sup>

#### Plants

- Boggs Lake Hedge-hyssop
- Slender Orcutt Grass
- Sacramento Orcutt Grass
- Layne's Ragwort

#### Invertebrates

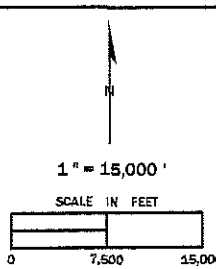
- Vernal Pool Fairy Shrimp
- Vernal Pool Tadpole Shrimp
- Valley Elderberry Longhorn Beetle

#### Birds

- Bald Eagle
- Bank Swallow
- Swainson's Hawk Nest Site (CNDDDB)

### Critical Habitat

- Sacramento Orcutt Grass <sup>3</sup>
- Slender Orcutt Grass <sup>3</sup>
- Vernal Pool Fairy Shrimp <sup>3</sup>
- Vernal Pool Tadpole Shrimp <sup>3</sup>
- California Tiger Salamander <sup>4</sup>
- Valley Elderberry Longhorn Beetle <sup>5</sup>
- Steelhead <sup>6</sup>
- Spring-run Chinook Salmon <sup>6</sup>



## NOTES

<sup>1</sup>Project Boundary: MSCE

<sup>2</sup>CDFF California Natural Diversity Database (CNDDDB), October 2008 Update (GIS Shapefile)  
This map may include multiple species' occurrences at each location, some of which may not be visible on this graphic.  
The CNDDDB occurrences shown may not reflect the actual location of the occurrence.

<sup>3</sup>USFWS Vernal Pool Species Final Critical Habitat, February 2006.

<sup>4</sup>USFWS California Tiger Salamander Final Critical Habitat, August 2005.

<sup>5</sup>USFWS Valley Elderberry Longhorn Beetle Final Critical Habitat, 1980.

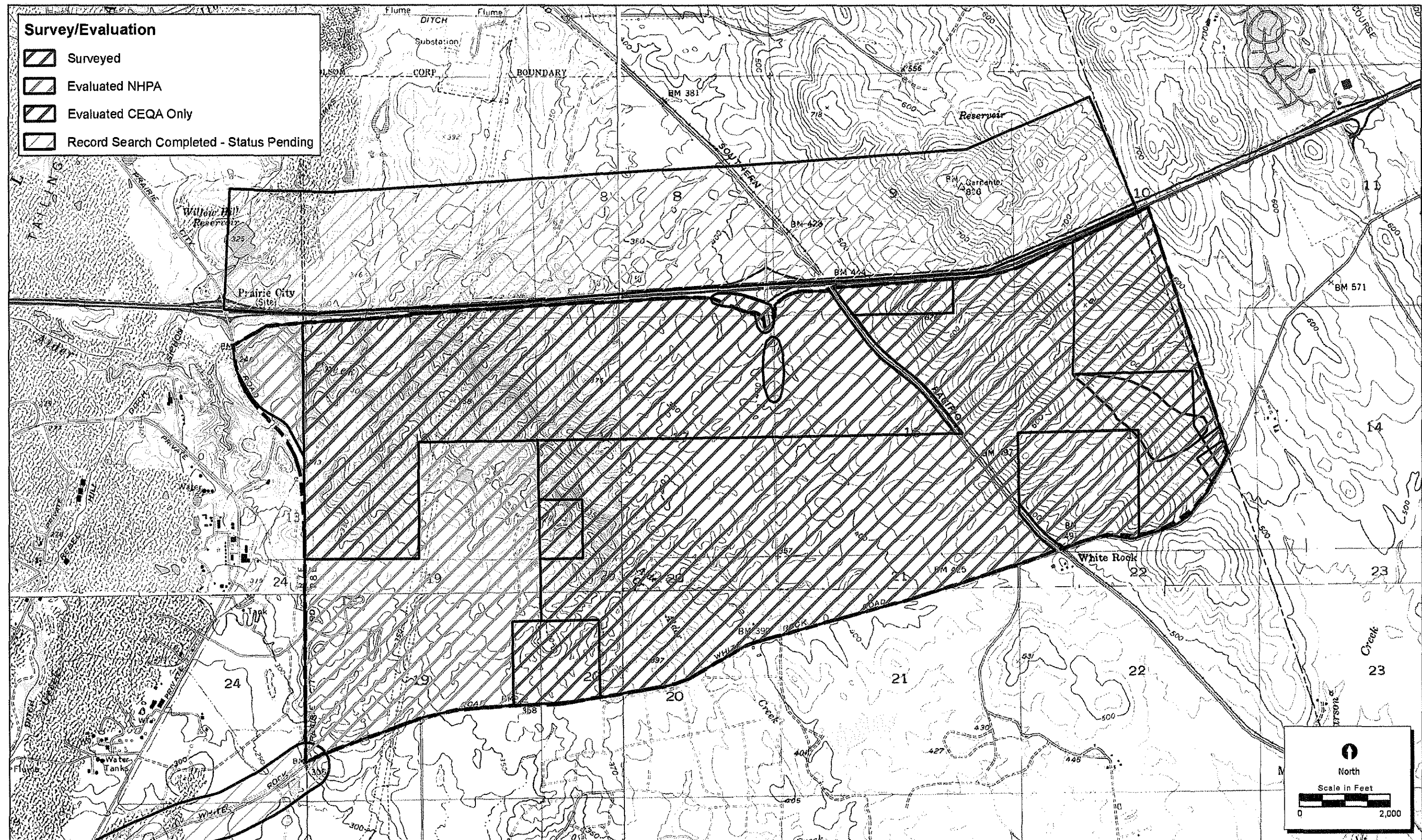
<sup>6</sup>NOAA/NMFS Steelhead and Spring-run Chinook Salmon Final Critical Habitat, June 2005.

J:\GIS\_Maps\2005-429\_Folsom\_Area\_South\_Group\404\404\_v1\SUMMARY\CNDDDB\_Maps\FSAG\_CNDDDB\_Summary\_5mille\_404.mxd

Map Date: 11/18/08  
GIS Specialist: JDS/ECK

**Figure 13. CNDDDB Occurrences of Federal and State-listed Threatened or Endangered Species within 5 miles of Project Area**

2005-429 Folsom Plan Area Specific Plan



J:\GIS\_Maps\2005-429\_Folsom\_Area\_South\_Group\404\404\_v1\SUMMARY\Cultural\_Maps\FSAG\_Cultural\_Summary\_Map1.mxd

11/18/08

**Figure 14. Cultural Resources Overview - Map 1**

2005-429 Folsom Plan Area Specific Plan





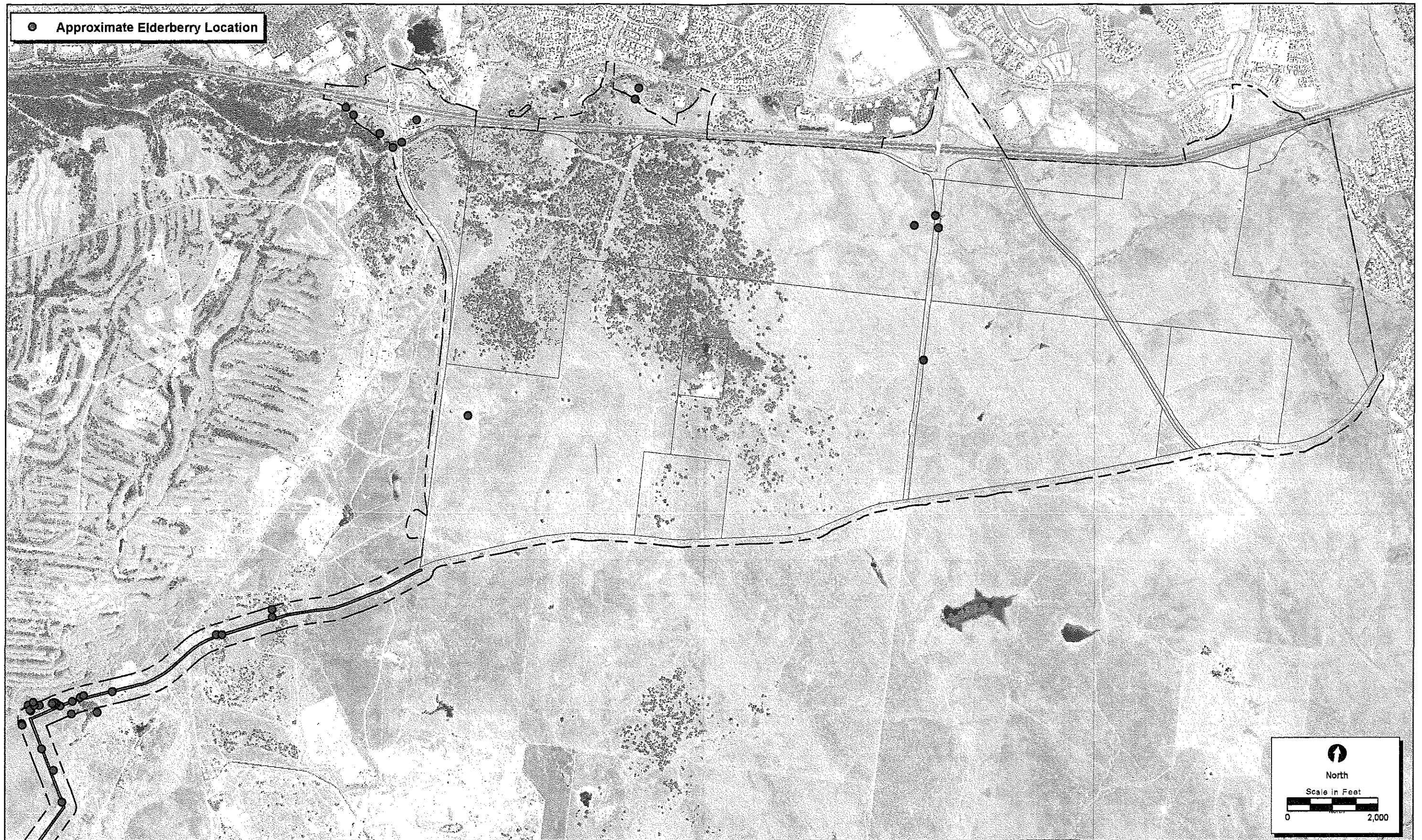
J:\GIS\_Maps\2005-429\_Folsom\_Area\_South\_Group\404\404\_v1\SUMMARY\Cultural\_Maps\FSAG\_Cultural\_Summary\_Map2.mxd

11/18/08

**Figure 15. Cultural Resources Overview - Map 2**

2005-429 Folsom Plan Area Specific Plan





J:\GIS\_Maps\2005-429\_Folsom\_Area\_South\_Group\404\404\_v1\SUMMARY\Elderberry\_Maps\PSAG\_Elderberry\_Summary.mxd

11/18/08

**Figure 16. Approximate Known Elderberry Locations**  
 2005-429 Folsom Plan Area Specific Plan

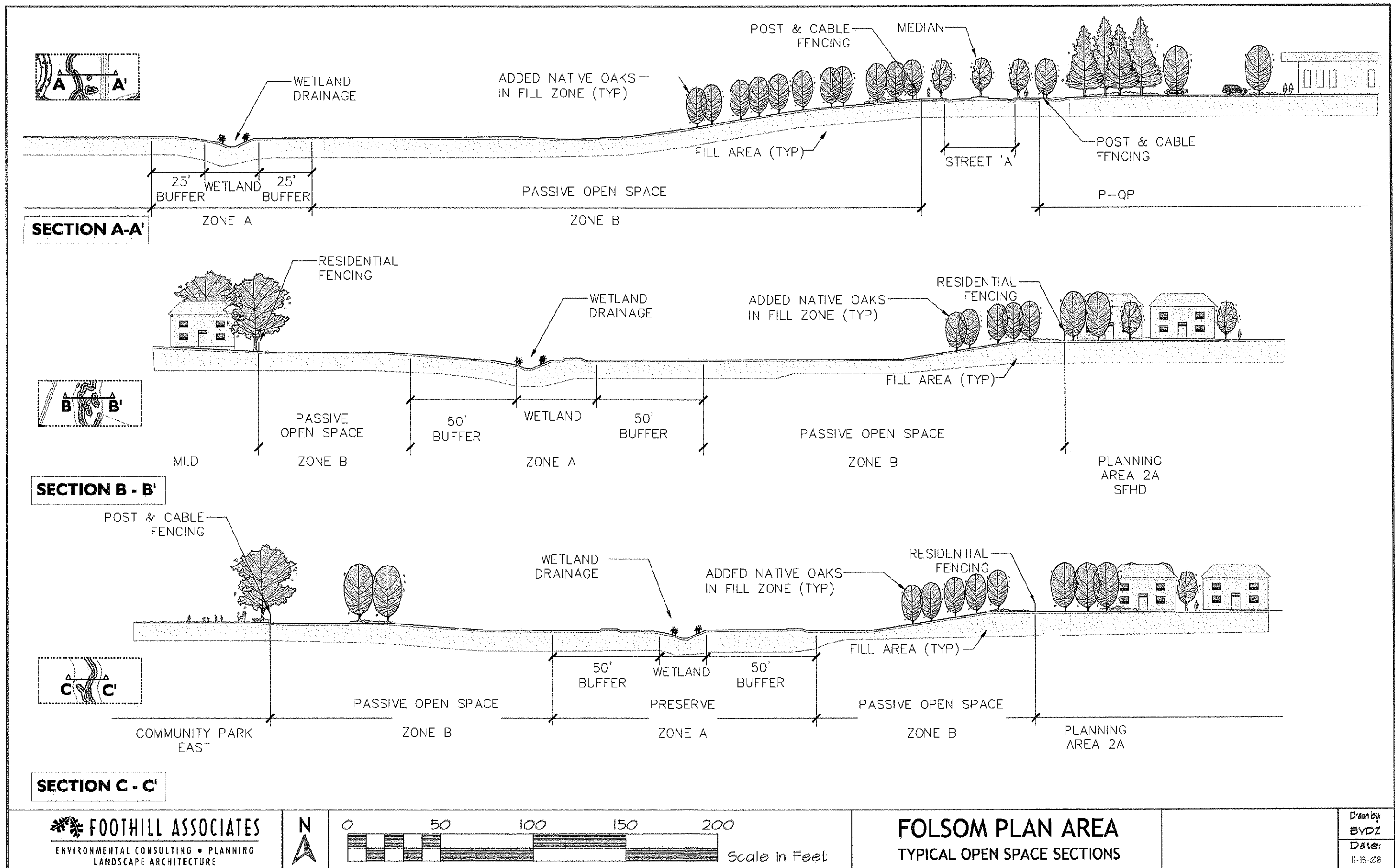


Figure 17. Typical Open Space Sections



## **LIST OF ATTACHMENTS**

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Attachment A – Recommended Text for Public Notice

Attachment B – Adjacent Property Owners

Attachment C – Folsom Plan Area – Wetland Composite Map

Attachment D – Folsom Plan Area – Wetland Avoidance/Impact Map

## ATTACHMENT A

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Recommended Text for Public Notice

# PUBLIC NOTICE

Public Notice No.: \_\_\_\_\_

Date: \_\_\_\_\_

Comments Due: \_\_\_\_\_

In reply, please refer to the Public Notice Number \_\_\_\_\_

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**SUBJECT:** The Sacramento District of the U.S. Army Corps of Engineers (Corps) is evaluating permit applications to develop six proposed development projects and two infrastructure projects within the Folsom Plan Area. The applicants are requesting that permits be valid for 20 years from the date of issuance. The projects would result in impacts to approximately 47.897 acres of waters of the United States. This notice is to inform interested parties of the proposed activities and to solicit comments. This notice may also be viewed at the Corps web site at <http://www.spk.usace.army.mil/organizations/cespk-co/regulatory/PNs/index.html>.

The Corps previously issued related notices in Public Notice No. SPK-2007-02159, Notice of Application for a Department of the Army Permit under Section 404 of the Clean Water Act, Notice of Intent to Prepare an Environmental Impact Statement (EIS), and Notice of Public Scoping Meeting for the Folsom South of 50 Annexation Project (Folsom SOI Project) on September 13, 2008.

**AUTHORITY:** These applications are being evaluated under Section 404 of the Clean Water Act for the discharge of dredged or fill material into waters of the United States. These eight projects have been consolidated into this one public notice for efficiency, paper reduction, and because they all are within the same specific plan area, the Folsom Plan Area.

## APPLICANTS:

### PROJECTS

Carpenter Ranch  
(Corps Id. No. 200600984)

Folsom 138  
(Corps Id. No. 200800326)

Folsom Heights  
(Corps Id. No. 200800331)

### APPLICANTS

FPA Land Development  
4665 MacArthur Court, Suite 200  
Newport Beach, California 92660  
Contact: Tim Kihm

Folsom White Rock Investors, LLC  
111 Woodmere Drive, Suite 190  
Folsom, California 95630  
Contact: Brian Cutting

Hospitality Consultants  
8525 Oak Arbor Court  
Fair Oaks, California 95628  
Contact: Bob Robinson

Folsom South  
(Corps Id. No. 200600035)

MJM Properties, LLC  
1037 Suncast Lane, Suite 111  
El Dorado Hills, CA 95762  
Contact: Mike McDougall

Hillsborough (formerly referred to as Folsom  
560) (Corps Id. No. 200600561)

GenCorp Realty Investments  
620 Coolidge Drive, Suite 100  
Folsom, California 95630  
Contact: David Hatch

Prairie City Road Business Park  
(Corps Id. No. 200600538)

GenCorp Realty Investments  
620 Coolidge Drive, Suite 100  
Folsom, California 95630  
Contact: David Hatch

Backbone Infrastructure  
(Corps Id. No. \_\_\_\_\_)

City of Folsom  
Community Development Department  
50 Natoma Street, Folsom, CA 95360  
Contact: Gail Furness de Pardo

Water Supply  
(Corps Id. No. \_\_\_\_\_)

**LOCATION:** The proposed on-site development and infrastructure projects are located within the Folsom Plan Area, in an unsectioned portion of Township 9 North, Range 7 East MDB&M, of the Folsom, California 7.5-minute USGS Topographic Quadrangle; Sections 9, 16, 17, 18 and 19, and an unsectioned portion of Township 9 North, Range 8 East MDB&M, of the Folsom, California and Buffalo Creek, California 7.5-minute USGS Topographic Quadrangles; and Section 15 Township 9 North, Range 8 East of the Clarksville, California 7.5-minute USGS Topographic Quadrangle. The proposed off-site infrastructure projects are located within Township 9 North, Range 7 East: unsectioned, and Township 9 North, Range 8 East: Sections 15 to 22. See attached vicinity and location map (Figure 1).

**PROJECT DESCRIPTION:** The applicants are proposing to construct the Folsom Plan Area Specific Plan (Figure 2) which includes mixed-density residential development; commercial and employment generating land uses including a regional shopping mall; a police station; a fire station; a municipal services center; five elementary schools and a joint high school/middle school; a water treatment plant; and other associated infrastructure. Proposed off-site infrastructure includes an off-site water supply line; highway interchanges along U.S. Highway 50; crossover roads; and an off-site sewer line extension.

Based on the available information, the applicant's overall project purpose is: (1) to construct a large-scale, mixed-use master-planned community consisting of mixed-density residential uses, a regional shopping center, and other employment-generating uses; (2) to provide associated supporting infrastructure including on-site backbone infrastructure, a water treatment plant, schools, parks, an on-site trail system, off-site sewer improvements, off-site

roadway improvements, off-site highway interchanges, an off-site water supply pipeline from the Freeport Regional Water Authority diversion facility to the site; and (3) to maintain 30 percent of the site as open space for the preservation of oak woodlands and sensitive habitat areas in manner consistent with Measure W, a local initiative passed by the voters of Folsom requiring the City to take certain actions in the planning of the Folsom Plan Area prior to the approval of the annexation of this area.

The Folsom Plan Area is approximately 3,502 acres located in eastern Sacramento County, south of Highway 50. The proposed projects would result in the permanent loss of approximately 47.897 acres of waters of the United States, including 7.756 acres of vernal pools. The Specific Plan provides for open space areas totaling at least 1,050 acres and a preserve, containing 45.553 acres of waters of the United States and avoiding impacts to 1.771 acres of vernal pools. **Figure 3** is a composite wetland delineation map. **Figure 4** provides a table of proposed open space and impacts.

**OTHER PROJECTS:** The impacts of the following proposed Folsom Plan Area Specific Plan projects have been included in calculations of proposed open space acreage and impact calculations; however, Section 404 permits for these projects are not being sought at this time.

**Off-site Infrastructure:** Applications for Section 404 permits will be submitted for other off-site infrastructure including four highway interchanges and a crossover road.

**Javanifard & Zarghami Property:** An application for a Section 404 permit may be submitted at a later date for the Javanifard & Zarghami site.

**Country Day School:** An application for a Section 404 permit may be submitted at a later date for the Country Day School site.

#### **ADDITIONAL INFORMATION:**

**Environmental Setting:** The project lands within the Folsom Plan Area generally consist of annual grassland, composed primarily of non-native annual grasses, including soft chess (*bromus hordeaceus*), ripgut brome (*bromus diandrus*), medusahead grass (*taeniatherum caput-medusae*), slender wild oat (*avena barbata*), and little quaking grass (*briza minor*). Other herbaceous species observed in this community include filaree (*erodium botrys*), bicolored lupine (*lupinus bicolor*), sticky tarweed (*holocarpha virgata*), yellow star-thistle (*centaurea solstitialis*), rose clover (*trifolium hirtum*), shamrock clover (*trifolium dubium*), fremont's tidy-tips (*layia fremontii*), valley tassels (*castilleja attenuata*), dwarf brodiaea (*brodiaea minor*), and hyacinth brodiaea (*triteleia hyacinthina*).

Some areas within the Folsom Plan Area also include Blue oak woodland. Blue oaks (*quercus douglasii*) represent the dominant tree species in this community. Species observed in the understory were generally similar to those found in the annual grassland.

The Folsom Plan Area is located within the Lower American Watershed (#18020111), the Lower Sacramento Watershed (#18020109), the Lower Consumnes-Lower Mokelumne Watershed (#18040005), and the Upper Consumnes Watershed (#18040013) (U.S. Department of Interior, Geological Survey [USGS] 1978).



Vernal pools are present in the project area. Vernal pools are topographic basins within the grassland community and typically are underlain with an impermeable or semi-permeable hardpan or duripan layer. Vernal pools are inundated up to one foot through the wet season and are dry by late spring through the following wet season. The plant communities within the vernal pools are predominantly native annual species that include Carter's butter cup (*Ranunculus bonariensis*), Vasey's coyote-thistle (*Eryngium vaseyi*), Mediterranean barley (*Hordeum marinum*), creeping spikerush (*Eleocharis macrostachya*), and annual hairgrass (*Deschampsia denthonioides*).

Seasonal wetlands are intermittently wet areas where runoff accumulates within low-lying depressions or adjacent to watercourses. These areas most likely remain inundated for extended periods into the spring and summer. Seasonal wetland swales are intermittently wet areas that carry runoff to larger drainages and creeks. These typically occur as linear features. Seasonal wetland swales have a vegetative community consisting of primarily non-native wetland plants. These generally include Carter's butter cup, annual hairgrass, Vasey's coyote-thistle.

**Adjacent Land Uses:** The Folsom Plan Area is surrounded by agricultural and rural residential land uses to the south. Land west of the project site is owned by the Aerojet-General Corporation and is planned for future residential/commercial development and ongoing Aerojet operations. Land east of the project site lies within El Dorado County and consists of residential housing. Residential and commercial development is located north of the project site, on the opposite side of U.S. Highway 50. Regional access to the project site would be provided from U.S. Highway 50, which also forms the site's northern boundary. Local access to the project site is provided by Prairie City Road, East Bidwell Street, and White Rock Road. Alder Creek transects the Folsom Plan Area diagonally from the south-central portion to the northwest corner of the plan area.

**Alternatives:** The applicants have endeavored to avoid, minimize and mitigate impacts to waters of the United States to the maximum extent practicable. They have provided information to the Corps concerning project alternatives and are in the process of evaluating alternatives to comply with Section 404(b)(1) of the Clean Water Act. These alternatives will consider other potential project locations that are available, practicable, and can achieve the stated project purpose as well as practicable measures to avoid or minimize impacts on site. Other on-site alternatives will include a Resource Impact Minimization Alternative, a Centralized Development Alternative, a Reduced Hillside Development Alternative, a No Federal Action, and a No Project Alternative, as described in Corps Public Notice No. SPK-2007-02159. Additional information concerning project alternatives may be available from the applicant or their agent. Other alternatives might be developed during the review process for this permit application. All reasonable project alternatives, in particular those which may be less damaging to the aquatic environment, will be considered.

**Mitigation:** The Corps requires that applicants consider and use all reasonable and practical measures to avoid and minimize impacts to aquatic resources. For wetlands that are not protected within a proposed preserve in the open space area and cannot practicably be avoided, compensatory mitigation will be provided. The project applicants propose to mitigate wetland impacts through a combination of on-site preservation, enhancement, and restoration and the

purchase of wetland credits for off-site preservation, creation or restoration at agency-approved mitigation facilities. Protections for the preservation of wetland resources on the project site will be incorporated, including execution of conservation easements, long-term funding and management of a preserve within the larger open space area in perpetuity, and minimization of drainage and runoff generated from adjacent development areas.

**OTHER GOVERNMENTAL AUTHORIZATIONS:** Water quality certification or waivers, as required under Section 401 of the Clean Water Act from the California Regional Water Quality Control Board, Central Valley Region, are required for these projects. The applicants will apply for certification.

**HISTORIC PROPERTIES:** Based on available information, including cultural resources assessments of the Folsom Plan Area performed, there are historic resources within the proposed projects' areas of potential effect. The Corps will consult with the State Historic Preservation Officer pursuant to Section 106 of the National Historic Preservation Act.

**ENDANGERED SPECIES:** The vernal pools, seasonal wetlands, and seasonal wetland swales might provide habitat for the federally-listed threatened vernal pool fairy shrimp (*Branchinecta lynchi*) or endangered vernal pool tadpole shrimp (*Lepidurus packardii*). The applicants will conduct surveys to determine presence or absence. Elderberry shrubs, the exclusive host plant to the threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), have been identified on site and will be impacted. The Corps will initiate consultation under Section 7 of the Endangered Species Act (ESA) with the U.S. Fish and Wildlife Service.

**ESSENTIAL FISH HABITAT:** The proposed projects will not adversely affect Essential Fish Habitat as defined by the Magnuson-Stevens Fishery Conservation and Management Act.

The above determinations are based on information provided by the applicant and our preliminary review.

**EVALUATION FACTORS:** The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, consideration of property ownership, and in general the needs and welfare of the people. The impact of the activities on the public interest will include application of the Section 404(b)(1) guidelines promulgated by the Administrator, Environmental Protection Agency (40 CFR Part 230).

The Corps of Engineers is soliciting comments from the public; federal, state and local agencies and officials; Indian tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal.

To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and other public interest factors listed above. Comments are used in preparation of an environmental assessment or an environmental impact statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

**SUBMITTING COMMENTS:** Written comments must be submitted to the office listed below on or before \_\_\_\_\_, 2008. For general comments on all projects, please refer to number \_\_\_\_\_ and for specific projects, please also refer to the appropriate individual Corps ID number.

Lisa Gibson  
Project Manager  
U.S. Army Corps of Engineers,  
Sacramento District  
1325 J Street, Room 1480  
Sacramento, California 95814-2922  
Phone: 916-557- 5288  
Fax: 916-557-6877  
Email: lisa.m.gibson@spk01.usace.army.mil

The Corps is particularly interested in receiving comments related to the proposal's probable impacts on the affected aquatic environment, as well as secondary cumulative effects. Any person may request, in writing, that a public hearing be held to consider this application. Requests shall specifically state, with particularity, the reason(s) for holding a public hearing. If the Corps determines that the information received in response to this notice is inadequate for thorough evaluation, a public hearing may be warranted. If a public hearing is warranted, interested parties will be notified of the time, date, and location of the hearing. Please note that all comment letters received are subject to release to the public through the Freedom of Information Act. If you have questions or need additional information, please contact the applicant, or the Corps' project manager, Lisa Gibson, email lisa.m.gibson@spk01.usace.army.mil.

Attachments: 4 figures

## ATTACHMENT B

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Adjacent Property Owners

1	Parcel: 066-0100-015-000 Owner: GASNAKIS, GEORGE REVOC TRUST Use: PASTURE Lns: \$1,000,000 Map:	Ph: Doc: 629 Lot:	Site: 10141 GERBER RD*SACRAMENTO CA 95829 Mail: 7456 REESE RD*SACRAMENTO CA 95828 Zn: AG2 Xmpt: BedBath:	Sale: \$1,580,000F Yb: Ltsz: 79.00 A Imp: 1%	Date: 02/25/2003 Asd: \$1,742,168 Un:
2	Parcel: 066-0100-016-000 Owner: GASNAKIS, GEORGE REVOC TRUST Use: DUPLEX Lns: Map:	Ph: Doc: 1147 Lot:	Site: 10093 GERBER RD*SACRAMENTO CA 95829 Mail: 7456 REESE RD*SACRAMENTO CA 95828 Zn: AG2 Xmpt: BedBath: 3/2.0	Sale: \$250,000F Yb: 1957 Ltsz: 2.69 A Imp: 17%	Date: 05/03/2006 Asd: \$540,914 Un: 2
3	Parcel: 066-0100-043-000 Owner: SINGH, VINCENT Use: VACANT RESIDENTIAL Lns: Map:	Ph: Doc: 3142 Lot:	Site: 10263 GERBER RD*SACRAMENTO CA 95829 Mail: 7260 CHAPARRAL DR*LATROBE CA 95682 Zn: AG2 Xmpt: BedBath:	Sale: Yb: Ltsz: 20.15 A Imp: 0%	Date: 07/01/2003 Asd: \$294,824 Un: 1
4	Parcel: 066-0100-045-000 Owner: DE LA TORRE, GUADALUPE Use: SINGLE FAMILY RESIDENCE Lns: Map:	Ph: Doc: 2419 Lot:	Site: 10251 GERBER RD*SACRAMENTO CA 95829 Mail: 3908 THORNHILL DR*SACRAMENTO CA 95826 Zn: AG2 Xmpt: Y BedBath: 3/2.0	Sale: \$1,100,000F Yb: 1996 Ltsz: 20.15 A Imp: 1%	Date: 02/04/2005 Asd: \$1,167,328 Un: 1
5	Parcel: 066-0100-049-000 Owner: BISPO, CECIL N & CHARLIEN R Use: VACANT RESIDENTIAL Lns: Map:	Ph: Doc: Lot:	Site: GERBER RD*SACRAMENTO CA 95829 Mail: 48308 90TH ST W*LANCASTER CA 93536 Zn: AG2 Xmpt: BedBath:	Sale: Yb: Ltsz: 40.00 A Imp: 26%	Date: 11/26/1979 Asd: \$256,819 Un:
	Parcel: 066-0100-083-000 Owner: DND LAND INC Use: PASTURE Lns: Map:	Ph: Doc: 56029 Lot: D	Site: EXCELSIOR RD*SACRAMENTO CA 95829 Mail: 3044 RIDGEVIEW DR*EL DORADO HILLS CA 95762 Zn: AG4 Xmpt: BedBath:	Sale: \$200,000F Yb: Ltsz: 18.68 A Imp: 0%	Date: 03/17/1989 Asd: \$43,203 Un:
7	Parcel: 066-0100-084-000 Owner: DND LAND INC Use: PASTURE Lns: Map:	Ph: Doc: Lot: E	Site: GERBER RD*SACRAMENTO CA 95829 Mail: 3044 RIDGEVIEW DR*EL DORADO HILLS CA 95762 Zn: SPA Xmpt: BedBath:	Sale: Yb: Ltsz: 80.00 A Imp: 4%	Date: 03/17/1989 Asd: \$38,904 Un:
8	Parcel: 067-0040-003-000 Owner: MINETA, K ALBERT 1991 Use: PASTURE Lns: Map:	Ph: Doc: 114 Lot: 1	Site: DOUGLAS RD*MATHER CA 95742 Mail: 1905 UNIVERSITY WAY*SAN JOSE CA 95126 Zn: AG8 Xmpt: BedBath:	Sale: \$1,125,000T Yb: Ltsz: 274.68 Imp: 0%	Date: 08/14/1996 Asd: \$1,394,953 Un:
9	Parcel: 067-0040-006-000 Owner: KSIDAKIS, LARNE & CHRIS Use: VACANT RESIDENTIAL Lns: Map:	Ph: Doc: 208 Lot:	Site: DOUGLAS RD*MATHER CA 95742 Mail: 4560 OXBOW RIDGE PL*FAIR OAKS CA 95628 Zn: AG8 Xmpt: BedBath:	Sale: \$19,000 Yb: Ltsz: 107.00 Imp: 0%	Date: 11/19/1982 Asd: \$30,557 Un:
10	Parcel: 067-0040-010-000 Owner: LAND, GRANTLINE R & B 220 Use: PASTURE Lns: \$28,500,000 Map:	Ph: Doc: 1437 Lot:	Site: GRANT LINE RD*RANCHO CORDOVA CA 95742 Mail: 10630 MATHER BLVD*MATHER CA 95655 Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 220.00 Imp: 0%	Date: 04/24/2006 Asd: \$5,452,379 Un:

11	Parcel: 067-0040-013-000 Owner: PAPPAS, L & V TRUST Use: PASTURE Lns: Map:	Ph: Doc: 933 Lot:	Site: 4200 GRANT LINE RD*RANCHO CORDOVA CA 95742 Mail: 5227 YORKVILLE PL*CARMICHAEL CA 95608 Zn: Z Xmpt: BedBath: 3/3.0	Sale: \$1,140,000F Yb: Ltsz: 210.00	Date: 09/18/1986 Asd: \$1,694,501 Un:
12	Parcel: 067-0040-021-000 Owner: WALNUT CREEK DEVELOPMENT INC Use: VACANT RESIDENTIAL Lns: Map:	Ph: Doc: Lot:	Site: DOUGLAS RD*MATHER CA 95742 Mail: 111 WOODMERE RD 190*FOLSOM CA 95630 Zn: RD0 Xmpt: BedBath:	Sale: Yb: Ltsz:	Date: Asd: \$17,964,985 Un:
13	Parcel: 067-0040-025-000 Owner: PULTE HOME CORPORATION Use: VACANT RESIDENTIAL Lns: Map:	Ph: Doc: Lot:	Site: GRANT LINE RD*RANCHO CORDOVA CA 95742 Mail: 4196 DOUGLAS BLVD 100*GRANITE BAY CA 95746 Zn: Z Xmpt: BedBath:	Sale: Yb: Ltsz:	Date: Asd: \$26,490,114 Un:
14	Parcel: 067-0100-003-000 Owner: COUNTY OF SACRAMENTO Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: 1390 Lot: 117	Site: GRANT LINE RD*RANCHO CORDOVA CA 95742 Mail: 9850 GOETHE RD*SACRAMENTO CA 95827 Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 118.75	Date: 02/10/2005 Asd: Un:
15	Parcel: 067-0100-005-000 Owner: TIESSEN-WAEGELL FAMILY LTD Use: FARMS, CROPS Lns: Map:	Ph: Doc: 1227 Lot: 43	Site: KIEFER BLVD*MATHER CA 95742 Mail: 7351 EAGLES NEST RD*SACRAMENTO CA 95830 Zn: AG8 Xmpt: BedBath:	Sale: \$92,000F Yb: Ltsz: 582.96	Date: 12/19/1996 Asd: \$540,347 Un:
	Parcel: 067-0100-008-000 Owner: TIESSEN-WAEGELL FAMILY Use: PASTURE Lns: Map:	Ph: Doc: 1227 Lot:	Site: KIEFER BLVD*MATHER CA 95742 Mail: 7351 EAGLES NEST RD*SACRAMENTO CA 95830 Zn: AG8 Xmpt: BedBath:	Sale: \$92,000F Yb: Ltsz: 25.68 A	Date: 12/19/1996 Asd: \$14,447 Un:
17	Parcel: 067-0100-009-000 Owner: COUNTY OF SACRAMENTO Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: Lot:	Site: GRANT LINE RD*RANCHO CORDOVA CA 95742 Mail: 9850 GOETHE RD*SACRAMENTO CA 95827 Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 304.50	Date: 10/10/1996 Asd: Un:
18	Parcel: 067-0100-010-000 Owner: COUNTY OF SACRAMENTO Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: Lot:	Site: 12563 KIEFER BLVD*MATHER CA 95742 Mail: 9850 GOETHE RD*SACRAMENTO CA 95827 Zn: AG2 Xmpt: BedBath:	Sale: Yb: Ltsz: 75.20 A	Date: 04/29/1997 Asd: Un:
19	Parcel: 067-0100-019-000 Owner: SOZZI, SUSAN C Use: MISCELLANEOUS Lns: Map:	Ph: Doc: Lot:	Site: GRANT LINE RD*RANCHO CORDOVA CA 95742 Mail: PO BOX 1350*SLOUGHHOUSE CA 95683 Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 43,560	Date: 12/28/1982 Asd: \$812 Un:
20	Parcel: 067-0110-017-000 Owner: SHEHADEH FAMILY REAL Use: PASTURE Lns: \$384,000 Map:	Ph: Doc: 732 Lot:	Site: GERBER RD*SACRAMENTO CA 95830 Mail: 6841 WOODCHASE DR*GRANITE BAY CA 95746 Zn: AG1 Xmpt: BedBath:	Sale: \$480,000F Yb: Ltsz: 160.00	Date: 05/28/1993 Asd: \$633,546 Un:

21	Parcel: 067-0110-020-000 Owner: WAEGELL, REBECCA TRUST Use: PASTURE Lns: Map:	Ph: Doc: Lot:	Site: GERBER RD*SACRAMENTO CA Mail: 1925 MEER WAY*SACRAMENTO CA Zn: AG1 Xmpt: BedBath:	Sale: Yb: Ltsz: 40.00 A Imp: 0%	Sqft: Un:	95830 95822 Date: 07/02/2008 Asd: \$36,923
22	Parcel: 067-0110-037-000 Owner: COUNTY OF SACRAMENTO Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: 757 Lot:	Site: FLORIN RD*SACRAMENTO CA Mail: 1007 7TH ST 3*SACRAMENTO CA Zn: AG1 Xmpt: BedBath:	Sale: Yb: Ltsz: 320.00 Imp: 0%	Sqft: Un:	95830 95814 Date: 51/77/1965 Asd:
23	Parcel: 067-0110-048-000 Owner: WAEGELL, DAVID & INGA Use: PASTURE Lns: \$37,000 Map:	Ph: Doc: 453 Lot: 1	Site: 7590 EAGLES NEST RD*SACRAMENTO CA Mail: 7590 EAGLES NEST RD*SACRAMENTO CA Zn: AG1 Xmpt: Y BedBath:	Sale: \$37,000P Yb: Ltsz: 1.75 A Imp: 87%	Sqft: Un:	95830 95830 Date: 01/30/2008 Asd: \$29,359
24	Parcel: 067-0110-049-000 Owner: WAEGELL, REBECCA TRUST Use: FARMS, CROPS Lns: Map:	Ph: Doc: Lot: 2	Site: 7351 EAGLES NEST RD*SACRAMENTO CA Mail: 1925 MEER WAY*SACRAMENTO CA Zn: AG1 Xmpt: BedBath:	Sale: Yb: Ltsz: 37.26 A Imp: 19%	Sqft: Un:	95830 95822 Date: 07/02/2008 Asd: \$42,369
25	Parcel: 067-0120-015-000 Owner: CARLI, LAWRENCE L FAMILY Use: PASTURE Lns: Map:	Ph: Doc: Lot:	Site: GRANT LINE RD*SACRAMENTO CA Mail: 7210 GRANT LINE RD*SACRAMENTO CA Zn: AG1 Xmpt: BedBath:	Sale: \$Q Yb: Ltsz: 9.91 A Imp: 0%	Sqft: Un:	95830 95830 Date: 04/22/2005 Asd: \$2,308
26	Parcel: 067-0120-037-000 Owner: UNITED STATES OF AMERICA Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: Lot:	Site: GRANT LINE RD*SACRAMENTO CA Mail: GRANT LINE RD*SACRAMENTO CA Zn: 0 Xmpt: BedBath:	Sale: Yb: Ltsz: 72.00 A Imp: 0%	Sqft: Un:	95830 95830 Date: 08/14/1969 Asd:
27	Parcel: 067-0120-051-000 Owner: WAEGELL, REBECCA TRUST Use: PASTURE Lns: Map:	Ph: Doc: 1214 Lot:	Site: 7409 SUNRISE BLVD*CITRUS HEIGHTS CA Mail: 1925 MEER WAY*SACRAMENTO CA Zn: AG1 Xmpt: BedBath:	Sale: Yb: Ltsz: 14.30 A Imp: 0%	Sqft: Un:	95610 95822 Date: 04/13/1984 Asd: \$8,379
28	Parcel: 067-0120-052-000 Owner: WAEGELL, REBECCA TRUST Use: PASTURE Lns: Map:	Ph: Doc: 1214 Lot:	Site: 7351 EAGLES NEST RD*SACRAMENTO CA Mail: 1925 MEER WAY*SACRAMENTO CA Zn: AG1 Xmpt: BedBath:	Sale: Yb: Ltsz: 196.11 Imp: 0%	Sqft: Un:	95830 95822 Date: 04/13/1984 Asd: \$45,231
29	Parcel: 067-0120-064-000 Owner: TIESSEN-WAEGELL FAMILY Use: PASTURE Lns: Map:	Ph: Doc: 1561 Lot:	Site: GRANT LINE RD*SACRAMENTO CA Mail: 7351 EAGLES NEST RD*SACRAMENTO CA Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 105.90 Imp: 0%	Sqft: Un:	95842 95830 Date: 01/19/2007 Asd: \$97,044
30	Parcel: 067-0120-065-000 Owner: STATE OF CALIFORNIA Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: Lot:	Site: GRANT LINE RD*SACRAMENTO CA Mail: PO BOX 911*MARYSVILLE CA Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 2.25 A Imp: 0%	Sqft: Un:	95842 95901 Date: 06/07/1995 Asd:

31	Parcel: 067-0130-014-000 Owner: CARLI, LAWRENCE L FAMILY Use: PASTURE Lns: Map:	Ph: Doc: Lot: 10	Site: 7210 GRANT LINE RD*ELK GROVE CA 95624 Mail: 7210 GRANT LINE RD*ELK GROVE CA 95624 Zn: AG1 Xmpt: BedBath:	Sale: Yb: Ltsz: 82.81 A Imp: 0%	Date: 04/09/1990 Asd: \$19,154 Un:
32	Parcel: 067-0130-015-000 Owner: CARLI, LAWRENCE L Use: PASTURE Lns: Map:	Ph: Doc: Lot: 14	Site: 7210 GRANT LINE RD*ELK GROVE CA 95624 Mail: 7210 GRANT LINE RD*ELK GROVE CA 95624 Zn: AG1 Xmpt: BedBath:	Sale: Yb: Ltsz: 77.84 A Imp: 84%	Date: 10/14/1983 Asd: \$172,444 Un:
33	Parcel: 067-0140-002-000 Owner: CARLI, LAWRENCE L FAMILY Use: PASTURE Lns: Map:	Ph: Doc: Lot: 220	Site: SUNRISE BLVD*SACRAMENTO CA 95830 Mail: 7210 GRANT LINE RD*SACRAMENTO CA 95830 Zn: AG1 Xmpt: BedBath:	Sale: \$Q Yb: Ltsz: 135.00 Imp: 0%	Date: 04/22/2005 Asd: \$31,154 Un:
34	Parcel: 067-0190-013-000 Owner: RICHARDSON, ROBERT & PAULA Use: SINGLE FAMILY RESIDENCE Lns: \$368,000 Map:	Ph: Doc: 1401 Lot: 13	Site: 10691 BIRCH RANCH DR*SACRAMENTO CA 95830 Mail: 10691 BIRCH RANCH DR*SACRAMENTO CA 95830 Zn: AG2 Xmpt: Y BedBath: 2/2.5	Sale: \$460,000F Yb: 1993 Ltsz: 12.10 A Imp: 57%	Date: 08/31/1998 Asd: \$706,877 Un: 1
35	Parcel: 067-0190-014-000 Owner: SISAYAN, ISAGANI Use: VACANT RESIDENTIAL Lns: \$117,250 Map:	Ph: Doc: 399 Lot: 14	Site: BIRCH RANCH DR*SACRAMENTO CA 95830 Mail: 7471 FERNRIDGE DR*SACRAMENTO CA 95828 Zn: AG2 Xmpt: BedBath:	Sale: \$81,136F Yb: Ltsz: 7.67 A Imp: 0%	Date: 04/25/2000 Asd: \$195,994 Un:
36	Parcel: 067-0190-015-000 Owner: DUGAUE, ROBERT & GLORIA M Use: SINGLE FAMILY RESIDENCE Lns: Map:	Ph: Doc: 225 Lot: 15	Site: 10725 BIRCH RANCH DR*SACRAMENTO CA 95830 Mail: 8660 HILLMON CT*SACRAMENTO CA 95828 Zn: AG2 Xmpt: BedBath:	Sale: \$119,500F Yb: Ltsz: 4.93 A Imp: 0%	Date: 06/18/1999 Asd: \$142,622 Un:
37	Parcel: 067-0190-016-000 Owner: SINGH REVOC LIVING TRUST Use: SINGLE FAMILY RESIDENCE Lns: \$90,000 Map:	Ph: Doc: 241 Lot: 16	Site: 10745 BIRCH RANCH DR*SACRAMENTO CA 95830 Mail: 10745 BIRCH RANCH DR*SACRAMENTO CA 95830 Zn: AG2 Xmpt: Y BedBath: 4/3.0	Sale: \$125,000F Yb: 2003 Ltsz: 5.90 A Imp: 85%	Date: 04/10/2000 Asd: \$1,022,071 Un: 1
38	Parcel: 067-0190-017-000 Owner: PEREZ, ROY M & GLORIA ETUX Use: SINGLE FAMILY RESIDENCE Lns: \$110,000 Map:	Ph: Doc: 205 Lot: 17	Site: 10790 BIRCH RANCH DR*SACRAMENTO CA 95830 Mail: 10790 BIRCH RANCH DR*SACRAMENTO CA 95830 Zn: AG2 Xmpt: Y BedBath: 4/3.5	Sale: \$155,000F Yb: 1994 Ltsz: 4.43 A Imp: 61%	Date: 12/06/1990 Asd: \$549,158 Un: 1
39	Parcel: 067-0190-018-000 Owner: TANNER, BRYCE J & ROBERTA D Use: SINGLE FAMILY RESIDENCE Lns: Map:	Ph: Doc: 84 Lot: 18	Site: 10770 BIRCH RANCH DR*SACRAMENTO CA 95830 Mail: 10770 BIRCH RANCH DR*SACRAMENTO CA 95830 Zn: AG2 Xmpt: Y BedBath: 6/6.0	Sale: \$135,000F Yb: 2002 Ltsz: 6.60 A Imp: 87%	Date: 11/25/1998 Asd: \$1,263,322 Un: 1
40	Parcel: 072-0010-095-000 Owner: STATE OF CALIFORNIA Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: 619 Lot:	Site: PRAIRIE CITY RD* Mail: 703 B ST*MARYSVILLE CA 95901 Zn: CH Xmpt: BedBath:	Sale: Yb: Ltsz: 8.24 A Imp: 0%	Date: 08/21/2000 Asd: Un:



41	Parcel: 072-0010-097-000 Owner: STATE OF CALIFORNIA Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: 617 Lot:	Site: PRAIRIE CITY RD* Mail: 703 B ST*MARYSVILLE CA Zn: M Xmpt: BedBath:	Sale: Yb: Ltsz: 4.87 A	Sqft: Imp: 0%	95901 Date: 08/21/2000 Asd: Un:
42	Parcel: 072-0010-099-000 Owner: STATE OF CALIFORNIA Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: 666 Lot:	Site: PRAIRIE CITY RD* Mail: PO BOX 911*MARYSVILLE CA Zn: CH Xmpt: BedBath:	Sale: Yb: Ltsz: 1.33 A	Sqft: Imp: 0%	95901 Date: 12/12/2000 Asd: Un:
43	Parcel: 072-0010-101-000 Owner: FOLSOM CORDOVA UNIFIED Use: VACANT RESIDENTIAL Lns: Map:	Ph: Doc: 206 Lot:	Site: PRAIRIE CITY RD* Mail: 125 E BIDWELL ST*FOLSOM CA Zn: CH Xmpt: BedBath:	Sale: Yb: Ltsz: 17.39 A	Sqft: Imp: 0%	95630 Date: 01/24/2007 Asd: Un:
44	Parcel: 072-0010-111-000 Owner: INTEL CORPORATION Use: OFFICE BUILDING Lns: Map:	Ph: Doc: 220 Lot: 4	Site: 1900 PRAIRIE CITY RD*FOLSOM CA Mail: 2200 MISSION CLGE BLVD*SANTA CLARA CA Zn: M 1 Xmpt: BedBath:	Sale: Yb: Ltsz:	Sqft: Imp: 42%	95630 95052 Date: 03/25/1982 Asd: \$565,625,367 Un:
45	Parcel: 072-0020-031-000 Owner: CALIFORNIA INDEPENDENT Use: VACANT INDUSTRIAL Lns: Map:	Ph: Doc: 579 Lot: 7	Site: IRON POINT RD*FOLSOM CA Mail: 151 BLUE RAVINE RD*FOLSOM CA Zn: ML Xmpt: BedBath:	Sale: Yb: Ltsz: 31.11 A	Sqft: Imp: 0%	95630 95630 Date: 08/08/2000 Asd: \$8,580,963 Un:
46	Parcel: 072-0060-007-000 Owner: JAVANIFARD, ZARGHAMI & GAYLE Use: SINGLE FAMILY RESIDENCE Lns: \$275,000 Map:	Ph: Doc: 1468 Lot:	Site: 14108 WHITE ROCK RD*RANCHO CORDOVA CA Mail: 1456 LAKEHILLS DR*EL DORADO HILLS CA Zn: AG8 Xmpt: BedBath: 2/1.0	Sale: \$550,000F Yb: 1984 Ltsz: 30.00 A	Sqft: 1,040 Imp: 0%	95670 95762 Date: 08/16/2000 Asd: \$630,952 Un: 1
47	Parcel: 072-0060-011-000 Owner: SAC-PLCRVLE TRANSPORTATION Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: 1665 Lot:	Site: *FOLSOM CA Mail: 2811 O ST*SACRAMENTO CA Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 2.29 A	Sqft: Imp: 0%	95630 95816 Date: 09/06/1996 Asd: Un:
48	Parcel: 072-0060-012-000 Owner: MANGINI TRUST 1998 Use: PASTURE Lns: Map:	Ph: Doc: 710 Lot:	Site: PLACERVILLE RD*FOLSOM CA Mail: 2758 LENA DR*SAN JOSE CA Zn: AG8 Xmpt: BedBath:	Sale: \$102,000 Yb: Ltsz: 18.20 A	Sqft: Imp: 0%	95630 95124 Date: 06/04/1996 Asd: \$88,268 Un:
49	Parcel: 072-0060-013-000 Owner: SAC-PLCRVLE TRANSPORTATION Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: 1665 Lot:	Site: *FOLSOM CA Mail: 2811 O ST*SACRAMENTO CA Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 3.37 A	Sqft: Imp: 0%	95630 95816 Date: 09/06/1996 Asd: Un:
50	Parcel: 072-0060-023-000 Owner: TSAKOPOULOS & ANGELO G Use: PASTURE Lns: Map:	Ph: Doc: 825 Lot:	Site: WHITE ROCK RD*RANCHO CORDOVA CA Mail: 7423 FAIR OAKS BLVD 10*CARMICHAEL CA Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 119.84	Sqft: Imp: 0%	95670 95608 Date: 10/29/1985 Asd: \$25,846 Un:

51	Parcel: 072-0060-025-000 Owner: TSAKOPOULOS FAMILY TRUST Use: PASTURE Lns: Map:	Ph: Doc: 1462 Lot:	Site: WHITE ROCK RD*RANCHO CORDOVA CA Mail: 7423 FAIR OAKS BLVD 10*CARMICHAEL CA Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 240.00	Sqft: Imp: 0%	Date: 10/24/2003 Asd: \$4,533,224 Un:
52	Parcel: 072-0060-038-000 Owner: TSAKOPOULOS, ANGELO K Use: PASTURE Lns: \$8,709,400 Map:	Ph: Doc: 284 Lot:	Site: SCOTT RD*FOLSOM CA Mail: 7700 COLLEGE TOWN DR 101*SACRAMENTO CA Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 406.20	Sqft: Imp: 0%	Date: 09/12/2002 Asd: \$2,638,078 Un:
53	Parcel: 072-0060-041-000 Owner: SAC-PLCRVLE TRANSPORTATION Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: 1665 Lot:	Site: OLD PLCRVLE RD*RANCHO CORDOVA CA Mail: 2811 O ST*SACRAMENTO CA Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 5.23 A	Sqft: Imp: 0%	Date: 09/06/1996 Asd: Un:
54	Parcel: 072-0060-042-000 Owner: CARPENTER RANCH Use: GOVERNMENTAL, PUBLIC Lns: \$74,373,700 Map:	Ph: Doc: 1309 Lot:	Site: SCOTT RD*FOLSOM CA Mail: N/AVAIL*ENCINO CA Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 1.36 A	Sqft: Imp: 0%	Date: 07/16/2008 Asd: Un:
55	Parcel: 072-0060-044-000 Owner: STATE OF CALIFORNIA Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: 881 Lot:	Site: SCOTT RD*FOLSOM CA Mail: PO BOX 911*MARYSVILLE CA Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 7.13 A	Sqft: Imp: 0%	Date: 10/05/2000 Asd: Un:
56	Parcel: 072-0060-045-000 Owner: CARPENTER RANCH Use: PASTURE Lns: \$74,373,700 Map:	Ph: Doc: 1309 Lot:	Site: SCOTT RD*FOLSOM CA Mail: N/AVAIL* Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 837.88	Sqft: Imp: 0%	Date: 07/16/2008 Asd: \$17,255,799 Un:
57	Parcel: 072-0060-046-000 Owner: STATE OF CALIFORNIA Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: 881 Lot:	Site: SCOTT RD*FOLSOM CA Mail: PO BOX 911*MARYSVILLE CA Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 3.92 A	Sqft: Imp: 0%	Date: 10/05/2000 Asd: Un:
58	Parcel: 072-0060-047-000 Owner: STATE OF CALIFORNIA Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: 881 Lot:	Site: SCOTT RD*FOLSOM CA Mail: PO BOX 911*MARYSVILLE CA Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 2.56 A	Sqft: Imp: 0%	Date: 10/05/2000 Asd: Un:
59	Parcel: 072-0060-048-000 Owner: CARPENTER RANCH Use: PASTURE Lns: \$74,373,700 Map:	Ph: Doc: 1309 Lot:	Site: SCOTT RD*FOLSOM CA Mail: N/AVAIL* Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 167.23	Sqft: Imp: 0%	Date: 07/16/2008 Asd: \$8,686,146 Un:
60	Parcel: 072-0060-050-000 Owner: TSAKOPOULOS, ANGELO K Use: PASTURE Lns: Map:	Ph: Doc: Lot:	Site: WHITE ROCK RD*RANCHO CORDOVA CA Mail: 7700 COLLEGE TOWN DR 101*SACRAMENTO CA Zn: SPA Xmpt: BedBath:	Sale: Yb: Ltsz: 141.90	Sqft: Imp: 0%	Date: Asd: \$30,585 Un:

61	Parcel: 072-0060-051-000 Owner: TSAKOPOULOS, ANGELO K Use: PASTURE Lns: Map:	Ph: Doc: Lot:	Site: WHITE ROCK RD*RANCHO CORDOVA CA 95670 Mail: 7700 COLLEGE TOWN DR 101*SACRAMENTO CA 95826 Zn: SPA Xmpt: BedBath:	Sale: Yb: Ltsz: 8.10 A	Sqft: Imp:0%	Date: Asd: \$1,723 Un:
62	Parcel: 072-0060-052-000 Owner: AEROJET-GENERAL CORP Use: PASTURE Lns: \$280,000,000 Map:	Ph: Doc: 1413 Lot:	Site: WHITE ROCK RD*RANCHO CORDOVA CA 95670 Mail: PO BOX 13222*SACRAMENTO CA 95813 Zn: SPA Xmpt: BedBath:	Sale: Yb: Ltsz: 72.23 A	Sqft: Imp:0%	Date: 04/01/2008 Asd: \$15,508 Un:
63	Parcel: 072-0060-069-000 Owner: TSAKOPOULOS, ANGELO K Use: PASTURE Lns: Map:	Ph: Doc: Lot:	Site: SCOTT RD*FOLSOM CA 95630 Mail: 7700 COLLEGE TOWN DR 101*SACRAMENTO CA 95826 Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 527.52	Sqft: Imp:0%	Date: Asd: \$3,573,426 Un:
64	Parcel: 072-0060-070-000 Owner: WHITE ROCK ROAD PROPERTIES Use: MINERAL, QUARRIES, Lns: Map:	Ph: Doc: 696 Lot:	Site: SCOTT RD*FOLSOM CA 95630 Mail: PO BOX 254795*SACRAMENTO CA 95865 Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 114.00	Sqft: Imp:0%	Date: 11/21/2007 Asd: \$342,000 Un:
65	Parcel: 072-0060-073-000 Owner: SACRAMENTO COUNTRY DAY Use: PASTURE Lns: Map:	Ph: Doc: 3813 Lot:	Site: WHITE ROCK RD*RANCHO CORDOVA CA 95670 Mail: 2636 LATHAM DR*SACRAMENTO CA 95864 Zn: SPA Xmpt: BedBath:	Sale: Yb: Ltsz: 80.00 A	Sqft: Imp:0%	Date: 10/15/2003 Asd: \$594,329 Un:
66	Parcel: 072-0060-074-000 Owner: AEROJET-GENERAL CORP Use: PASTURE Lns: \$280,000,000 Map:	Ph: Doc: 1413 Lot:	Site: WHITE ROCK RD*RANCHO CORDOVA CA 95670 Mail: PO BOX 13222*SACRAMENTO CA 95813 Zn: SPA Xmpt: BedBath:	Sale: Yb: Ltsz: 459.17	Sqft: Imp:0%	Date: 04/01/2008 Asd: \$106,154 Un:
67	Parcel: 072-0070-001-000 Owner: FOLSOM HEIGHTS LLC Use: PASTURE Lns: \$10,161,000 Map:	Ph: Doc: 1272 Lot:	Site: WHITE ROCK RD*RANCHO CORDOVA CA 95670 Mail: 2049 EMPIRE MINE CIR*GOLD RIVER CA 95670 Zn: AG2 Xmpt: BedBath:	Sale: Yb: Ltsz: 97.71 A	Sqft: Imp:0%	Date: 03/29/2006 Asd: \$5,907,391 Un:
68	Parcel: 072-0070-006-000 Owner: FOLSOM WHITE ROCK INVESTORS Use: PASTURE Lns: Map:	Ph: Doc: 616 Lot:	Site: PLACERVILLE RD*FOLSOM CA 95630 Mail: 111 WOODMERE RD 190*FOLSOM CA 95630 Zn: AG8 Xmpt: BedBath:	Sale: \$900,000F Yb: Ltsz: 115.00	Sqft: Imp:0%	Date: 08/24/1987 Asd: \$7,440,000 Un:
69	Parcel: 072-0070-015-000 Owner: STATHOS FRANK G & AKT Use: PASTURE Lns: Map:	Ph: Doc: 1723 Lot:	Site: OLD PLCRVLE RD*FOLSOM CA 95630 Mail: 7700 COLLEGE TOWN DR 201*SACRAMENTO CA 95826 Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 149.50	Sqft: Imp:0%	Date: 03/05/2004 Asd: \$827,927 Un:
70	Parcel: 072-0070-021-000 Owner: ARCADIAN HEIGHTS LLC Use: PASTURE Lns: Map:	Ph: Doc: 1193 Lot:	Site: PLACERVILLE RD*FOLSOM CA 95630 Mail: 7700 COLLEGE TOWN DR 101*SACRAMENTO CA 95826 Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 295.80	Sqft: Imp:0%	Date: 01/25/2008 Asd: \$3,127,275 Un:

71	Parcel: 072-0070-022-000 Owner: ARCADIAN HEIGHTS LLC Use: PASTURE Lns: Map:	Ph: Doc: 1193 Lot:	Site: PLACERVILLE RD*FOLSOM CA Mail: 7700 COLLEGE TOWN DR 101*SACRAMENTO CA Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 145.60	Sqft: Imp: 0%	Date: 01/25/2008 Asd: \$661,665 Un:
72	Parcel: 072-0070-023-000 Owner: FOLSOM HEIGHTS LLC Use: PASTURE Lns: \$10,161,000 Map:	Ph: Doc: 1272 Lot:	Site: *FOLSOM CA Mail: 2049 EMPIRE MINE CIR*GOLD RIVER CA Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 28,750	Sqft: Imp: 0%	Date: 03/29/2006 Asd: \$39,535 Un:
73	Parcel: 072-0070-025-000 Owner: SAC-PLCRVLE TRANSPORTATION Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: 1665 Lot:	Site: OLD PLCRVLE RD*FOLSOM CA Mail: 2811 O ST*SACRAMENTO CA Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 2.34 A	Sqft: Imp: 0%	Date: 09/06/1996 Asd: Un:
74	Parcel: 072-0070-029-000 Owner: SAC-PLCRVLE TRANSPORTATION Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: Lot:	Site: WHITE ROCK RD*RANCHO CORDOVA CA Mail: 2811 O ST*SACRAMENTO CA Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 3,485	Sqft: Imp: 0%	Date: 09/06/1996 Asd: Un:
75	Parcel: 072-0070-032-000 Owner: RUSSELL-PROMONTORY L L C Use: VACANT RESIDENTIAL Lns: Map:	Ph: Doc: 1501 Lot: 268	Site: 15125 WHITE ROCK RD*RANCHO CORDOVA CA Mail: 7700 COLLEGE TOWN DR 101*SACRAMENTO CA Zn: AG8 Xmpt: BedBath:	Sale: \$372,000P Yb: Ltsz: 390.59	Sqft: Imp: 0%	Date: 02/27/1995 Asd: \$1,458,771 Un:
76	Parcel: 072-0100-016-000 Owner: GRANT LINE ROAD PROPERTIES Use: MINERAL, QUARRIES, Lns: Map:	Ph: Doc: 995 Lot:	Site: GRANT LINE RD*RANCHO CORDOVA CA Mail: 3500 AMERICAN RIVER DR*SACRAMENTO CA Zn: M Xmpt: BedBath:	Sale: Yb: Ltsz: 404.89	Sqft: Imp: 0%	Date: 09/27/2001 Asd: \$4,300,941 Un:
77	Parcel: 072-0100-020-000 Owner: AEROJET GENERAL CORPORATION Use: VACANT INDUSTRIAL Lns: Map:	Ph: Doc: 1752 Lot:	Site: WHITE ROCK RD*RANCHO CORDOVA CA Mail: PO BOX 13222*SACRAMENTO CA Zn: M Xmpt: BedBath:	Sale: Yb: Ltsz: 242.21	Sqft: Imp: 0%	Date: 10/26/2001 Asd: \$1,237,161 Un:
78	Parcel: 072-0100-022-000 Owner: GRANT LINE ROAD PROPERTIES Use: MINERAL, QUARRIES, Lns: Map:	Ph: Doc: 995 Lot: 23	Site: WHITE ROCK RD*RANCHO CORDOVA CA Mail: 3500 AMERICAN RIVER DR*SACRAMENTO CA Zn: IR Xmpt: BedBath:	Sale: Yb: Ltsz: 171.00	Sqft: Imp: 0%	Date: 09/27/2001 Asd: \$3,936,530 Un:
79	Parcel: 072-0100-025-000 Owner: AEROJET GENERAL CORPORATION Use: VACANT INDUSTRIAL Lns: Map:	Ph: Doc: Lot:	Site: WHITE ROCK RD*RANCHO CORDOVA CA Mail: PO BOX 13222*SACRAMENTO CA Zn: SPA Xmpt: BedBath:	Sale: Yb: Ltsz: 5.20 A	Sqft: Imp: 0%	Date: 06/03/1983 Asd: \$52,830 Un:
80	Parcel: 072-0100-026-000 Owner: AEROJET-GENERAL CORP Use: VACANT INDUSTRIAL Lns: \$280,000,000 Map:	Ph: Doc: 1413 Lot: A	Site: 13280 WHITE ROCK RD*RANCHO CORDOVA CA Mail: PO BOX 13222*SACRAMENTO CA Zn: SPA Xmpt: BedBath:	Sale: Yb: Ltsz: 450.74	Sqft: Imp: 0%	Date: 04/01/2008 Asd: \$6,728,893 Un:

81	Parcel: 072-0100-028-000 Owner: STATE OF CALIFORNIA Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: Lot:	Site: 13300 WHITE ROCK RD*RANCHO CORDOVA CA 95742 Mail: 13300 WHITE ROCK RD*RANCHO CORDOVA CA 95742 Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 165.73	Sqft: Imp: 0%	Date: 03/09/1990 Asd: Un:
82	Parcel: 072-0100-029-000 Owner: STATE OF CALIFORNIA Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: 504 Lot:	Site: 13333 WHITE ROCK RD*RANCHO CORDOVA CA 95742 Mail: 1 CAPITOL MALL 500*SACRAMENTO CA 95814 Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 211.07	Sqft: Imp: 0%	Date: 11/02/2004 Asd: Un:
83	Parcel: 072-0231-023-000 Owner: COUNTY OF SACRAMENTO Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: Lot: 2	Site: WHITE ROCK RD*SACRAMENTO CA 95842 Mail: WHITE ROCK RD*SACRAMENTO CA 95842 Zn: M Xmpt: BedBath:	Sale: Yb: Ltsz: 7.84 A	Sqft: Imp: 0%	Date: 07/16/1975 Asd: Un:
84	Parcel: 072-0231-048-000 Owner: AEROJET GENERAL CORP Use: TRANSPORTATION, AIR, Lns: Map:	Ph: Doc: Lot:	Site: PRAIRIE CITY RD*FOLSOM CA 95630 Mail: PO BOX 13222*SACRAMENTO CA 95813 Zn: SPA Xmpt: BedBath:	Sale: Yb: Ltsz: 52.84 A	Sqft: Imp: 0%	Date: Asd: \$39,525 Un:
85	Parcel: 072-0231-049-000 Owner: STATE OF CALIFORNIA Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: Lot:	Site: PRAIRIE CITY RD*FOLSOM CA 95630 Mail: PO BOX 911*MARYSVILLE CA 95901 Zn: SPA Xmpt: BedBath:	Sale: Yb: Ltsz: 7.02 A	Sqft: Imp: 0%	Date: 06/04/1997 Asd: Un:
86	Parcel: 072-0231-050-000 Owner: STATE OF CALIFORNIA Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: Lot:	Site: FOLSOM BLVD*RANCHO CORDOVA CA 95742 Mail: PO BOX 911*MARYSVILLE CA 95901 Zn: SPA Xmpt: BedBath:	Sale: Yb: Ltsz: 2.90 A	Sqft: Imp: 0%	Date: 06/04/1997 Asd: Un:
87	Parcel: 072-0231-092-000 Owner: AEROJET GENERAL CORP Use: VACANT INDUSTRIAL Lns: Map:	Ph: Doc: Lot:	Site: AEROJET RD*RANCHO CORDOVA CA 95742 Mail: PO BOX 13222*SACRAMENTO CA 95813 Zn: SPA Xmpt: BedBath:	Sale: Yb: Ltsz: 687.65	Sqft: Imp: 0%	Date: Asd: \$64,347,663 Un:
88	Parcel: 072-0270-028-000 Owner: FOLSOM HEIGHTS LLC Use: PASTURE Lns: \$10,161,000 Map:	Ph: Doc: 1272 Lot:	Site: PLACERVILLE RD*FOLSOM CA 95630 Mail: 2049 EMPIRE MINE CIR*GOLD RIVER CA 95670 Zn: AG2 Xmpt: BedBath:	Sale: Yb: Ltsz: 88.33 A	Sqft: Imp: 0%	Date: 03/29/2006 Asd: \$4,634,982 Un:
89	Parcel: 072-0270-043-000 Owner: SAC-PLCRVLE TRANSPORTATION Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: 1665 Lot:	Site: PLACERVILLE RD*FOLSOM CA 95630 Mail: 2811 O ST*SACRAMENTO CA 95816 Zn: A Xmpt: BedBath:	Sale: Yb: Ltsz: 3.30 A	Sqft: Imp: 0%	Date: 09/06/1996 Asd: Un:
90	Parcel: 072-0270-127-000 Owner: STATE OF CALIFORNIA Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: 936 Lot:	Site: E BIDWELL ST* Mail: PO BOX 911*MARYSVILLE CA 95901 Zn: A Xmpt: BedBath:	Sale: Yb: Ltsz: 18,508	Sqft: Imp: 0%	Date: 08/17/2000 Asd: Un:

91	Parcel: 072-0270-128-000 Owner: STATE OF CALIFORNIA Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: 936 Blk: Lot:	Site: SCOTT RD*FOLSOM CA Mail: PO BOX 911*MARYSVILLE CA Zn: A Xmpt: BedBath:	Sale: Yb: Ltsz: 16,149	Sqft: Imp: 0%	Date: 08/17/2000 Asd: Un:
92	Parcel: 072-0270-129-000 Owner: CARPENTER RANCH Use: VACANT COMMERCIAL Lns: \$74,373,700 Map:	Ph: Doc: 1309 Blk: Lot:	Site: PLACERVILLE RD*FOLSOM CA Mail: N/AVAIL* Zn: A Xmpt: BedBath:	Sale: Yb: Ltsz: 2.93 A	Sqft: Imp: 0%	Date: 07/16/2008 Asd: \$210,160 Un:
93	Parcel: 072-0270-133-000 Owner: CARPENTER RANCH Use: VACANT COMMERCIAL Lns: \$74,373,700 Map:	Ph: Doc: 1309 Blk: Lot:	Site: SCOTT RD*FOLSOM CA Mail: N/AVAIL* Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 11.86 A	Sqft: Imp: 0%	Date: 07/16/2008 Asd: \$1,938,000 Un:
94	Parcel: 072-0270-138-000 Owner: RUSSELL-PROMONTORY LLC Use: PASTURE Lns: Map:	Ph: Doc: 1501 Blk: Lot:	Site: 14751 WHITE ROCK RD*FOLSOM CA Mail: 7700 COLLEGE TOWN DR 101*SACRAMENTO CA Zn: AG8 Xmpt: BedBath:	Sale: \$372,000 Yb: Ltsz: 64.85 A	Sqft: Imp: 0%	Date: 02/27/1995 Asd: \$669,759 Un:
95	Parcel: 072-0270-144-000 Owner: STATE OF CALIFORNIA Use: PASTURE Lns: Map:	Ph: Doc: 260 Blk: Lot:	Site: SCOTT RD*FOLSOM CA Mail: PO BOX 911*MARYSVILLE CA Zn: A1A Xmpt: BedBath:	Sale: Yb: Ltsz:	Sqft: Imp: 0%	Date: 05/17/2007 Asd: Un:
96	Parcel: 072-0270-146-000 Owner: STATE OF CALIFORNIA Use: GOVERNMENTAL, PUBLIC Lns: \$188,800 Map:	Ph: Doc: 2229 Blk: Lot:	Site: HWY 50*FOLSOM CA Mail: PO BOX 911*MARYSVILLE CA Zn: AG Xmpt: BedBath:	Sale: \$236,000F Yb: Ltsz: 10,018	Sqft: Imp: 0%	Date: 07/21/2004 Asd: Un:
97	Parcel: 072-0270-147-000 Owner: CARPENTER RANCH Use: PASTURE Lns: \$74,373,700 Map:	Ph: Doc: 1309 Blk: Lot:	Site: HWY 50*FOLSOM CA Mail: N/AVAIL* Zn: AG Xmpt: BedBath:	Sale: Yb: Ltsz: 37.08 A	Sqft: Imp: 0%	Date: 07/16/2008 Asd: \$4,590,000 Un:
98	Parcel: 072-1170-107-000 Owner: ELLIOTT HOMES INC Use: VACANT RESIDENTIAL Lns: Map:	Ph: Doc: 2152 Blk: Lot: 64	Site: IRON POINT RD*FOLSOM CA Mail: 2390 E BIDWELL ST*FOLSOM CA Zn: A Xmpt: BedBath:	Sale: Yb: Ltsz:	Sqft: Imp: 0%	Date: 11/13/2001 Asd: \$1,278,542 Un:
99	Parcel: 072-1170-113-000 Owner: ELLIOTT HOMES INC Use: VACANT COMMERCIAL Lns: Map:	Ph: Doc: 2152 Blk: Lot: 28	Site: IRON POINT RD*FOLSOM CA Mail: 2390 E BIDWELL ST*FOLSOM CA Zn: A Xmpt: BedBath:	Sale: Yb: Ltsz:	Sqft: Imp: 0%	Date: 11/13/2001 Asd: \$3,960,974 Un:
100	Parcel: 072-1190-040-000 Owner: ELLIOTT ALTA VISTA LLC Use: STORE/OFFICE COMBO Lns: Map:	Ph: Doc: 1929 Blk: Lot: 26	Site: 80 IRON POINT CIR*FOLSOM CA Mail: 80 IRON POINT CIR*FOLSOM CA Zn: A Xmpt: BedBath:	Sale: Yb: Ltsz: 12.69 A	Sqft: Imp: 0%	Date: 03/10/2004 Asd: \$4,189,011 Un:

101	Parcel: 072-1190-047-000 Owner: DKM IRON POINT LLC & DMK Use: OFFICE BUILDING Lns: Map:	Ph: Doc: 1108 Blk: Lot: 1	Site: 80 IRON POINT CIR*FOLSOM CA 95630 Mail: 10933 TRADE CENTER DR 106*RANCHO CORDOVA 95670 Zn: A Xmpt: BedBath:	Sale: Yb: Ltsz: 5.00 A	Sqft: Imp: 84%	Date: 12/17/2004 Asd: \$13,137,754 Un:
102	Parcel: 072-1190-056-000 Owner: MACHADO TRUST ANTHONY L Use: OFFICE BUILDING Lns: Map:	Ph: Doc: 1341 Blk: Lot:	Site: 35 IRON POINT CIR*FOLSOM CA 95630 Mail: 2609 W PINTAIL WAY*ELK GROVE CA 95757 Zn: A Xmpt: BedBath:	Sale: \$3,503,500P Yb: Ltsz: 4.69 A	Sqft: Imp: 88%	Date: 06/18/2004 Asd: \$17,908,652 Un:
103	Parcel: 072-1190-057-000 Owner: ELLIOTT HOMES INC & NATOMAS Use: STORES, RETAIL OUTLET Lns: Map:	Ph: Doc: 166 Blk: Lot: 26	Site: IRON POINT RD*FOLSOM CA 95630 Mail: 1280 LESNICK CT*FOLSOM CA 95630 Zn: A Xmpt: BedBath:	Sale: Yb: Ltsz: 13.69 A	Sqft: Imp: 0%	Date: 06/28/1988 Asd: \$608,282 Un:
104	Parcel: 072-1190-058-000 Owner: THARALDSON FAMILY Use: HOTEL/MOTEL Lns: \$29,700,000 Map:	Ph: Doc: 1078 Blk: Lot: 1	Site: 2555 IRON POINT RD*FOLSOM CA 95630 Mail: 1201 WESTRAC DR S*FARGO ND 58103 Zn: C Xmpt: BedBath:	Sale: Yb: Ltsz: 3.33 A	Sqft: Imp: 80%	Date: 03/11/2005 Asd: \$9,264,585 Un:
105	Parcel: 072-1190-059-000 Owner: THARALDSON FAMILY Use: HOTEL/MOTEL Lns: \$29,700,000 Map:	Ph: Doc: 1078 Blk: Lot: 2	Site: 2575 IRON POINT RD*FOLSOM CA 95630 Mail: 1201 WESTRAC DR S*FARGO ND 58103 Zn: C Xmpt: BedBath:	Sale: Yb: Ltsz: 3.11 A	Sqft: Imp: 82%	Date: 03/11/2005 Asd: \$12,493,950 Un:
106	Parcel: 072-1190-060-000 Owner: FAT FAMILY TRUST Use: DEPARTMENT STORE Lns: Map:	Ph: Doc: 166 Blk: Lot: 3	Site: 2595 IRON POINT RD*FOLSOM CA 95630 Mail: 5034 MILLSTONE WAY*GRANITE BAY CA 95746 Zn: C Xmpt: BedBath:	Sale: Yb: Ltsz: 1.17 A	Sqft: Imp: 74%	Date: 06/28/1988 Asd: \$3,291,250 Un:
107	Parcel: 072-1190-061-000 Owner: FAT FAMILY TRUST Use: RESTAURANT, BAR, FOOD Lns: Map:	Ph: Doc: 166 Blk: Lot: 4	Site: 2585 IRON POINT RD*FOLSOM CA 95630 Mail: 5034 MILLSTONE WAY*GRANITE BAY CA 95746 Zn: C Xmpt: BedBath:	Sale: Yb: Ltsz: 1.43 A	Sqft: Imp: 71%	Date: 06/28/1988 Asd: \$3,635,388 Un:
108	Parcel: 072-1190-069-000 Owner: BRADVILLE INC Use: ROADWAYS Lns: Map:	Ph: Doc: 190 Blk: Lot: R1	Site: IRON POINT RD*FOLSOM CA 95630 Mail: 2500 VENTURE OAKS WAY 175*SACRAMENTO CA 95833 Zn: ML Xmpt: BedBath:	Sale: Yb: Ltsz: 2.35 A	Sqft: Imp: 0%	Date: 12/15/1999 Asd: \$10 Un:
109	Parcel: 072-1190-085-000 Owner: BRADVILLE INC Use: MEDICAL/DENTAL/PROFESSI Lns: Map:	Ph: Doc: 190 Blk: Lot:	Site: IRON POINT RD*FOLSOM CA 95630 Mail: 2500 VENTURE OAKS WAY 175*SACRAMENTO CA 95833 Zn: ML Xmpt: BedBath:	Sale: Yb: Ltsz:	Sqft: Imp: 0%	Date: 12/15/1999 Asd: \$1,210,065 Un:
110	Parcel: 072-1190-086-000 Owner: KAIS LLC Use: MEDICAL/DENTAL/PROFESSI Lns: \$32,600,000 Map:	Ph: Doc: 1648 Blk: Lot:	Site: 2155 IRON POINT RD*FOLSOM CA 95630 Mail: 200 WITMER RD*HORSHAM PA 19044 Zn: ML Xmpt: BedBath:	Sale: Yb: Ltsz: 11.28 A	Sqft: Imp: 84%	Date: 10/30/2003 Asd: \$31,443,028 Un:

111	Parcel: 072-1190-107-000 Owner: STATE OF CALIFORNIA Use: ROADWAYS Lns: Map:	Ph: Doc: Lot:	Site: IRON POINT RD*FOLSOM CA Mail: PO BOX 911*MARYSVILLE CA Zn: ML Xmpt: BedBath:	Sale: Yb: Ltsz: 1.43 A	Sqft: Imp: 0%	Date: Asd: Un:
112	Parcel: 072-1190-118-000 Owner: BRADDOCK & LOGAN VENTURE Use: DEPARTMENT STORE Lns: \$419,625 Map:	Ph: Doc: 1432 Lot: 10	Site: 2495 IRON POINT RD*FOLSOM CA Mail: 4155 BLACKHAWK PLAZA CIR 201*DANVILLE CA Zn: ML Xmpt: BedBath:	Sale: Yb: Ltsz:	Sqft: Imp: 56%	Date: 10/03/2005 Asd: \$18,942,561 Un:
113	Parcel: 072-1190-119-000 Owner: ABTPROP IRON POINT LLC Use: OFFICE BUILDING Lns: Map:	Ph: Doc: 1043 Lot: 1	Site: 50 IRON POINT CIR*FOLSOM CA Mail: 5304 WEDGE CIR*FAIR OAKS CA Zn: A Xmpt: BedBath:	Sale: Yb: Ltsz:	Sqft: Imp: 87%	Date: 06/21/2007 Asd: \$12,750,000 Un:
114	Parcel: 072-1190-120-000 Owner: BROADSTONE ASSOCIATES OB LLC Use: MISCELLANEOUS Lns: Map:	Ph: Doc: Lot: 2	Site: IRON POINT CIR*FOLSOM CA Mail: 10933 TRADE CENTER DR*RANCHO CORDOVA CA Zn: A Xmpt: BedBath:	Sale: Yb: Ltsz:	Sqft: Imp: 0%	Date: Asd: \$10 Un:
115	Parcel: 072-1190-144-000 Owner: CITY OF FOLSOM Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: Lot:	Site: IRON POINT RD*FOLSOM CA Mail: 50 NATOMA ST*FOLSOM CA Zn: A Xmpt: BedBath:	Sale: Yb: Ltsz:	Sqft: Imp: 0%	Date: Asd: Un:
116	Parcel: 072-2660-025-000 Owner: LEDOUX, STEPHEN & MISTY Use: SINGLE FAMILY RESIDENCE Lns: Map:	Ph: Doc: 1732 Lot: 25	Site: 2082 HORSESHOE GLEN CIR*FOLSOM CA Mail: 2082 HORSESHOE GLEN CIR*FOLSOM CA Zn: A Xmpt: BedBath: 3/2.0	Sale: \$493,500F Yb: 2005 Ltsz: 11,674	Sqft: 1,613 Imp: 81%	Date: 12/08/2005 Asd: \$467,548 Un:
117	Parcel: 072-2660-026-000 Owner: DALIA, CHRISTY L & GABRIEL Use: SINGLE FAMILY RESIDENCE Lns: \$275,000 Map:	Ph: Doc: 2147 Lot: 26	Site: 2078 HORSESHOE GLEN CIR*FOLSOM CA Mail: 2078 HORSESHOE GLEN CIR*FOLSOM CA Zn: A Xmpt: Y BedBath: 4/2.0	Sale: \$466,000F Yb: 2005 Ltsz: 6,874	Sqft: 1,664 Imp: 78%	Date: 02/15/2006 Asd: \$401,990 Un:
118	Parcel: 072-2660-027-000 Owner: NAGPAL, MUKESH Use: SINGLE FAMILY RESIDENCE Lns: \$460,165 Map:	Ph: Doc: 2303 Lot: 27	Site: 2074 HORSESHOE GLEN CIR*FOLSOM CA Mail: 2074 HORSESHOE GLEN CIR*FOLSOM CA Zn: A Xmpt: Y BedBath: 4/3.0	Sale: \$484,500F Yb: 2005 Ltsz: 6,623	Sqft: 1,851 Imp: 79%	Date: 12/14/2005 Asd: \$418,280 Un:
119	Parcel: 072-2660-028-000 Owner: ILAGAN, CAMILO L & CARLA B G Use: SINGLE FAMILY RESIDENCE Lns: \$437,000 Map:	Ph: Doc: 2389 Lot: 28	Site: 2070 HORSESHOE GLEN CIR*FOLSOM CA Mail: 1075 ELSWORTH WAY*FOLSOM CA Zn: A Xmpt: BedBath: 4/2.0	Sale: \$460,500F Yb: 2005 Ltsz: 6,043	Sqft: 1,613 Imp: 78%	Date: 12/16/2005 Asd: \$397,383 Un:
120	Parcel: 072-2660-029-000 Owner: BALL, JOSHUA D & LISA Q Use: SINGLE FAMILY RESIDENCE Lns: \$387,900 Map:	Ph: Doc: 1962 Lot: 29	Site: 2066 HORSESHOE GLEN CIR*FOLSOM CA Mail: 2066 HORSESHOE GLEN CIR*FOLSOM CA Zn: A Xmpt: BedBath: 3/2.0	Sale: \$431,000F Yb: 2005 Ltsz: 5,438	Sqft: 1,468 Imp: 76%	Date: 04/25/2006 Asd: \$372,181 Un:



121	Parcel: 072-2660-030-000 Owner: YU, JIM CHUNG Use: SINGLE FAMILY RESIDENCE Ph: Lns: \$150,000 Map:	Site: 2062 HORSESHOE GLEN CIR*FOLSOM CA 95630 Mail: 2062 HORSESHOE GLEN CIR*FOLSOM CA 95630 Zn: A Sale: \$479,000F Date: 12/19/2005 Xmpt: Yb: 2005 Sqft: 1,851 Asd: \$413,311 BedBath: 4/3.0 Ltsz: 5,258 Imp: 79% Un:
122	Parcel: 072-2660-031-000 Owner: ALMAD, ASHWINI ANAND Use: SINGLE FAMILY RESIDENCE Ph: Lns: \$392,000 Map:	Site: 2058 HORSESHOE GLEN CIR*FOLSOM CA 95630 Mail: 2058 HORSESHOE GLEN CIR*FOLSOM CA 95630 Zn: A Sale: \$392,500F Date: 03/09/2007 Xmpt: Yb: 2005 Sqft: 1,664 Asd: \$367,983 BedBath: 4/2.0 Ltsz: 5,150 Imp: 74% Un:
123	Parcel: 072-2660-032-000 Owner: DERMOTT, MAUREEN A Use: SINGLE FAMILY RESIDENCE Ph: Lns: \$351,000 Map:	Site: 2054 HORSESHOE GLEN CIR*FOLSOM CA 95630 Mail: 2054 HORSESHOE GLEN CIR*FOLSOM CA 95630 Zn: A Sale: \$451,000F Date: 10/12/2006 Xmpt: Yb: 2005 Sqft: 1,851 Asd: \$423,218 BedBath: 4/3.0 Ltsz: 5,204 Imp: 77% Un:
124	Parcel: 072-2660-033-000 Owner: NELSON, DARREN S Use: SINGLE FAMILY RESIDENCE Ph: Lns: \$400,000 Map:	Site: 2050 HORSESHOE GLEN CIR*FOLSOM CA 95630 Mail: 2050 HORSESHOE GLEN CIR*FOLSOM CA 95630 Zn: A Sale: \$400,000F Date: 09/21/2006 Xmpt: Yb: 2005 Sqft: 1,468 Asd: \$338,640 BedBath: 3/2.0 Ltsz: 5,173 Imp: 75% Un:
125	Parcel: 072-2660-034-000 Owner: CRUZ, ADRIAN P & MARIGOLD L Use: SINGLE FAMILY RESIDENCE Ph: Lns: \$416,997 Map:	Site: 2046 HORSESHOE GLEN CIR*FOLSOM CA 95630 Mail: 2046 HORSESHOE GLEN CIR*FOLSOM CA 95630 Zn: A Sale: \$417,000F Date: 02/16/2007 Xmpt: Yb: 2005 Sqft: 1,664 Asd: \$391,310 BedBath: 4/2.0 Ltsz: 5,227 Imp: 76% Un:
126	Parcel: 072-2660-035-000 Owner: SORDELLO, JOHN B & RUTH O REV Use: SINGLE FAMILY RESIDENCE Ph: Lns: Map:	Site: 2042 HORSESHOE GLEN CIR*FOLSOM CA 95630 Mail: 2042 HORSESHOE GLEN CIR*FOLSOM CA 95630 Zn: A Sale: \$392,500F Date: 10/18/2006 Xmpt: Yb: 2005 Sqft: 1,344 Asd: \$368,273 BedBath: 3/2.0 Ltsz: 5,151 Imp: 74% Un:
127	Parcel: 072-2660-036-000 Owner: DAVIS, REGINA Use: SINGLE FAMILY RESIDENCE Ph: Lns: \$430,155 Map:	Site: 2038 HORSESHOE GLEN CIR*FOLSOM CA 95630 Mail: 2038 HORSESHOE GLEN CIR*FOLSOM CA 95630 Zn: A Sale: \$478,000F Date: 05/23/2006 Xmpt: Yb: 2005 Sqft: 1,851 Asd: \$412,724 BedBath: 4/3.0 Ltsz: 5,227 Imp: 79% Un:
128	Parcel: 072-2660-037-000 Owner: DAY, CONSTANCE A Use: SINGLE FAMILY RESIDENCE Ph: Lns: \$268,000 Map:	Site: 2034 HORSESHOE GLEN CIR*FOLSOM CA 95630 Mail: 2034 HORSESHOE GLEN CIR*FOLSOM CA 95630 Zn: A1A Sale: \$405,000F Date: 10/31/2007 Xmpt: Yb: 2005 Sqft: 1,664 Asd: \$405,000 BedBath: 4/2.0 Ltsz: 5,095 Imp: 75% Un:
129	Parcel: 072-2660-038-000 Owner: AUG, LINDA & RICHARD Use: SINGLE FAMILY RESIDENCE Ph: Lns: \$375,064 Map:	Site: 2030 HORSESHOE GLEN CIR*FOLSOM CA 95630 Mail: 2030 HORSESHOE GLEN CIR*FOLSOM CA 95630 Zn: A Sale: \$395,000F Date: 03/30/2007 Xmpt: Yb: 2005 Sqft: 1,468 Asd: \$370,484 BedBath: 3/2.0 Ltsz: 5,133 Imp: 74% Un:
130	Parcel: 072-2660-039-000 Owner: HAIDER, BASSAM J & LABEBAH Use: SINGLE FAMILY RESIDENCE Ph: (916) 817-6265 Lns: \$450,000 Map:	Site: 2026 HORSESHOE GLEN CIR*FOLSOM CA 95630 Mail: 2026 HORSESHOE GLEN CIR*FOLSOM CA 95630 Zn: A Sale: \$450,000F Date: 07/21/2006 Xmpt: Yb: 2005 Sqft: 1,851 Asd: \$380,970 BedBath: 4/3.0 Ltsz: 5,021 Imp: 77% Un:

131	Parcel: 072-2670-012-000 Owner: ELLIOTT HOMES INC Use: VACANT RESIDENTIAL Ph: Lns: Map:	Site: 1950 HORSESHOE GLEN CIR*FOLSOM CA 95630 Mail: 2390 E BIDWELL ST*FOLSOM CA 95630 Zn: A Sale: Date: Xmpt: Yb: Sqft: Asd: \$12,829 BedBath: Ltsz: Imp: 0% Un:
132	Parcel: 072-2670-013-000 Owner: ELLIOTT HOMES INC Use: VACANT RESIDENTIAL Ph: Lns: Map:	Site: 1954 HORSESHOE GLEN CIR*FOLSOM CA 95630 Mail: 2390 E BIDWELL ST*FOLSOM CA 95630 Zn: A Sale: Date: Xmpt: Yb: Sqft: Asd: \$12,829 BedBath: Ltsz: Imp: 0% Un:
133	Parcel: 072-2670-014-000 Owner: ELLIOTT HOMES INC Use: VACANT RESIDENTIAL Ph: Lns: Map:	Site: 1960 HORSESHOE GLEN CIR*FOLSOM CA 95630 Mail: 2390 E BIDWELL ST*FOLSOM CA 95630 Zn: A Sale: Date: Xmpt: Yb: Sqft: Asd: \$12,829 BedBath: Ltsz: Imp: 0% Un:
134	Parcel: 072-2670-015-000 Owner: ELLIOTT HOMES INC Use: VACANT RESIDENTIAL Ph: Lns: Map:	Site: 1964 HORSESHOE GLEN CIR*FOLSOM CA 95630 Mail: 2390 E BIDWELL ST*FOLSOM CA 95630 Zn: A Sale: Date: Xmpt: Yb: Sqft: Asd: \$12,829 BedBath: Ltsz: Imp: 0% Un:
135	Parcel: 072-2670-016-000 Owner: ELLIOTT HOMES INC Use: VACANT RESIDENTIAL Ph: Lns: Map:	Site: 1968 HORSESHOE GLEN CIR*FOLSOM CA 95630 Mail: 2390 E BIDWELL ST*FOLSOM CA 95630 Zn: A Sale: Date: Xmpt: Yb: Sqft: Asd: \$12,829 BedBath: Ltsz: Imp: 0% Un:
136	Parcel: 072-2670-017-000 Owner: ELLIOTT HOMES INC Use: VACANT RESIDENTIAL Ph: Lns: Map:	Site: 1972 HORSESHOE GLEN CIR*FOLSOM CA 95630 Mail: 2390 E BIDWELL ST*FOLSOM CA 95630 Zn: A Sale: Date: Xmpt: Yb: Sqft: Asd: \$12,829 BedBath: Ltsz: Imp: 0% Un:
137	Parcel: 072-2670-018-000 Owner: ELLIOTT HOMES INC Use: VACANT RESIDENTIAL Ph: Lns: Map:	Site: 1976 HORSESHOE GLEN CIR*FOLSOM CA 95630 Mail: 2390 E BIDWELL ST*FOLSOM CA 95630 Zn: A Sale: Date: Xmpt: Yb: Sqft: Asd: \$12,829 BedBath: Ltsz: Imp: 0% Un:
138	Parcel: 072-2670-019-000 Owner: ELLIOTT HOMES INC Use: VACANT RESIDENTIAL Ph: Lns: Map:	Site: 1980 HORSESHOE GLEN CIR*FOLSOM CA 95630 Mail: 2390 E BIDWELL ST*FOLSOM CA 95630 Zn: A Sale: Date: Xmpt: Yb: Sqft: Asd: \$12,829 BedBath: Ltsz: Imp: 0% Un:
139	Parcel: 072-2670-020-000 Owner: ELLIOTT HOMES INC Use: VACANT RESIDENTIAL Ph: Lns: Map:	Site: 1984 HORSESHOE GLEN CIR*FOLSOM CA 95630 Mail: 2390 E BIDWELL ST*FOLSOM CA 95630 Zn: A Sale: Date: Xmpt: Yb: Sqft: Asd: \$12,829 BedBath: Ltsz: Imp: 0% Un:
140	Parcel: 072-2670-021-000 Owner: ELLIOTT HOMES INC Use: VACANT RESIDENTIAL Ph: Lns: Map:	Site: 1988 HORSESHOE GLEN CIR*FOLSOM CA 95630 Mail: 2390 E BIDWELL ST*FOLSOM CA 95630 Zn: A Sale: Date: Xmpt: Yb: Sqft: Asd: \$12,829 BedBath: Ltsz: Imp: 0% Un:

141	Parcel: 072-2670-022-000 Owner: ELLIOTT HOMES INC Use: VACANT RESIDENTIAL Lns: Map:	Ph: Doc: Lot: 47	Site: 1992 HORSESHOE GLEN CIR*FOLSOM CA 95630 Mail: 2390 E BIDWELL ST*FOLSOM CA 95630 Zn: A Sale: Xmpt: Yb: Sqtft: Imp: 0% Date: Asd: \$12,829 Un:
142	Parcel: 072-2670-023-000 Owner: ELLIOTT HOMES INC Use: VACANT RESIDENTIAL Lns: Map:	Ph: Doc: Lot: 46	Site: 1996 HORSESHOE GLEN CIR*FOLSOM CA 95630 Mail: 2390 E BIDWELL ST*FOLSOM CA 95630 Zn: A Sale: Xmpt: Yb: Sqtft: Imp: 0% Date: Asd: \$12,829 Un:
143	Parcel: 072-2670-024-000 Owner: ELLIOTT HOMES INC Use: VACANT RESIDENTIAL Lns: Map:	Ph: Doc: Lot: 45	Site: 2000 HORSESHOE GLEN CIR*FOLSOM CA 95630 Mail: 2390 E BIDWELL ST*FOLSOM CA 95630 Zn: A Sale: Xmpt: Yb: Sqtft: Imp: 0% Date: Asd: \$12,829 Un:
144	Parcel: 072-2670-025-000 Owner: ELLIOTT HOMES INC Use: SINGLE FAMILY RESIDENCE Lns: Map:	Ph: Doc: Lot: 44	Site: 2004 HORSESHOE GLEN CIR*FOLSOM CA 95630 Mail: 2390 E BIDWELL ST*FOLSOM CA 95630 Zn: A1A Sale: Xmpt: Yb: 2008 Sqtft: 1,344 Imp: 0% Date: Asd: \$12,829 Un:
145	Parcel: 072-2670-026-000 Owner: FAJARDO, RONALD S & MAROSARIO Use: SINGLE FAMILY RESIDENCE Lns: \$410,420 Map:	Ph: Doc: 1313 Lot: 43	Site: 2008 HORSESHOE GLEN CIR*FOLSOM CA 95630 Mail: 2008 HORSESHOE GLEN CIR*FOLSOM CA 95630 Zn: A1A Sale: \$432,500F Xmpt: Yb: 2008 Sqtft: 1,851 Imp: 0% Date: 05/02/2008 Asd: \$12,829 Un:
146	Parcel: 072-2670-027-000 Owner: ELLIOTT HOMES INC Use: SINGLE FAMILY RESIDENCE Lns: Map:	Ph: Doc: Lot: 42	Site: 2012 HORSESHOE GLEN CIR*FOLSOM CA 95630 Mail: 2390 E BIDWELL ST*FOLSOM CA 95630 Zn: A1A Sale: Xmpt: Yb: 2008 Sqtft: 1,468 Imp: 0% Date: Asd: \$12,829 Un:
147	Parcel: 072-2670-028-000 Owner: ELLIOTT HOMES INC Use: SINGLE FAMILY RESIDENCE Lns: Map:	Ph: Doc: Lot: 41	Site: 2016 HORSESHOE GLEN CIR*FOLSOM CA 95630 Mail: 2390 E BIDWELL ST*FOLSOM CA 95630 Zn: A1A Sale: Xmpt: Yb: 2008 Sqtft: 1,344 Imp: 0% Date: Asd: \$12,829 Un:
148	Parcel: 072-2670-029-000 Owner: AGGARWAL, RAHUL Use: SINGLE FAMILY RESIDENCE Lns: \$339,200 Map:	Ph: Doc: 1609 Lot: 40	Site: 2020 HORSESHOE GLEN CIR*FOLSOM CA 95630 Mail: 2020 HORSESHOE GLEN CIR*FOLSOM CA 95630 Zn: A1A Sale: \$424,500F Xmpt: Yb: 2008 Sqtft: 1,851 Imp: 0% Date: 04/30/2008 Asd: \$12,829 Un:
149	Parcel: 072-2670-066-000 Owner: EMPIRE RANCH COMMUNITY ASSOC Use: MISCELLANEOUS Lns: Map:	Ph: Doc: Lot: A	Site: IRON POINT RD*FOLSOM CA 95630 Mail: 7191 MURIETA PKWY*RANCHO MURIETA CA 95683 Zn: A Sale: Xmpt: Yb: Sqtft: Imp: 0% Date: Asd: Un:
150	Parcel: 072-2670-067-000 Owner: EMPIRE RANCH COMMUNITY ASSOC Use: MISCELLANEOUS Lns: Map:	Ph: Doc: Lot: E	Site: HORSESHOE GLN*FOLSOM CA 95630 Mail: 7191 MURIETA PKWY*RANCHO MURIETA CA 95683 Zn: A Sale: Xmpt: Yb: Sqtft: Imp: 0% Date: Asd: Un:

151	Parcel: 072-2670-068-000 Owner: EMPIRE RANCH COMMUNITY ASSOC Use: MISCELLANEOUS Lns: Map:	Ph: Doc: Lot: D	Site: HORSESHOE GLN*FOLSOM CA Mail: 7191 MURIETA PKWY*RANCHO MURIETA CA Zn: A Xmpt: BedBath:	Sale: Yb: Ltsz:	Sqft: Imp: 0%	Date: Asd: Un:	95630 95683
152	Parcel: 072-2780-073-000 Owner: CITY OF FOLSOM Use: RECREATIONAL Lns: Map:	Ph: Doc: Lot: DD	Site: MINNIE OLIVE WAY*FOLSOM CA Mail: 50 NATOMA ST*FOLSOM CA Zn: M Xmpt: BedBath:	Sale: Yb: Ltsz:	Sqft: Imp: 0%	Date: Asd: Un:	95630 95630
153	Parcel: 072-2780-074-000 Owner: CITY OF FOLSOM Use: RECREATIONAL Lns: Map:	Ph: Doc: Lot: EE	Site: BLOSSOM ROCK LN*FOLSOM CA Mail: 50 NATOMA ST*FOLSOM CA Zn: M Xmpt: BedBath:	Sale: Yb: Ltsz:	Sqft: Imp: 0%	Date: Asd: Un:	95630 95630
154	Parcel: 073-0010-001-000 Owner: GRANT LINE ROAD PROPERTIES Use: MINERAL, QUARRIES, Lns: Map:	Ph: Doc: 995 Lot: 1	Site: 3417 GRANT LINE RD*RANCHO CORDOVA CA Mail: 3500 AMERICAN RIVER DR*SACRAMENTO CA Zn: M Xmpt: BedBath:	Sale: Yb: Ltsz: 175.00	Sqft: Imp: 8%	Date: 09/27/2001 Asd: \$1,546,953 Un:	95742 95864
155	Parcel: 073-0010-007-000 Owner: BYPASS, TRACY & TRACY Use: PASTURE Lns: Map:	Ph: Doc: Lot:	Site: 3601 GRANT LINE RD*RANCHO CORDOVA CA Mail: 3601 GRANT LINE RD*RANCHO CORDOVA CA Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 640.00	Sqft: Imp: 7%	Date: 11/21/2007 Asd: \$144,058 Un:	95742 95742
156	Parcel: 073-0010-010-000 Owner: GRANTLINE ROAD LLC Use: VACANT INDUSTRIAL Lns: \$1,026,000 Map:	Ph: Doc: 2406 Lot: 10	Site: GRANT LINE RD*RANCHO CORDOVA CA Mail: 7700 COLLEGE TOWN DR 215*SACRAMENTO CA Zn: IR Xmpt: BedBath:	Sale: \$1,368,000F Yb: Ltsz: 1.40 A	Sqft: Imp: 0%	Date: 08/06/2003 Asd: \$7,575 Un:	95742 95826
157	Parcel: 073-0010-011-000 Owner: GRANTLINE ROAD LLC Use: VACANT INDUSTRIAL Lns: \$1,026,000 Map:	Ph: Doc: 2406 Lot:	Site: 3450 GRANT LINE RD*RANCHO CORDOVA CA Mail: 7700 COLLEGE TOWN DR 215*SACRAMENTO CA Zn: IR Xmpt: BedBath:	Sale: \$1,368,000F Yb: Ltsz: 114.00	Sqft: Imp: 1%	Date: 08/06/2003 Asd: \$1,473,189 Un:	95742 95826
158	Parcel: 073-0010-012-000 Owner: JOHN, JAMES TRACY LIVING & Use: VINES AND BUSH FRUITS Lns: Map:	Ph: Doc: 1506 Lot: 1	Site: 3601 GRANT LINE RD*RANCHO CORDOVA CA Mail: 3601 GRANT LINE RD*RANCHO CORDOVA CA Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 124.00	Sqft: Imp: 25%	Date: 12/18/1986 Asd: \$38,289 Un:	95742 95742
159	Parcel: 073-0010-025-000 Owner: JOHN, JAMES TRACY LIVING Use: VINES AND BUSH FRUITS Lns: Map:	Ph: Doc: 1146 Lot:	Site: 3601 GRANT LINE RD*RANCHO CORDOVA CA Mail: 3601 GRANT LINE RD*RANCHO CORDOVA CA Zn: AG8 Xmpt: Y BedBath:	Sale: Yb: Ltsz: 320.00	Sqft: Imp: 40%	Date: 09/22/2000 Asd: \$155,944 Un:	95742 95742
160	Parcel: 073-0040-006-000 Owner: GRANDCHILDRENS JOSEPH HENRY Use: PASTURE Lns: Map:	Ph: Doc: 713 Lot:	Site: GRANT LINE RD*RANCHO CORDOVA CA Mail: 8436 OLIVET CT*SACRAMENTO CA Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 3.63 A	Sqft: Imp: 0%	Date: 09/29/1981 Asd: \$678 Un:	95742 95826

161	Parcel: 073-0040-021-000 Owner: TSAKOPOULOS FAMILY TRUST Use: VACANT RESIDENTIAL Lns: Map:	Ph: Doc: 156 Lot:	Site: GRANT LINE RD*RANCHO CORDOVA CA 95742 Mail: 7423 FAIR OAKS BLVD 10*CARMICHAEL CA 95608 Zn: AG8 Xmpt: BedBath:	Sale: \$1,535,000F Yb: Ltsz: 160.00	Sqft: Imp: 0%	Date: 05/19/2008 Asd: \$1,108,259 Un:
162	Parcel: 073-0040-023-000 Owner: CONWY LLC Use: VACANT RESIDENTIAL Lns: Map:	Ph: Doc: 2212 Lot:	Site: GRANT LINE RD*RANCHO CORDOVA CA 95742 Mail: 2882 PROSPECT PARK DR 250*RANCHO CORDOVA 95670 Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 316.37	Sqft: Imp: 0%	Date: 05/05/2004 Asd: \$4,945,633 Un:
163	Parcel: 122-0050-019-000 Owner: KENDRICK, LEONARD & BETSY Use: PASTURE Lns: Map:	Ph: Doc: 800 Lot: 1	Site: 10066 GERBER RD*SACRAMENTO CA 95829 Mail: 8710 CHAMBRAY RD*ELK GROVE CA 95624 Zn: AR1 Xmpt: BedBath:	Sale: Yb: Ltsz: 8.76 A	Sqft: Imp: 59%	Date: 03/12/2002 Asd: \$348,650 Un:
164	Parcel: 122-0060-026-000 Owner: SOUTHGATE RECREATION & PARK Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: Lot:	Site: VINEYARD RD*SACRAMENTO CA 95829 Mail: 6000 ORANGE AVE*SACRAMENTO CA 95823 Zn: AR Xmpt: BedBath:	Sale: Yb: Ltsz: 145.99	Sqft: Imp: 0%	Date: Asd: Un:
165	Parcel: 122-0070-002-000 Owner: IOVIENO, ALDO P Use: SINGLE FAMILY RESIDENCE Lns: Map:	Ph: (916) 682-9360 Doc: Lot: 701	Site: 10400 GERBER RD*SACRAMENTO CA 95829 Mail: 10400 GERBER RD*SACRAMENTO CA 95829 Zn: AR Xmpt: BedBath: 2/1.0	Sale: Yb: 1945 Ltsz: 2.09 A	Sqft: 1,229 Imp: 73%	Date: 06/21/1979 Asd: \$129,309 Un: 1
166	Parcel: 122-0070-003-000 Owner: NOAH, NORBERT & HELEN Use: VACANT RESIDENTIAL Lns: Map:	Ph: Doc: 651 Lot: 701	Site: 10412 GERBER RD*SACRAMENTO CA 95829 Mail: 6774 MIDDLECOFF WAY*SACRAMENTO CA 95822 Zn: AR Xmpt: BedBath:	Sale: \$4,000F Yb: Ltsz: 2.38 A	Sqft: Imp: 0%	Date: 03/10/1980 Asd: \$12,397 Un:
167	Parcel: 122-0070-004-000 Owner: ZAVALA, ADOLFO Use: SINGLE FAMILY RESIDENCE Lns: \$340,000 Map:	Ph: Doc: 2268 Lot: 701	Site: 10424 GERBER RD*SACRAMENTO CA 95829 Mail: 10424 GERBER RD*SACRAMENTO CA 95829 Zn: AR Xmpt: BedBath: 3/2.5	Sale: \$425,000F Yb: 1975 Ltsz: 2.38 A	Sqft: 1,917 Imp: 50%	Date: 06/24/2003 Asd: \$500,455 Un: 1
168	Parcel: 122-0070-005-000 Owner: PFANNENSTIEL, PAUL P Use: VACANT RESIDENTIAL Lns: Map:	Ph: Doc: 181 Lot: 701	Site: 10460 GERBER RD*SACRAMENTO CA 95829 Mail: 10460 GERBER RD*SACRAMENTO CA 95829 Zn: AR Xmpt: BedBath:	Sale: Yb: Ltsz: 2.38 A	Sqft: Imp: 0%	Date: 05/29/1974 Asd: \$12,115 Un:
169	Parcel: 122-0070-006-000 Owner: PFANNENSTIEL, PAUL P Use: SINGLE FAMILY RESIDENCE Lns: Map:	Ph: Doc: 181 Lot: 702	Site: 10460 GERBER RD*SACRAMENTO CA 95829 Mail: 10460 GERBER RD*SACRAMENTO CA 95829 Zn: AR Xmpt: Y BedBath: 3/1.0	Sale: Yb: 1961 Ltsz: 2.38 A	Sqft: 1,304 Imp: 79%	Date: 05/29/1974 Asd: \$59,325 Un: 1
170	Parcel: 122-0070-007-000 Owner: PFANNENSTIEL, PAUL & PAULETTE Use: SINGLE FAMILY RESIDENCE Lns: \$100,012 Map:	Ph: Doc: 870 Lot: 702	Site: 10472 GERBER RD*SACRAMENTO CA 95829 Mail: 10460 GERBER RD*SACRAMENTO CA 95829 Zn: AR Xmpt: BedBath: 1/1.0	Sale: \$83,000F Yb: 1940 Ltsz: 2.38 A	Sqft: 770 Imp: 15%	Date: 11/26/1997 Asd: \$100,886 Un: 1

171	Parcel: 122-0070-008-000 Owner: BENEDETTI, EDDIE Use: SINGLE FAMILY RESIDENCE Lns: Map:	Ph: Doc: 503 Lot: 702	Site: 10488 GERBER RD*SACRAMENTO CA 95829 Mail: PO BOX 825*POLLOCK PINES CA 95726 Zn: AR Xmpt: BedBath: 1/1.0	Sale: Yb: 1960 Ltsz: 3.45 A	Sqft: 720 Imp: 0%	Date: 09/25/1968 Asd: \$16,827 Un: 1
172	Parcel: 122-0070-024-000 Owner: KATHARYNE, ELAINE LIVING Use: SINGLE FAMILY RESIDENCE Lns: \$202,980 Map:	Ph: Doc: 1053 Lot: B	Site: 7630 GRAND VIEW RD*SACRAMENTO CA 95829 Mail: 7630 GRAND VIEW RD*SACRAMENTO CA 95829 Zn: AR Xmpt: Y BedBath: 3/2.0	Sale: \$199,000F Yb: 1980 Ltsz: 1.97 A	Sqft: 1,560 Imp: 65%	Date: 04/17/1996 Asd: \$251,676 Un: 1
173	Parcel: 122-0070-025-000 Owner: ZIMMERMAN, CARLENE & LANCE Use: SINGLE FAMILY RESIDENCE Lns: \$220,500 Map:	Ph: Doc: 1609 Lot: A	Site: 10390 GERBER RD*SACRAMENTO CA 95829 Mail: 10390 GERBER RD*SACRAMENTO CA 95829 Zn: AR Xmpt: Y BedBath: 4/2.5	Sale: \$315,000F Yb: 1975 Ltsz: 1.88 A	Sqft: 1,872 Imp: 52%	Date: 06/28/2002 Asd: \$354,274 Un: 1
174	Parcel: 122-0070-027-000 *P* Owner: HAM, SOON NAM Use: SINGLE FAMILY RESIDENCE Lns: \$280,000 Map:	Ph: Doc: 62 Lot: D	Site: 10350 GERBER RD*SACRAMENTO CA 95829 Mail: 10350 GERBER RD*SACRAMENTO CA 95829 Zn: AR Xmpt: Y BedBath: 4/2.5	Sale: \$350,000F Yb: 1975 Ltsz: 3.95 A	Sqft: 2,727 Imp: 57%	Date: 09/22/2000 Asd: \$401,511 Un: 1
175	Parcel: 122-0070-029-000 Owner: VANG, MAO J Use: SINGLE FAMILY RESIDENCE Lns: \$593,100 Map:	Ph: Doc: 3003 Lot: B	Site: 7624 MAYBELL LN*SACRAMENTO CA 95829 Mail: 7624 MAYBELL LN*SACRAMENTO CA 95829 Zn: AR Xmpt: Y BedBath: 3/2.0	Sale: \$659,000F Yb: 1976 Ltsz: 2.21 A	Sqft: 1,638 Imp: 54%	Date: 01/14/2005 Asd: \$650,380 Un: 1
176	Parcel: 122-0070-030-000 Owner: SCHWARTZ, THOMAS & ANGELICA Use: SINGLE FAMILY RESIDENCE Lns: \$464,000 Map:	Ph: Doc: 1967 Lot: A	Site: 10318 GERBER RD*SACRAMENTO CA 95829 Mail: 10318 GERBER RD*SACRAMENTO CA 95829 Zn: AR Xmpt: Y BedBath: 3/2.0	Sale: \$660,000F Yb: 1976 Ltsz: 2.11 A	Sqft: 1,851 Imp: 87%	Date: 05/31/2007 Asd: \$112,069 Un: 1
177	Parcel: 123-0010-003-000 Owner: CONSERVANCY TO PROTECT THE Use: PASTURE Lns: Map:	Ph: Doc: 1856 Lot:	Site: GERBER RD*SACRAMENTO CA 95830 Mail: 3445 AMERICAN RIVER DR A*SACRAMENTO CA 95864 Zn: AG2 Xmpt: BedBath:	Sale: Yb: Ltsz:	Sqft: Imp: 0%	Date: 12/21/2006 Asd: \$2,801,940 Un:
178	Parcel: 123-0030-003-000 Owner: WAEGELL, DAVID EUGENE & JOHN Use: PASTURE Lns: Map:	Ph: Doc: 551 Lot: 2	Site: 10950 GERBER RD*SACRAMENTO CA 95830 Mail: 7266 EAGLES NEST RD*SACRAMENTO CA 95830 Zn: AG1 Xmpt: BedBath:	Sale: Yb: Ltsz: 314.86	Sqft: Imp: 21%	Date: 05/23/2007 Asd: \$389,738 Un:
179	Parcel: 126-0050-001-000 Owner: GRANT LINE GENERAL Use: PASTURE Lns: Map:	Ph: Doc: 1512 Lot: 1	Site: GRANT LINE RD*SACRAMENTO CA 95830 Mail: 3415 AMERICAN RIVER DR C*SACRAMENTO CA 95864 Zn: AG1 Xmpt: BedBath:	Sale: \$519,000F Yb: Ltsz: 182.00	Sqft: Imp: 0%	Date: 05/22/1987 Asd: \$771,444 Un:
180	Parcel: 126-0050-040-000 Owner: UNITED STATES OF AMERICA Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: Lot:	Site: GRANT LINE RD*SACRAMENTO CA 95824 Mail: GRANT LINE RD*SACRAMENTO CA 95824 Zn: A Xmpt: BedBath:	Sale: Yb: Ltsz: 30,492	Sqft: Imp: 0%	Date: 09/11/1969 Asd: Un:

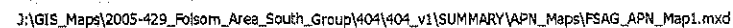
181	Parcel: 126-0050-041-000 Owner: UNITED STATES OF AMERICA Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: Lot:	Site: GRANT LINE RD*SACRAMENTO CA 95824 Mail: GRANT LINE RD*SACRAMENTO CA 95824 Zn: A Xmpt: BedBath:	Sale: Yb: Ltsz: 35.00 A Imp:0%	Sqft: Un:	Date: 09/11/1969 Asd:
182	Parcel: 126-0050-046-000 Owner: UNITED STATES OF AMERICA Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: Lot: 6	Site: GRANT LINE RD*SACRAMENTO CA 95824 Mail: GRANT LINE RD*SACRAMENTO CA 95824 Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 21.36 A Imp:0%	Sqft: Un:	Date: 09/23/1969 Asd:
183	Parcel: 126-0050-047-000 Owner: FAITH HOLDINGS Use: PASTURE Lns: \$975,000 Map:	Ph: Doc: 57 Lot: 6	Site: 7619 GRANT LINE RD*ELK GROVE CA 95624 Mail: 7619 GRANT LINE RD*ELK GROVE CA 95624 Zn: AG8 Xmpt: BedBath:	Sale: \$1,500,000F Yb: Ltsz: 10,890 Imp:0%	Sqft: Un:	Date: 02/11/1999 Asd: \$3,041
184	Parcel: 126-0050-060-000 Owner: FAITH HOLDINGS Use: PASTURE Lns: \$975,000 Map:	Ph: Doc: 57 Lot: 6	Site: 7619 GRANT LINE RD*ELK GROVE CA 95624 Mail: 7619 GRANT LINE RD*ELK GROVE CA 95624 Zn: AG8 Xmpt: BedBath:	Sale: \$1,500,000F Yb: Ltsz: 47.42 A Imp:91%	Sqft: Un:	Date: 02/11/1999 Asd: \$3,816,318
185	Parcel: 126-0060-025-000 Owner: WIERE, WILLIAM Use: SINGLE FAMILY RESIDENCE Lns: Map:	Ph: Doc: 13 Lot: 1	Site: 7107 GRANT LINE RD*ELK GROVE CA 95624 Mail: 7107 GRANT LINE RD*ELK GROVE CA 95624 Zn: AG2 Xmpt: Y BedBath: 3/2.0	Sale: \$55,000 Yb: 1986 Ltsz: 14.20 A Imp:61%	Sqft: 1,452 Un: 1	Date: 08/21/1984 Asd: \$435,814
186	Parcel: 126-0060-026-000 Owner: HARBOTT, SHARLOTTE G Use: VACANT RESIDENTIAL Lns: Map:	Ph: Doc: Lot: 2	Site: 7150 GRANT LINE RD*ELK GROVE CA 95624 Mail: PO BOX 555*SLOUGHHOUSE CA 95683 Zn: AG2 Xmpt: Y BedBath:	Sale: Yb: Ltsz: 14.90 A Imp:19%	Sqft: Un:	Date: 09/28/1987 Asd: \$37,297
187	Parcel: 126-0060-027-000 Owner: PEREZ, JORGE & ELIZABETH Use: SINGLE FAMILY RESIDENCE Lns: \$178,400 Map:	Ph: Doc: 1309 Lot: 3	Site: 7190 GRANT LINE RD*ELK GROVE CA 95624 Mail: PO BOX 477*RANCHO CORDOVA CA 95741 Zn: AG2 Xmpt: Y BedBath: 2/1.0	Sale: \$223,000F Yb: 1976 Ltsz: 15.60 A Imp:55%	Sqft: 1,728 Un: 1	Date: 03/09/1999 Asd: \$266,151
188	Parcel: 126-0060-028-000 Owner: DEA FAMILY LIVING TRUST Use: SINGLE FAMILY RESIDENCE Lns: Map:	Ph: Doc: 217 Lot: 4	Site: 7240 GRANT LINE RD*ELK GROVE CA 95624 Mail: PO BOX 510*SLOUGHHOUSE CA 95683 Zn: AG2 Xmpt: Y BedBath: 3/3.0	Sale: Yb: 1987 Ltsz: 16.31 A Imp:82%	Sqft: 2,176 Un: 1	Date: 09/13/1974 Asd: \$173,545
189	Parcel: 126-0060-038-000 Owner: STATE OF CALIFORNIA Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: Lot:	Site: GRANT LINE RD*ELK GROVE CA 95624 Mail: PO BOX 911*MARYSVILLE CA 95901 Zn: AG2 Xmpt: BedBath:	Sale: Yb: Ltsz: 4,356 Imp:0%	Sqft: Un:	Date: 01/23/1995 Asd:
190	Parcel: 126-0060-039-000 Owner: GRANT LINE JACKSON INVESTORS Use: PASTURE Lns: Map:	Ph: Doc: Lot: 4	Site: GRANT LINE RD*ELK GROVE CA 95624 Mail: 2625 FAIR OAKS BLVD 7*SACRAMENTO CA 95864 Zn: AG2 Xmpt: BedBath:	Sale: Yb: Ltsz: 158.59 Imp:0%	Sqft: Un:	Date: 05/09/1990 Asd: \$2,066,004

191	Parcel: 126-0060-041-000	*M*	Site: GRANT LINE RD*ELK GROVE CA	95624		
	Owner: ROONEY BROTHERS FARMS		Mail: PO BOX 1732*BODEGA BAY CA	94923		
Use:	PASTURE	Ph:	Zn: AG2	Sale:	Date: 07/10/1998	
Lns:		Doc:	Xmpt:	Yb:	Sqft:	Asd: \$534,837
Map:	Blk:	Lot: 2	BedBath:	Ltsz: 246.08	Imp: 0%	Un:
192	Parcel: 126-0060-046-000		Site: 7250 GRANT LINE RD*ELK GROVE CA	95624		
	Owner: SILVA, SCOTT E & LISA C 2007		Mail: 3401 FITZGERALD RD*RANCHO CORDOVA CA	95742		
Use:	PASTURE	Ph:	Zn: AG2	Sale:	Date: 11/22/2000	
Lns:		Doc: 1312	Xmpt:	Yb:	Sqft:	Asd: \$2,828,658
Map:	Blk:	Lot:	BedBath:	Ltsz: 61.36 A	Imp: 88%	Un:
193	Parcel: 126-0060-048-000		Site: 7371 GRANT LINE RD*SACRAMENTO CA	95624		
	Owner: MCNAIR, EDWARD & ROSEMARY		Mail: PO BOX 1527*ELK GROVE CA	95759		
Use:	SINGLE FAMILY RESIDENCE	Ph:	Zn: AG2	Sale:	Date: 07/14/2004	
Lns:		Doc: 1737	Xmpt: Y	Yb:	Sqft:	Asd: \$884,698
Map:	Blk:	Lot:	BedBath:	Ltsz: 63.36 A	Imp: 62%	Un:
194	Parcel: 126-0070-010-000		Site: 6789 GRANT LINE RD*SLOUGHHOUSE CA	95683		
	Owner: MALLARAPU, SHOBHA		Mail: 3901 WOODHOUSE CT*ROCKLIN CA	95765		
Use:	SINGLE FAMILY RESIDENCE	Ph:	Zn: A	Sale:	Date: 08/29/2007	
Lns:	\$825,000	Doc: 153	Xmpt:	Yb: 1995	Sqft: 1,792	Asd: \$1,167,328
Map:	Blk:	Lot: 18	BedBath: 3/2.0	Ltsz: 10.00 A	Imp: 27%	Un: 1
195	Parcel: 126-0070-064-000		Site: 6821 GRANT LINE RD*SLOUGHHOUSE CA	95683		
	Owner: MCQUARY, RONALD L & SANDRA E		Mail: 6821 GRANT LINE RD*SLOUGHHOUSE CA	95683		
Use:	SINGLE FAMILY RESIDENCE	Ph:	Zn: A	Sale:	Date: 12/10/2001	
Lns:	\$170,000	Doc: 1157	Xmpt:	Yb: 1985	Sqft: 1,508	Asd: \$302,902
Map:	Blk:	Lot: A	BedBath: 3/2.5	Ltsz: 1.87 A	Imp: 55%	Un: 1
196	Parcel: 126-0070-065-000		Site: 6831 GRANT LINE RD*SLOUGHHOUSE CA	95683		
	Owner: BANK OF NEW YORK 2005-17 TR		Mail: 1757 TAPO CANYON RD 88*SIMI VALLEY CA	93063		
Use:	SINGLE FAMILY RESIDENCE	Ph:	Zn: A2	Sale: \$345,950T	Date: 03/28/2008	
Lns:		Doc: 52	Xmpt: Y	Yb: 1966	Sqft: 1,050	Asd: \$385,186
Map:	Blk:	Lot: B	BedBath: 3/2.0	Ltsz: 2.16 A	Imp: 57%	Un: 1
197	Parcel: 126-0070-077-000	*P*	Site: 12141 JACKSON RD*SLOUGHHOUSE CA	95683		
	Owner: SISSON, PETER J TRUST		Mail: 1311 22ND ST*SACRAMENTO CA	95816		
Use:	SINGLE FAMILY RESIDENCE	Ph:	Zn: A	Sale: \$159,000F	Date: 11/07/2001	
Lns:	\$127,200	Doc: 1025	Xmpt:	Yb: 1952	Sqft: 1,926	Asd: \$279,183
Map:	Blk:	Lot: 16	BedBath: 2/1.5	Ltsz: 2.42 A	Imp: 71%	Un: 1
198	Parcel: 126-0070-085-000	*P*	Site: 6989 GRANT LINE RD*SLOUGHHOUSE CA	95683		
	Owner: KAVIANI, JAVAD		Mail: 7656 BOCA RATON DR*LAS VEGAS NV	89113		
Use:	SINGLE FAMILY RESIDENCE	Ph:	Zn: A	Sale: \$53,944T	Date: 07/25/1994	
Lns:		Doc: 557	Xmpt:	Yb: 1960	Sqft: 1,755	Asd: \$190,883
Map:	Blk:	Lot: 16	BedBath: 2/2.0	Ltsz: 2.05 A	Imp: 66%	Un: 1
199	Parcel: 126-0070-086-000	*P*	Site: GRANT LINE RD*SLOUGHHOUSE CA	95683		
	Owner: KAVIANI, JAVAD		Mail: 7656 BOCA RATON DR*LAS VEGAS NV	89113		
Use:	VACANT RESIDENTIAL	Ph:	Zn: A	Sale:	Date: 07/25/1994	
Lns:		Doc:	Xmpt:	Yb:	Sqft:	Asd: \$1,166
Map:	Blk:	Lot:	BedBath:	Ltsz: 3,581	Imp: 0%	Un: 1
200	Parcel: 126-0070-087-000		Site: GRANT LINE RD*SLOUGHHOUSE CA	95683		
	Owner: STATE OF CALIFORNIA		Mail: 723 D ST*MARYSVILLE CA	95901		
Use:	GOVERNMENTAL, PUBLIC	Ph:	Zn: A	Sale:	Date: 04/24/1996	
Lns:		Doc:	Xmpt:	Yb:	Sqft:	Asd:
Map:	Blk:	Lot:	BedBath:	Ltsz: 4,219	Imp: 0%	Un:



201	Parcel: 126-0070-091-000 Owner: HAACK, EDWARD J Use: SINGLE FAMILY RESIDENCE Lns: Map:	Ph: 1851 Doc: 1851 Blk: Lot: A	Site: 6801 GRANT LINE RD*SLOUGHHOUSE CA 95683 Mail: PO BOX 1044*SLOUGHHOUSE CA 95683 Zn: A Sale: \$350,000F Xmpt: Y Yb: 1997 Sqft: 1,885 Asd: \$410,686 BedBath: 2/2.0 Ltsz: 2.54 A Imp: 60% Un: 1	Date: 10/17/2003
202	Parcel: 126-0070-100-000 Owner: CLAUSON, CLIFFORD A & CYNTHIA Use: SINGLE FAMILY RESIDENCE Lns: \$213,750 Map:	Ph: Doc: 1329 Blk: Lot: A	Site: 6701 GRANT LINE RD*SLOUGHHOUSE CA 95683 Mail: PO BOX 292238*SACRAMENTO CA 95829 Zn: A 2 Sale: \$225,000F Xmpt: Yb: 1955 Sqft: 1,395 Asd: \$131,631 BedBath: 3/1.0 Ltsz: 2.04 A Imp: 66% Un: 1	Date: 05/03/2000
203	Parcel: 126-0070-103-000 Owner: CLAUSON, CLIFFORD A & CYNTHIA Use: VACANT RESIDENTIAL Lns: Map:	Ph: Doc: Blk: Lot: D	Site: GRANT LINE RD*SACRAMENTO CA 95683 Mail: PO BOX 292238*SACRAMENTO CA 95829 Zn: A 2 Sale: Xmpt: Yb: Sqft: Asd: \$43,876 BedBath: Ltsz: Imp: 0% Un:	Date:
204	Parcel: 126-0080-002-000 Owner: DECKER, ROBERT E Use: GOVERNMENTAL, PUBLIC Lns: \$120,000 Map:	Ph: Doc: 1760 Blk: Lot: 4	Site: 12700 KIEFER BLVD*SLOUGHHOUSE CA 95683 Mail: PO BOX 224*HERALD CA 95638 Zn: AG8 Sale: Xmpt: Yb: Sqft: Asd: BedBath: Ltsz: 550.00 Imp: 0% Un:	Date: 05/03/2005
205	Parcel: 126-0080-022-000 Owner: COUNTY OF SACRAMENTO Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: Blk: Lot: 1	Site: GRANT LINE RD*SACRAMENTO CA 95842 Mail: 9850 GOETHE RD*SACRAMENTO CA 95827 Zn: AG8 Sale: Xmpt: Yb: Sqft: Asd: BedBath: Ltsz: 433.68 Imp: 0% Un:	Date: 03/09/2001
206	Parcel: 126-0090-001-000 Owner: COUNTY OF SACRAMENTO Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: 977 Blk: Lot: 1	Site: GRANT LINE RD*SACRAMENTO CA 95842 Mail: 1 N ADDRESS*SACRAMENTO CA 95826 Zn: AG8 Sale: Xmpt: Yb: Sqft: Asd: BedBath: Ltsz: 97.02 A Imp: 0% Un:	Date: 12/28/1982
207	Parcel: 126-0090-016-000 Owner: COUNTY OF SACRAMENTO Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: 254 Blk: Lot: 1	Site: KIEFER BLVD*SLOUGHHOUSE CA 95683 Mail: 9850 GOETHE RD*SACRAMENTO CA 95827 Zn: AG8 Sale: Xmpt: Yb: Sqft: Asd: BedBath: Ltsz: 200.00 Imp: 0% Un:	Date: 03/30/1967
208	Parcel: 126-0090-017-000 Owner: COUNTY OF SACRAMENTO Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: 105 Blk: Lot: 2	Site: KIEFER BLVD*SLOUGHHOUSE CA 95683 Mail: 5901 FLORIN PERKINS RD*SACRAMENTO CA 95828 Zn: AG8 Sale: Xmpt: Yb: Sqft: Asd: BedBath: Ltsz: 90.00 A Imp: 0% Un:	Date: 01/22/1968
209	Parcel: 126-0090-018-000 Owner: COUNTY OF SACRAMENTO Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: Blk: Lot: 3	Site: KIEFER BLVD*SLOUGHHOUSE CA 95683 Mail: 9850 GOETHE RD*SACRAMENTO CA 95827 Zn: AG8 Sale: Xmpt: Yb: Sqft: Asd: BedBath: Ltsz: 90.00 A Imp: 0% Un:	Date: 11/22/1968
210	Parcel: 126-0090-019-000 Owner: COUNTY OF SACRAMENTO Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: 199 Blk: Lot: 4	Site: KIEFER BLVD*SLOUGHHOUSE CA 95683 Mail: 9850 GOETHE RD*SACRAMENTO CA 95827 Zn: AG8 Sale: Xmpt: Yb: Sqft: Asd: BedBath: Ltsz: 90.00 A Imp: 0% Un:	Date: 01/23/1970

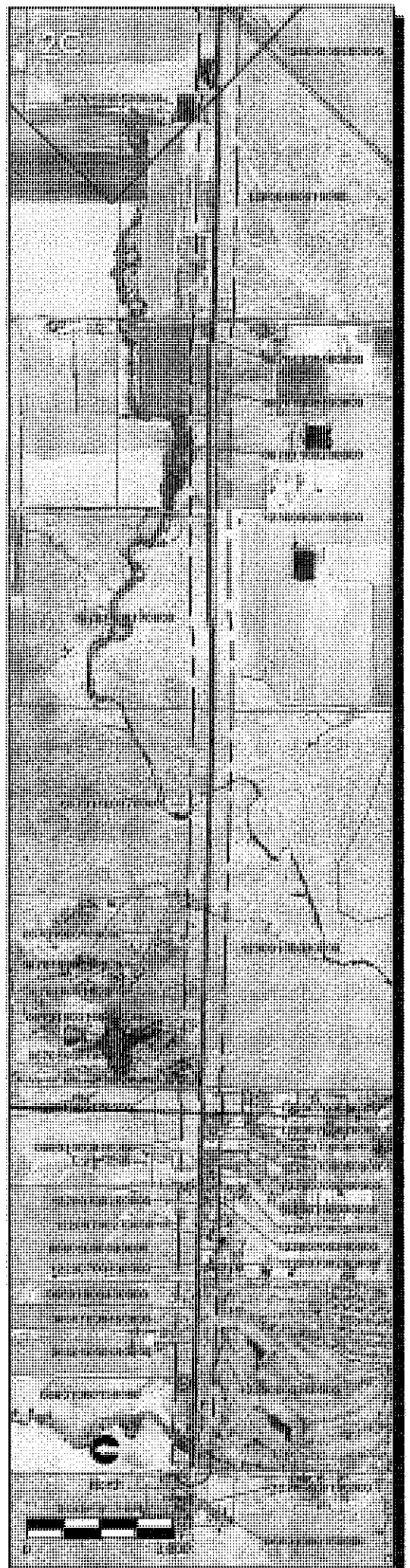
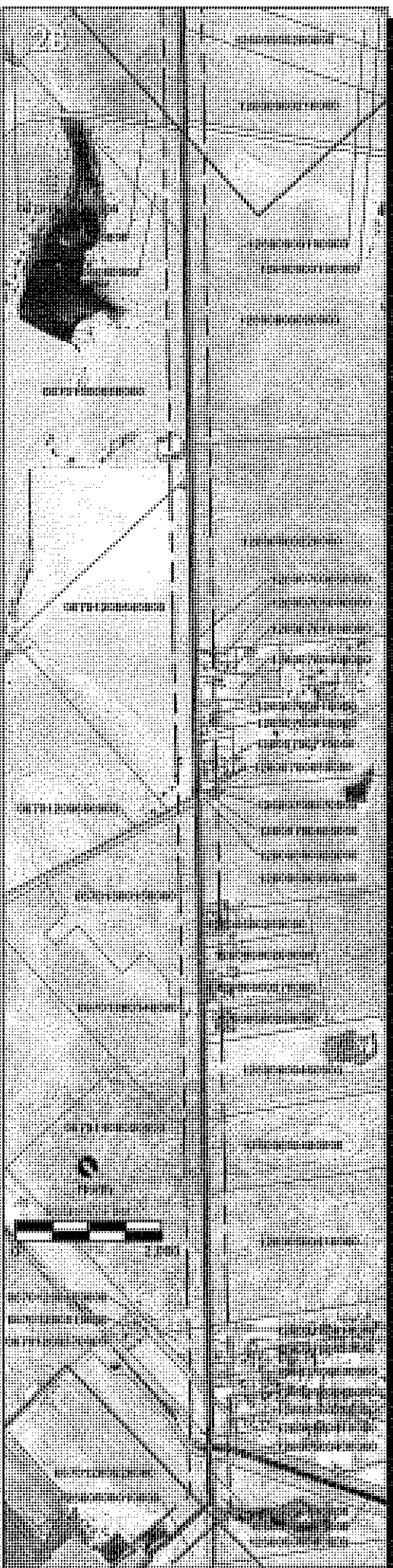
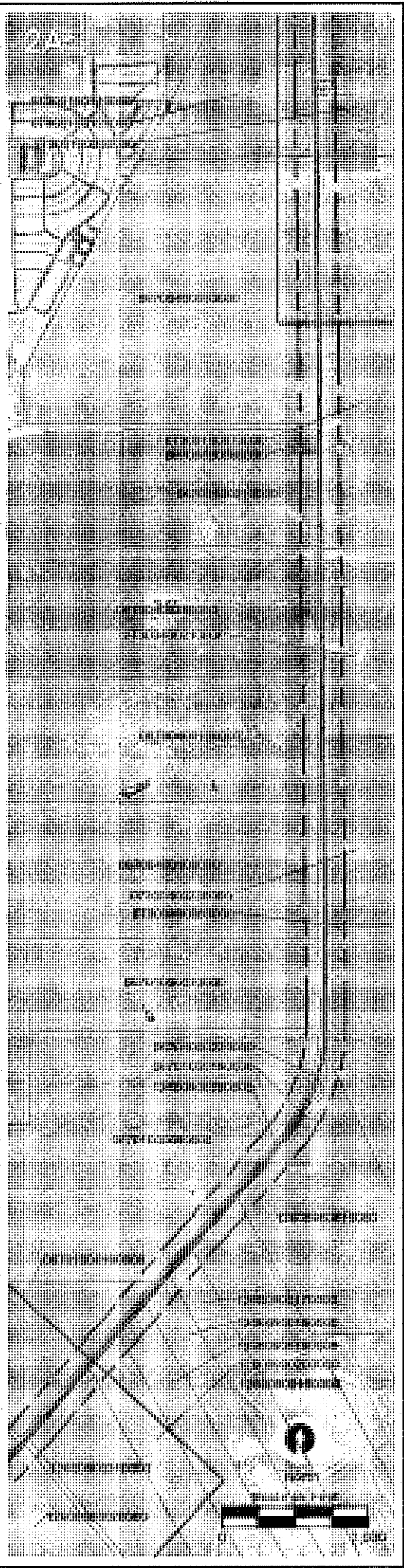
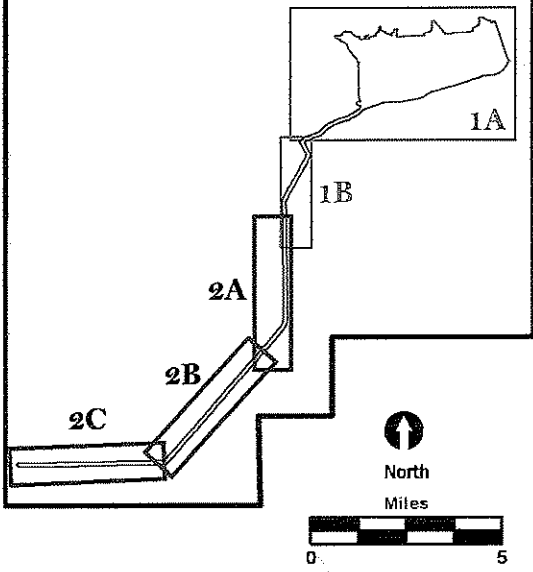
211	Parcel: 126-0090-020-000 Owner: COUNTY OF SACRAMENTO Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: 109 Lot: 5	Site: KIEFER BLVD*SLOUGHHOUSE CA Mail: 9850 GOETHE RD*SACRAMENTO CA Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 90.00 A Imp: 0%	Sqft: Asd: Un:	Date: 01/20/1971
212	Parcel: 126-0090-021-000 Owner: COUNTY OF SACRAMENTO Use: GOVERNMENTAL, PUBLIC Lns: Map:	Ph: Doc: 17 Lot: 6	Site: 12701 KIEFER BLVD*SLOUGHHOUSE CA Mail: 9850 GOETHE RD*SACRAMENTO CA Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 92.31 A Imp: 0%	Sqft: Asd: Un:	Date: 02/01/1972
213	Parcel: 126-0090-025-000 Owner: COUNTY OF SACRAMENTO Use: MISCELLANEOUS Lns: Map:	Ph: Doc: Lot:	Site: GRANT LINE RD*SLOUGHHOUSE CA Mail: 9850 GOETHE RD*SACRAMENTO CA Zn: AG8 Xmpt: BedBath:	Sale: Yb: Ltsz: 25,265 Imp: 0%	Sqft: Asd: Un:	Date: 12/05/1996
214	Parcel: 126-0310-001-000 Owner: YOUNG, ANDREW G SR & ANDREW G Use: SINGLE FAMILY RESIDENCE Lns: \$350,100 Map:	Ph: Doc: 2490 Lot: 29	Site: 7491 GRANT LINE RD*ELK GROVE CA Mail: 12811 QUINCE LN*WILTON CA Zn: A Xmpt: Y BedBath: 4/2.0	Sale: \$389,000 Yb: 1975 Ltsz: 2.11 A Imp: 86%	Sqft: 1,688 Asd: \$81,159 Un: 1	Date: 12/28/2005
215	Parcel: 126-0310-002-000 Owner: BARBER, RONALD L & JUDITH F Use: SINGLE FAMILY RESIDENCE Lns: Map:	Ph: Doc: Lot: 30	Site: 7501 GRANT LINE RD*ELK GROVE CA Mail: 7501 GRANT LINE RD*ELK GROVE CA Zn: A Xmpt: Y BedBath: 3/2.0	Sale: Yb: 1975 Ltsz: 2.27 A Imp: 75%	Sqft: 1,501 Asd: \$141,926 Un: 1	Date: 06/02/1992
216	Parcel: 126-0310-003-000 Owner: PHILIPPS, JOHN & TRACY Use: SINGLE FAMILY RESIDENCE Lns: \$144,000 Map:	Ph: Doc: 1743 Lot: 31	*P* Site: 7511 GRANT LINE RD*ELK GROVE CA Mail: 7511 GRANT LINE RD*ELK GROVE CA Zn: A Xmpt: Y BedBath: 4/2.0	Sale: \$192,000F Yb: 1977 Ltsz: 2.07 A Imp: 76%	Sqft: 2,260 Asd: \$280,968 Un: 1	Date: 05/14/1993
217	Parcel: 126-0310-004-000 Owner: HASHASH, MUNIR & FADIA Use: SINGLE FAMILY RESIDENCE Lns: Map:	Ph: (916) 984-2001 Doc: 229 Lot: 32	Site: 11701 SHELDON LAKE DR*ELK GROVE CA Mail: 1304 SCHOOL ST*FOLSOM CA Zn: A Xmpt: BedBath: 3/2.0	Sale: \$300,000F Yb: 1974 Ltsz: 2.04 A Imp: 66%	Sqft: 1,501 Asd: \$337,405 Un: 1	Date: 10/24/2001
218	Parcel: 126-0310-028-000 Owner: THIEMANN, LINDA R Use: SINGLE FAMILY RESIDENCE Lns: \$290,000 Map:	Ph: Doc: 1979 Lot: 63	*P* Site: 11700 SHELDON LAKE DR*ELK GROVE CA Mail: 11700 SHELDON LAKE DR*ELK GROVE CA Zn: A Xmpt: Y BedBath: 3/2.0	Sale: \$200,000P Yb: 1975 Ltsz: 2.17 A Imp: 73%	Sqft: 1,501 Asd: \$177,819 Un: 1	Date: 01/20/2005



**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS



## MAP 2



## ATTACHMENT C

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Folsom Plan Area – Wetland Composite Map



## ATTACHMENT D

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### Folsom Plan Area Wetland Avoidance/Impact Map

Clean Water Act  
Section 404 Individual Permit Application  
For  
**Folsom Heights**  
Folsom, California

20 November 2008

Prepared For:  
**Hospitality Consultants**



**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

## CONTENTS

# Clean Water Act Section 404 Individual Permit Application Folsom Heights

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Figure 1. Project Site and Vicinity

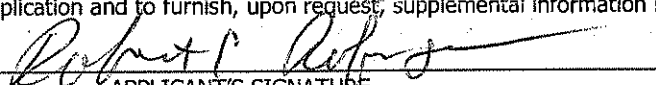
Figure 2. Proposed Land Use Plan

Figure 3. Wetland Delineation

Figure 4. Avoidance/Impact Areas

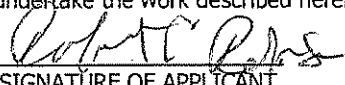
**LIST OF ATTACHMENTS**

Attachment A – Section 7 Consultation Information

<b>APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT (33 CFR 325)</b>	<b>OMB APPROVAL NO. 0710-003</b>		
<p>Public reporting burden for this collection of information is estimated to average 5 hours per response, including the time for reviewing instructions, Searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Service Directorate of Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302; and to the Office of Management and Budget, Paperwork Reduction Project (0710-003), Washington, DC 20503. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.</p>			
<p><b>PRIVACY ACT STATEMENT</b></p> <p>Authority: 33 USC 401, Section 10; 1413, Section 404. Principal Purpose: These laws require permits authorizing activities in, or affecting, navigable waters of the United States; the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Routine uses: Information provided, however, the permit application cannot be processed nor can a permit be issued.</p> <p>One set of the original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the proposed activity. An application that is not completed in full will be returned.</p>			
<p><b>(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)</b></p>			
1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETED
<p><b>(ITEMS BELOW TO BE FILLED BY APPLICANT)</b></p>			
5. APPLICANT'S NAME  Mr. Bob Robinson		8. AUTHORIZED AGENT'S NAME & TITLE (AN AGENT IS NOT REQUIRED)  Bjorn Gregersen, Vice President	
6. APPLICANT'S ADDRESS  Hospitality Consultants 8525 Oak Arbor Ct. Fair Oaks, CA 5628		9. AGENT'S ADDRESS  ECORP Consulting, Inc. 2525 Warren Drive Rocklin, CA 95677	
7. APPLICANT'S PHONE NUMBERS WITH AREA CODE  a. Residence b. Business (916) 293-8417		10. AGENT'S PHONE NUMBERS WITH AREA CODE  a. Residence b. Business (916) 782-9100	
<p>11. <b>STATEMENT OF AUTHORIZATION</b></p> <p>I hereby authorize <u>ECORP Consulting, Inc.</u> to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.</p> <div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="width: 60%;">   APPLICANT'S SIGNATURE </div> <div style="width: 35%; text-align: right;"> <u>11-20-08</u>  DATE </div> </div>			
<p><b>NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY</b></p>			
12. PROJECT NAME OR TITLE (see instructions)  Folsom Heights			

13. NAME OF WATERBODY, IF KNOWN (if applicable)  Unnamed seasonal wetlands, seasonal wetland swales, seep, and intermittent drainage.	14. PROJECT STREET ADDRESS (if applicable)
15. LOCATION OF PROJECT  COUNTY Sacramento STATE CA	
16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)  The ±178.8 acre site is located south of Highway 50, west of the El Dorado County Line, north of White Rock Road, and east of Scott Road in eastern Sacramento County, California. The site corresponds to an unsectioned portion of Township 9 North, Range 8 East (MDBM) of the "Folsom, California" 7.5-minute quadrangle (U.S. Department of the Interior, Geological Survey 1980). The approximate center of the site is located at 38° 38' 18" North and 121° 09' 09" West. The site is located within the Upper Consumnes Watershed (#18040013, U.S. Department of Interior, Geological Survey 1978).	
17. DIRECTIONS TO THE SITE  From Highway 50 take the Scott Road exit and turn south towards White Rock Road. Once at White Rock Road, turn East towards the El Dorado County line. The southern boundary of the property is located just prior to the El Dorado County line, north of White Rock Road.	
18. NATURE OF ACTIVITY (Description of project, include all features)  The ±178.8 acre Folsom Heights project involves the development of a mixed use community in Eastern Sacramento County, California, within the Folsom Plan Area Specific Plan (Folsom Plan Area). Project components include Single Family, Single Family High Density, Multi-Family Low Density, General Commercial, and Preserve/Open Space within the Folsom Plan Area. The project site contains approximately 5.784 acres of waters of the United States, of which approximately 2.039 acres would be avoided. The land plan for the proposed Folsom Heights project is shown in Figure 2.	
19. PROJECT PURPOSE (Describe the reason or purpose of the project, see instructions)  The purpose of the Folsom Plan Area Specific Plan is: (1) to construct a large-scale, mixed-use master-planned community consisting of mixed-density residential uses, a regional shopping center, and other employment-generating uses; (2) to provide associated supporting infrastructure including on-site backbone infrastructure, schools, parks, an on-site trail system, off-site sewer improvements, off-site roadway improvements, off-site highway interchanges, an off-site water supply pipeline from the Freeport Regional Water Authority diversion facility to the site, and an off-site water treatment plant; and (3) to permanently protect 30 percent of the site as open space for the preservation of oak woodlands and sensitive habitat areas in manner consistent with Measure W.	
USE BLOCKS 20-22 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED	
20. REASON(S) FOR DISCHARGE  Fill of waters of the U.S. to support grading and leveling of the land.	

<b>21. TYPE(S) OF MATERIAL BEING DISCHARGED AND THE AMOUNT OF EACH TYPE IN CUBIC YARDS</b>  Material to be discharged will include soil graded and moved on-site. A total of approximately 2,630 cubic yards of soil will be discharged ( <i>i.e.</i> , surface area of 3.257 acres x 6" assumed depth).																
<b>22. SURFACE AREA IN ACRES OF WETLANDS OR OTHER WATERS FILLED (see instructions)</b>  The project will impact 3.257 acres of waters of the U.S., including wetlands.																
<b>23. IS ANY PORTION OF THE WORK ALREADY COMPLETE? YES <input type="radio"/> NO <input checked="" type="radio"/></b> IF YES, DESCRIBE THE WORK  																
<b>24. ADDRESSES OF ADJOINING PROPERTY OWNERS, LESSEES, ETC. WHOSE PROPERTY ADJOINS THE WETTERBODY (if more than can be entered her, please attach a supplemental list)</b>  Please see comprehensive Specific Plan Area List included in comprehensive application.																
<b>25. LIST OF OTHER CERTIFICATIONS OR APPROVALS/DENIALS RECEIVED FROM OTHER FEDERAL, STATE, OR LOCAL AGENCIES</b>  <div style="text-align: center;">FOR WORK DESCRIBED IN THIS APPLICATION</div> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 15%;">AGENCY</th> <th style="text-align: left; width: 20%;">TYPE APPROVAL*</th> <th style="text-align: left; width: 25%;">IDENTIFICATION NUMBER</th> <th style="text-align: left; width: 20%;">DATE APPLIED</th> <th style="text-align: left; width: 20%;">DATE APPROVED</th> </tr> </thead> <tbody> <tr> <td colspan="5" style="padding-top: 10px;">DATE DENIED</td> </tr> <tr> <td colspan="5" style="text-align: center; padding-top: 20px;">SEE ADDITIONAL INFORMATION SECTION</td> </tr> </tbody> </table>		AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED					SEE ADDITIONAL INFORMATION SECTION				
AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED												
DATE DENIED																
SEE ADDITIONAL INFORMATION SECTION																

26. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.			
 SIGNATURE OF APPLICANT	11-20-08 DATE	 SIGNATURE OF AGENT	 DATE
The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed. 18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, factitious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious, or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.			

## ENG FORM 4345 - CONTINUATION SHEET FOLSOM HEIGHTS

### Blocks 8 & 9:

*Additional Authorized Agent*

*Project Engineer:* Brian Allen  
*Company Name:* Cooper Thorne & Associates  
*Company Address:* 3233 Monier Circle  
*City, State Zip:* Rancho Cordova, California 95742  
*Contact:* (916) 638-0919

### Block 16:

*Other Location Descriptions*

The ±178.8 acre site is located south of Highway 50, west of the El Dorado County Line, north of White Rock Road, and east of Scott Road in eastern Sacramento County, California (Figure 1. *Project Site and Vicinity*). The site corresponds to an unsectioned portion of Township 9 North, Range 8 East (MDBM) of the "Folsom, California" 7.5-minute quadrangle (U.S. Department of the Interior, Geological Survey 1980). The approximate center of the site is located at 38° 38' 18" North and 121° 09' 09" West. The site is located within the Upper Consumnes Watershed (#18040013, U.S. Department of Interior, Geological Survey 1978).

### Block 17:

*Directions to Site*

From Highway 50 take the Scott Road exit and turn south towards White Rock Road. Once at White Rock Road, turn east towards the El Dorado County line. The southern boundary of the property is located just prior to the El Dorado County line, north of White Rock Road.

**Block 18:***Nature of Activity/Project Description*

The ±178.8 acre Folsom Heights project involves the development of a mixed use community in Eastern Sacramento County, California, within the Folsom Plan Area Specific Plan (Folsom Plan Area). Project components include 35 acres of Single Family, 31 acres of Single Family High Density, 27.9 acres of Multi-Family Low Density, 34.5 acres of General Commercial, 44.3 acres of Preserve/Open Space, and 6.1 acres of Right of Way within the Folsom Plan Area. The project site contains approximately 5.784 acres of waters of the United States, of which approximately 2.039 acres would be avoided. The land plan for the proposed Folsom Heights project is shown in Figure 2.

**Block 19:***Project Purpose*

The purpose of the Folsom Plan Area Specific Plan is: (1) to construct a large-scale, mixed-use master-planned community consisting of mixed-density residential uses, a regional shopping center, and other employment-generating uses; (2) to provide associated supporting infrastructure including on-site backbone infrastructure, schools, parks, an on-site trail system, off-site sewer improvements, off-site roadway improvements, off-site highway interchanges, an off-site water supply pipeline from the Freeport Regional Water Authority diversion facility to the site, and an off-site water treatment plant; and (3) to permanently protect 30 percent of the site as open space for the preservation of oak woodlands and sensitive habitat areas in manner consistent with Measure W.

**Block 22:***Surface Area of Waters to be Impacted*

Estimated impacts to potentially jurisdictional waters of the U.S. total 3.257 acres, consisting of Seasonal Wetlands (0.583 acre), Seasonal Wetland Swales (0.951 acre), Seep (1.628 acre), and Intermittent Drainage (0.096 acre). The delineation is shown in Figure 3.

**ADDITIONAL INFORMATION****Regulatory Background**

Proposed project activities fall under the jurisdiction of several resource agencies. Pursuant to Section 404 of the Clean Water Act, construction activities in waters of the U.S. are subject to the approval of the U.S. Army Corps of Engineers (Corps). The applicant is requesting an Individual Permit from the Corps for the proposed project. Pursuant to Section 401 of the Clean Water Act, this permit will need to be certified by the Central Valley Regional Water Quality Control Board (CVRWQB). In addition, there is the potential for special-status species within the project area; therefore, consultation will be initiated with the U.S. Fish and Wildlife Service (USFWS). Following is a summary regarding the status of relevant regulatory requirements.

Supporting documents, such as wetland delineations, special-status species/rare plant surveys, determinate-level branchiopod surveys, tree surveys, cultural resource reports, etc, that have been prepared for the Folsom Heights project are not included in this submittal. These documents will be submitted at a later date in bundled-fashion and augmented as new information and/or reports become available.

## Federal Clean Water Act, Section 404

A total of 5.784 acres of potential jurisdictional waters of the U. S. were identified within the greater project area, including seasonal wetlands, seasonal wetland swales, seep, and intermittent drainage. The applicant is requesting authorization through an individual permit for project impacts to 3.257 acre of waters of the U.S (Figure 4. *Avoidance/Impact Areas*).

**Table 1 – Potential Jurisdictional Waters of the U.S.**

<u>Type</u>	<u>Acreage</u>
Seasonal wetland	0.624
Seasonal wetland Swale	1.840
Seep	2.214
Intermittent Drainage	1.106
<b>TOTAL:</b>	<b>5.784</b>

**Table 2 – Proposed Impact Acreages**

<u>Type</u>	<u>Existing</u>	<u>Avoidance</u>	<u>Project Impacts</u>	<u>Infrastructure Impacts*</u>	<u>Interchange Impacts*</u>
Seasonal wetland	0.624	0.021	0.583	0.021	0.000
Seasonal wetland Swale	1.840	0.480	0.951	0.196	0.213
Seep	2.214	0.586	1.628	0.000	0.000
Intermittent Drainage	1.106	0.953	0.096	0.030	0.028
<b>TOTAL:</b>	<b>5.784</b>	<b>2.039</b>	<b>3.257</b>	<b>0.247</b>	<b>0.240</b>

\*The Backbone Infrastructure and Interchange Impacts are included as the delineation for this project included these areas.

## Federal Clean Water Act, Section 401

A request for Section 401 Water Quality Certification will be submitted to the Central Valley Regional Water Quality Control Board.

## Federal Endangered Species Act

Project implementation (i.e. fill of seasonal wetlands) represents potential impacts to the federally listed vernal pool fairy shrimp (*Branchinecta lynchi*, federal threatened) and vernal pool tadpole shrimp (*Lepidurus packardii*, federal endangered). The applicant may conduct determinate-level surveys for listed branchiopods during the 2008-2009 wet season. In the event that listed vernal pool branchiopods are found during the pending wet season surveys, the Applicant requests that the project be appended to the Programmatic Formal Endangered Species Act Consultation on



Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans within the Jurisdiction of the Sacramento Field Office, California (USFWS 1-1-96-F-1).

No special-status plant species were identified on the project site during special-status plant surveys, which were conducted during August 2008. Please refer to Attachment A or information to support Section 7 Consultation.

No elderberry shrubs (*Sambucus* species) are known to occur on the project site. Elderberry shrubs are the exclusive host plant to the Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus* – VELB). VELB is listed as “threatened” on the Federal Endangered Species Act.

### **California Fish and Game Code**

The proposed project will require authorization from the California Department of Fish and Game (CDFG) for impacts to the intermittent drainage as a result of project implementation. Project-specific construction will result in 0.096 acre of impact to a CDFG jurisdictional streambed (i.e., intermittent drainages). Therefore, pursuant to Section 1602 of the California Fish and Game Code, a request for a Lake and Streambed Alteration Agreement will be submitted to the California Department of Fish and Game.

### **California Environmental Quality Act**

The City of Folsom is preparing an Environmental Impact Report (EIR) for the proposed project.

### **National Environmental Policy Act (NEPA)**

The Corps, as Lead Agency, is preparing an Environmental Impact Statement (EIS) in accordance with NEPA guidelines.

## **National Historic Preservation Act, Section 106**

This Project must meet the provisions for the treatment of cultural resources contained within Section 106 of the National Historic Preservation Act (NHPA). The goal of Section 106 of the NHPA is to identify significant cultural resources and seek ways to avoid, minimize, or mitigate adverse effects on significant cultural resources that may result from federal undertakings, including federally permitted activities. Significant cultural resources must meet at least one of four criteria that define eligibility for listing on the National Register of Historic Places (NRHP) (36 CFR 60.4; 36 CFR Part 800).

EDAW (2007) conducted a cultural resources inventory of the Project Area, in compliance with the California Environmental Quality Act (CEQA). As a result of that study, several sites were recorded or observed: CA-SAC-904H (historical rock wall); FH-1 (farm and ranch complex); and FH-2 (prehistoric bedrock mortars). A segment of the historical Lincoln Highway (White Rock Road) is located immediately adjacent to the Project Area. EDAW concluded that none of the resources appear to meet the eligibility criteria for inclusion in the California Register of Historical Resources (CRHR).

The previous research was not conducted in compliance with either Section 106 of the NHPA or the requirements of the Sacramento District of the Corps. Therefore, because a federal 404 permit is necessary for the Project, it will be necessary to implement the Section 106 process following the Corps of Engineers Section 106 guidelines. Accordingly, the resources identified in the Project Area must be evaluated for significance using the NRHP eligibility criteria by archaeologists who meet the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology. If any of the resources are determined eligible, mitigation would consist of either avoidance by preserving them in open space or by carrying out data recovery efforts prior to Project approval, implementation, or construction.

## **ADJACENT LAND USE**

Surrounding land uses include rural residences, developed and undeveloped roadways, and pastureland.

## **NOTIFICATION TO ADJACENT PARCEL OWNERS**

Please see the Specific Plan Area List provided with the Comprehensive Clean Water Act Section 404 Application for the Folsom Plan Area Specific Plan

## **ALTERNATIVES ANALYSIS**

A detailed Alternatives Analysis will be prepared in accordance with Section 404(b)(1) of the Clean Water Act and submitted under separate cover.

## **MITIGATION PLAN**

The Applicant proposes to participate in a joint mitigation plan with the other participating property owners in the Folsom South Group. The applicants will mitigate unavoidable impacts to waters of the United States through a combination of the on-site enhancement, on-site creation or restoration, the purchase of credits for at Corps-approved mitigation facilities, and/or off-site wetland restoration or creation. This compensatory mitigation proposal will offset the loss of functions and values caused by unavoidable impacts to waters of the United States and will implement the Corps' Mitigation Rule. In addition, the mitigation will ensure that there is no net increase in floodwater surface elevations downstream of the Project.

## LIST OF FIGURES

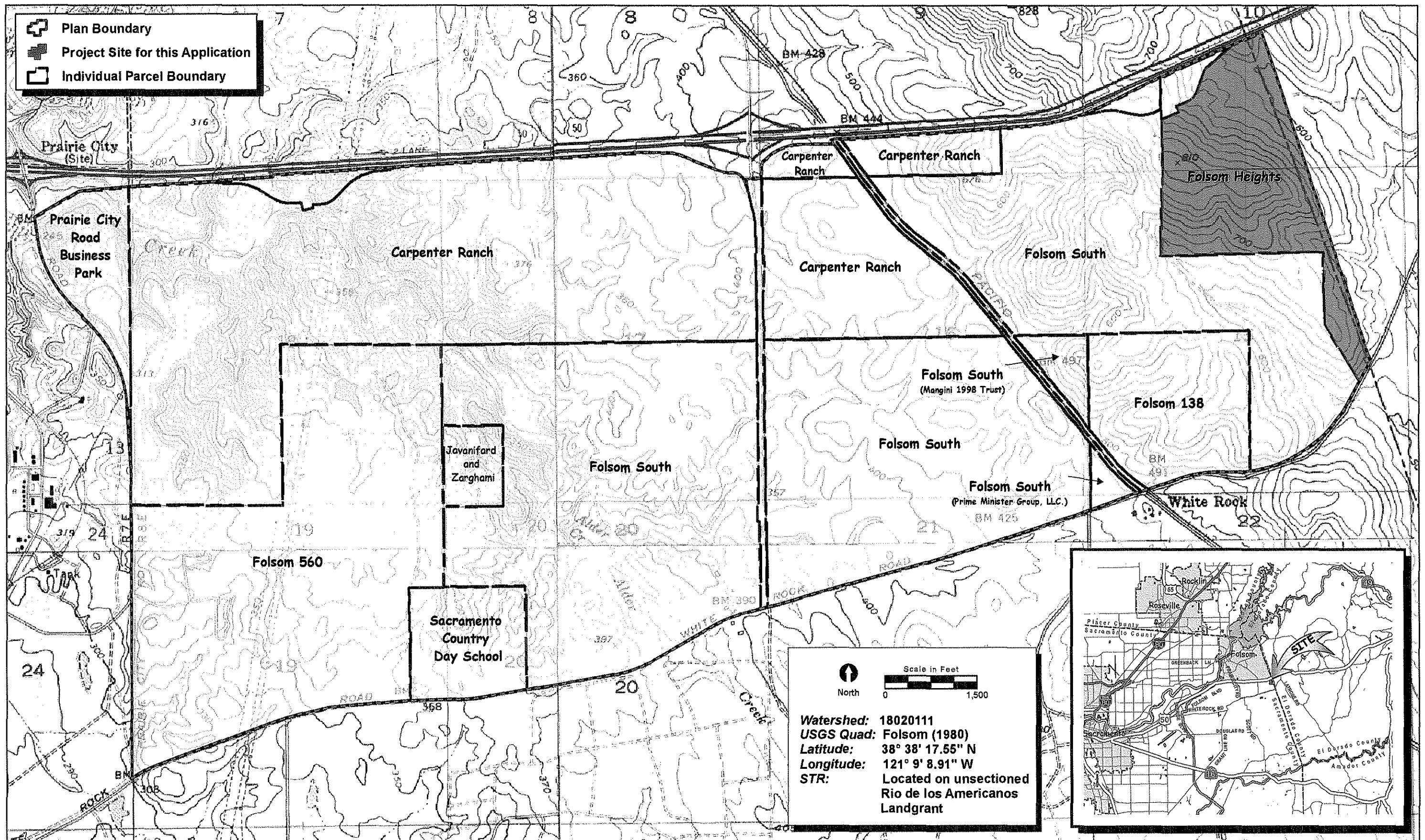
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Figure 1. Project Site and Vicinity

Figure 2. Proposed Land Use Plan

Figure 3. Wetland Delineation

Figure 4. Avoidance/Impact Areas

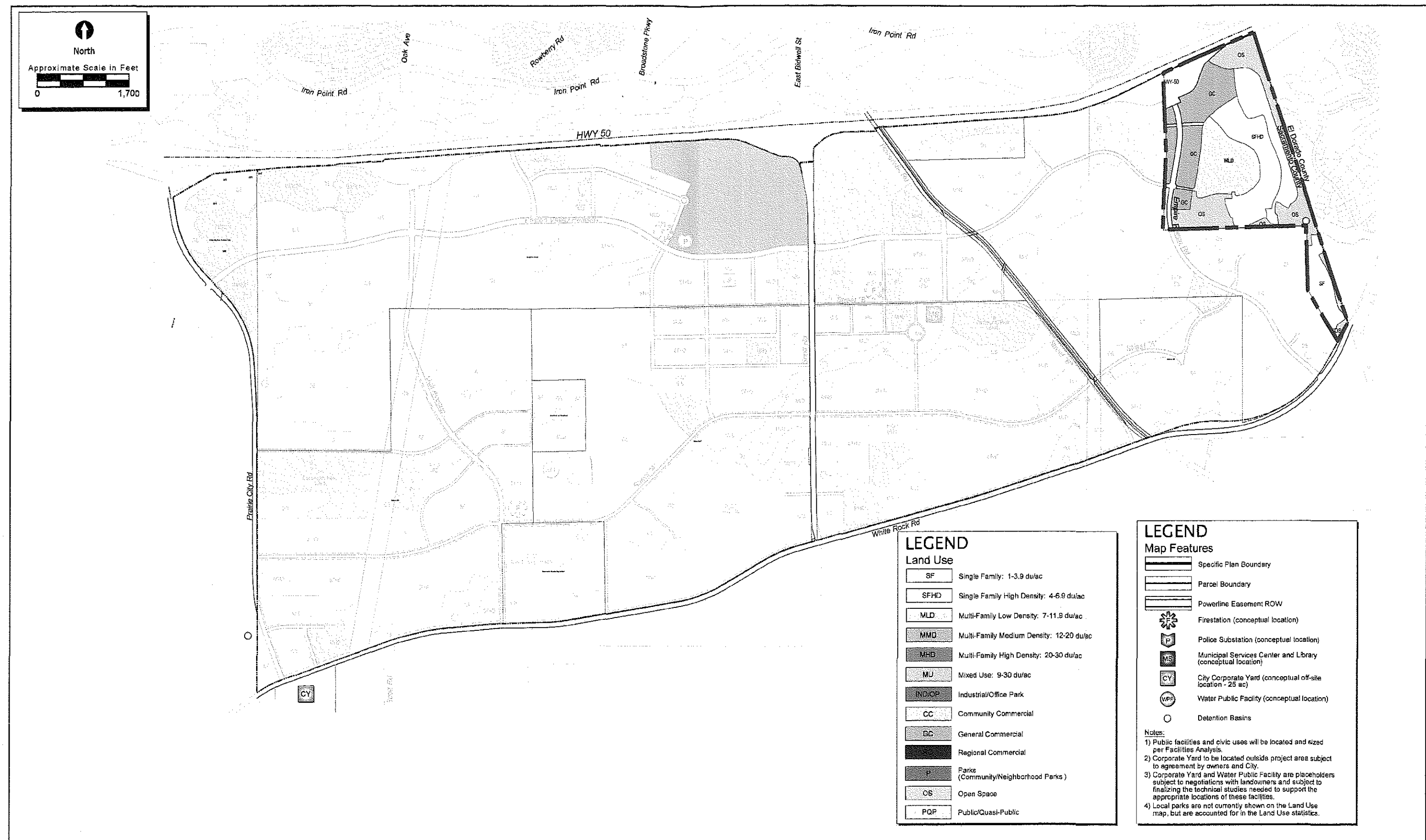


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**Figure 1. Project Site and Vicinity**

2005-429 Folsom Plan Area Specific Plan



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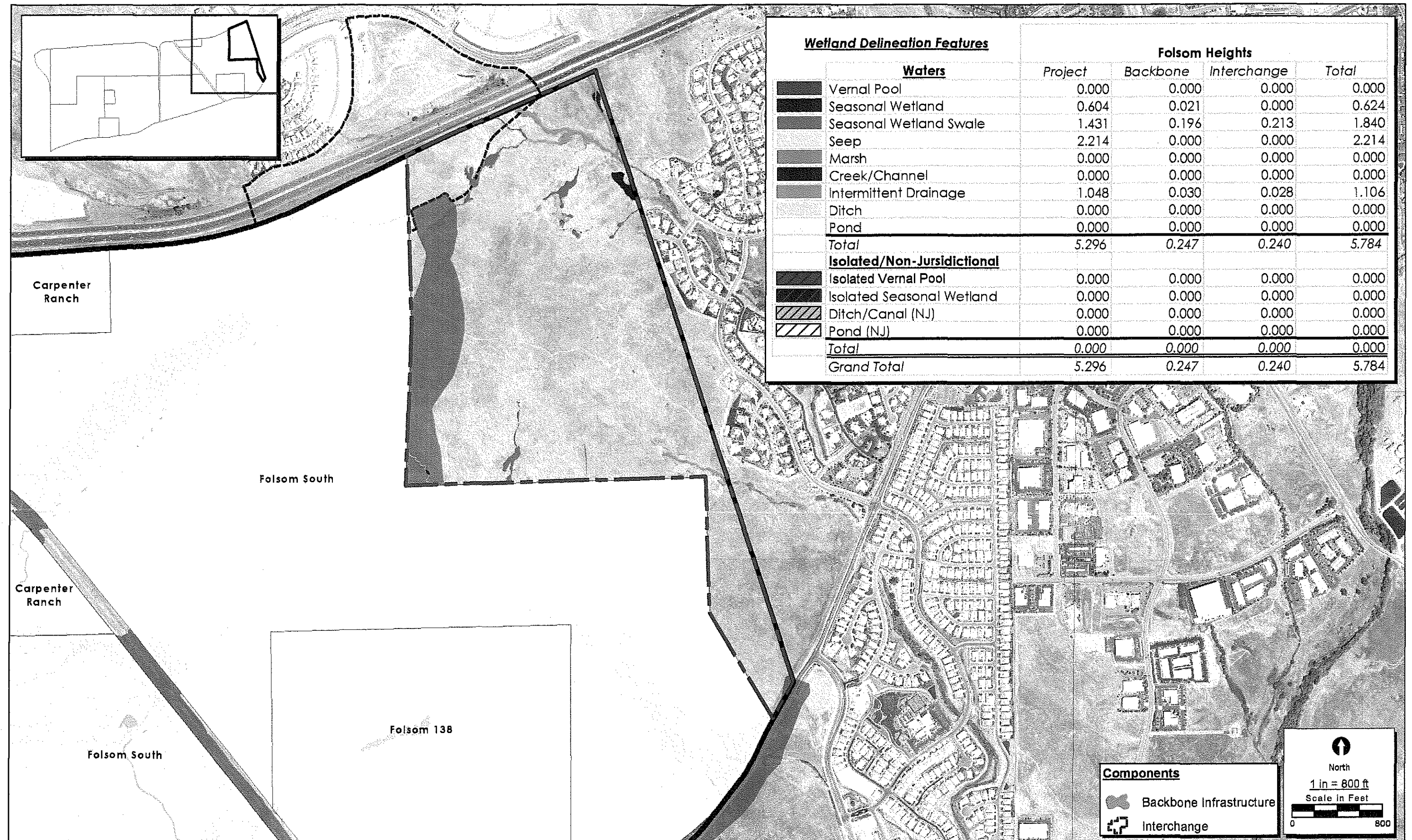
**Figure 2. Proposed Land Use**  
2005-429 Folsom Plan Area Specific Plan

**MACKEY & SOMPS**  
CIVIL ENGINEERS, INC.  
CIVIL ENGINEERING/LAND PLANNING/LAND SURVEYING  
SACRAMENTO, CALIFORNIA (916) 422-4002  
JOS 04/1997 TSS-04/04

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**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

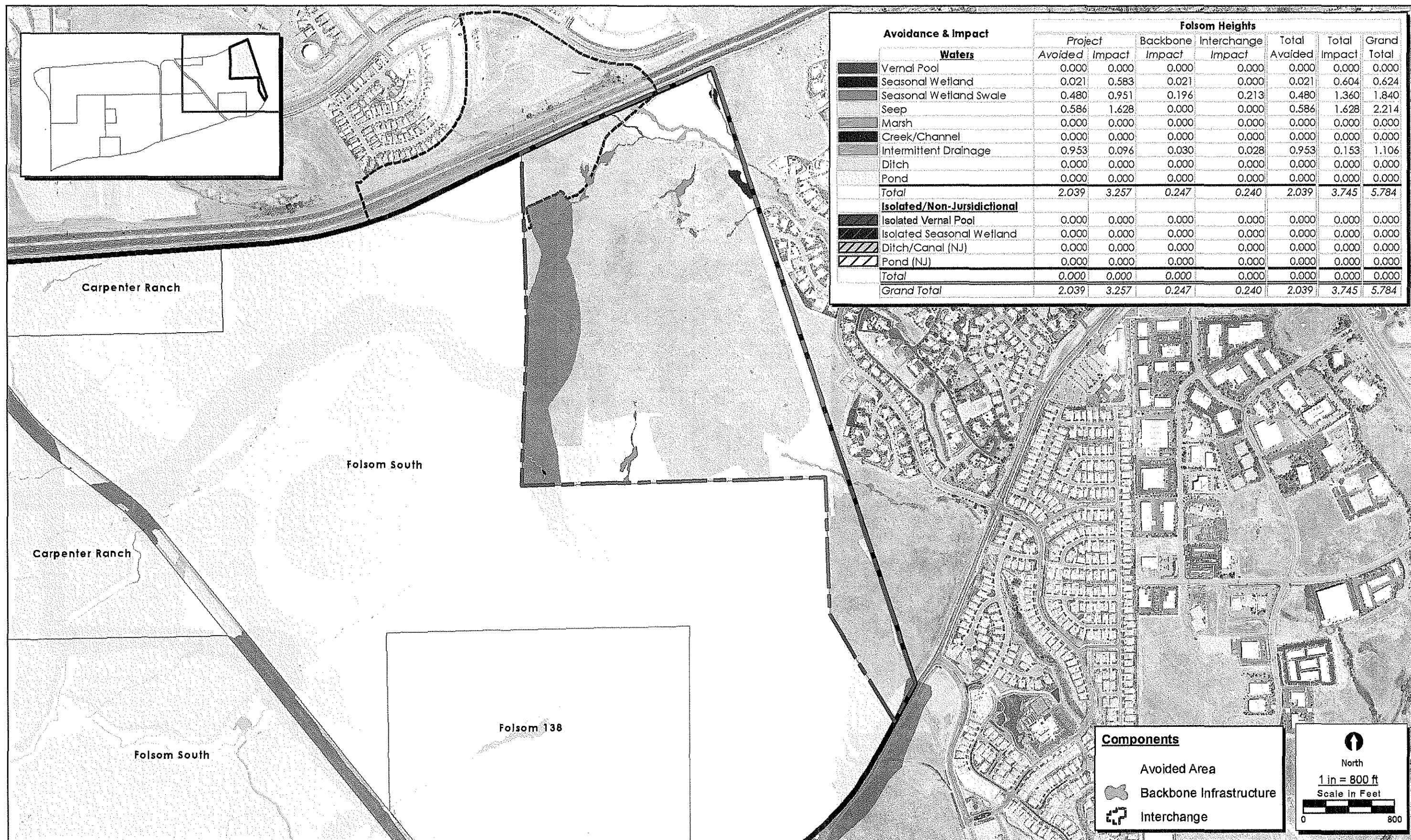




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**Figure 3. Wetland Delineation**  
2005-429 Folsom Plan Area Specific Plan



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11/18/08

**Figure 4. Avoidance/Impact Areas**  
2005-429 Folsom Plan Area Specific Plan



## **ATTACHMENTS A**

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### Section 7 Consultation Information

**Proposed Folsom Heights Project  
Individual Permit  
Section 7 Consultation Information**

**A DESCRIPTION OF THE ACTION TO BE CONSIDERED:**

The ±178.8-acre Folsom Heights project site consists of open grassland / pastureland located in mostly undeveloped lands south of Highway 50, west of the El Dorado County Line, north of White Rock Road, and east of Scott Road in eastern Sacramento County, California. The site corresponds to an unsectioned portion of Township 9 North, Range 8 East (MDBM) of the "Folsom, California" 7.5-minute quadrangle (U.S. Department of the Interior, Geological Survey 1980). The approximate center of the site is located at 38° 38' 18" North and 121° 09' 09" West. The site is located within the Upper Consumnes Watershed (#18040013, U.S. Department of Interior, Geological Survey 1978).

The Folsom Heights project proposes to develop approximately ±178.8 acres of land in eastern Sacramento currently located within the Folsom Plan Area Specific Plan (Folsom Plan Area). The proposed project consists of the development of 35 acres of Single Family, 31 acres of Single Family High Density, 27.9 acres of Multi-Family Low Density, 34.5 acres of General Commercial, and 6.1 acres of Right of Way within the Folsom Sphere of Influence. In addition, the project proposes 44.3 acres of Preserve/Open Space, which will avoid, preserve, and protect 2.039 acres of waters of the U.S., as well as potential special-status species habitat. The plan provides for a mix of land uses and residential densities designed to serve the Highway 50 corridor.

**A DESCRIPTION OF THE SPECIFIC AREA THAT MAY BE AFFECTED BY THE ACTION:**

The Project is located in the Sacramento Valley, east of the Greater Sacramento Metropolitan Area. The Folsom Heights site is comprised of rolling hills at an elevational range of approximately 525 feet to 800 feet above mean sea level. The site is dominated by an annual grassland vegetation community.

The site is currently used as pastureland and surrounding land uses surrounding the site include rural residential, agricultural cropland, and rangeland.

According to the *Soil Survey of Sacramento County, California* (U.S. Department of Agriculture, Soil Conservation Service 1993), five soil units, or types, have been mapped within the site (See Figure 10 in Summary - *Natural Resources Conservation Service Soil Types*). These are: (AkC) Argonaut Gravelly Loam, 2-15% slopes; (AwD) Auburn Silt Loam, 2-30% slopes; (AxD) Auburn Very Rocky Silt Loam, 2-30% slopes; (107) Argonaut-Auburn Complex, 3-8% slopes, and (110) Argonaut-Auburn-Rock Outcrop Complex, 8-30% slopes (U.S. Department of Agriculture, Soil Conservation Service 1993).

## **A DESCRIPTION OF ANY LISTED SPECIES OR CRITICAL HABITAT THAT MAY BE AFFECTED BY THIS ACTION:**

### **Vernal Pool Invertebrates**

Project implementation (i.e. fill of seasonal wetlands) represents potential impacts to the federally listed vernal pool fairy shrimp (*Branchinecta lynchi*, federal threatened) and vernal pool tadpole shrimp (*Lepidurus packardii*, federal endangered). The applicant may conduct determinate-level surveys for listed branchiopods during the 2008-2009 wet season. In the event that listed vernal pool branchiopods are found during the pending wet season surveys, the Applicant requests that the project be appended to the Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans within the Jurisdiction of the Sacramento Field Office, California (USFWS 1-1-96-F-1).

### **Valley Elderberry Longhorn Beetle**

No elderberry shrubs (*Sambucus* species) are known to occur on the project site. Elderberry shrubs are the exclusive host plant to the Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus* – VELB). VELB is listed as “threatened” on the Federal Endangered Species Act.

## Special-Status Plant Species

Special-status plant surveys were conducted during August 2008. No special-status plant species were observed during the 2008 surveys.

## Jurisdictional Delineation

Table 1 lists potential jurisdictional waters of the U.S. found on-site. A total of 5.784 acres of potential waters of the U.S have been mapped on the site. These include 0.624 acre of seasonal wetland, 1.840 acres of seasonal wetland swale, 2.214 acre of Seep, and 1.106 acre of intermittent drainage.

**Table 1 – Potential Corps Jurisdictional Waters of the U.S.**

<b>Type</b>	<b>Acreage</b>
Seasonal wetland	0.624
Seasonal wetland Swale	1.840
Seep	2.214
Intermittent Drainage	<u>1.106</u>
<b>TOTAL:</b>	<b>5.784</b>

## A DESCRIPTION OF THE MANNER IN WHICH THE ACTION MAY AFFECT ANY LISTED SPECIES OR CRITICAL HABITAT AND AN ANALYSIS OF ANY CUMULATIVE IMPACTS:

Project implementation (i.e. seasonal wetlands and seasonal wetland swales totaling 1.534 acres) represents potential impacts to the federally listed vernal pool fairy shrimp (*Branchinecta lynchi*, federal threatened) and vernal pool tadpole shrimp (*Lepidurus packardii*, federal endangered). The applicant may conduct determinate-level surveys for listed branchiopods during the 2008-2009 wet season. In the event that listed vernal pool branchiopods are found during the pending wet season surveys, the Applicant requests that the project be appended to the Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for

Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans within the Jurisdiction of the Sacramento Field Office, California (USFWS 1-1-96-F-1).

**Table 2 – Proposed Impact Acreages**

<b>Type</b>	<b>Existing</b>	<b>Avoidance</b>	<b>Project Impacts</b>	<b>Infrastructure Impacts*</b>	<b>Interchange Impacts*</b>
Seasonal wetland	0.624	0.021	0.583	0.021	0.000
Seasonal wetland Swale	1.840	0.480	0.951	0.196	0.213
Seep	2.214	0.586	1.628	0.000	0.000
Intermittent Drainage	<u>1.106</u>	<u>0.953</u>	<u>0.096</u>	<u>0.030</u>	<u>0.028</u>
<b>TOTAL:</b>	<b>5.784</b>	<b>2.039</b>	<b>3.257</b>	<b>0.247</b>	<b>0.240</b>

\*The Backbone Infrastructure and Interchange Impacts are included as the delineation for this project included these areas.

## **RELEVANT REPORTS INCLUDING ENVIRONMENTAL IMPACT STATEMENT, ENVIRONMENTAL ASSESSMENT, OR BIOLOGICAL ASSESSMENT PREPARED:**

EDAW submitted a Wetland Delineation report to the Sacramento District office of the U.S. Army Corps of Engineers (Corps) in March 2008. On April 21, 2008, a field visit with EDAW and the U.S. Army Corps of Engineers occurred for verification of onsite wetlands.

## **ANY OTHER RELEVANT AVAILABLE INFORMATION ON THE ACTION, THE LISTED SPECIES, OR CRITICAL HABITAT:**

There is no other relevant available information applicable to the proposed project, the listed species, or the critical habitat.

## **PROPOSED MITIGATION:**

Project implementation (i.e. seasonal wetlands and seasonal wetland swales totaling 1.534 acres) represents potential impacts to the federally listed vernal pool fairy shrimp (*Branchinecta lynchi*, federal threatened) and vernal pool tadpole shrimp (*Lepidurus packardii*, federal endangered). The applicant may conduct determinate-level surveys for listed branchiopods during the 2008-2009 wet season. In the event that listed vernal pool branchiopods are found

during the pending wet season surveys, the Applicant requests that the project be appended to the Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans within the Jurisdiction of the Sacramento Field Office, California (USFWS 1-1-96-F-1).

Section 404 Individual Permit

For

**Folsom South**

Folsom, California

November 19, 2008

Prepared For:

**MJM Properties, LLC**

**APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT (33 CFR 325)****OMB APPROVAL NO. 0710-003**

Public reporting burden for this collection of information is estimated to average 5 hours per response, including the time for reviewing instructions, Searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Service Directorate of Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302; and to the Office of Management and Budget, Paperwork Reduction Project (0710-003), Washington, DC 20503. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

**PRIVACY ACT STATEMENT**

Authority: 33 USC 401, Section 10; 1413, Section 404. Principal Purpose: These laws require permits authorizing activities in, or affecting, navigable waters of the United States; the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Routine uses: Information provided, however, the permit application cannot be processed nor can a permit be issued.

One set of the original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the proposed activity. An application that is not completed in full will be returned.

**(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)**

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETED
--------------------	----------------------	------------------	-------------------------------

**(ITEMS BELOW TO BE FILLED BY APPLICANT)**

5. APPLICANT'S NAME MJM Properties, LLC	8. AUTHORIZED AGENT'S NAME & TITLE (AN AGENT IS NOT REQUIRED) Kenneth D. Whitney, Ph.D. Foothill Associates
6. APPLICANT'S ADDRESS 1037 Suncast Lane, Suite 111 El Dorado Hills, CA 95762	9. AGENT'S ADDRESS 590 Menlo Drive, Suite 1 Rocklin, CA 95765
7. APPLICANT'S PHONE NUMBERS WITH AREA CODE a. Residence: b. Business: (916) 941-1411	10. AGENT'S PHONE NUMBERS WITH AREA CODE a. Business: (916) 435-1202 b. Fax: (916) 435-1205

**11. STATEMENT OF AUTHORIZATION**

I hereby authorize Foothill Associates to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.

  
APPLICANT'S SIGNATURE

11/19/2008  
DATE

**NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY**

12. PROJECT NAME OR TITLE (see Instructions) Folsom South	
13. NAME OF WATERBODY, IF KNOWN (if applicable) Alder Creek and unnamed tributaries to Alder Creek	14. PROJECT STREET ADDRESS (if applicable) N/A
15. LOCATION OF PROJECT COUNTY Sacramento STATE CA	
16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see Instructions) The project site is located south of State Highway 50, within a portion of Sections 9, 10, 15, 16, 17, 20, 21, and 22, Township 9 North, Range 8 East, Latitude 38° 37' 59.11" North and Longitude 121° 6' 11.17" West, Sacramento County, California and can be located on the <i>Folsom, Folsom SE, Clarksville and Buffalo Creek</i> USGS 7.5-minute series topographic quadrangles. See attached Site and Vicinity Map (Folsom South Public Notice Figure 1).	
17. DIRECTIONS TO THE SITE SEE ATTACHED SITE AND VICINITY MAP (FOLSOM SOUTH PUBLIC NOTICE FIGURE 1), AND DRIVING DIRECTIONS (ATTACHMENT A).	



**18. NATURE OF ACTIVITY** (Description of project, include all features)

The project proposes the development of residential and commercial land uses, schools, and parks, as well as passive open space and wetland preserves on approximately 1,400 acres of currently undeveloped land in eastern Sacramento County (Folsom South Public Notice Figure 3).

**19. PROJECT PURPOSE** (Describe the reason or purpose of the project, see instructions)

The purpose of the Folsom Sphere of Influence project is: (1) to construct a large-scale, mixed-use master-planned community consisting of mixed-density residential uses, a regional shopping center, and other employment-generating uses; (2) to provide associated supporting infrastructure including on-site backbone infrastructure, schools, parks, an on-site trail system, off-site sewer improvements, off-site roadway improvements, off-site highway interchanges, an off-site water supply pipeline from the Freeport Regional Water Authority diversion facility to the site, and an off-site water treatment plant; and (3) to permanently protect 30 percent of the site as open space for the preservation of oak woodlands and sensitive habitat areas in manner consistent with Measure W.

**USE BLOCKS 20-22 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED****20. REASON(S) FOR DISCHARGE**

Development of mixed land uses, including residential and commercial land uses, as well as schools, parks, and passive open space and wetland preserves in areas of aquatic habitat.

**21. TYPE(S) OF MATERIAL BEING DISCHARGED AND THE AMOUNT OF EACH TYPE IN CUBIC YARDS**

Approximately 12,000 cubic yards of clean fill would be required to accommodate project development (based on 7.25 acres of fill of waters of the U.S.).

**22. SURFACE AREA IN ACRES OF WETLANDS OR OTHER WATERS FILLED** (see instructions)

Project development would necessitate the fill of approximately 7.25 acres of waters of the U.S., including 0.60 acres of seasonal wetlands, 0.13 acre of vernal pools, 0.36 acre of seep, and approximately 2.49 acres of other waters of the U.S., including: 0.97 acre of intermittent drainage, 0.97 acre of pond, and 0.12 acre of ditch canal (Folsom South Public Notice Figure 3). An additional 4.86 acres of waters of the U.S. would be filled on the project site associated with the City's Infrastructure Permit.

A variety of heavy equipment will be used for excavation and fill activities associated with construction of the proposed project.

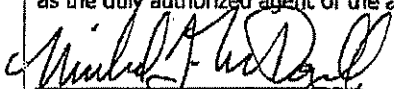
**23. IS ANY PORTION OF THE WORK ALREADY COMPLETE?** YES NO ☒ IF YES, DESCRIBE THE WORK**24. ADDRESSES OF ADJOINING PROPERTY OWNERS, LESSEES, ETC. WHOSE PROPERTY ADJOINS THE WATERBODY** (If more than can be entered her, please attach a supplemental list)**25. LIST OF OTHER CERTIFICATIONS OR APPROVALS/DENIALS RECEIVED FROM OTHER FEDERAL, STATE, OR LOCAL AGENCIES FOR WORK DESCRIBED IN THIS APPLICATION\***

Type of Approval	Agency	Application Status
Specific Plan Approval	City of Folsom	In Progress
EIR Certification	City of Folsom	In Progress
EIS/Section 404 Application	ACOE	In Progress
Section 7 Consultation	USFWS	Section 7 Information Supplied with Section 404 Application. BA to be Submitted
Section 106 Consultation	SHPO	In Progress
Conditional Use Permit Contract Assignment	United States Bureau of Reclamation	In Progress
401 Water Quality Certification	RWQCB	Application to be Submitted
Streambed Alteration Notification	CDFG	Application to be Submitted

\*Also see additional information, beginning on Page 5 of this application.

\*Would include but is not restricted to zoning, building and flood plain permits.

26. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

 11/19/2008  
SIGNATURE OF APPLICANT DATE

 11/19/2008  
SIGNATURE OF AGENT DATE

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious, or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

**BLOCK 8:**

Additional Authorized Agent

Jim Ray  
Mackay and Soms  
1771 Tribute Road, Suite E  
Sacramento, CA 95815  
Phone: (916) 929-6092

**BLOCK 16:**

Other Location Descriptions

The project site is located south of State Highway 50, within a portion of Sections 9, 10, 15, 16, 17, 20, 21, and 22, Township 9 North, Range 8 East, Latitude 38° 37' 59.11" North and Longitude 121° 6' 11.17" West, within the Lower Sacramento, Lower American (Hydrologic Unit 18020111) and San Joaquin Upper Cosumnes (Hydrologic Unit 18040013) watersheds, Sacramento County, California, and can be located on the *Folsom*, *Folsom SE*, *Clarksville* and *Buffalo Creek* USGS 7.5-minute series topographic quadrangles. See attached Site and Vicinity Map (Folsom South Public Notice Figure 1).

**BLOCK 17:**

Directions to Site

The project area is located south of Highway 50, north of White Rock Road, and extending east of Placerville Payen Road, and west of Scott Road, in eastern Sacramento County, California.

**BLOCK 18:**

Nature of Activity/Project Description

The project involves the development of a mixed use community in Eastern Sacramento County, California. Project components include low, medium, and high density single and multi-family residential uses, schools, commercial and mixed use sites, parks, passive open space and wetland preserve areas, as well as roads, storm water facilities, and urban infrastructure. The proposed land use plan for the Folsom South project is shown on the Folsom South Public Notice Figure 2. Proposed land uses are summarized by acreage in Table 1.

**Table 1 — Folsom South Proposed Land Uses and Acreages**

<b>Land Use</b>	<b>Acreage</b>
Single Family (SF)	227.3
Single Family High Density (SFHD)	244.4
Multi-Family Low Density (MLD)	182.2
Multi-Family Medium Density (MMD)	45.1
Multi-Family High Density (MHD)	20.7
Mixed Use District (MU)	22.3
Community Commercial (CC)	22.5
General Commercial (GC)	59.8
Parks – Community East	20.0
Parks – Neighborhood (P)	24.5
Parks – Local	25.0
Open Space (OS)	376.1
Public/Quasi-Public (PQP) (MS/HS)	79.3
Public/Quasi Public (PQP) (ES)	30.0
Major Circulation	55.5

Source: RRM Design Group 2008

Approximately 29.00 acres of waters of the United States, and 1.43 acres of non-jurisdictional waters have been delineated on the project site, of which approximately 17.14 acres would be avoided and preserved in perpetuity.

**BLOCK 19:**Project Purpose

The purpose of the Folsom Sphere of Influence project is: (1) to construct a large-scale, mixed-use master-planned community consisting of mixed-density residential uses, a regional shopping center, and other employment-generating uses; (2) to provide associated supporting infrastructure including on-site backbone infrastructure, schools, parks, an on-site trail system, off-site sewer improvements, off-site roadway improvements, off-site highway interchanges, an off-site water supply pipeline from the Freeport Regional Water Authority diversion facility to the site, and an off-site water treatment plant; and (3) to permanently protect 30 percent of the site as open space for the preservation of oak woodlands and sensitive habitat areas in manner consistent with Measure W.

**BLOCK 22:**Surface Area of Waters to be Impacted

As shown on the Folsom South Public Notice Figure 4, estimated project impacts to potentially jurisdictional waters of the U.S. total 7.25 acres, consisting of 0.56 acres of seasonal wetlands, 0.13 acre of vernal pools, 4.09 acres of seasonal wetland swale, 0.36 acre of seep, and approximately 2.06 acres of other waters of the U.S., including 0.97 acre of intermittent drainage, 0.97 acre of pond, and 0.12 acre of ditch. In addition, approximately 1.19 acres of non-jurisdictional waters would be impacted, including 0.34 acre of ditch/canal, and 0.85 acre of pond. An additional 4.65 acres of waters of the U.S. will be impacted on the project site related to the City's Infrastructure Permit. The jurisdictional delineation is shown on the Folsom South Public Notice Figure 3.

**Additional Information****REGULATORY BACKGROUND**

Proposed project activities fall under the jurisdiction of several resource agencies. Pursuant to Section 404 of the Clean Water Act, construction activities in waters of the U.S. are subject to the approval of the U.S. Army Corps of Engineers (Corps) and issuance of a Section 404 permit. The applicant is requesting an Individual Permit from the Corps for the proposed project. Pursuant to Section 401 of the Clean Water Act, this permit will need to be certified by the Central Valley Regional Water Quality Control Board (CVRWQB). In addition, there is the potential for federally-listed species within the project area; therefore, consultation will be initiated with the U.S. Fish and Wildlife Service (USFWS). Following is a summary regarding the status of relevant regulatory requirements.

Supporting documents, such as wetland delineations, special-status species/rare plant surveys, determinate-level branchiopod surveys, tree surveys, cultural resource reports, etc, that have been prepared for the Folsom South Project are not included in this submittal. These documents will be submitted at a later date in bundled-fashion and augmented as new information and/or reports become available.

## Federal Clean Water Act, Section 404

As shown in Table 2, 29.00 acres of potential jurisdictional waters of the U. S. have been delineated on the project site, including vernal pools, seasonal wetlands, seasonal wetland swales, marsh, seeps, intermittent drainages, pond, and ditch.

**Table 2 – Jurisdictional and Non-Jurisdictional Wetlands and Waters of the U.S.**

<b>Jurisdictional</b>	
<b>Type</b>	<b>Acreage</b>
Vernal Pool	0.38
Seasonal Wetland	1.19
Seasonal Wetland Swale	9.68
Seep	6.48
Marsh	0.06
Intermittent Drainage	9.67
Ditch	0.15
Pond	1.39
<b>Sub total:</b>	<b>29.00</b>
<b>Non-Jurisdictional</b>	
<b>Type</b>	<b>Acreage</b>
Ditch/Canal	0.42
Pond	1.01
<b>Sub total:</b>	<b>1.43</b>
<b>TOTAL:</b>	<b>30.43</b>

The applicant is requesting authorization through this application for an Individual Permit for project-related impacts to 7.25 acres of waters of the U.S. Existing, as well as proposed preserved and impacted jurisdictional features are listed in Table 3 by jurisdictional classification and acreage, and are shown on the Folsom South Public Notice Figure 4.

**Table 3 – Proposed Folsom South Project Impact/Preserve Acreages**

<b>Jurisdictional Wetlands/Waters</b>				
<b>Type</b>	<b>Existing</b>	<b>Preserved</b>	<b>Project Impacted</b>	<b>Infrastructure Impacted</b>
Vernal Pool	0.38	0.20	0.13	0.05
Seasonal Wetland	1.19	0.20	0.60	0.39
Seasonal Wetland Swale	9.68	3.67	4.09	1.92
Seep	6.48	5.42	0.36	0.70
Marsh	0.06	0.06	0.00	0.00
Intermittent Drainage	9.67	7.14	0.97	1.56
Ditch	0.15	0.00	0.12	0.02
Pond	1.39	0.42	0.97	0.00
<b>Sub Total</b>	<b>29.00</b>	<b>17.11</b>	<b>7.25</b>	<b>4.65</b>

**Non-Jurisdictional Waters**

Ditch/Canal	0.42	0.03	0.34	0.05
Pond	1.01	0.00	0.85	0.16
<b>Sub Total</b>	<b>1.43</b>	<b>0.03</b>	<b>1.19</b>	<b>0.21</b>
<b>Total:</b>	<b>30.43</b>	<b>17.14</b>	<b>8.44</b>	<b>4.86</b>

**Federal Clean Water Act, Section 401**

A request for Section 401 Water Quality Certification will be submitted to the Central Valley Regional Water Quality Control Board.

**Federal Endangered Species Act**

The Folsom South project site contains potential habitat for five federally-listed species including the threatened vernal pool fairy shrimp (*Branchinecta lynchi*), the endangered vernal pool tadpole shrimp (*Lepidurus packardii*), endangered Sacramento Orcutt grass (*Orcuttia viscida*), and endangered Slender Orcutt grass (*Orcuttia tenuis*). However focused surveys conducted on the project site resulted in negative findings; therefore development of the proposed project would not result in adverse effects to habitat for any federally-listed vernal pool species.

The project site also contains potential habitat for the threatened Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). A single elderberry shrub is located east of Scott Road within the Folsom South project site. The shrub is located in a non-riparian area and has four stems measuring one to four inches, and numerous stems measuring less than one inch. No exit holes were observed in this shrub. However, the location of this shrub is included within the City's infrastructure permit and affects to potential VELB habitat resulting from potential impacts to this shrub will be addressed in the City's application. Therefore, implementation of the Folsom South project would not result in adverse effects to habitat for the federally threatened Valley elderberry longhorn beetle.

A wet-season survey for federally-listed vernal pool branchiopods was conducted on the project site during the 2006 – 2007 wet season (February through May). This survey resulted in negative findings for federally-listed invertebrate species. A Dry-season survey was conducted on the project site in 2007. This survey resulted in negative findings for special-status invertebrate species' eggs within the soil samples analyzed. Two additional wet-season surveys

were conducted on a portion of the Folsom South project site (Mangini Property), one survey was conducted during the 1998-1999 wet season (December through May) and one survey was conducted during the 1999-2000 wet season (November through June). Both surveys resulted in negative findings.

Focused surveys for special-status plant species were conducted on the project site on May 5, May 18, June 7, and June 20, 2006. Two survey windows were included to identify both early and late-blooming species with the potential to occur on the site.

### **National Environmental Policy Act (NEPA)**

The Corps, as Lead Agency, is preparing an Environmental Impact Statement (EIS) in accordance with NEPA guidelines.

### **California Fish and Game Code**

The proposed project will require authorization from the California Department of Fish and Game (CDFG) for alterations to the on-site ephemeral and intermittent drainages resulting from project implementation. Project-specific construction will result in approximately 1.29 acres of impact to a CDFG jurisdictional streambed (i.e., ephemeral and intermittent drainages).

Therefore, pursuant to Section 1602 of the California Fish and Game Code, a request for a Lake and Streambed Alteration Agreement will be submitted to the California Department of Fish and Game.

### **California Environmental Quality Act(CEQA)**

The City of Folsom is currently preparing an Environmental Impact Report (EIR) for the proposed project.

### **National Historic Preservation Act, Section 106**

Section 106 of the National Historic Preservation Act requires that each federally sponsored project consider how that undertaking could affect historic properties. A Section 106-compliant archaeological inventory survey has been prepared for the project site.

## **ADJACENT LAND USE**

Local land uses and vegetation communities surrounding the site consist of the following: Highway 50 and commercial complexes to the north; low density single-family residential areas and a cellular phone tower to the east; White Rock Road, single-family residential construction, and ranches on annual grassland to the south; and ranches on oak woodland and annual grassland to the west.

## **NOTIFICATION TO ADJACENT PARCEL OWNERS**

Please see the Specific Plan Area List provided with the Comprehensive Clean Water Act Section 404 Application for the Folsom Plan Area Specific Plan.

## **ALTERNATIVES ANALYSIS**

A detailed Alternatives Analysis will be prepared in accordance with Section 404(b)(1) of the Clean Water Act and submitted under separate cover.

## **MITIGATION PLAN**

The Applicant proposes to participate in a joint mitigation plan with the other participating property owners in the Folsom South Group. The applicants will mitigate unavoidable impacts to waters of the United States through a combination of the on-site enhancement, on-site creation or restoration, the purchase of credits for at Corps-approved mitigation facilities, and/or off-site wetland restoration or creation. This compensatory mitigation proposal will offset the loss of functions and values caused by unavoidable impacts to waters of the United States and will implement the Corps' Mitigation Rule. In addition, the mitigation will ensure that there is no net increase in floodwater surface elevations downstream of the Project.



## **LIST OF FIGURES**

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Figure 1. Project Site and Vicinity

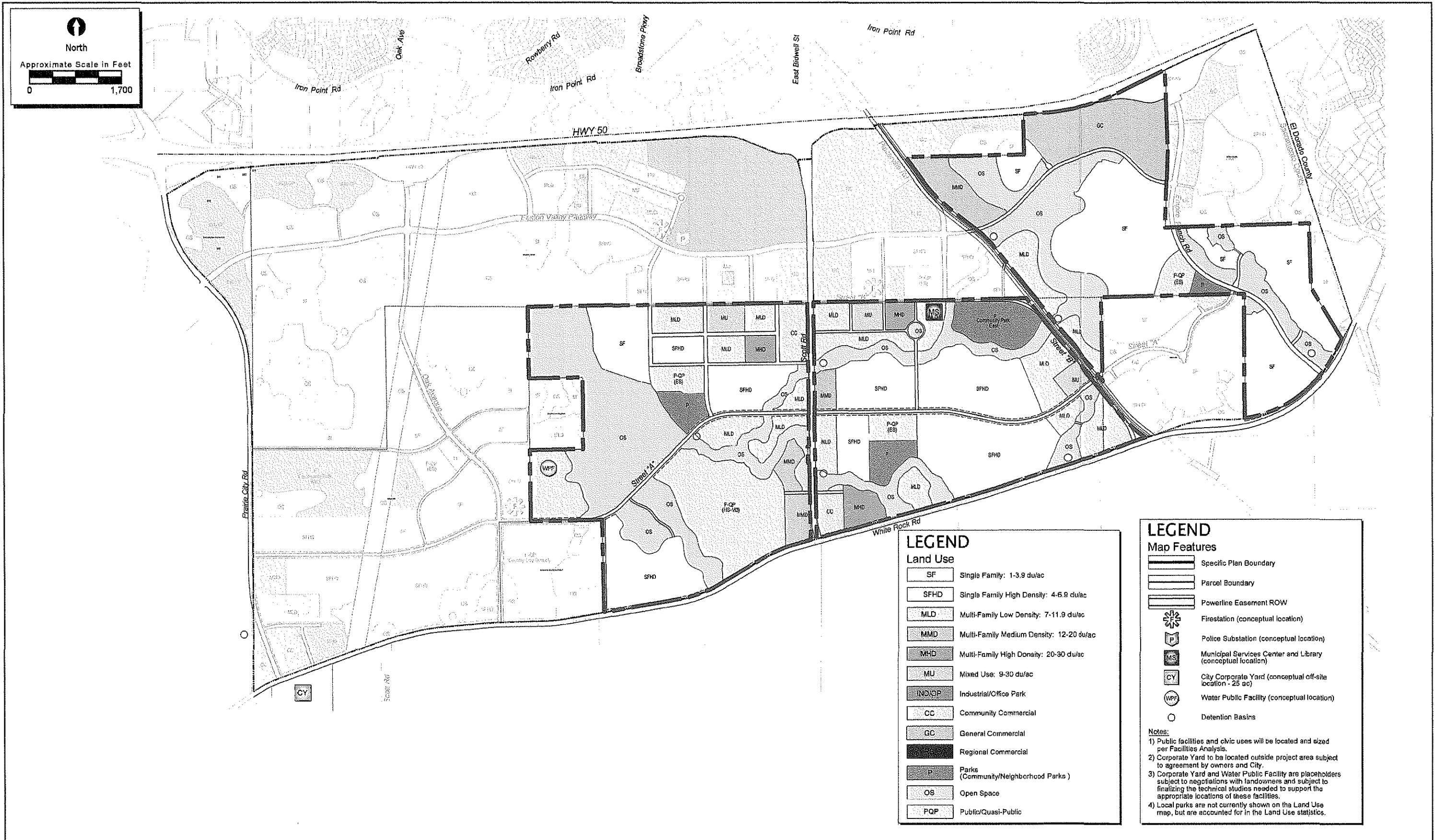
Figure 2. Proposed Land Use Plan

Figure 3. Wetland Delineation

Figure 4. Avoidance/Impact Areas







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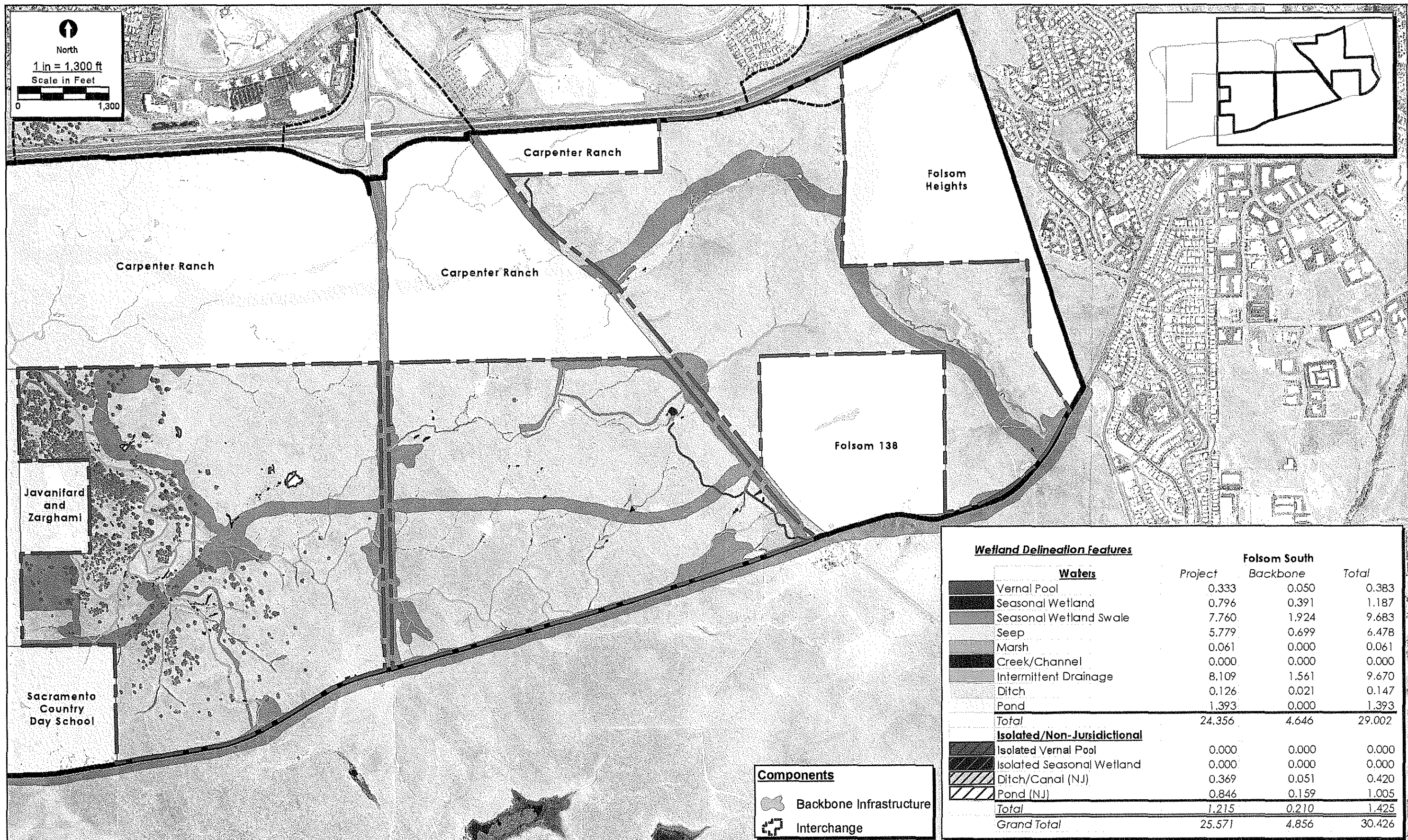
11/18/08

**Figure 2. Proposed Land Use**  
2005-429 Folsom Plan Area Specific Plan

**MACKAY & SOMPS**  
CIVIL ENGINEERS, INC.  
CIVIL ENGINEERING/LAND PLANNING/LAND SURVEYING  
6400 W. 12TH, SUITE 100, FOLSOM, CA 95630  
(916) 938-0000  
Fax: (916) 938-0002  
Date: 06/1/08

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ENVIRONMENTAL CONSULTANTS

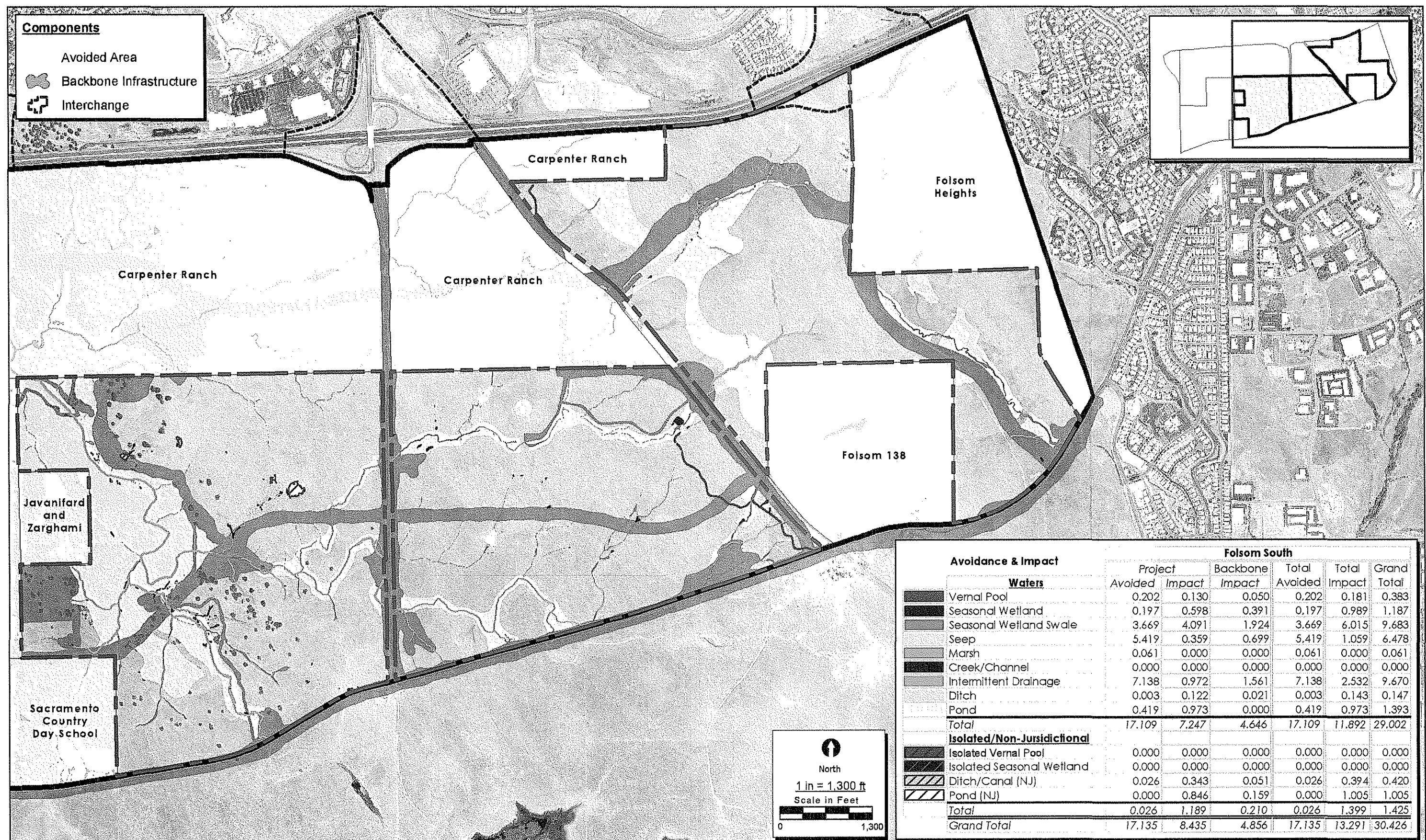


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**Figure 3. Wetland Delineation**  
2005-429 Folsom Plan Area Specific Plan





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11/18/08

**Figure 4. Avoidance/Impact Areas**  
2005-429 Folsom Plan Area Specific Plan

## **ATTACHMENTS A**

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### Section 7 Consultation Information

**Proposed Folsom South Project  
Section 404 Individual Permit  
Section 7 Consultation Information**

**A DESCRIPTION OF THE ACTION TO BE CONSIDERED:**

The ±1,400-acre Folsom South project site consists of open grassland / pastureland located in mostly undeveloped lands south of Highway 50, north of White Rock Road, and extending east of Placerville Payen Road, and west of Scott Road in northeastern Sacramento County, California. The project site is located south of State Highway 50, within a portion of Sections 9, 10, 15, 16, 17, 20, 21, and 22, Township 9 North, Range 8 East, Latitude 38° 37' 59.11" North and Longitude 121° 6' 11.17" West, within the Lower Sacramento, Lower American (Hydrologic Unit 18020111) and San Joaquin Upper Cosumnes (Hydrologic Unit 18040013) watersheds, Sacramento County, California, and can be located on the *Folsom, Folsom SE, Clarksville* and *Buffalo Creek* USGS 7.5-minute series topographic quadrangles.

The project proposes to develop approximately 1,400 acres of land in eastern Sacramento currently located within the City of Folsom Sphere of Influence (FSOI). As summarized in Table 1, the project proposes the development of a mixed use community in Eastern Sacramento County, California. Project components include low, medium, and high density single and multi-family residential uses, schools, commercial and mixed use sites, parks, and open space areas, as well as roads, storm water facilities, and urban infrastructure. In addition, the project proposes an approximately 101-acre on-site preserve, which will protect 17.14 acres of waters of the U.S. and non-jurisdictional waters, as well as, potential special-status species' habitat. Approximately 357 acres of Open Space, including 256 acres of passive open space and 101 acres of wetland preserve, will be preserved.

**Table 1 - Folsom South Proposed Land Uses and Acreages**

<b>Land Use</b>	<b>Acreage</b>
Single Family (SF)	227.3
Single Family High Density (SFHD)	244.4
Multi-Family Low Density (MLD)	182.2
Multi-Family Medium Density (MMD)	45.1
Multi-Family High Density (MHD)	20.7
Mixed Use District (MU)	22.3



Community Commercial (CC)	22.5
General Commercial (GC)	59.8
Parks – Community East	20.0
Parks – Neighborhood (P)	24.5
Parks - Local	25.0
Open Space (OS)	376.1
Public/Quasi-Public (PQP) (MS/HS)	79.3
Public/Quasi Public (PQP) (ES)	30.0
Major Circulation	55.5

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Source: RRM Design Group 2008

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## **A DESCRIPTION OF THE SPECIFIC AREA THAT MAY BE AFFECTED BY THE ACTION:**

The Project is located in the Sacramento Valley, east of the Greater Sacramento Metropolitan Area. The topography of the eastern portion of the site is dominated by a series of more or less parallel hilltops and intervening valleys between 400 and 550 feet above mean sea level (MSL). Rolling topography and moderate to steep slopes typify the lower, western portions of the site and the surrounding area. The elevations in the western portion of the site range from approximately 330 to 400 feet above MSL.

The California annual grassland alliance community is the dominant vegetation community within the project site. This community consists of a myriad of native and non-native annual plant species and occurs in a majority of the state at elevations from sea level to approximately 4,000 feet above MSL. Composition of this vegetation community varies depending on distribution, geographic location and land use. Additional major influences on this vegetation community include soil type, annual precipitation and fall temperatures. Dominant plant species within the California annual grassland on the site include the following: Italian ryegrass (*Lolium multiflorum*), soft brome (*Bromus hordeaceus*), medusa head (*Taeniatherum caput-medusae*), wild oat (*Avena sp.*), chick weed (*Stellaria media*), yellow star thistle (*Centaurea solstitialis*), barley (*Hordeum murinum ssp. leporinum*), and clover (*Trifolium sp.*).

The majority of the site is currently utilized for livestock grazing. In the past, portions of the western portion of the site were mined for gold and other minerals. The Southern Pacific railroad tracks also bisect the site, but are no longer in use.



Local land uses and vegetation communities surrounding the site consist of the following: Highway 50 and commercial complexes to the north; low density single-family residential areas and a cellular phone tower to the east; White Rock Road, single-family residential construction, and ranches on annual grassland to the south; and ranches on oak woodland and annual grassland to the west.

According to the *Soil Survey of Sacramento County, California*, four soil map units, or types, have been mapped within the site. The soils that occur on the site include the following: (107) Argonaut-Auburn Complex, 3 to 8 percent slopes, (109) Auburn silt loam, 2 to 30 percent slopes; (110) Auburn-Argonaut-Rock outcrop complex, 8 to 30 percent slopes; and (237) Whiterock loam, 3 to 30 percent slopes.

## **A DESCRIPTION OF ANY LISTED SPECIES OR CRITICAL HABITAT THAT MAY BE AFFECTED BY THIS ACTION:**

### **Vernal Pool Invertebrates**

Project implementation (i.e. fill of seasonal wetlands) represents potential impacts to the threatened vernal pool fairy shrimp (*Branchinecta lynchi*), the endangered vernal pool tadpole shrimp (*Lepidurus packardii*). A wet-season survey for federally-listed vernal pool branchiopods was conducted on the project site during the 2006 – 2007 wet season. This survey resulted in negative findings for federally-listed invertebrate species. A Dry-season survey was conducted on the project site in 2007. This survey resulted in negative findings for special-status invertebrate species' eggs within the soil samples analyzed.

Two additional wet-season surveys were conducted on a portion of the Folsom South project site (Mangini Property), one survey was conducted during the 1998-1999 wet season (December through May) and one survey was conducted during the 1999-2000 wet season (November through June). Both surveys resulted in negative findings.

## **Federally-Listed Plant Species**

Project implementation would have the potential to affect potential habitat for endangered Sacramento Orcutt grass (*Orcuttia viscida*), and endangered Slender Orcutt grass (*Orcuttia tenuis*). Focused surveys for special-status plant species were conducted on the project site on May 5, May 18, June 7, and June 20, 2006. Two survey windows were included to identify both early and late-blooming species with the potential to occur on the site.

## **Valley Elderberry Longhorn Beetle**

Elderberry shrubs are the exclusive host plant to the Valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*). Valley elderberry longhorn beetle is listed as "threatened" on the Federal Endangered Species Act. A single elderberry shrub is located east of Scott Road within the Folsom South project site. The shrub is located in a non-riparian area and has four stems measuring one to four inches, and numerous stems measuring less than one inch. No exit holes were observed in this shrub. However, the location of this shrub is included within the City's infrastructure permit and affects to potential VELB habitat resulting from potential impacts to this shrub will be addressed in the City's application. Therefore, implementation of the Folsom South project would not result in adverse effects to habitat for the federally threatened Valley elderberry longhorn beetle.

## **Jurisdictional Delineation**

Table 2 summarizes the acreages and classifications for jurisdictional and non-jurisdictional wetlands and waters delineated on the Folsom South project site. A total of 29.00 acres of potential waters of the U.S., and 1.43 acres of non-jurisdictional waters have been mapped on the site, as shown in Table 2. Jurisdictional features delineated on the site include 0.38 acre of vernal pool, 1.19 acre of seasonal wetland, 9.68 acres of seasonal wetland swale, 6.48 acres of seep, 0.06 acre of marsh, 9.67 acres of intermittent drainage, 0.15 acre of ditch, and 1.39 acre of pond. Non-jurisdictional features delineated on the site include 1.01 acre of pond and 0.42 acre of ditch/canal.

**Table 2 – Corps Jurisdictional and Non-Jurisdictional Waters of the U.S.**

<b>Jurisdictional</b>	
<b>Type</b>	<b>Acreage</b>
Vernal Pool	0.38
Seasonal Wetland	1.19
Seasonal Wetland Swale	9.68
Seep	6.48
Marsh	0.06
Intermittent Drainage	9.67
Ditch	0.15
Pond	1.39
<b>Subtotal</b>	<b>29.00</b>
<b>Non Jurisdictional</b>	
<b>Type</b>	<b>Acreage</b>
Pond	1.01
Ditch	0.42
<b>Subtotal</b>	<b>1.43</b>
<b>Total:</b>	<b>30.43</b>

**A DESCRIPTION OF THE MANNER IN WHICH THE ACTION MAY AFFECT ANY LISTED SPECIES OR CRITICAL HABITAT AND AN ANALYSIS OF ANY CUMULATIVE IMPACTS:**

As shown in Table 3, the applicant is proposing to permanently preserve and protect 17.14 acres of waters of the U.S. and non-jurisdictional waters, including 0.20 acre of vernal pools, 0.20 acre of seasonal wetland, 3.67 acres of seasonal wetland swale, 5.42 acres of seep, 0.06 acre of marsh, 7.14 acres of intermittent drainage, and 0.42 acre of pond, as well as 0.026 acre of non-jurisdictional ditch/canal.

**Table 3 – Proposed Folsom South Project Impact/Preserve Acreages**

<b>Jurisdictional Wetlands/Waters</b>				
<b>Type</b>	<b>Existing</b>	<b>Preserved</b>	<b>Project Impacted</b>	<b>Infrastructure Impacted</b>
Vernal Pool	0.38	0.20	0.13	0.05
Seasonal Wetland	1.19	0.20	0.60	0.39
Seasonal Wetland Swale	9.68	3.67	4.09	1.92
Seep	6.48	5.42	0.36	0.70
Marsh	0.06	0.06	0.00	0.00
Intermittent Drainage	9.67	7.14	0.97	1.56
Ditch	0.15	0.00	0.12	0.02
Pond	1.39	0.42	0.97	0.00
<b>Sub Total</b>	<b>29.00</b>	<b>17.11</b>	<b>7.25</b>	<b>4.65</b>

<b>Non-Jurisdictional Waters</b>				
Ditch/Canal	0.42	0.03	0.34	0.05
Pond	1.01	0.00	0.85	0.16
<b>Sub Total</b>	<b>1.43</b>	<b>0.03</b>	<b>1.19</b>	<b>0.21</b>
<b>TOTAL:</b>	<b>30.43</b>	<b>17.14</b>	<b>8.44</b>	<b>4.86</b>

Project implementation will result in direct impacts to 4.82 acres of potential habitat for federally-listed vernal pool species, including 0.13 acre of vernal pools, 0.60 acre of seasonal wetlands, and 4.09 acres of seasonal wetland swales. However, wet- and dry-season surveys for federally-listed invertebrates have resulted in negative findings. In addition, focused surveys conducted on the project site for special status plant species resulted in negative findings. Therefore, it is not anticipated that implementation of the Folsom South project would result in adverse effects to habitat for federally-listed vernal pool species. Similarly, survey results for portions of the greater FSOI project area have resulted in negative findings. Therefore, no indirect effects to habitat for federally-listed vernal pool species are anticipated.

#### **RELEVANT REPORTS INCLUDING ENVIRONMENTAL IMPACT STATEMENT, ENVIRONMENTAL ASSESSMENT, OR BIOLOGICAL ASSESSMENT PREPARED:**

Foothill Associates submitted a Wetland Delineation report to the Sacramento District office of the U.S. Army Corps of Engineers (Corps) on July 28, 2008. On September 10, 2008, Foothill Associates submitted a revised delineation based on changes requested by the Corps during field verification site visits.

A wet-season survey for federally-listed vernal pool branchiopods was conducted on the project site during the 2006 – 2007 wet season. A Dry-season survey was conducted on the project site in 2007. Two additional wet season surveys for federally-listed vernal pool branchiopods were conducted on the Mangini Property, within the Folsom South project site during 1998-1999 and the 1999-2000 wet seasons.

A Special-Status Plant Survey report was prepared for the project site in June 2006.

**ANY OTHER RELEVANT AVAILABLE INFORMATION ON THE ACTION, THE LISTED SPECIES, OR CRITICAL HABITAT:**

There is no other relevant available information applicable to the proposed project, the listed species, or the critical habitat.

**PROPOSED COMPENSATION:**

As described above, surveys for federally-listed species on the project site have resulted in negative findings. Therefore, implementation of the proposed Folsom South project would not result in adverse effects to habitat for federally-listed species. No compensation is proposed.

Clean Water Act  
Section 404 Individual Permit Application  
For  
**Folsom 138**  
Folsom, California

20 November 2008

Prepared For:  
**Folsom White Rock Investors, LLC**



**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

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# Clean Water Act Section 404 Individual Permit Application Folsom 138

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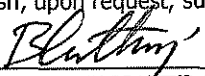
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<b>APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT (33 CFR 325)</b>	<b>OMB APPROVAL NO. 0710-003</b>		
<p>Public reporting burden for this collection of information is estimated to average 5 hours per response, including the time for reviewing instructions, Searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Service Directorate of Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302; and to the Office of Management and Budget, Paperwork Reduction Project (0710-003), Washington, DC 20503. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.</p>			
<p><b>PRIVACY ACT STATEMENT</b></p> <p>Authority: 33 USC 401, Section 10; 1413, Section 404. Principal Purpose: These laws require permits authorizing activities in, or affecting, navigable waters of the United States; the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Routine uses: Information provided, however, the permit application cannot be processed nor can a permit be issued.</p> <p>One set of the original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the proposed activity. An application that is not completed in full will be returned.</p>			
<p><b>(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)</b></p>			
1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETED
<p><b>(ITEMS BELOW TO BE FILLED BY APPLICANT)</b></p>			
<p>5. APPLICANT'S NAME</p> <p>Folsom White Rock Investors, LLC Attn. Brian Cutting</p>		<p>8. AUTHORIZED AGENT'S NAME &amp; TITLE (AN AGENT IS NOT REQUIRED)</p> <p>ECORP Consulting, Inc. Attn. Craig W. Hiatt</p>	
<p>6. APPLICANT'S ADDRESS</p> <p>111 Woodmere Drive, Suite 190 Folsom, California 95630</p>		<p>9. AGENT'S ADDRESS</p> <p>2525 Warren Drive Rocklin, CA 95677</p>	
<p>7. APPLICANT'S PHONE NUMBERS WITH AREA CODE</p> <p>a. Residence b. Business (916) 608-9600</p>		<p>10. AGENT'S PHONE NUMBERS WITH AREA CODE</p> <p>a. Residence b. Business (916) 782-9100</p>	
<p>11. <b>STATEMENT OF AUTHORIZATION</b></p> <p>I hereby authorize <u>ECORP Consulting, Inc.</u> to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.</p> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="width: 60%;">   <hr style="border: 0; border-top: 1px solid black;"/> <p style="text-align: center;">APPLICANT'S SIGNATURE</p> </div> <div style="width: 35%; text-align: right;"> <p><u>11/19/08</u></p> <hr style="border: 0; border-top: 1px solid black;"/> <p style="text-align: center;">DATE</p> </div> </div>			

**NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY**

12. PROJECT NAME OR TITLE (see instructions)	
Folsom 138	
13. NAME OF WATERBODY, IF KNOWN (if applicable) Unnamed vernal pools, seasonal wetlands, seasonal wetland swales, marsh, seeps, and ephemeral drainages tributary to Alder Creek.	14. PROJECT STREET ADDRESS (if applicable)
15. LOCATION OF PROJECT  COUNTY Sacramento STATE CA	
16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)  The site corresponds to a portion of Section 15 Township 9 North, Range 8 East of the "Clarksville, California" 7.5-minute quadrangle (U.S. Department of the Interior Geological Survey). The project is located at approximately 38° 38' 00" North and 121° 05' 30" West within the Lower American (#18020109) and the Upper Cosumnes (#18040013) watersheds.	
17. DIRECTIONS TO THE SITE  From Sacramento, take U.S. 50 east toward Placerville. Take the Prairie City Road exit and proceed south to White Rock Road. Take White Rock Road east for approximately 1.5 miles. The site is located on the north side of White Rock Road.	
18. NATURE OF ACTIVITY (Description of project, include all features)  The project proposes to develop approximately 138 acres of land in eastern Sacramento currently located within the Folsom Plan Area Specific Plan. The proposed project consists of the development of three (3) residential villages, and two neighborhood parks.	
19. PROJECT PURPOSE (Describe the reason or purpose of the project, see instructions)  The purpose of the Folsom Plan Area Specific Plan is: (1) to construct a large-scale, mixed-use master-planned community consisting of mixed-density residential uses, a regional shopping center, and other employment-generating uses; (2) to provide associated supporting infrastructure including on-site backbone infrastructure, schools, parks, an on-site trail system, off-site sewer improvements, off-site roadway improvements, off-site highway interchanges, an off-site water supply pipeline from the Freeport Regional Water Authority diversion facility to the site, and an off-site water treatment plant; and (3) to permanently protect 30 percent of the site as open space for the preservation of oak woodlands and sensitive habitat areas in manner consistent with Measure W.	

**USE BLOCKS 20-22 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED**

20. REASON(S) FOR DISCHARGE  Fill of waters of the U.S. to support grading and leveling of the land.
21. TYPE(S) OF MATERIAL BEING DISCHARGED AND THE AMOUNT OF EACH TYPE IN CUBIC YARDS  Material to be discharged will include soil graded and moved on-site. A total of approximately 2,500 cubic yards of soil will be discharged.

22. SURFACE AREA IN ACRES OF WETLANDS OR OTHER WATERS FILLED (see instructions)

The project will impact 1.462 acres of waters of the U.S., including wetlands.

23. IS ANY PORTION OF THE WORK ALREADY COMPLETE? YES ☐ NO ☒ IF YES, DESCRIBE THE WORK

24. ADDRESSES OF ADJOINING PROPERTY OWNERS, LESSEES, ETC. WHOSE PROPERTY ADJOINS THE WATERBODY (if more than can be entered her, please attach a supplemental list)

Please see comprehensive Specific Plan Area List included in comprehensive application.

25. LIST OF OTHER CERTIFICATIONS OR APPROVALS/DENIALS RECEIVED FROM OTHER FEDERAL, STATE, OR LOCAL AGENCIES FOR WORK DESCRIBED IN THIS APPLICATION

SEE ADDITIONAL INFORMATION SECTION

26. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

B. Blum  
SIGNATURE OF APPLICANT

11/19/08  
DATE

\_\_\_\_\_  
SIGNATURE OF AGENT

\_\_\_\_\_  
DATE

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious, or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

## ENG FORM 4345 - CONTINUATION SHEET FOLSOM 138

### Blocks 8 and 9:

#### *Additional Authorized Agent*

Project Engineer: Brian Allen  
Cooper Thorne & Associates  
3233 Monier Circle  
Rancho Cordova, California 95742  
(916) 638-0919

### Block 16:

#### *Other Location Descriptions*

The ±138-acre Folsom 138 project site consists of open grassland / pastureland located in mostly undeveloped lands northeast of the intersection of White Rock Road and Placerville Road in northeastern Sacramento County, California (Figure 1 – *Project Site and Vicinity Map*). The site corresponds to a portion of Section 15 Township 9 North, Range 8 East of the "Clarksville, California" 7.5-minute quadrangle (U.S. Department of the Interior Geological Survey). The project is located at approximately 38° 38' 00" North and 121° 05' 30" West within the Lower American (#18020109) and the Upper Cosumnes (#18040013) watersheds. Please refer to Figure 1. *Site and Vicinity*.

**Block 17:***Directions to Site*

From Sacramento, take U.S. 50 east toward Placerville. Take the Prairie City Road exit and proceed south to White Rock Road. Take White Rock Road east for approximately 1.5 miles. The site is located on the north side of White Rock Road.

**Block 18:***Nature of Activity/Project Description*

The project involves the development of a mixed-use community in Eastern Sacramento County, California. Project components include low, medium, and high-density residential uses spread over three distinct villages. Village One contains 131 residential lots. Villages Two and Three contain 107 and 77 residential lots, respectively. The project also includes three open space areas, which will preserve and protect wetland resources, as well as native vegetation such as oak trees. The project site contains approximately 2,533 acres of waters of the United States. The land plan for the proposed project shown in Figure 2.

**Block 19:***Project Purpose*

The purpose of the Folsom Plan Area Specific Plan is: (1) to construct a large-scale, mixed-use master-planned community consisting of mixed-density residential uses, a regional shopping center, and other employment-generating uses; (2) to provide associated supporting infrastructure including on-site backbone infrastructure, schools, parks, an on-site trail system, off-site sewer improvements, off-site roadway improvements, off-site highway interchanges, an off-site water supply pipeline from the Freeport Regional Water Authority diversion facility to the site, and an off-site water treatment plant; and (3) to permanently protect 30 percent of

the site as open space for the preservation of oak woodlands and sensitive habitat areas in manner consistent with Measure W.

## **Block 22:**

### *Surface Area of Waters to be Impacted*

Estimated impacts to potentially jurisdictional waters of the U.S. total 1.462 acres, consisting of vernal pools (0.018 acre), seasonal wetlands (0.708 acre), seasonal wetland swales (0.438 acre), seep (0.286 acre), and intermittent drainages (0.013 acre). The delineation is shown in Figure 3.

## **ADDITIONAL INFORMATION**

### **Regulatory Background**

Proposed project activities fall under the jurisdiction of several resource agencies. Pursuant to Section 404 of the Clean Water Act, construction activities in waters of the U.S. are subject to the approval of the U.S. Army Corps of Engineers (Corps). The applicant is requesting an Individual Permit from the Corps for the proposed project. Pursuant to Section 401 of the Clean Water Act, this permit will need to be certified by the Central Valley Regional Water Quality Control Board (CVRWQB). In addition, there is the potential for special-status species within the project area; therefore, consultation will be initiated with the U.S. Fish and Wildlife Service (USFWS). Following is a summary regarding the status of relevant regulatory requirements.

Supporting documents, such as wetland delineations, special-status species/rare plant surveys, determinate-level branchiopod surveys, tree surveys, cultural resource reports, etc, that have been prepared for the Folsom 138 project are not included in this submittal. These documents will be submitted at a later date in bundled-fashion and augmented as new information and/or reports become available.

## Federal Clean Water Act, Section 404

A total of 2.533 acres of potential jurisdictional waters of the U. S. were identified within the greater project area, including vernal pools, seasonal wetlands, seasonal wetland swales, marsh, seeps, and intermittent drainages. The applicant is requesting an individual permit for project impacts to 1.462 acre of waters of the U.S. Impacts to Waters of the U.S. are depicted graphically on Figure 4 – *Avoidance/Impact Areas*.

**Table 1 – Potential Jurisdictional Waters of the U.S.**

<b>Type</b>	<b>Acreage<sup>1</sup></b>
Vernal Pool	0.043
Seasonal Wetland	0.720
Seasonal Wetland Swale	1.183
Marsh	0.058
Seep	0.517
Intermittent Drainage	0.012
<b>TOTAL:</b>	<b>2.533</b>

<sup>1</sup> These acreages were verified by the Corps

**Table 2 – Proposed Impact Acreages\***

<b>Type</b>	<b>Existing</b>	<b>Avoided</b>	<b>Project Impact</b>	<b>Infrastructure Impacts**</b>
Vernal Pool	0.043	0.025	0.018	0.000
Seasonal Wetland	0.720	0.012	0.708	0.000
Seasonal Wetland Swale	1.183	0.745	0.438	0.000
Marsh	0.058	0.045	0.000	0.012
Seep	0.517	0.315	0.202	0.000
Intermittent Drainage	0.012	0.000	0.012	0.000
<b>TOTAL:</b>	<b>2.533</b>	<b>1.058</b>	<b>1.462</b>	<b>0.012</b>

\* Acreages may vary due to rounding.

\*\*The Backbone Infrastructure impacts are included as the delineation for this project included these areas.

## Federal Clean Water Act, Section 401

A request for Section 401 Water Quality Certification will be submitted to the Central Valley Regional Water Quality Control Board.

## **Federal Endangered Species Act**

Project implementation (i.e. fill of seasonal wetlands) represents potential impacts to the federally listed vernal pool fairy shrimp (*Branchinecta lynchi*, federal threatened) and vernal pool tadpole shrimp (*Lepidurus packardii*, federal endangered). To offset these impacts, mitigation will be carried out off-site. The Applicant plans to survey potential vernal pool branchiopod habitat for listed branchiopods during the 2008 – 2009 wet season. In the event that listed branchiopods are found during the surveys, the applicant will propose to permanently preserve and protect the appropriate acreage of vernal pool and seasonal wetland habitat to mitigate for the vernal pool/seasonal wetland impacts. The creation component of the mitigation plan will be carried out at an agency-approved mitigation bank or “turn-key” mitigation facility within the project’s service area.

No elderberry shrubs (*Sambucus* species) are known to be present on the property. Therefore, no impacts to the Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus* – federally threatened) are anticipated. Please refer to Attachment A for Information to Support Section 7 Consultation.

Special-status plant surveys will be conducted during 2009. Results of the special-status plant survey will be forwarded to the Corps and U.S. Fish and Wildlife Service (USFWS) upon completion.

## **National Environmental Policy Act (NEPA)**

The Corps, as federal Lead Agency, will prepare an Environmental Impact Statement (EIS) in accordance with NEPA guidelines.



### **California Fish and Game Code**

The proposed project will require authorization from the California Department of Fish and Game (CDFG) for impacts to the intermittent drainage as a result of project implementation. Project-specific construction will result in 0.012 acre of impact to a CDFG jurisdictional streambed (e.g., intermittent drainages). Therefore, pursuant to Section 1602 of the California Fish and Game Code, a request for a Lake and Streambed Alteration Agreement will be submitted to the California Department of Fish and Game.

### **California Environmental Quality Act (CEQA)**

The City of Folsom, as the State of California Lead Agency, will prepare an Environmental Impact Report (EIR) in accordance with CEQA guidelines.

### **National Historic Preservation Act, Section 106**

This Project must meet the provisions for the treatment of cultural resources contained within Section 106 of the National Historic Preservation Act (NHPA). The goal of Section 106 of the NHPA is to identify significant cultural resources and seek ways to avoid, minimize, or mitigate adverse effects on significant cultural resources that may result from federal undertakings, including federally permitted activities. Significant cultural resources must meet at least one of four criteria that define eligibility for listing on the National Register of Historic Places (NRHP) (36 CFR 60.4; 36 CFR Part 800).

Peak & Associates (1993, 1994) conducted a cultural resources survey of the Project property for the proposed White Rock Springs Golf Course, in compliance with the California Environmental Quality Act (CEQA). As a result of the study, three cultural resources were identified: CA-SAC-222 (PA-93-28), a prehistoric bedrock mortar site and the "white rock" resource; CA-SAC-672-H (P-34-9060H; PA-93-27), the remnants of the White Rock Springs Ranch; and CA-SAC-1484 (PA-93-29), an historic-era rock wall or fence. Peak & Associates (1994) evaluated these resources relative to the California Register of Historic Places (CRHR) under CEQA guidelines and concluded that sites

under CEQA guidelines and concluded that sites CA-SAC-222 and CA-SAC-672-H may be eligible for the CRHR. Site CA-SAC-1484 was evaluated as not eligible for the CRHR.

The previous research was not conducted in compliance with either Section 106 of the NHPA or the requirements of the Sacramento District of the Corps. Moreover, the study was conducted more than 14 years ago under obsolete protocol. Therefore, because a federal 404 permit is necessary for the Project, it will be necessary to implement the Section 106 process following the Corps of Engineers Section 106 guidelines. Accordingly, the property will need to be resurveyed by archaeologists who meet the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology. The previously identified cultural resources and any new resources identified either by the survey or as a result of any ground disturbing activity will need to be evaluated for eligibility for the NRHP. If any of the resources are determined eligible, mitigation would consist of either avoidance by preserving them in open space or by carrying out data recovery efforts prior to Project approval, implementation, or construction.

## **NOTIFICATION TO ADJACENT PARCEL OWNERS**

Please see the Specific Plan Area List provided with the Comprehensive Clean Water Act Section 404 Application for the Folsom Plan Area Specific Plan.

## **ALTERNATIVES ANALYSIS**

A detailed Alternatives Analysis will be prepared in accordance with Section 404(b)(1) of the Clean Water Act and submitted under separate cover.

## **MITIGATION PLAN**

The Applicant proposes to participate in a joint mitigation plan with the other participating property owners in the Folsom South Group. The applicants will mitigate unavoidable impacts to waters of the United States through a combination of the on-site enhancement, on-site creation or

creation or restoration, the purchase of credits for at Corps-approved mitigation facilities, and/or off-site wetland restoration or creation. This compensatory mitigation proposal will offset the loss of functions and values caused by unavoidable impacts to waters of the United States and will implement the Corps' Mitigation Rule. In addition, the mitigation will ensure that there is no net increase in floodwater surface elevations downstream of the Project.

## **LIST OF FIGURES**

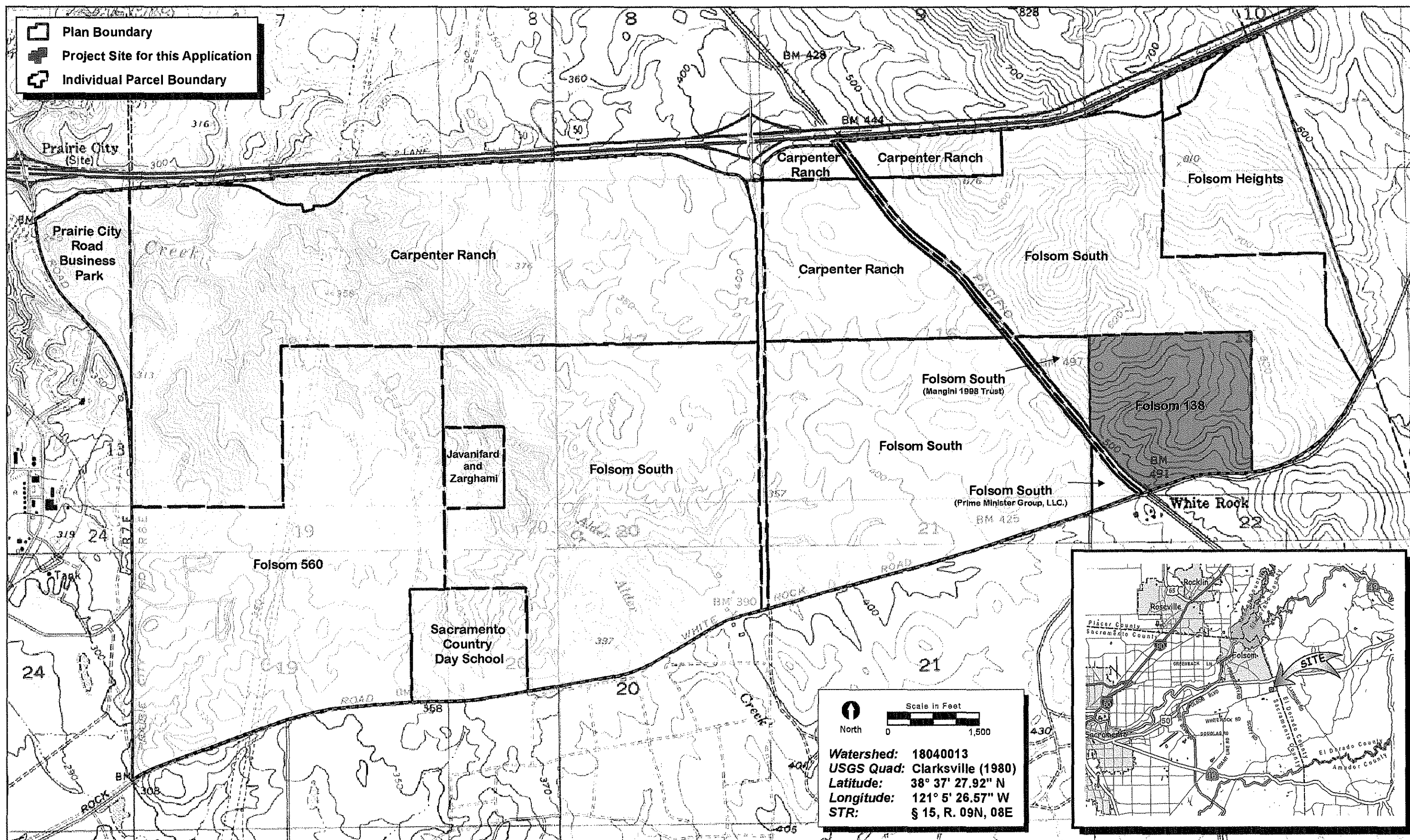
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Figure 1. Project Site and Vicinity

Figure 2. Proposed Land Use Plan

Figure 3. Wetland Delineation

Figure 4. Avoidance/Impact Areas

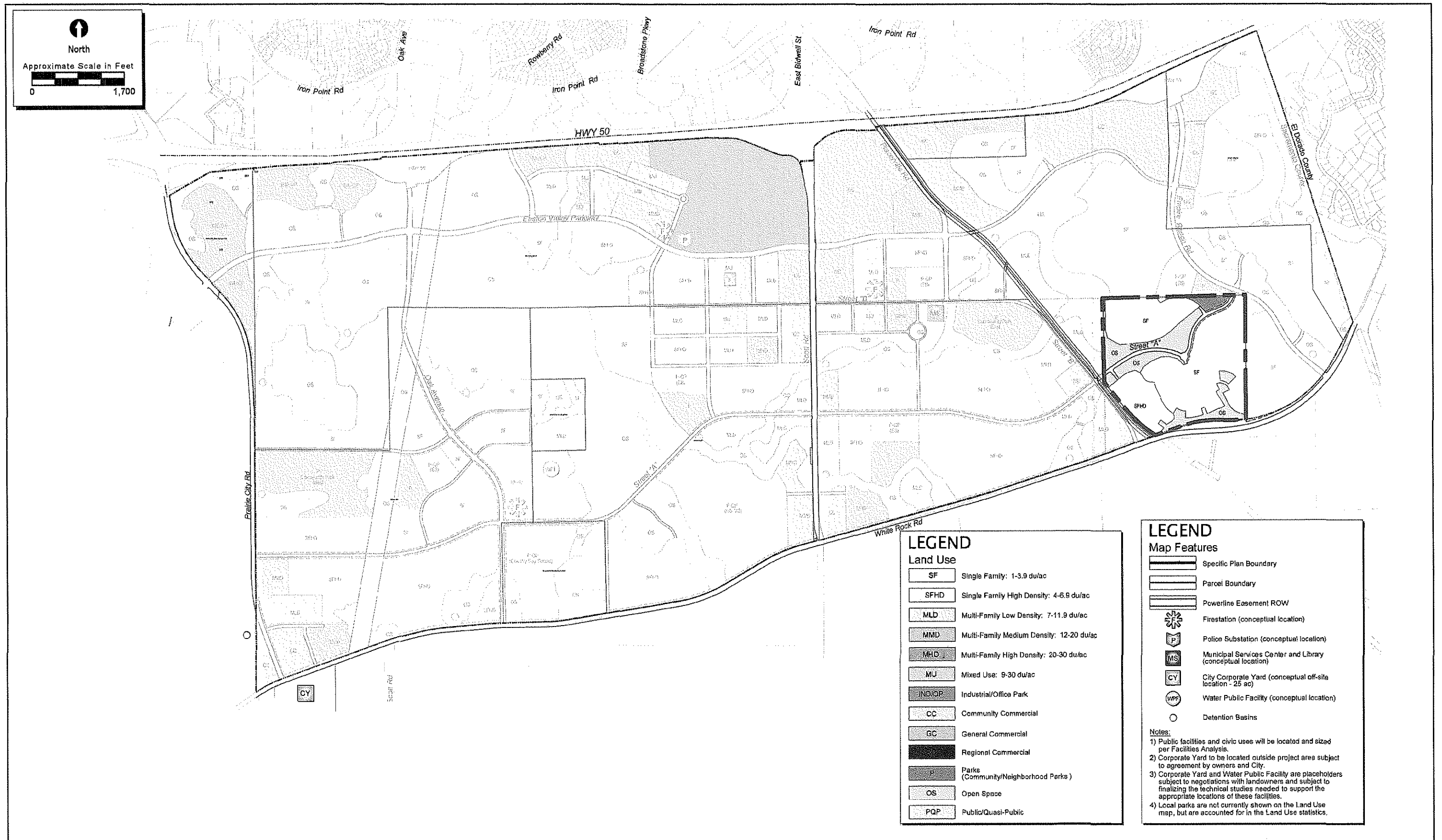


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**Figure 1. Project Site and Vicinity**

2005-429 Folsom Plan Area Specific Plan



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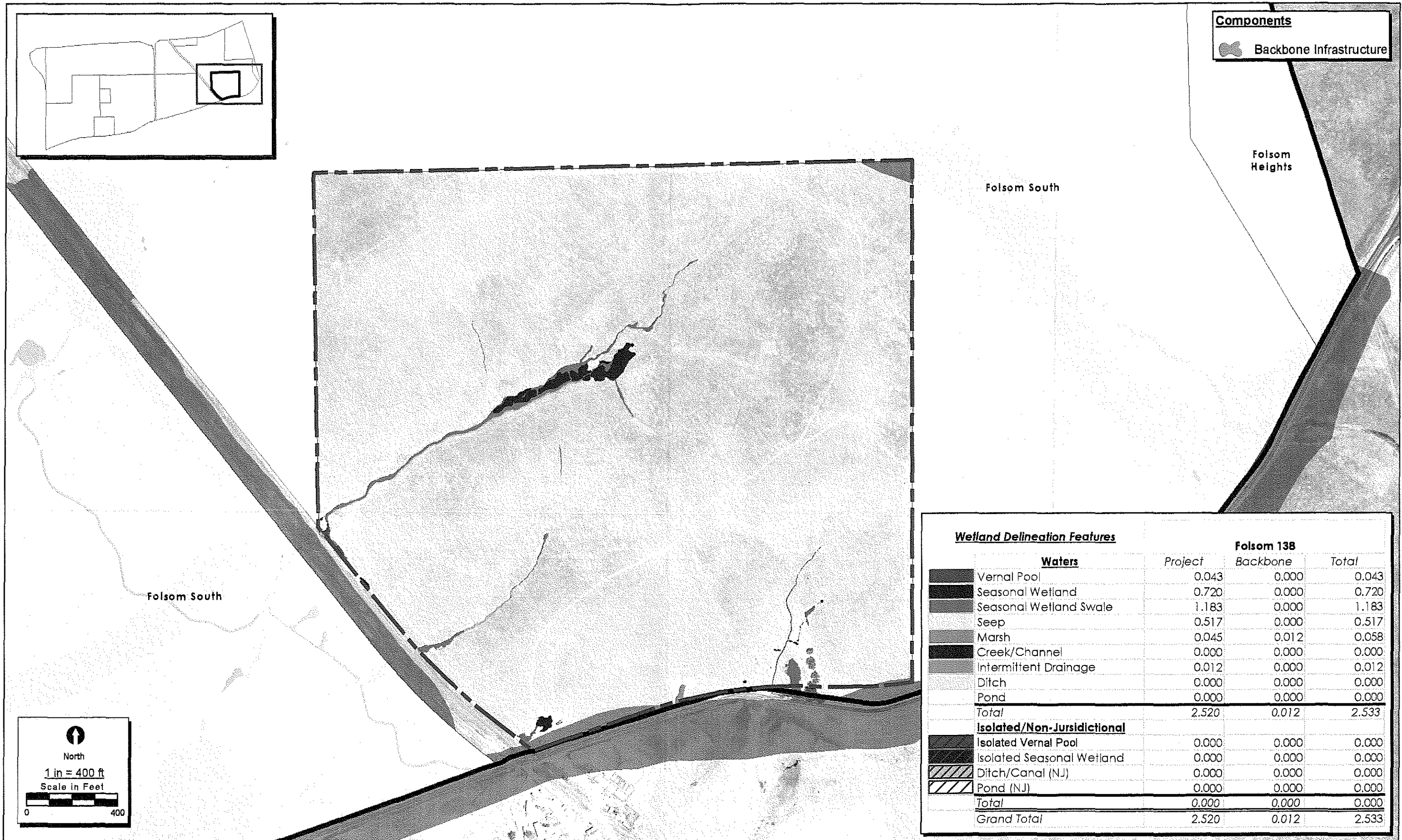
**Figure 2. Proposed Land Use**  
2005-429 Folsom Plan Area Specific Plan

**Mackay & Somps**  
CIVIL ENGINEERS, INC.  
CIVIL ENGINEERING/LAND PLANNING/LAND SURVEYING  
SACRAMENTO, CALIFORNIA  
Job Number: 7550-RW Date: 06/19/08

**rrm design group**  
creating environments people enjoy®

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

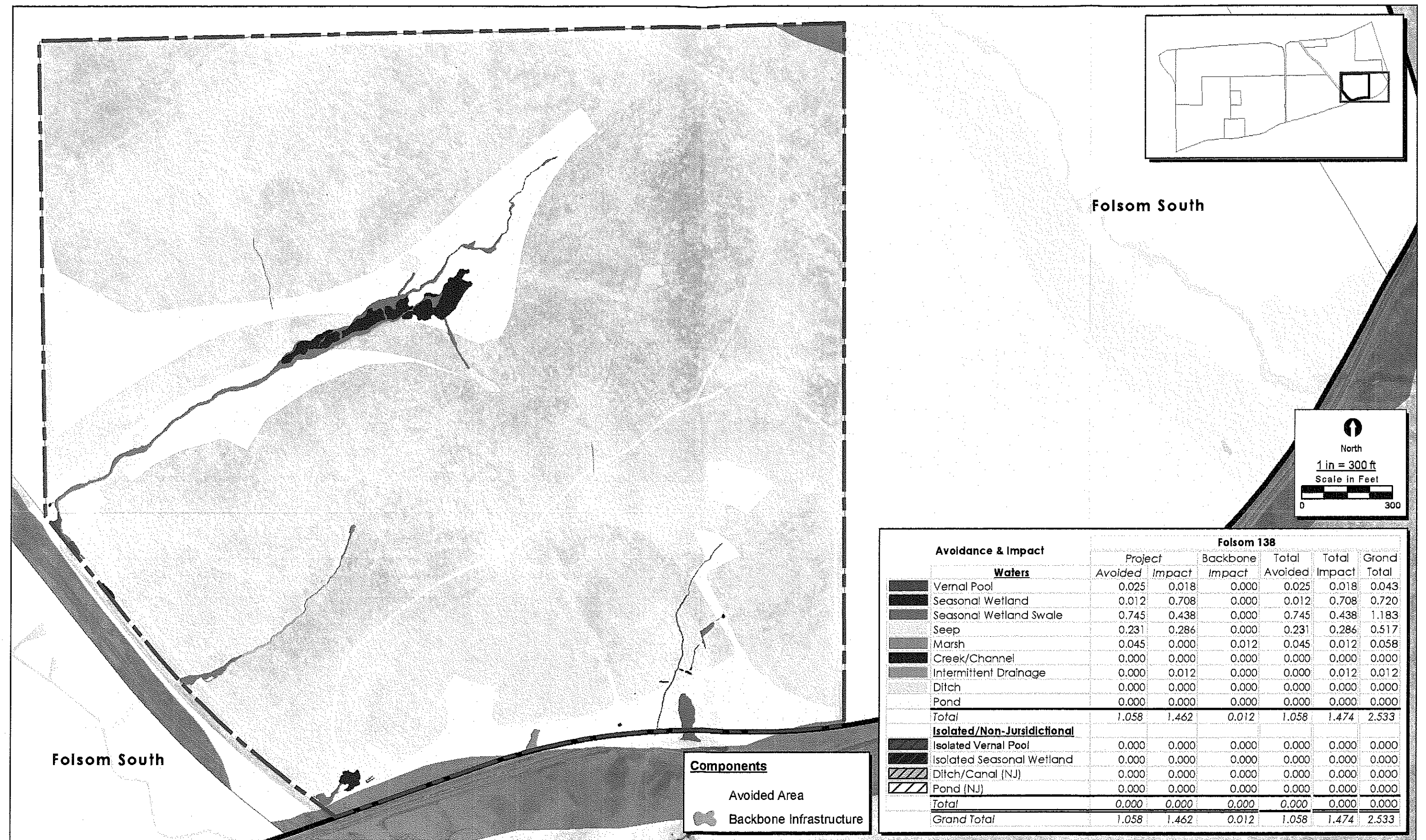




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**Figure 3. Wetland Delineation**  
2005-429 Folsom Plan Area Specific Plan



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**Figure 4. Avoidance/Impact Areas**  
2005-429 Folsom Plan Area Specific Plan



## **ATTACHMENT A**

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Information to Support Section 7 Consultation

**Proposed Folsom 138 Project  
Individual Permit  
Section 7 Consultation Information**

**A DESCRIPTION OF THE ACTION TO BE CONSIDERED:**

The ±138 acre Folsom 138 site is located south of Highway 50, west of Prairie City Road, and south of the City of Folsom in eastern Sacramento County, California. The site corresponds to an unsectioned portion of Township 9 North, Range 7 East (MDBM) of the "Folsom, California" 7.5-minute quadrangle (U.S. Department of the Interior, Geological Survey 1980). The approximate center of the site is located at 38° 38' 20" North and 121° 09' 09" West. The site is located within the Lower American Watershed (#18020111, U.S. Department of Interior, Geological Survey 1978).

The Folsom 138 project proposes to develop approximately 138 acres of land in eastern Sacramento currently located within the Folsom Plan Area Specific Plan (Folsom Plan Area). The proposed project consists of the development of 1.3 acres of Single Family development, 41.3 acres of Industrial/Office Park, and 3.1 acres of Right of Ways within the Folsom Sphere of Influence. In addition, the project proposes 25.3 acres of onsite Preserve/Open Space, which will protect 2.683 acres of waters of the U.S., as well as potential special-status species habitat. The plan provides for a mix of land uses and residential densities designed to serve the Highway 50 corridor.

**A DESCRIPTION OF THE SPECIFIC AREA THAT MAY BE AFFECTED BY THE ACTION:**

The Project is located in the Sacramento Valley, east of the Greater Sacramento Metropolitan Area. The Folsom 138 site consists of a relatively flat terrace with areas of steeper terrain occurring in association with drainage features to the west, north, and east. Alder Creek flows from east to west across the northern portion of the site. Elevations range from approximately 260 to 310 feet above mean sea level (MSL). The site is currently used for cattle grazing, as is

much of the surrounding land. Other land uses in the vicinity of the site include the Aerojet facility to the west, Highway 50 to the north, and ranches to the east and south.

Annual grassland and blue oak woodland are the predominant plant communities on-site. The annual grassland community is composed primarily of non-native annual grasses, including soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), medusahead grass (*Taeniatherum caput-medusae*), slender wild oat (*Avena barbata*), and little quaking grass (*Briza minor*). Other herbaceous species observed in this community include sticky tarweed (*Holocarpha virgata*), yellow star-thistle (*Centaurea solstitialis*), rose clover (*Trifolium hirtum*), shamrock clover (*Trifolium dubium*), Fremont's tidy-tips (*Layia fremontii*), Valley tassels (*Castilleja attenuata*), and hyacinth brodiaea (*Triteleia hyacinthina*).

Blue oak woodland occurs in the northern portion of the site. Blue oaks (*Quercus douglasii*) represent the dominant tree species in this community. Species observed in the understory were generally similar to those found in the annual grassland.

According to the *Soil Survey of Sacramento County, California* (U.S. Department of Agriculture, Soil Conservation Service 1993), seven soil units, or types, have been mapped within the site. These are: (160) Hicksville sandy clay loam, 0 to 2 percent slopes, occasionally flooded; (192) Red Bluff loam, 2 to 5 percent slopes; (196) Red Bluff-Xerorthents-dredge tailings complex, 2 to 50 percent slopes; (198) Redding gravelly loam, 0 to 8 percent slopes; (235) Vleck gravelly loam, 2 to 15 percent slopes; (237) Whiterock loam, 3 to 30 percent slopes; and (245) Xerorthents, dredge tailings, 2 to 50 percent slopes.

## **A DESCRIPTION OF ANY LISTED SPECIES OR CRITICAL HABITAT THAT MAY BE AFFECTED BY THIS ACTION:**

### **Vernal Pool Invertebrates**

Project implementation (i.e. fill of vernal pool, seasonal wetlands, and seasonal wetland swales) represents potential impacts to the federally listed vernal pool fairy shrimp (*Branchinecta lynchi*,

federal threatened) and vernal pool tadpole shrimp (*Lepidurus packardii*, federal endangered). The Applicant proposes to survey potential habitat for listed vernal pool branchiopods during the 2008-2009 wet season. In the event that listed vernal pool branchiopods are found during the pending wet season surveys, the Applicant requests that the project be appended to the Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans within the Jurisdiction of the Sacramento Field Office, California (USFWS 1-1-96-F-1) as the project will impact less than one (1) acre of potential vernal pool branchiopod habitat.

### **Valley Elderberry Longhorn Beetle**

No elderberry shrubs (*Sambucus* species) are known to be present on the property. Elderberry shrubs are the exclusive host plant to the Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus* – VELB). VELB is listed as “threatened” on the Federal Endangered Species Act.

### **Special-Status Plant Species**

Special-status plant surveys were conducted during April and June 2008. No special-status plant species were observed during the 2008 surveys.

### **Jurisdictional Delineation**

Table 1 lists potential jurisdictional waters of the U.S. found on-site. A total of 2.533 acres of potential waters of the U.S have been mapped on the site. These include 0.043 acre of vernal pool, 0.720 acre of seasonal wetland, 1.183 acres of seasonal wetland swale, 0.517 acre of seep, 0.058 acre of marsh, and 0.012 acre of intermittent drainage).

**Table 1 – Potential Corps Jurisdictional Waters of the U.S.**

<b>Type</b>	<b>Acreage</b>
Vernal pool	0.043
Seasonal wetland	0.720
Seasonal wetland Swale	1.183
Seep	0.517
Marsh	0.058
Intermittent Drainage	0.012
<b>TOTAL:</b>	<b>2.533</b>

**A DESCRIPTION OF THE MANNER IN WHICH THE ACTION MAY AFFECT ANY LISTED SPECIES OR CRITICAL HABITAT AND AN ANALYSIS OF ANY CUMULATIVE IMPACTS:**

Project implementation (i.e. fill of vernal pools, seasonal wetlands, and seasonal wetland swales totaling 1.164 acres) represents potential impacts to the federally listed vernal pool fairy shrimp (*Branchinecta lynchi*, federal threatened) and vernal pool tadpole shrimp (*Lepidurus packardii*, federal endangered). The Applicant proposes to survey potential habitat for listed vernal pool branchiopods during the 2009 wet season. In the event that listed vernal pool branchiopods are found during the pending wet season surveys, the Applicant requests that the project be appended to the Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans within the Jurisdiction of the Sacramento Field Office, California (USFWS 1-1-96-F-1).

**Table 2 – Proposed Impact Acreages**

<b>Type</b>	<b>Existing</b>	<b>Avoided</b>	<b>Project Impacts</b>	<b>Infrastructure Impacts*</b>
Vernal Pool	0.043	0.025	0.018	0.000
Seasonal Wetland	0.720	0.012	0.708	0.000
Seasonal Wetland Swale	1.183	0.745	0.438	0.000
<b>TOTAL:</b>	<b>1.946</b>	<b>0.782</b>	<b>1.164</b>	<b>0.000</b>

\*The Backbone Infrastructure and Interchange Impacts are included as the delineation for this project included these areas.

**RELEVANT REPORTS INCLUDING ENVIRONMENTAL IMPACT STATEMENT,  
ENVIRONMENTAL ASSESSMENT, OR BIOLOGICAL ASSESSMENT PREPARED:**

ECORP Consulting, Inc. submitted a Wetland Delineation report to the Sacramento District office of the U.S. Army Corps of Engineers (Corps) on January 10, 2006 and received verification on July 11, 2008 (ID#20060538).

A Special-Status Plant Survey report was prepared for the project site during July 2007.

**ANY OTHER RELEVANT AVAILABLE INFORMATION ON THE ACTION, THE  
LISTED SPECIES, OR CRITICAL HABITAT:**

There is no other relevant available information applicable to the proposed project, the listed species, or the critical habitat.

**PROPOSED MITIGATION:**

Project implementation (i.e. fill of seasonal wetlands) represents potential impacts to the federally listed vernal pool fairy shrimp (*Branchinecta lynchi*, federal threatened) and vernal pool tadpole shrimp (*Lepidurus packardii*, federal endangered). The Applicant proposes to survey potential habitat for listed vernal pool branchiopods during the 2008-2009 wet season. In the event that listed vernal pool branchiopods are found during the pending wet season surveys, the Applicant requests that the project be appended to the Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans within the Jurisdiction of the Sacramento Field Office, California (USFWS 1-1-96-F-1) as the project-related impacts to potential vernal pool habitat will be less than one (1) acre.

Section 404 Individual Permit

For

**Carpenter Ranch**

Folsom, California

20 November 2008

Prepared For:

**FPA Land Development**

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## Section 404 Individual Permit

### Carpenter Ranch

#### APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT Form 4345

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**APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT (33 CFR 325)****OMB APPROVAL NO. 0710-003**

Public reporting burden for this collection of information is estimated to average 5 hours per response, including the time for reviewing instructions, Searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Service Directorate of Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302; and to the Office of Management and Budget, Paperwork Reduction Project (0710-003), Washington, DC 20503. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

**PRIVACY ACT STATEMENT**

Authority: 33 USC 401, Section 10; 1413, Section 404. Principal Purpose: These laws require permits authorizing activities in, or affecting, navigable waters of the United States; the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Routine uses: Information provided, however, the permit application cannot be processed nor can a permit be issued.

One set of the original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the proposed activity. An application that is not completed in full will be returned.

**(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)**

1. APPLICATION NO. 200600984	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETED
---------------------------------	----------------------	------------------	-------------------------------

**(ITEMS BELOW TO BE FILLED BY APPLICANT)**

5. APPLICANT'S NAME  Tim Kihm, President, FPA Land Development	8. AUTHORIZED AGENT'S NAME & TITLE (AN AGENT IS NOT REQUIRED)  Ginger Fodge, Principal, Gibson & Skordal, LLC
6. APPLICANT'S ADDRESS  4665 MacArthur Court, Suite 200 Newport Beach, California 92660	9. AGENT'S ADDRESS  2277 Fair Oaks Blvd. Suite 105 Sacramento, California 95825
7. APPLICANT'S PHONE NUMBERS WITH AREA CODE  a. Residence b. Business (949) 399-2505 Fax (949) 399-2535	10. AGENT'S PHONE NUMBERS WITH AREA CODE  a. Residence b. Business (916) 569-1830 Fax (916) 569-1835

11. **STATEMENT OF AUTHORIZATION**  
I hereby authorize Gibson & Skordal, LLC to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.

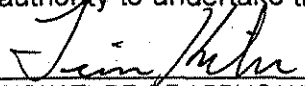
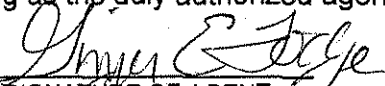
  
APPLICANT'S SIGNATURE

11/12/2008  
DATE

**NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY**

12. PROJECT NAME OR TITLE (see instructions)  Carpenter Ranch	
13. NAME OF WATERBODY, IF KNOWN (if applicable)  Alder Creek, tributaries, wetlands	14. PROJECT STREET ADDRESS (if applicable)  N/A
15. LOCATION OF PROJECT  COUNTY Sacramento STATE CA	
16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions) South of Highway 50, east and west of Scott Road	
17. DIRECTIONS TO THE SITE  See attached sheet.	

18. NATURE OF ACTIVITY (Description of project, include all features)		
See attached sheet		
19. PROJECT PURPOSE (Describe the reason or purpose of the project, see instructions)		
See attached sheet		
<b>USE BLOCKS 20-22 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED</b>		
20. REASON(S) FOR DISCHARGE		
Fill for site grading for residential/commercial development and infrastructure		
21. TYPE(S) OF MATERIAL BEING DISCHARGED AND THE AMOUNT OF EACH TYPE IN CUBIC YARDS		
Approximately 59,055 cubic yards of clean fill material graded on site.		
22. SURFACE AREA IN ACRES OF WETLANDS OR OTHER WATERS FILLED (see instructions)		
See attached sheet		
23. IS ANY PORTION OF THE WORK ALREADY COMPLETE? YES <input type="radio"/> NO <input checked="" type="radio"/> IF YES, DESCRIBE THE WORK		
24. ADDRESSES OF ADJOINING PROPERTY OWNERS, LESSEES, ETC. WHOSE PROPERTY ADJOINS THE WATERBODY (if more than can be entered her, please attach a supplemental list)		
See attached sheet		
25. LIST OF OTHER CERTIFICATIONS OR APPROVALS/DENIALS RECEIVED FROM OTHER FEDERAL, STATE, OR LOCAL AGENCIES FOR WORK DESCRIBED IN THIS APPLICATION		
City of Folsom	EIR/Tentative Map	In process
Regional Water Quality Control Board	401 Certification	To be applied for concurrently
CA Department of Fish and Game	1602 Agreement	To be applied for concurrently
*Would include but is not restricted to zoning, building and flood plain permits.		

26. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.			
 SIGNATURE OF APPLICANT	<u>11/12/2008</u> DATE	 SIGNATURE OF AGENT	<u>11-12-08</u> DATE
<p>The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.</p> <p>18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious, or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.</p>			

**ENG FORM 4345 - CONTINUATION SHEET CARPENTER RANCH - #200600984**

**Blocks 8 and 9:**

*Additional Authorized Agent*

*Project engineer:* Jim Ray  
*Company Name:* MacKay & Somps Civil Engineers, Inc.  
*Company Address:* 1771 Tribute Road Suite E  
*City, State Zip:* Sacramento, California 95815  
*Contact:* (916) 929-6092, Fax (916) 923-5625

**Block 16:**

*Other Location Descriptions*

The project site is located in Sections 9, 16, 17, and 18, Township 9 North, Range 8 East, MDB&M, Sacramento County, California. The parcel can be found at UTM 661,695.75 M E; 4,278,082.56 M N (Zone 10) and is portrayed on the Clarksville and Folsom, California 7.5 Minute Series Quadrangles. Figure 1 is a site and vicinity map.

**Block 17:**

*Directions to Site*

The project area is approximately 1,024 acres in size and is located immediately south of Highway 50 between Prairie City Road, Scott Road and Placerville Road in eastern Sacramento County, California.

From downtown Sacramento drive east on US Hwy 50 and exit at the East Bidwell Street/Scott Road exit. Drive south on Scott Road for approximately two hundred yards. The project site is located directly to the east and west of Scott Road.

## **Block 18:**

### *Nature of Activity/Project Description*

The project will include both single and multi-family residential housing, commercial and office development, parks, open space, and public uses, including a school site. The project is currently under review by the City of Folsom; therefore, modifications to the size and/or configuration of the specific features described below may be made before final project approval. The project site contains approximately 27.7 acres of waters of the United States, of which approximately 13.8 acres would be avoided and preserved in perpetuity. Figure 2 shows the proposed site plan.

### Housing

The project proposes construction of approximately 827 single-family detached units on approximately 218.6 acres, and 902 multi-family units totaling approximately 61.3 acres. In addition, the site contains two areas for Mixed Use development consisting of 35.2 acres which will include 405 additional higher density residential units as well as a mixture of commercial, service, office and civic uses. Multi-family housing will be located in close proximity to commercial centers and key arterials or intersections where public transit services will be available.

### Commercial and Office

Commercial and Office development is proposed for several areas within the project area totaling approximately 276.5 acres. A large regional commercial mall is proposed for the southwest corner of the intersection of Highway 50 and Scott Road, which would contain major regional retail tenants and supporting retail uses and restaurants. This mall would draw customers from a regional service area extending beyond the City of Folsom. Adjacent to the west end of the mall site is a Mixed Use area which will contain a mix of uses such as commercial, office, entertainment, restaurants and housing. Four other major commercial centers that include large discount

centers that include large discount retailers, grocery and drug stores and similar land uses which rely on a broad market area for their economic viability would be located along major roadways. Four other parcels are designated for Industrial/Office Park use. They will contain uses that include business parks, offices and light industrial space.

### Town Center

South of the Easton Valley Parkway and the Regional Mall Site, a 15-acre area designated Mixed Use is proposed for a mix of uses consisting of high density housing, support neighborhood scale commercial uses, civic uses, and a community gathering place.

### Open Space

The project proposes to preserve over 347 acres of open space to set aside areas for natural resource protection. Contained within the open space preserves are large expanses of oak trees, the drainage corridor for the main branch of Alder Creek and its southern tributary, and other sensitive natural resource features. Within the open space area passive recreational use is proposed including a paved trail system, small picnic areas, and rest areas. Recreational features will be placed in areas which will avoid impact to sensitive resources. Within the open space, storm water will be treated with a variety of best management practices prior to discharging to the existing drainage corridors.

### Schools

Approximately 10 acres of the project area will be dedicated for an elementary school site.

### Parks

Three parks are indicated on the plan to be constructed on approximately 12.5 acres. In addition, approximately 14.4 acres of additional parks will be sited within the site and the Specific Plan area to satisfy the demand for recreational facilities. Numerous landscape corridors will be constructed

will be constructed along major and collector roadways to provide pedestrian and bicycle connection throughout the plan.

#### **Block 19:**

##### *Project Purpose*

The purpose of the Folsom Sphere if Influence project is: 1) to construct a large-scale, mixed-use master-planned community consisting of mixed-density residential uses, a regional shopping center, and other employment-generating uses; 2) to provide associated supporting infrastructure including on-site backbone infrastructure, schools, parks, an on-site trail system, off-site sewer improvements, off-site roadway improvements, off-site highway interchanges, and off-site water treatment plant; and 3) to permanently protect 30 percent of the site as open space for the preservation of oak woodlands and sensitive habitat areas in a manner consistent with Measure W.

#### **Block 22:**

##### **Surface Area of Waters to be Impacted**

Estimated impacts to jurisdictional waters of the U.S. and non-jurisdictional wetlands total 8.817 acres, consisting of 0.799 acre of vernal pools, 0.008 acre of depressional seasonal wetlands, 4.679 acres of seasonal wetland swale, 1.235 acres of seep, 0.014 acre of marsh, 1.239 acres of drainage channel, and 0.843 acre of ditch. The verified wetland delineation is shown in Figure 3.

#### **ADDITIONAL INFORMATION**

##### **Regulatory Background**

Proposed project activities fall under the jurisdiction of several resource agencies. Pursuant to Section 404 of the Clean Water Act, construction activities which involve the placement of fill in waters of the U.S. are subject to the approval of the U.S. Army Corps of Engineers (Corps). The

applicant is requesting an Individual Permit from the Corps for the proposed project. Pursuant to Section 401 of the Clean Water Act, this permit will need to be certified by the Central Valley Regional Water Quality Control Board (CVRWQB). In addition, there is the potential for special-status species within the project area; therefore, consultation will be initiated with the U.S. Fish and Wildlife Service (USFWS). Following is a summary regarding the status of relevant regulatory requirements.

Supporting documents, such as wetland delineations, special-status species/rare plant surveys, determinate-level branchiopod surveys, tree surveys, cultural resource reports, etc, that have been prepared for the Carpenter Ranch Project are not included in this submittal. These documents will be submitted at a later date in bundled-fashion and augmented as new information and/or reports become available.

#### **Federal Clean Water Act, Section 404**

A total of 27.7465 acres of jurisdictional waters of the U. S. were identified within the greater project area, including vernal pools, depressional seasonal wetlands, seasonal wetland swales, seeps, emergent marsh, intermittent/ephemeral drainage, and ditches. An additional 0.0191 acre of vernal pools on the site was determined to be isolated and non-jurisdictional. Table 1 provides a summary of the types of wetlands and other waters identified on the project site.

The applicant is requesting authorization through an individual permit for project impacts to 8.817 acres of waters of the U.S. and non-jurisdictional wetlands. Table 2 provides a summary of the proposed project impacts. Figure 4 shows the proposed impact and preserve areas.



**Table 1 – Jurisdictional and Non-Jurisdictional Wetlands and Waters**

<b>Type</b>	<b>Acreage</b>
Vernal pool	1.1416
Seasonal wetland	0.1211
Seasonal wetland Swale	8.9226
Seep	1.4948
Marsh	0.0917
Creek/Channel	14.5072
Ditch	1.4674
Non-Jurisdictional Vernal Pool	0.0191
<b>TOTAL:</b>	<b>27.7656</b>

**Table 2 – Proposed Impact Acreages**

<b>Type</b>	<b>Existing</b>	<b>Preserved</b>	<b>Impacted</b>
Vernal pool	1.1416	0.070	0.790
Seasonal wetland	0.1211	0.112	0.008
Seasonal wetland Swale	8.9226	1.409	4.679
Seep	1.4948	0.263	1.235
Marsh	0.0917	0.078	0.014
Creek/Channel	14.5072	11.546	1.239
Ditch	1.4674	0.290	0.843
Non-Jurisdictional Vernal Pool	0.0191	0.010	0.009
<b>TOTAL:</b>	<b>27.7656</b>	<b>13.778</b>	<b>8.817</b>

### *Vernal Pools*

A total of 139 vernal pools ranging from 13 to more than 12,000 square feet in size were mapped on the project site. Vernal pools are wetlands that sustain long-term ponding and/or saturated soil conditions during and following periods of heavy precipitation in the winter and early spring. Additional water is provided by surface sheet flow and subsurface discharge onto the perched water-tables or impermeable surfaces which underlie vernal pools. Plants surveyed within vernal pools included coyote thistle (*Eryngium yaseyi*), rabbits foot grass (*Polypogon monspeliensis*), perennial rye, manna grass (*Glyceria sp.*), dove weed (*Eremocarpus setigerus*), and slender popcorn flower (*Plagiobothrys stipitatus*).

### *Depressional Seasonal Wetlands*

Eleven depressional seasonal wetlands ranging in size from 30 to more than 3,000 square feet were mapped on the project site. These features were differentiated from vernal pools by their lack of endemic vernal pool plant communities. Commonly observed species included toad rush (*Juncus bufonius*), rabbits foot grass, perennial rye grass, tarweed (*Holocarpha virgata*), and coyote thistle.

### *Seeps*

Twelve seeps were identified on the site ranging in size from approximately 310 to 38,005 square feet. Seeps are most often associated with sloping terrain with water that is derived primarily from groundwater discharge in the winter and spring. Dominant plants observed include barnyard grass (*Echinochloa crusgalli*), Bermuda grass (*Cynodon dactylon*), cocklebur (*Xanthium strumarium*), dallis grass (*Paspalum dilatatum*), rice cutgrass (*Leersia oryzoides*), dense-flower spike primrose (*Boisduvalia densiflora*), and perennial rye.

### *Wet Swales*

A total of 56 wet swales were mapped on the project site that ranged from less than 80 square feet to over 100,000 square feet. Wet swales typically occur in linear sloping drainages that lack a defined bed and bank, and support a wetland plant community. Plants observed during surveys included penny-royal (*Mentha pulegium*), cocklebur, rice cutgrass, dense-flower spike primrose, and dallis grass.

### *Emergent Marsh*

One emergent marsh totaling 0.09 acre was identified on the project site. The plant community in the marsh was dominated by cattails (*Typha sp.*) and hardstem bulrush (*Scirpus acutus*), and several inches of standing surface water were present during field surveys.

### *Channels Including Alder Creek and Associated Riparian Wetlands*

Thirty-six channels including Alder Creek and associated riparian wetlands were mapped on the project site. These features ranged from 31 to more than 400,000 square feet in size and displayed a distinct bed and bank and an ordinary high water mark characterized by shelving and the destruction of terrestrial vegetation. Plants observed in channels included dallis grass, cattails, joint grass (*Paspalum distichum*), and Olney's rush (*Scirpus americanus*). Several feet of water were present in the western reaches of Alder Creek, but the majority of the other channels were dry at the time of field surveys conducted in August 2005.

### *Ditches*

Fourteen ditches ranging from 40 to more than 23,000 square feet were identified on the project site. These features follow topographic contour lines and may represent relics from historic hydraulic gold mining operations. The ditches typically included an excavated channel enclosed by levees or berms created with sidecast material. Observed species included rabbit's foot grass, curly dock, and yellow monkey flower (*Mimulus guttatus*).

### **Federal Clean Water Act, Section 401**

A request for Section 401 Water Quality Certification will be submitted to the Central Valley Regional Water Quality Control Board.

### **Federal Endangered Species Act**

Federally-listed species that could potentially be affected on the project site include the threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus* – VELB), and species associated with vernal pools including the threatened vernal pool fairy shrimp (*Branchinecta lynchi*), the endangered vernal pool tadpole shrimp (*Lepidurus packardii*), the threatened slender orcutt grass (*Orcuttia tenuis*), and the threatened Sacramento orcutt grass (*Orcuttia viscida*). Additional information regarding potential impacts to federally-listed species is provided in Attachment A.

One elderberry shrub (*Sambucus* species) is located on the project site and would be impacted by project implementation. Elderberry shrubs are the exclusive host plant to the Valley elderberry longhorn beetle. VELB is listed as "threatened" under the Federal Endangered Species Act. The shrub is located along an unnamed intermittent drainage and contains a single live stem with no exit holes. Impact to this shrub will be mitigated in accordance with U.S. Fish and Wildlife Service guidelines.

The vernal pools, depressional seasonal wetlands, and wetland swales on the project site are potential habitat for the vernal pool fairy shrimp and vernal pool tadpole shrimp. These habitats total 10.2044 acres, including the 0.0191 acre of non-jurisdictional vernal pools. However, wet season surveys conducted during the rainy seasons of 2006-2007 and 2007-2008 did not identify any of the listed invertebrate species in the sampled wetlands. Because the 2006-2007 rainy season was a below normal year, the U.S. Fish and Wildlife Service rejected the results of that year's survey. Another wet season survey will be conducted during the 2008-2009 rainy season to confirm the negative results. It is anticipated that the results will be negative, and that the project will not affect the federally-listed vernal pool crustaceans.

No special status plants were observed on the project site during field surveys. Focused surveys will be conducted in spring 2009 to confirm the absence of federally-listed plants.

### **National Environmental Policy Act (NEPA)**

The Corps, as Lead Agency, is preparing an Environmental Impact Statement (EIS) in accordance with NEPA guidelines.

### **California Fish and Game Code**

The proposed project will require authorization from the California Department of Fish and Game (CDFG) for impacts to the drainage channels as a result of project implementation and potentially for mitigation activities (creation of wetlands adjacent to Alder Creek). Project-specific construction will result in 1.239 acres of impact to a CDFG jurisdictional streambed (i.e., ephemeral and intermittent drainages). Therefore, pursuant to Section 1602 of the California Fish and Game

Fish and Game Code, a request for a Lake and Streambed Alteration Agreement will be submitted to the California Department of Fish and Game concurrent with this application.

### **California Environmental Quality Act**

The City of Folsom is preparing an Environmental Impact Report (EIR) for the proposed project.

### **National Historic Preservation Act, Section 106**

This Project must meet the provisions for the treatment of cultural resources contained within Section 106 of the National Historic Preservation Act (NHPA). The goal of Section 106 of the NHPA is to identify significant cultural resources and seek ways to avoid, minimize, or mitigate adverse effects on significant cultural resources that may result from federal undertakings, including federally permitted activities. Significant cultural resources must meet at least one of four criteria that define eligibility for listing on the National Register of Historic Places (NRHP) (36 CFR 60.4; 36 CFR Part 800).

Ric Windmiller, R.P.A. (2006) conducted a cultural resources inventory of the Project Area, in compliance with the California Environmental Quality Act (CEQA). As a result of that study, 129 historic sites were recorded. Mr. Windmiller concluded that 52 of the resources appear to meet the eligibility criteria for inclusion in the California Register of Historical Resources (CRHR).

The previous research was not conducted in compliance with either Section 106 of the NHPA or the requirements of the Sacramento District of the Corps. Therefore, because a federal 404 permit is necessary for the Project, it will be necessary to implement the Section 106 process following the Corps of Engineers Section 106 guidelines. Accordingly, the resources identified in the Project Area must be evaluated for significance using the NRHP eligibility criteria by archaeologists who meet the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology. If any of the resources are determined eligible, mitigation would consist of either avoidance by preserving them in open space or by carrying out data recovery efforts prior to Project approval, implementation, or construction.

## **ADJACENT LAND USE**

Surrounding land uses include rural residences, developed and undeveloped roadways, and pastureland. Lands north of Highway 50 include a variety of residential and commercial uses.

## **NOTIFICATION TO ADJACENT PARCEL OWNERS**

Please see the Specific Plan Area List provided with the Comprehensive Clean Water Act Section 404 Application for the Folsom Plan Area Specific Plan.

## **ALTERNATIVES ANALYSIS**

A detailed Alternatives Analysis for the Folsom Sphere of Influence Specific Plan Area will be prepared in accordance with Section 404(b)(1) of the Clean Water Act and submitted under separate cover.

## **MITIGATION PLAN**

The Applicant proposes to participate in a joint mitigation plan with the other participating property owners in the Folsom South Group. The applicants will mitigate unavoidable impacts to waters of the United States through a combination of the on-site enhancement, on-site creation or restoration, the purchase of credits for at Corps-approved mitigation facilities, and/or off-site wetland restoration or creation. This compensatory mitigation proposal will offset the loss of functions and values caused by unavoidable impacts to waters of the United States and will implement the Corps' Mitigation Rule. In addition, the mitigation will ensure that there is no net increase in floodwater surface elevations downstream of the Project.

## **LIST OF FIGURES**

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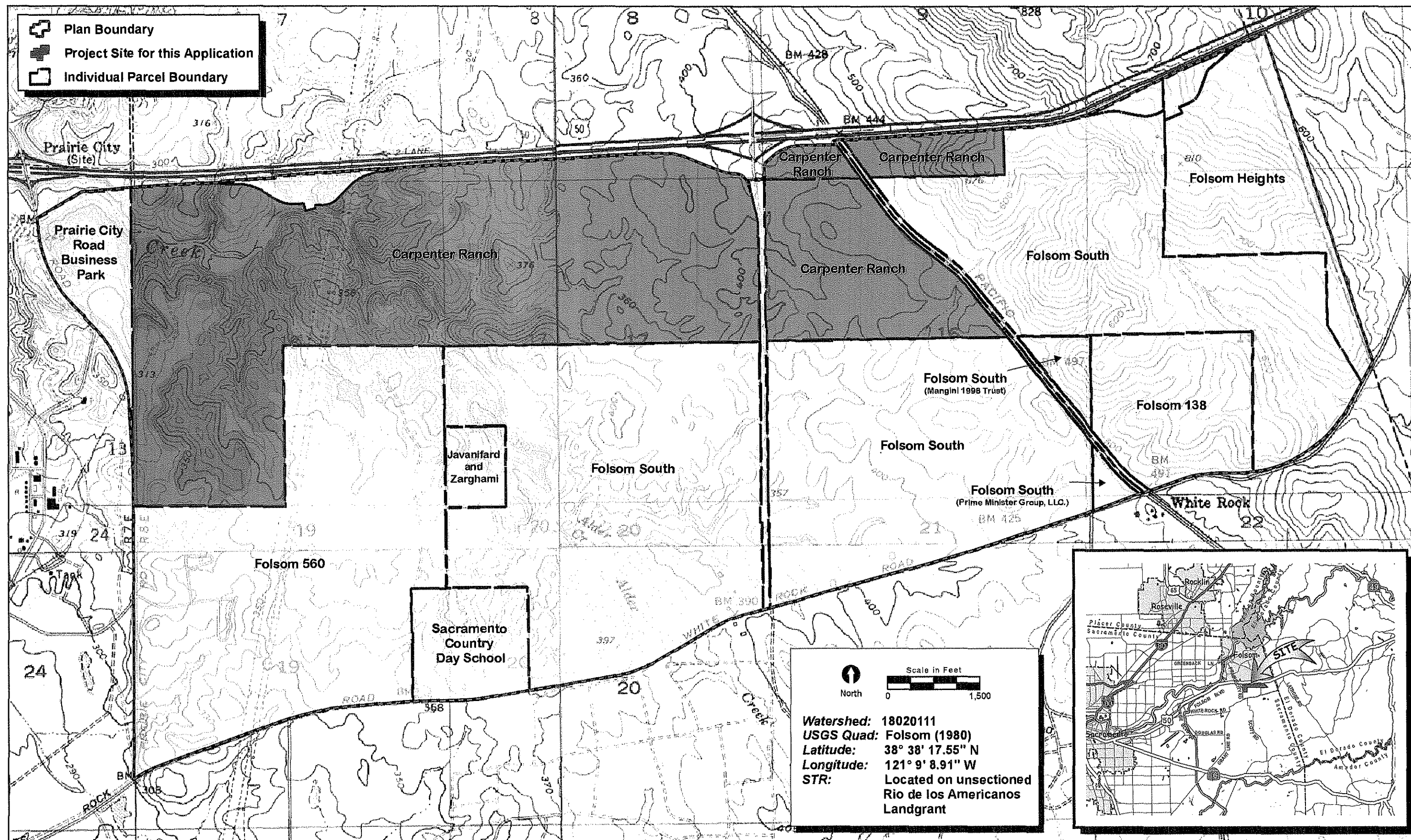
Figure 1. Project Site and Vicinity

Figure 2. Proposed Land Use Plan

Figure 3. Wetland Delineation

Figure 4. Preserve and Impact Plan





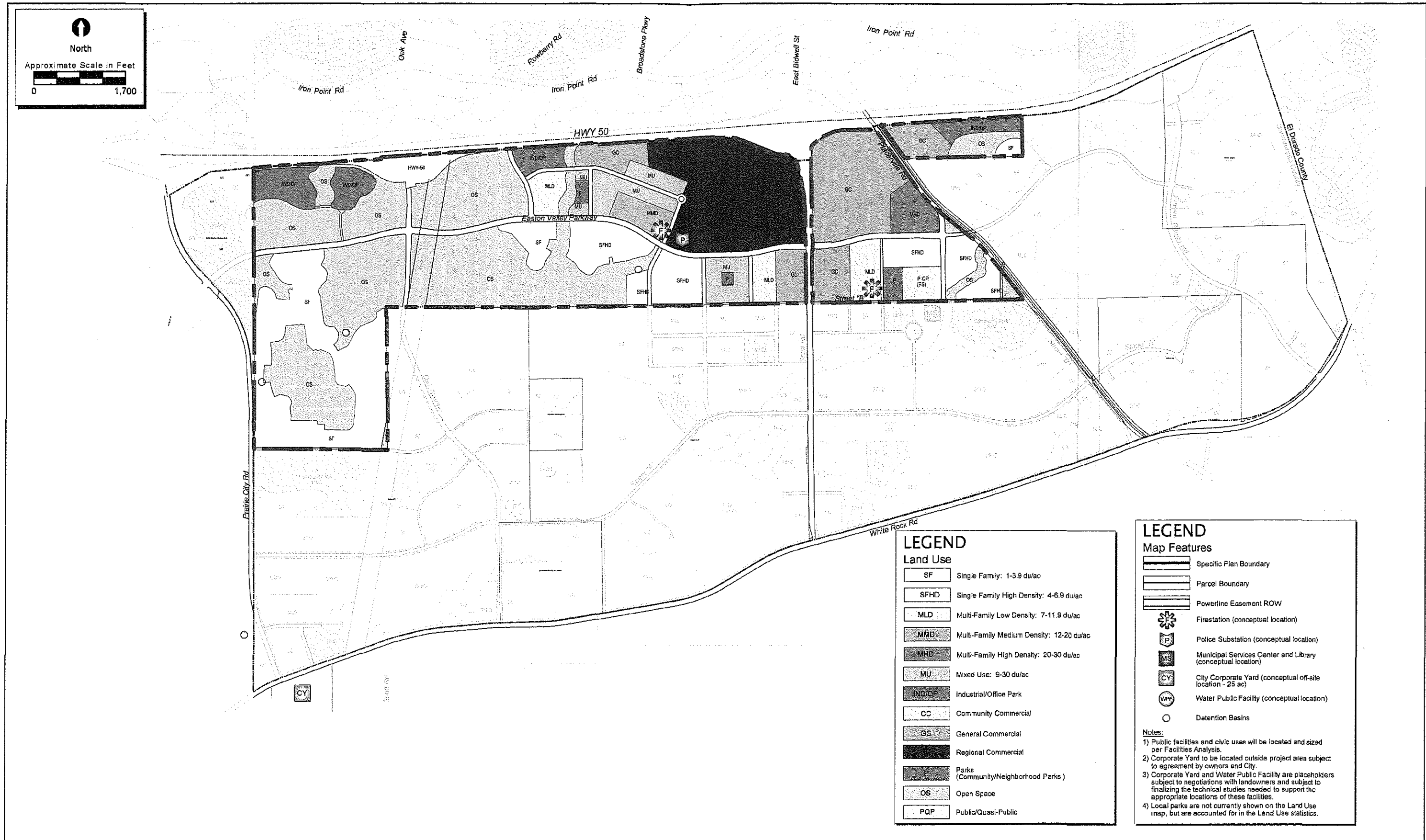
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11/18/08

**Figure 1. Project Site and Vicinity**

2005-429 Folsom Plan Area Specific Plan

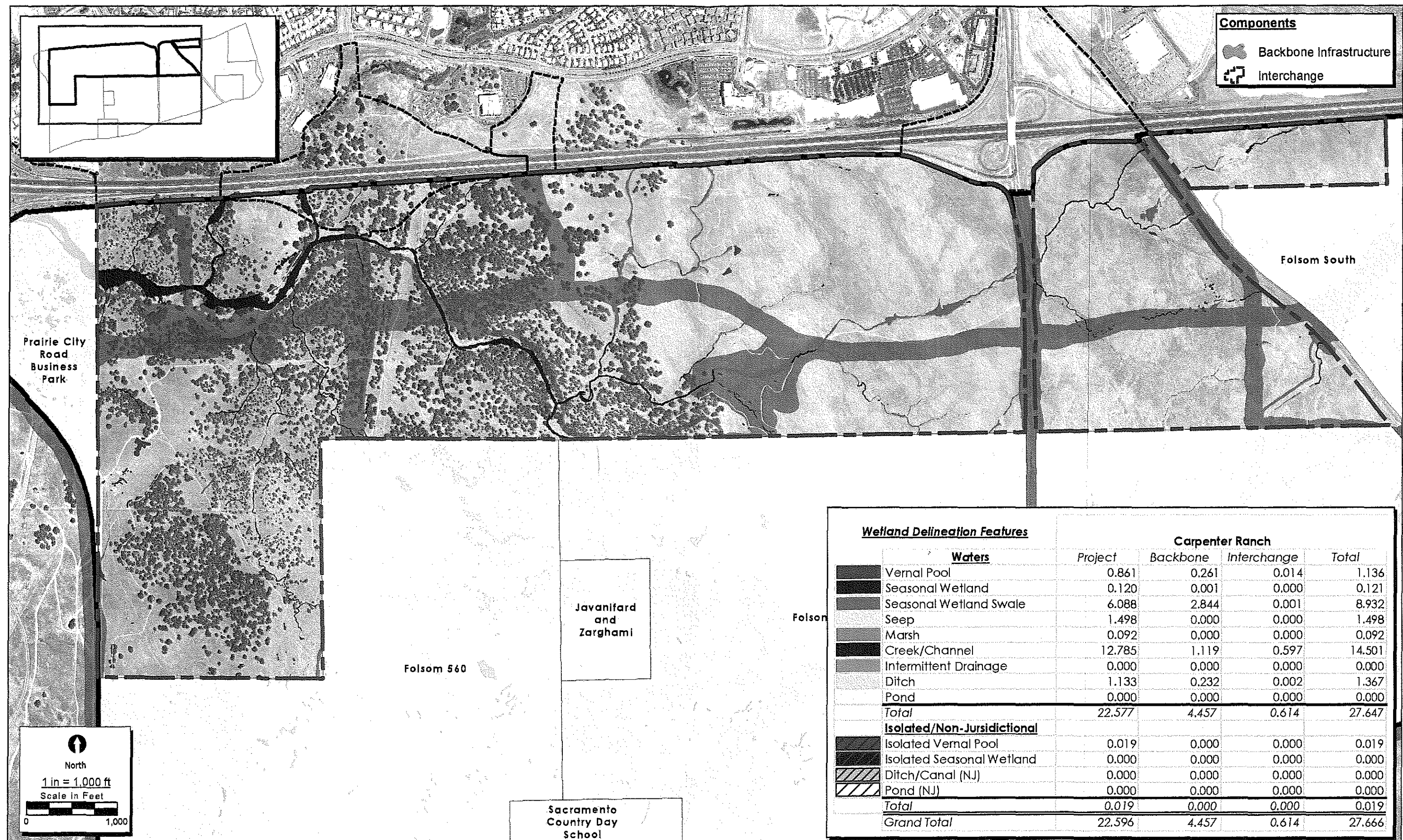




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**Figure 2. Proposed Land Use**  
2005-429 Folsom Plan Area Specific Plan

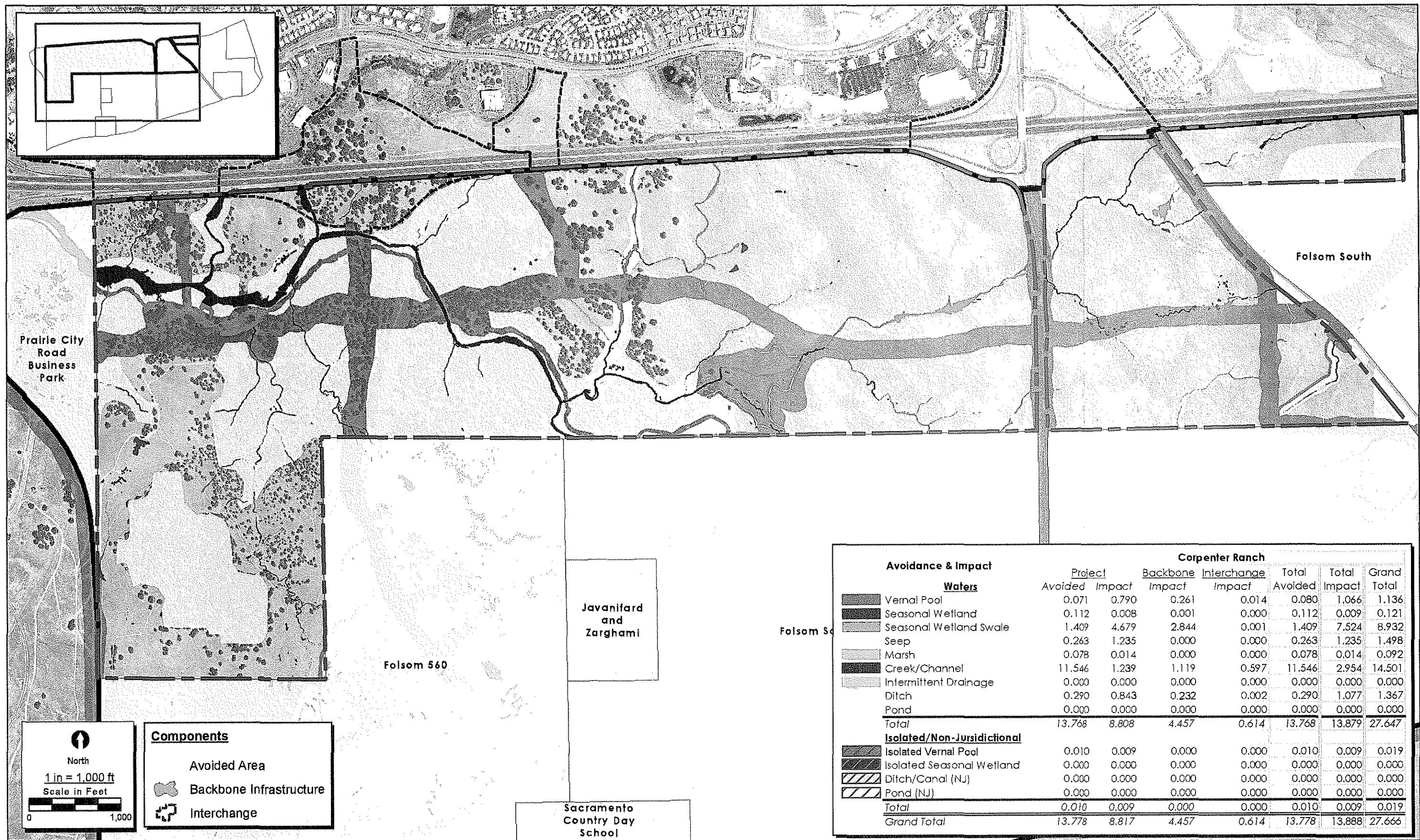


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**Figure 3. Wetland Delineation**  
2005-429 Folsom Plan Area Specific Plan





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**Figure 4. Avoidance/Impact Areas**

2005-429 Folsom Plan Area Specific Plan

## **LIST OF ATTACHMENTS**

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Attachment A – Section 7 Consultation Information

**Proposed Carpenter Ranch Project  
Individual Permit  
Section 7 Consultation Information**

**A DESCRIPTION OF THE ACTION TO BE CONSIDERED:**

The Carpenter Ranch project site is approximately 1,024 acres in size and is located immediately south Highway 50 between Prairie City Road, Scott Road and Placerville Road. The project site is located in Sections 9, 16, 17, and 18, Township 9 North, Range 8 East, MDB&M, Sacramento County, California. The parcel can be found at UTM 661,695.75 M E; 4,278,082.56 M N (Zone 10) and is portrayed on the Clarksville and Folsom, California 7.5 Minute Series Quadrangles. The project is located within the Lower American (#18020109) and the Upper Cosumnes (#18040013) watersheds. Figure 1 is a vicinity map.

The project proposes to develop approximately 1,024 acres of land in eastern Sacramento currently located within the City of Folsom Sphere of Influence (SOI). The proposed project will include both single and multi-family residential housing, commercial and office development, parks, open space, and public uses, including a school site. The project is currently under review by the City of Folsom; therefore, modifications to the size and/or configuration of the specific features described below may be made before final project approval. In addition, the project proposes 347 acres of open space preserves, which will protect approximately 13.8 acres of waters of the U.S. The plan provides for a mix of land uses and residential densities designed to serve the Highway 50 corridor. (Figure 2 – *Proposed Land Use Plan*).

**Housing**

The project proposes construction of approximately 827 single-family detached units on approximately 218.6 acres, and 902 multi-family units totaling approximately 61.3 acres. In addition the site contains two areas for Mixed Use development consisting of 35.2 acres which will include an additional 405 higher density residential units as well as a mixture of commercial, service, office and civic uses. Multi-family housing will be located in close proximity to

commercial centers and key arterials or intersections where public transit services will be available.

### **Commercial and Office**

Commercial and Office development is proposed for several areas within the site totaling approximately 276.5 acres within the project area. A large regional commercial mall is proposed for the southwest corner of the intersection of Highway 50 and Scott Road which would contain major regional retail tenants and supporting retail uses and restaurants. This mall would draw customers from a regional service area extending beyond the City of Folsom. Adjacent to the west end of the mall site is a Mixed Use area which will contain a mix of uses such as commercial, office, entertainment, restaurants and housing. Four other major commercial centers that include large discount retailers, grocery and drug stores and similar land uses rely on a broad market area for their economic viability are located along major roadways. Four other parcels are designated for Industrial/Office Park use. They will contain uses that include business parks, offices and light industrial space.

### **Town Center**

South of the Easton Valley Parkway and the Regional Mall Site, an area designated Mixed Use containing approximately 15 acres is proposed to be composed of a mixed of uses consisting of high density housing, support neighborhood scale commercial uses, civic uses and a community gathering place.

### **Open Space**

The project proposes to preserve over 347 acres of open space to set aside areas for natural resource protection. Contained within the open space preserves are large expanses of oak trees, the drainage corridor for the main branch of Alder Creek and its southern tributary and other sensitive natural resource features. Within the open space area passive recreational use is proposed including a paved trail system and other uses such as small picnic and rest areas all of which will avoid impact to sensitive resources. Within the open space, storm water will be

treated with a variety of best management practices prior to discharging to the existing drainage corridors .

### **Schools**

Approximately 10 acres of the project area will be dedicated for an elementary school site.

### **Parks**

Three parks are indicated on the plan to be constructed on approximately 12.5 acres, in addition approximately 14.4 acres of additional parks will be sited within the site and the Specific Plan area to satisfy the demand for recreational facilities. Numerous landscape corridors will be constructed along major and collector roadways to provide pedestrian and bicycle connection throughout the plan.

### **A DESCRIPTION OF THE SPECIFIC AREA THAT MAY BE AFFECTED BY THE ACTION:**

The Carpenter Ranch Project is located in the Sacramento Valley, east of the Greater Sacramento Metropolitan Area (see Figure 1). The Project site consists of two discrete sections which abut the south side of US 50 and are situated in the foothills on rolling to relatively flat terrain at an elevation of approximately 300 to 400 feet. The 1,000-acre west section is separated from the 54-acre east parcel by Placerville Road and a reach of the Southern Pacific Railroad. The site supports no habitable structures except for an abandoned trailer. Various relic pits, tailing piles, and channels from historic gold mining operations are scattered throughout the site, and a power line right of way traverses the property from north to south. The western-most boundary is bracketed by Prairie City Road which divides the Project site from property owned by GenCorp. Lands to the south and east are sparsely developed rangelands while properties north of Highway 50 support various commercial and residential developments. The site did not appear to have been recently grazed, graded, or plowed at the time of field surveys.



The majority of the study area supports two general habitat types: disturbed, non-native annual grasslands and oak forest/woodland/savannah. The eastern portion, including the disjoint eastern parcel, in general is flatter and dominated by wild oats (*Avena fatua*), tarweed (*Holocarpha virgata*), and medusa-head (*Taeniatherum caput-medusae*). Common grasses and forbs include perennial rye grass (*Lolium perenne*), little quaking grass (*Briza minor*), soft chess (*Bromus mollis*), and prickly lettuce (*Lactuca serriola*). The western half supports an overstory primarily composed by live oak (*Quercus wislizenii*), valley oak (*Quercus lobata*), and blue oak (*Quercus douglasii*). The understory consists of dogtail (*Cynosurus echinatus*), tarweed, soft chess, hairy hawkbit (*Leontodon leyssei*), and perennial rye grass.

The Project site also supports a relatively large drainage which spans the property from east to west. Several other water features are also present and include vernal pools, seasonal wetlands, swales, emergent marsh, seeps, and ditches.

According to the April 1993, "Soil Survey of Sacramento County, California," nine soil map units occur within the study area. The first is Argonaut-Auburn complex, 3-8% slopes (107) which is composed of about 45% Argonaut soil and 35% Auburn soil. Both are well drained and derived from weathered metaandesite and metamorphic rocks. The Argonaut component is moderately deep and has an underlying variegated hardpan typically at a depth of 14 inches. Permeability for this component is very slow resulting in pooled water for short periods after heavy winter/spring rains or over irrigation. The Auburn component is shallow or moderately deep and possesses a fractured metabasic bedrock at 14 inches. This unit contains inclusions of Creviscreek, Hicksville, and Mokelumne soils, and Xerorthents, and rock outcrop. The second soil unit is Argonaut-Auburn-Rock complex, 8-30% slopes (110). This unit is composed of approximately 40% Auburn soil, 35% Argonaut soil, and 10% Rock outcrop while the remaining 15% contains inclusions of Mokelumne soils, soils with slopes greater than 30%, and soils with bedrock 10 inches below the surface. The Auburn component is shallow or moderately deep and well drained. The Argonaut soil is moderately deep, well drained, and possesses a 15 inch thick claypan approximately 14 inches below the surface. After heavy rains, water may temporarily perch above the claypan. The third map unit is Hadselville-Pentz complex, 2-30% slopes (156). The Hadselville component makes up about 45% of the complex and is very shallow and moderately well drained. The Pentz component, which is shallow and well drained,



forms about 45% of the complex. In some areas a thin hardpan is situated over bedrock. Included in the unit are areas of Hicksville, Keyes, Ranchoseco, Pardee, Peters, and Redding soils, and Lithic Xerorthents. The fourth unit is Hicksville sandy clay loam, 0-2% slopes, occasionally flooded (160), which is a moderately deep and moderately well drained soil. This unit includes a perched seasonal water table about 36 to 48 inches below the surface and often is subject to short term flooding after intense rain events. Inclusions within the map unit include Amador, Columbia, Corning, Crevicreek, Pentz, and Redding soils. The fifth soil mapped is Orangevale coarse sandy loam, 2-5% slopes (183). This is a very deep, well drained soil with inclusions of Fiddymont soils, Xerarents, and Urban land. It is associated with high terrace remnants and is derived from granitic rock sources in alluvium. The sixth unit is Red Bluff loam, 2-5% slopes (192), which also includes small areas of Redding soils and Xerorthents. This soil is very deep, well drained, and associated with high terraces. A hardpan is commonly found at 40 to 60 inches. The seventh unit is Red Bluff-Xerorthents, dredge tailings complex, 2-50% slopes (196). This soil is composed of about 45% Red Bluff soils, 40% Xerorthents, and 15% inclusions of Corning, Hicksville, Redding soils and Slickens, and/or an unnamed soil with a hardpan at 40-60 inches. The Red Bluff soil is well drained, very deep, and derived from mixed rock sources, while the Xerorthents component represents areas of dredge tailing deposits. Vleck gravelly loam, 2-15% slopes (235) represent the eighth map in the study area. This soil is moderately deep, moderately well drained, and formed in alluvium. Typically, a claypan is situated 13 inches below the surface. Inclusions of Amador and Gillender soils and soils underlain by hardpan at 10 to 20 inches compose approximately 15% of the total acreage. The final unit is Whiterock loam, 3-30% slopes (237), which is very shallow to shallow, and somewhat excessively drained. It is associated with fractured, vertically oriented metasedimentary rock and contains inclusions of Argonaut and Auburn soils, and Rock outcrop.

None of the above soil map units are listed in the June 1991, "Hydric Soils of the United States", or the Natural Resources Conservation Service's "Field Office Official List of Hydric Soil Map Units for Sacramento County, California" (county list) dated March 17, 1992. The Columbia inclusions in 160 are listed as hydric on the county list when associated with low flood planes as is an unnamed inclusion in 192 and 196 when found in depressions. Lastly, the Slickens in 196 are considered hydric if associated with depressions.

## **A DESCRIPTION OF ANY LISTED SPECIES OR CRITICAL HABITAT THAT MAY BE AFFECTED BY THIS ACTION:**

Federally-listed species that could potentially be affected on the project site include the threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)(VELB), and species associated with vernal pools including the threatened vernal pool fairy shrimp (*Branchinecta lynchi*), the endangered vernal pool tadpole shrimp (*Lepidurus packardii*), the threatened slender orcutt grass (*Orcuttia tenuis*), and the threatened Sacramento orcutt grass (*Orcuttia viscida*). Additional information regarding potential impacts to these species is provided below.

### **Vernal Pool Invertebrates**

The vernal pools, depressional seasonal wetlands, and wetland swales on the project site are potential habitat for the vernal pool fairy shrimp and vernal pool tadpole shrimp. These habitats total 10.2044 acres, including the 0.0191 acre of non-jurisdictional vernal pools. However, wet season surveys conducted during the rainy seasons of 2006-2007 and 2007-2008 did not identify any of the listed invertebrate species in the sampled wetlands. Because the 2006-2007 rainy season was a below normal year, the U.S. Fish and Wildlife Service rejected the results of that year's survey. Another wet season survey will be conducted during the 2008-2009 rainy season to confirm the results. It is anticipated that the results will be negative, and that the project will not affect the federally-listed vernal pool crustaceans.

### **Valley Elderberry Longhorn Beetle**

Five elderberry shrubs (*Sambucus sp.*) were identified on the Carpenter Ranch site. Four of the shrubs are located within the right-of-way for the proposed widening of Scott Road; therefore impacts to those shrubs will be evaluated as part of the infrastructure application submitted by the City of Folsom. One elderberry shrub is located along Alder Creek in the interior of the Carpenter Ranch site. Although the shrub is in poor condition, one live stem was identified, as summarized in Table 1.

**Table 1 – Elderberry Shrub Stem Count at the Carpenter Ranch Project Site**

<b>Shrub Reference #</b>	<b>Stem Diameter (in.)</b>	<b>Shrub Height(ft.)</b>	<b>Exit Holes (Y/N)</b>	<b>Riparian Habitat</b>
1	1.5	8	No	Yes

### **Special-Status Plant Species**

Special-status plant surveys will be conducted during the spring of 2009. No special-status plant species were observed at the time of the wetland delineation field surveys.

### **Jurisdictional Delineation**

Table 1 lists jurisdictional waters of the U.S. and non-jurisdictional wetlands found on-site. A total of 27.7465 acres of waters of the U.S has been mapped on the site. These include 1.1607 acres of vernal pool, 0.1211 acre of seasonal wetland, 8.9226 acres of seasonal wetland swale, 0.0917 acre of marsh, 1.4948 acre of seep, and 14.5072 acre of drainage channels (Figure 3 – *Wetland Delineation*). In addition, 0.0191 acre of isolated, non-jurisdictional vernal pools were also mapped.

**Table 2 – Jurisdictional and Non-Jurisdictional Wetlands and Waters**

<b>Type</b>	<b>Acreage</b>
Vernal pool	1.1607
Seasonal wetland	0.1211
Seasonal wetland Swale	8.9226
Seep	1.4948
Marsh	0.0917
CreekChannel	14.5072
Ditch	1.4674
<b>TOTAL:</b>	<b>27.7656</b>

**A DESCRIPTION OF THE MANNER IN WHICH THE ACTION MAY AFFECT ANY LISTED SPECIES OR CRITICAL HABITAT AND AN ANALYSIS OF ANY CUMULATIVE IMPACTS:**

The vernal pools, depressional seasonal wetlands, and wetland swales on the project site are potential habitat for the vernal pool fairy shrimp and vernal pool tadpole shrimp. These habitats total 10.2044 acres, including the 0.0191 acre of non-jurisdictional vernal pools. However, wet season surveys conducted during the rainy seasons of 2006-2007 and 2007-2008 did not identify any of the listed invertebrate species in the sampled wetlands. Because the 2006-2007 rainy season was a below normal year, the U.S. Fish and Wildlife Service rejected the results of that year's survey. Another wet season survey will be conducted during the 2008-2009 rainy season to confirm the results. It is anticipated that the results will be negative, and that the project will not affect the federally-listed vernal pool crustaceans.

The elderberry shrub is proposed to be removed as part of project construction. Due to the poor condition of the shrub, it is unlikely that the shrub will be transplanted. Credits will be purchased from a Service-approved VELB mitigation bank, as described in the mitigation section below.

For purposes of Section 7 of the Endangered Species Act, cumulative impacts are defined to include the effects for future State, tribal, or private actions that are reasonably certain to occur in the action area. Future Federal actions (e.g. future permit actions) that are unrelated to the proposed project and actions that are not reasonably certain to occur in the action are not considered to be cumulative effects for purposes of Section 7. Under the Service's guideline for Section 7 consultations, the action area is determined based on the direct and indirect impacts of the proposed federal action (Section 404 individual permit authorization).<sup>1</sup> Consistent with the Service's guidelines, the action area for the project would be the project boundaries, plus a 250-foot area around the project boundaries for the purpose of assessing indirect impacts to the listed vernal pool invertebrates. The properties to the east, south and west of the Carpenter Ranch project site are subject to their own review under the Endangered Species Act

and the Federal Clean Water Act, and will be evaluated in conjunction with this project application. Based on this action area, it is our conclusion that there would be no cumulative impacts of the proposed project affecting federally-listed species.

**RELEVANT REPORTS INCLUDING ENVIRONMENTAL IMPACT STATEMENT, ENVIRONMENTAL ASSESSMENT, OR BIOLOGICAL ASSESSMENT PREPARED:**

Gibson & Skordal, LLC submitted a wetland delineation report to the Sacramento District office of the U.S. Army Corps of Engineers (Corps) on December 7, 2006. On October 29, 2007, a revised delineation was submitted based on changes requested by the Corps during a field verification site visit. The revised delineation was verified by the Corps on July 23, 2007.

Copies of the wetland delineation report and wet season vernal pool crustacean surveys will be forwarded under separate cover.

**ANY OTHER RELEVANT AVAILABLE INFORMATION ON THE ACTION, THE LISTED SPECIES, OR CRITICAL HABITAT:**

There is no other relevant available information applicable to the proposed project, the listed species, or the critical habitat.

**PROPOSED MITIGATION:**

Per U.S. Fish and Wildlife Service Guidelines, impacts to potential VELB habitat will be mitigated at a 2:1 ratio. Two VELB credits will be purchased at a Service-approved mitigation bank.

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<sup>1</sup> U.S. Fish and Wildlife Service and National Marine Fisheries Service. 1998. Consultation Handbook, Procedures for Conducting Consultation and Conference Activities under Section 7 of the Endangered Species Act. Marh 1998.

Clean Water Act  
Section 404 Individual Permit Application  
For  
**Folsom 560 (Hillsborough)**  
Folsom, California

20 November 2008

Prepared For:  
**GenCorp Realty Investments**



**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

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**Clean Water Act  
Section 404 Individual Permit Application  
Folsom 560 (Hillsborough)**

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Attachment A – Section 7 Consultation Information



<b>APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT (33 CFR 325)</b>		<b>OMB APPROVAL NO. 0710-003</b>	
<p>Public reporting burden for this collection of information is estimated to average 5 hours per response, including the time for reviewing instructions, Searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Service Directorate of Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302; and to the Office of Management and Budget, Paperwork Reduction Project (0710-003), Washington, DC 20503. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.</p>			
<b>PRIVACY ACT STATEMENT</b>			
<p>Authority: 33 USC 401, Section 10; 1413, Section 404. Principal Purpose: These laws require permits authorizing activities in, or affecting, navigable waters of the United States; the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Routine uses: Information provided, however, the permit application cannot be processed nor can a permit be issued.</p> <p>One set of the original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the proposed activity. An application that is not completed in full will be returned.</p>			
<b>(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)</b>			
1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETED
<b>(ITEMS BELOW TO BE FILLED BY APPLICANT)</b>			
5. APPLICANT'S NAME  GenCorp realty Investments David Hatch, Vice President		8. AUTHORIZED AGENT'S NAME & TITLE (AN AGENT IS NOT REQUIRED)  ECORP Consulting, Inc. Craig W. Hiatt, Senior Project Manager	
6. APPLICANT'S ADDRESS  620 Coolidge Drive, Suite 100 Folsom, California 95630		9. AGENT'S ADDRESS  2525 Warren Drive Rocklin, CA 95677	
7. APPLICANT'S PHONE NUMBERS WITH AREA CODE  a. Business (916) 351-8534		10. AGENT'S PHONE NUMBERS WITH AREA CODE  a. Business (916) 782-9100	
11. <b>STATEMENT OF AUTHORIZATION</b>  I hereby authorize ECORP Consulting, Inc. to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.			
APPLICANT'S SIGNATURE _____		DATE _____	
<b>NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY</b>			
12. PROJECT NAME OR TITLE (see instructions)  Folsom 560 (Hillsborough)			
13. NAME OF WATERBODY, IF KNOWN (if applicable)  Unnamed vernal pools. Seasonal wetlands, seasonal wetland swales, seeps, intermittent drainages, intermittent drainages, ditches, and stock ponds, which are tributary to Alder Creek.		14. PROJECT STREET ADDRESS (if applicable)	

15. LOCATION OF PROJECT	
COUNTY Sacramento	STATE
CA	
16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)	
<p>The site corresponds to portions of Sections 18 and 19, Township 9 North, Range 8 East (MDBM) of the "Folsom, California" and "Buffalo Creek, California" 7.5-minute quadrangles (U.S. Department of the Interior, Geological Survey 1980). The approximate center of the site is located at 38° 37' 25" North and 121° 08' 23" West. The site located within the Lower American River Watershed (#18020111, U.S. Department of Interior, Geological Survey 1978).</p>	
17. DIRECTIONS TO THE SITE	
<p>From Sacramento, proceed east on U.S. Highway 50. Take the Prairie City Road exit and proceed south to White Rock Road. Turn east on White Rock Road. The project site is located at the northeast corner of the Intersection of Prairie City and White Rock Roads.</p>	
18. NATURE OF ACTIVITY (Description of project, include all features)	
<p>The Folsom 560 (Hillsborough) project proposes to develop approximately 560 acres of land in eastern Sacramento currently located within the Folsom Plan Area Specific Plan. The proposed project consists of the development of residential villages with a variety of residential densities and product types, neighborhood parks, and open space. In addition, the project proposes an on-site wetland preserve, which will protect waters of the U.S., as well as potential special-status species habitat in perpetuity. The plan provides for a mix of land uses and residential densities designed to serve the Highway 50 corridor. The land plan for the proposed Hillsborough project is shown in Figure 2.</p>	
19. PROJECT PURPOSE (Describe the reason or purpose of the project, see instructions)	
<p>The Folsom 560 (Hillsborough) project is a portion of the Folsom Plan Area Specific Plan (see block 18). The purpose of the Folsom Plan Area Specific Plan is: (1) to construct a large-scale, mixed-use master-planned community consisting of mixed-density residential uses, a regional shopping center, and other employment-generating uses; (2) to provide associated supporting infrastructure including on-site backbone infrastructure, schools, parks, an on-site trail system, off-site sewer improvements, off-site roadway improvements, off-site highway interchanges, an off-site water supply pipeline from the Freeport Regional Water Authority diversion facility to the site, and an off-site water treatment plant; and (3) to permanently protect 30 percent of the site as open space for the preservation of oak woodlands and sensitive habitat areas in manner consistent with Measure W.</p>	
USE BLOCKS 20-22 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED	
20. REASON (S) FOR DISCHARGE	
Grading and leveling of the land prior to project implementation.	
21. TYPE (S) OF MATERIAL BEING DISCHARGED AND THE AMOUNT OF EACH TYPE IN CUBIC YARDS	
Approximately 5,500 yards <sup>3</sup> of native soil will be used for fill.	
22. SURFACE AREA IN ACRES OF WETLANDS OR OTHER WATERS FILLED (see instructions)	
Approximately 3.409 acres of waters of the U.S., including wetlands, will be filled as a result of project implementation.	

23. IS ANY PORTION OF THE WORK ALREADY COMPLETE? YES <input type="radio"/> NO <input checked="" type="radio"/> IF YES, DESCRIBE THE WORK			
24. ADDRESSES OF ADJOINING PROPERTY OWNERS, LESSEES, ETC. WHOSE PROPERTY ADJOINS THE WETERBODY (if more than can be entered her, please attach a supplemental list)  Please see comprehensive Specific Plan Area List included in comprehensive application.			
25. LIST OF OTHER CERTIFICATIONS OR APPROVALS/DENIALS RECEIVED FROM OTHER FEDERAL, STATE, OR LOCAL AGENCIES FOR WORK DESCRIBED IN THIS APPLICATION  <div style="text-align: center;">SEE ADDITIONAL INFORMATION SECTION</div>			
26. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.			
_____ SIGNATURE OF APPLICANT	_____ DATE	_____ SIGNATURE OF AGENT	_____ DATE
The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed. 18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious, or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.			

## ENG FORM 4345 - CONTINUATION SHEET HILLSBOROUGH

### Block 8:

#### *Additional Authorized Agent*

Project Engineer: Mr. Jim Ray  
Company Name: MacKay & Somps Civil Engineers  
Company Address: 1771 Tribute Road, Suite E  
City, State Zip: Sacramento, California 95815-4487  
Contact: (916) 929-6092

### Block 16:

#### *Other Location Descriptions*

The site corresponds to portions of Sections 18 and 19, Township 9 North, Range 8 East (MDBM) of the "Folsom, California" and "Buffalo Creek, California" 7.5-minute quadrangles (U.S. Department of the Interior, Geological Survey 1980). The approximate center of the site is located at 38° 37' 27.92" North and 121° 08' 27.58" West. The site is located within the Lower American River Watershed. Please refer to Figure 1. Project Site and Vicinity.

### Block 18:

#### *Nature of Activity/Project Description*

The Folsom 560 (Hillsborough) proposes to develop approximately 560 acres of land in eastern Sacramento currently located within the proposed Folsom Plan Area Specific Plan. The proposed project consists of the development of residential villages with a variety of residential densities and product types, neighborhood parks, and open space. In addition, the project proposes an on-site wetland preserve, which will protect waters of the U.S., as well as potential special-status

status species habitat in perpetuity. The plan provides for a mix of land uses and residential densities designed to serve the Highway 50 corridor. The land plan for the proposed Hillsborough project is shown in Figure 2.

## **Block 19:**

### *Project Purpose*

The Folsom 560 (Hillsborough) project is a portion of the Folsom Plan Area Specific Plan (see block 18). The purpose of the Folsom Plan Area Specific Plan project is: (1) to construct a large-scale, mixed-use master-planned community consisting of mixed-density residential uses, a regional shopping center, and other employment-generating uses; (2) to provide associated supporting infrastructure including on-site backbone infrastructure, schools, parks, an on-site trail system, off-site sewer improvements, off-site roadway improvements, off-site highway interchanges, an off-site water supply pipeline from the Freeport Regional Water Authority diversion facility to the site, and an off-site water treatment plant; and (3) to permanently protect 30 percent of the site as open space for the preservation of oak woodlands and sensitive habitat areas in manner consistent with Measure W.

## **Block 22:**

### *Surface Area of Waters to be Impacted*

Estimated impacts to potentially jurisdictional waters of the U.S. total 3.409 acres, consisting of vernal pool (0.584 acre), seasonal wetland (0.953 acre), seasonal wetland swale (1.281 acre), seep (0.029 acre), intermittent drainage (0.373 acre), ditch (0.160 acre) and pond (0.029 acre). The delineation and preserve impact areas are presented as Figure 3 and 4, respectively.

## **ADDITIONAL INFORMATION**

### **Regulatory Background**

Proposed project activities fall under the jurisdiction of several resource agencies. Pursuant to Section 404 of the Clean Water Act, construction activities in waters of the U.S. are subject to the approval of the U.S. Army Corps of Engineers (Corps). The applicant is requesting an Individual Permit from the Corps for the proposed project. Pursuant to Section 401 of the Clean Water Act, this permit will need to be certified by the Central Valley Regional Water Quality Control Board (CVRWQB). In addition, there is the potential for special-status species within the project area; therefore, consultation will be initiated with the U.S. Fish and Wildlife Service (USFWS). Following is a summary regarding the status of relevant regulatory requirements.

Supporting documents, such as wetland delineations, special-status species/rare plant surveys, determinate-level branchiopod surveys, tree surveys, cultural resource reports, etc, that have been prepared for the Folsom 560 (Hillsborough) project are not included in this submittal. These documents will be submitted at a later date in bundled-fashion and augmented as new information and/or reports become available.

### **Federal Clean Water Act, Section 404**

A total of 10.495 acres of potential jurisdictional waters of the U. S. were identified within the project area, including vernal pools, seasonal wetlands, seasonal wetland swales, seeps, intermittent drainage, ditch, and pond. The applicant is requesting an individual permit for project impacts to 3.576 acres of waters of the U.S.

**Table 1 – Potential Jurisdictional Waters of the U.S.**

<b>Type</b>	<b>Acreage<sup>1</sup></b>
Vernal Pool	1.823
Seasonal Wetland	1.546
Seasonal Wetland Swale	3.134
Seep	0.029
Intermittent Drainage	0.718
Ditch	0.445
Pond	2.788
<b>TOTAL:</b>	<b>10.484</b>

<sup>1</sup> An additional 0.009 acres of Isolated Vernal Pool and 0.003 acres of Isolated Seasonal Wetlands occur on site

**Table 2 – Proposed Impact Acreages**

<b>Type</b>	<b>Existing</b>	<b>Avoidance<sup>1</sup></b>	<b>Project Impacts</b>	<b>Infrastructure Impacts<sup>2</sup></b>
Vernal Pool	1.823	1.196	0.584	0.044
Seasonal Wetland	1.546	0.340	0.953	0.254
Seasonal Wetland Swale	3.134	1.331	1.281	0.522
Seep	0.029	0.000	0.029	0.000
Intermittent Drainage	0.718	0.155	0.373	0.190
Ditch	0.445	0.234	0.160	0.051
Pond	2.788	2.759	0.029	0.000
<b>TOTAL:</b>	<b>10.484</b>	<b>6.014</b>	<b>3.409</b>	<b>1.061</b>

<sup>1</sup> An additional 0.009 acres of Isolated Vernal Pool and 0.003 acres of Isolated Seasonal Wetlands will be avoided

<sup>2</sup> The Backbone Infrastructure and Interchange Impacts are included as the delineation for this project included these areas.

## **Federal Clean Water Act, Section 401**

A request for Section 401 Water Quality Certification will be submitted to the Central Valley Regional Water Quality Control Board.

## **Federal Endangered Species Act**

Project implementation (i.e. fill of seasonal wetlands) represents potential impacts to the federally listed vernal pool fairy shrimp (*Branchinecta lynchi*, federal threatened) and vernal pool tadpole shrimp (*Lepidurus packardii*, federal endangered). The Applicant proposes to survey potential habitat for listed vernal pool branchiopods during the 2008-2009 wet season.

No special-status plant species were identified on the project site during special-status plant surveys, which were conducted during April and June 2008.

One elderberry shrub (*Sambucus* species) may be impacted by project implementation. Elderberry shrubs are the exclusive host plant to the Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus* – VELB). VELB is listed as “threatened” on the Federal Endangered Species Act. The Applicant requests that the project be appended to the Programmatic Formal Consultation Permitting Projects with Relatively Small Effects on the Valley elderberry longhorn beetle Within the Jurisdiction of the Sacramento Field Office, California (USFWS 1-1-96-F-66).

### **California Fish and Game Code**

The proposed project will require authorization from the California Department of Fish and Game (CDFG) for impacts to the intermittent drainage as a result of project implementation. Project-specific construction will result in 0.396 acre of impact to a CDFG jurisdictional streambed (i.e., intermittent drainages). Therefore, pursuant to Section 1602 of the California Fish and Game Code, a request for a Lake and Streambed Alteration Agreement will be submitted to the California Department of Fish and Game.

### **National Environmental Policy Act (NEPA)**

The Corps, as Lead Agency, will prepare an Environmental Impact Statement (EIS) in accordance with NEPA guidelines.

### **California Environmental Quality Act (CEQA)**

The City of Folsom will prepare an Environmental Impact Report (EIR) for the proposed project in accordance with CEQA guidelines.



## **National Historic Preservation Act, Section 106**

This Project must meet the provisions for the treatment of cultural resources contained within Section 106 of the National Historic Preservation Act (NHPA). The goal of Section 106 of the NHPA is to identify significant cultural resources and seek ways to avoid, minimize, or mitigate adverse effects on significant cultural resources that may result from federal undertakings, including federally permitted activities. Significant cultural resources must meet at least one of four criteria that define eligibility for listing on the National Register of Historic Places (NRHP) (36 CFR 60.4; 36 CFR Part 800).

ECORP Consulting, Inc. (2007) conducted a cultural resources survey of the Project Area. As a result of that study, 11 sites were initially recorded: CA-SAC-1009-H (rock wall/fence; P-34-1692; EC-06-86); P-34-1693 (EC-06-87; dam); P-34-1694 (EC-06-89; dam); P-34-1695 (EC-06-90; bedrock milling station); P-34-1696 (EC-06-91; well/cistern/windmill); P-34-1697 (EC-07-04; bedrock milling station); P-34-1698 (EC-07-05; bedrock milling station); P-34-1699 (EC-07-06; cabin foundation, mining-related features and loci from the Rhodes Diggings Mining District); P-34-1700 (EC-07-14; rock alignment); P-34-1701 (EC-07-15; mine tailings); and P-34-1702 (EC-07-16; debris scatter). In addition, two isolates P-34-1703 (ISO-1; brick) and P-34-1704 (ISO-2; bottle base) were identified within the Project Area. As a result of the survey, ECORP recommended subsurface testing at sites P-34-1695, P-34-1696, P-34-1697, P-34-1698, P-34-1699, and P-34-1702, and archival research for CA-SAC-1009-H, P-34-1693, P-34-1694, P-34-1696, P-34-1699, P-34-1700, P-34-1701, and P-34-1702 to evaluate these resources for eligibility for the NRHP. In 2008, ECORP recorded one additional site, an historic-era PG&E 115kv transmission line (EC-18-16; P# pending), which was also evaluated for eligibility.

In July 2008, testing and evaluation at these locations were carried out. Upon re-examination, it was concluded that the bedrock mortar cups in sites P-34-1697 and P-34-1698 are non-cultural and, therefore, they were not subjected to test excavations. Solano Archaeological Services (2008) did, however, test these sites as part of the White Rock Road Widening Extended Phase 1 project and found no confirmed cultural material.

As a result of subsurface testing at the other four sites where testing was recommended, cultural deposits were observed at the locations of P-34-1696, P-34-1699, and P-34-1702. No subsurface deposits were observed at the location of P-34-1695. Table 3 summarizes the results of the evaluation, which was based on archival research or subsurface testing, or both.

**Table 3- Evaluation of Cultural Resources**

Site Number	Description	NRHP Eligibility
P-34-1692	Historical rock wall	Not eligible
P-34-1693	Historical rock dam	Not eligible
P-34-1694	Historical rock dam	Not eligible
P-34-1695	Prehistoric bedrock mortar	Not eligible
P-34-1696	Historical windmill	Not eligible
P-34-1699	Historical mining features (Rhode's Diggings)	Eligible*
P-34-1700	Historical rock wall	Not eligible
P-34-1701	Historical mine tailings	Not eligible
P-34-1702	Historical debris scatter	Not eligible
EC-08-16	Historical PG&E transmission line	Not eligible
P-34-1697	Non-cultural bedrock feature	Not eligible
P-34-1698	Non-cultural bedrock feature	Not eligible
P-34-1703	Historical brick isolate	Not eligible
P-34-1704	Historical bottle base isolate	Not eligible

\*This site is composed of multiple features, which are currently being reviewed as either contributing or non-contributing elements to the Rhode's Diggings Mining District, which has been previously evaluated as eligible for the NRHP. The evaluation report is currently in preparation.

If the Corps determines that all of the resources, with the exception of P-34-1699, are not eligible for the NRHP and the State Historic Preservation Officer (SHPO) concurs, then no mitigation measures for those sites will be necessary under Section 106. If the Corps determines that site P-34-1699, or any specific component of the site, is eligible for the NRHP and the SHPO concurs, then the Criteria for Adverse Effect will be applied and mitigation measures will be developed. Mitigation measures could consist of preservation, data recovery, interpretation, and additional archival research.

## ADJACENT LAND USE

Surrounding land uses include rural residences, developed and undeveloped roadways, and pastureland.

## **NOTIFICATION TO ADJACENT PARCEL OWNERS**

Please see the Specific Plan Area List provided with the Comprehensive Clean Water Act Section 404 Application for the Folsom Plan Area Specific Plan

## **ALTERNATIVES ANALYSIS**

A detailed Alternatives Analysis will be prepared in accordance with Section 404(b)(1) of the Clean Water Act and submitted under separate cover.

## **MITIGATION PLAN**

The Applicant proposes to participate in a joint mitigation plan with the other participating property owners in the Folsom South Group. The applicants will mitigate unavoidable impacts to waters of the United States through a combination of the on-site enhancement, on-site creation or restoration, the purchase of credits for at Corps-approved mitigation facilities, and/or off-site wetland restoration or creation. This compensatory mitigation proposal will offset the loss of functions and values caused by unavoidable impacts to waters of the United States and will implement the Corps' Mitigation Rule. In addition, the mitigation will ensure that there is no net increase in floodwater surface elevations downstream of the Project.

## **LIST OF FIGURES**

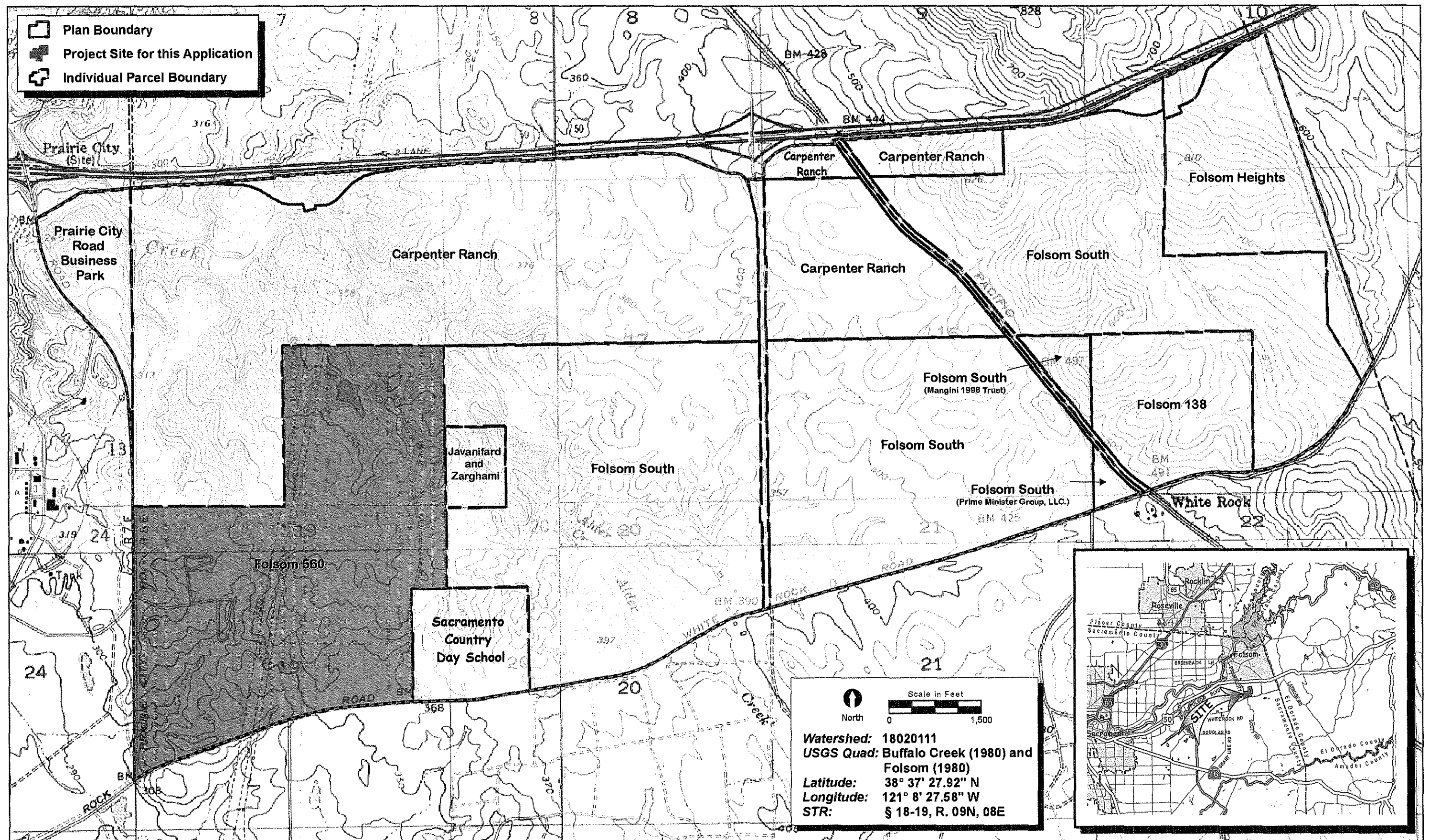
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Figure 1. Project Site and Vicinity

Figure 2. Proposed Land Use Plan

Figure 3. Wetland Delineation

Figure 4. Avoidance/Impact Areas



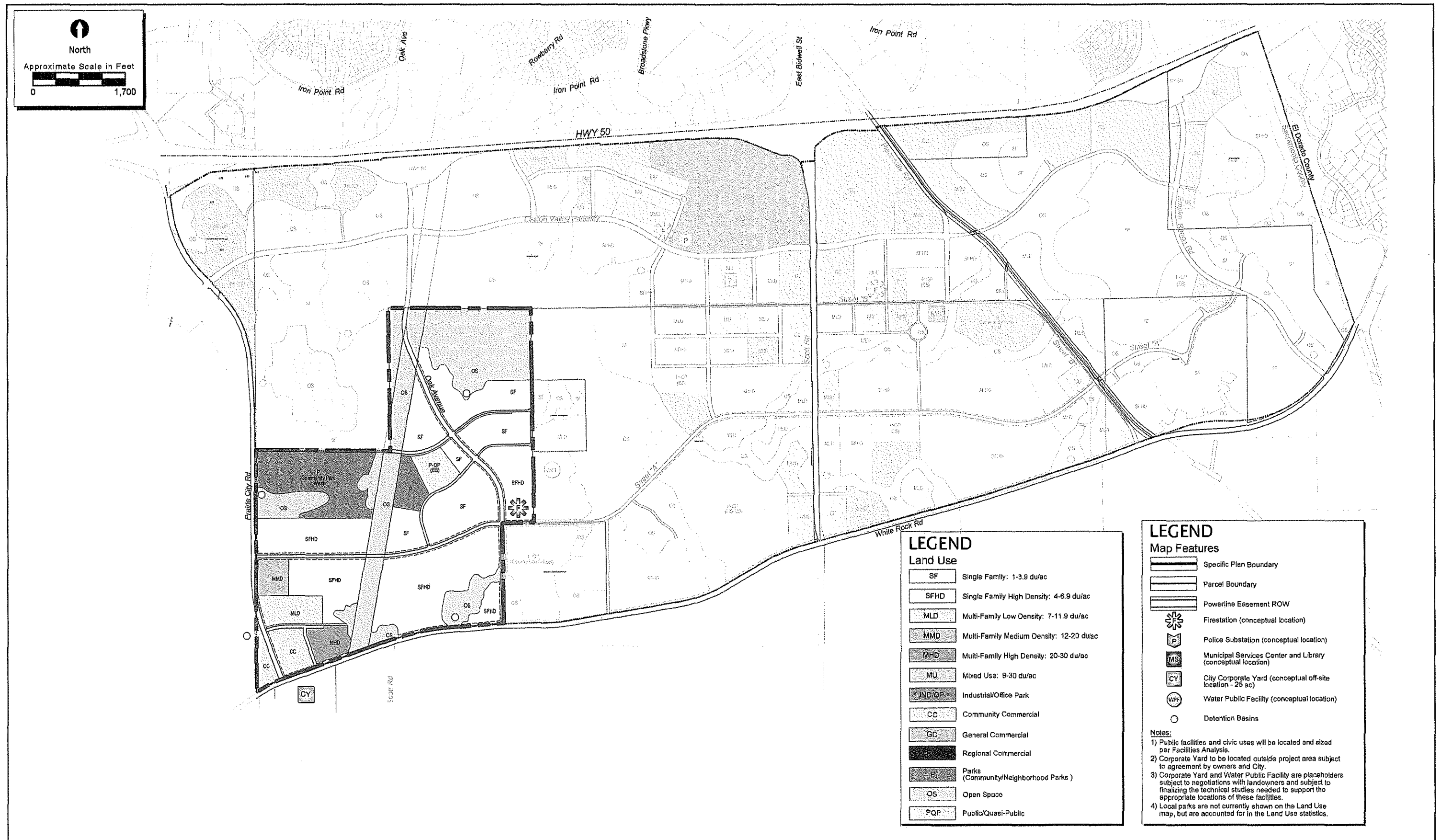
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11/18/08

**Figure 1. Project Site and Vicinity**

2005-429 Folsom Plan Area Specific Plan

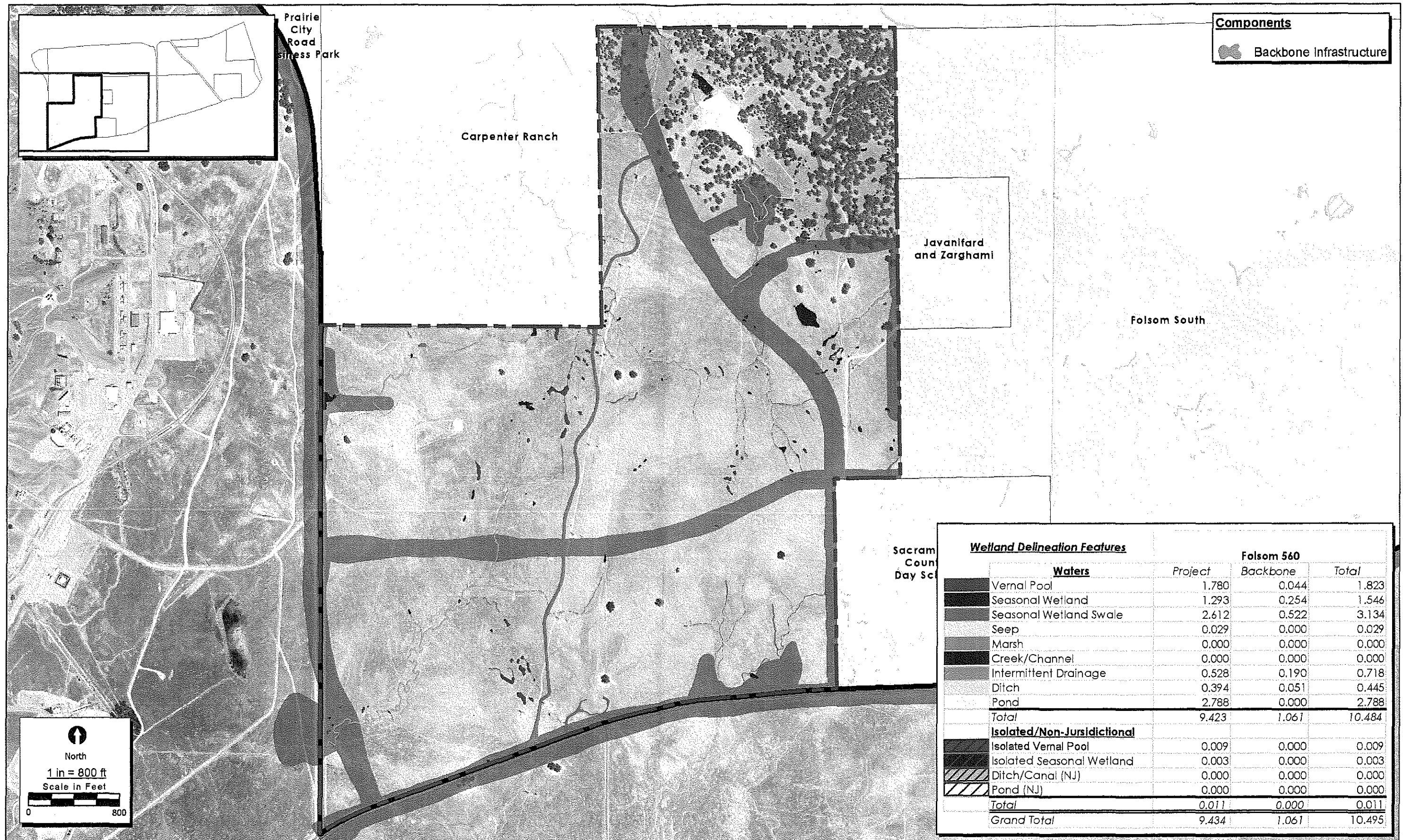




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**Figure 2. Proposed Land Use**  
2005-429 Folsom Plan Area Specific Plan

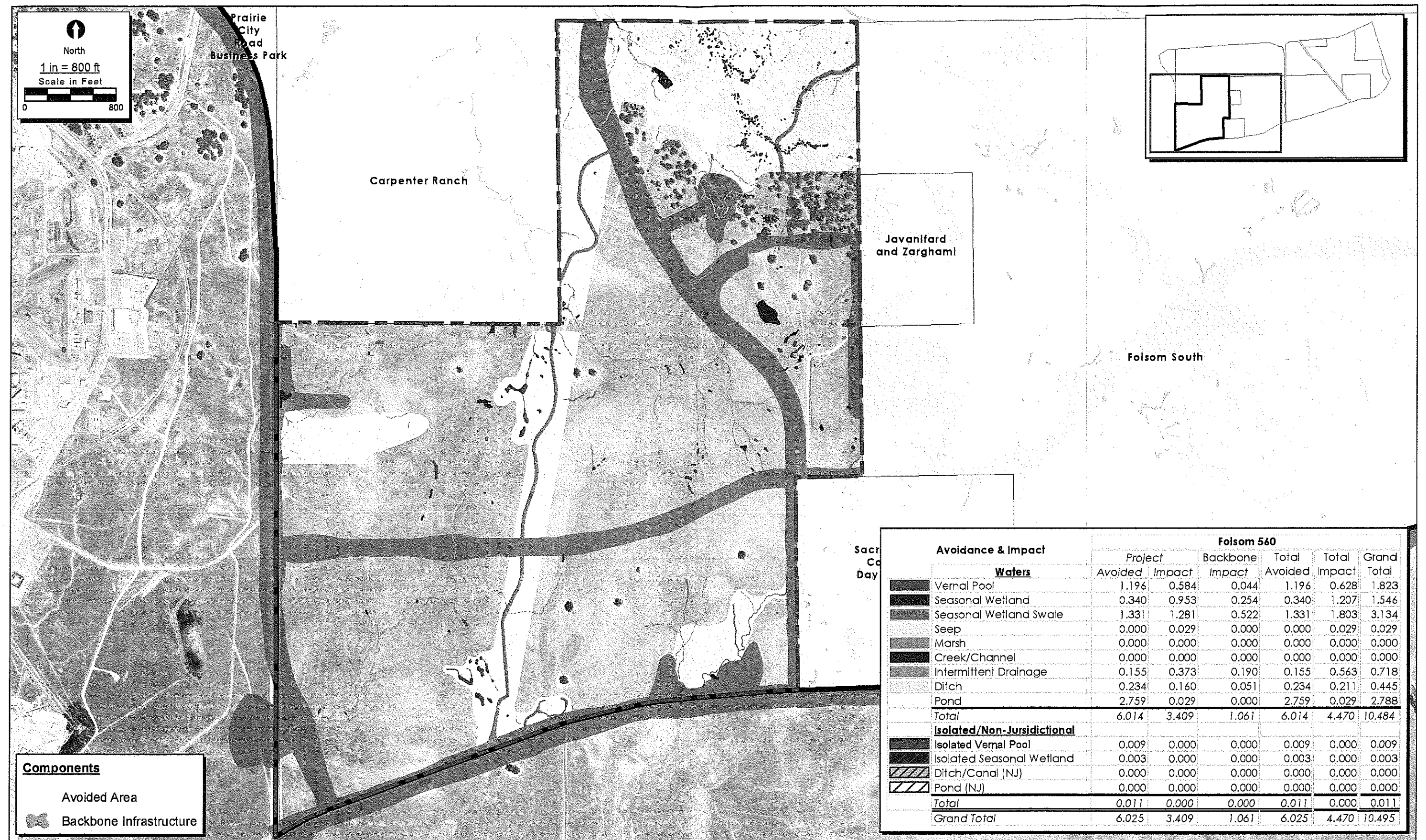


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**Figure 3. Wetland Delineation**  
2005-429 Folsom Plan Area Specific Plan





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**Figure 4. Avoidance/Impact Areas**  
2005-429 Folsom Plan Area Specific Plan



## **ATTACHMENT A**

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### Section 7 Consultation Information

**Proposed Folsom 560 (Hillsborough) Project  
Individual Permit  
Section 7 Consultation Information**

**A DESCRIPTION OF THE ACTION TO BE CONSIDERED:**

The ± 560-acre Hillsborough project site consists of open grassland / pastureland located in mostly undeveloped lands northeast of the intersection of White Rock Road and Placerville Road in northeastern Sacramento County, California. The site corresponds to a portion of Section 15 Township 9 North, Range 8 East of the "Clarksville, California" 7.5-minute quadrangle (U.S. Department of the Interior Geological Survey). The project is located at approximately 38° 37' 27.92" North and 121° 08' 27.58" West within the Lower American (#18020109) watershed.

The project proposes to develop approximately 560 acres of land in eastern Sacramento currently located within the City of Folsom Sphere of Influence (SOI). The proposed project consists of the development of three (3) residential villages, neighborhood parks, and open space. In addition, the project proposes an on-site preserve, which will protect waters of the U.S., as well as potential special-status species habitat in perpetuity. The plan provides for a mix of land uses and residential densities designed to serve the Highway 50 corridor.

**A DESCRIPTION OF THE SPECIFIC AREA THAT MAY BE AFFECTED BY THE ACTION:**

The Project is located in the Sacramento Valley, east of the Greater Sacramento Metropolitan Area. The Hillsborough site is comprised of rolling hills at an elevational range of approximately 290 feet to 400 feet above mean sea level. The site is dominated by an annual grassland vegetation community. Annual grassland is the dominant plant community on-site. A variety of non-native annual grasses, including soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), medusahead grass (*Taeniatherum caput-medusae*), slender wild oat (*Avena barbata*), and little quaking grass (*Briza minor*), were commonly observed in this community. Other herbaceous species observed in this community include sticky tarweed (*Holocarpha virgata*), yellow star-thistle (*Centaurea solstitialis*), rose clover (*Trifolium hirtum*), shamrock

clover (*Trifolium dubium*), Fremont's tidy-tips (*Layia fremontii*), Valley tassels (*Castilleja attenuata*), and hyacinth brodiaea (*Triteleia hyacinthina*).

Blue oak woodland occurs in the northern portion of the site. Blue oaks (*Quercus douglasii*) represent the dominant tree species in this community. Species observed in the understory were generally similar to those found in the annual grassland.

The site is currently used as pastureland and surrounding land uses surrounding the site include rural residential, agricultural cropland, and rangeland.

According to the *Soil Survey of Sacramento County, California* (U.S. Department of Agriculture, Soil Conservation Service 1993), seven (7) soil units, or types, have been mapped within the site. These are: (107) Argonaut Auburn complex, 3 to 8 percent slopes; (145) Fiddymont fine sandy loam, 1 to 8 percent slopes; (190) Pits; (192) Red Bluff loam, 2 to 5 percent slopes; (193) Red Bluff-Redding complex, 0 to 5 percent slopes; (235) Vleck gravelly loam, 2 to 15 percent slopes; and (237) Whiterock loam, 3 to 30 percent slopes.

## **A DESCRIPTION OF ANY LISTED SPECIES OR CRITICAL HABITAT THAT MAY BE AFFECTED BY THIS ACTION:**

### **Vernal Pool Invertebrates**

Project implementation (i.e. fill of seasonal wetlands) represents potential impacts to the federally listed vernal pool fairy shrimp (*Branchinecta lynchi*, federal threatened) and vernal pool tadpole shrimp (*Lepidurus packardii*, federal endangered). The Applicant proposes to survey potential vernal pool branchiopod habitat for listed species during the 2008-2009 wet seasons. In the event that listed branchiopods are found, compensatory and preservation mitigation will be carried out off-site. The creation component of the mitigation plan will be carried out at an agency-approved mitigation bank or "turn-key" mitigation facility within the project's service area. The preservation component of the mitigation plan will be conveyed at an agency-approved preservation bank located within the project's survey area.

## Valley Elderberry Longhorn Beetle

One elderberry shrub (*Sambucus* species) may be impacted by project implementation. Elderberry shrubs are the exclusive host plant to the Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus* – VELB). VELB is listed as “threatened” on the Federal Endangered Species Act. The Applicant proposes to mitigate in accordance with the Programmatic Consultation for impacts to VELB.

## Special-Status Plant Species

Special-status plant surveys were conducted during April and June 2008. No special-status plant species were observed during the 2008 surveys.

## Jurisdictional Delineation

Table 1 lists potential jurisdictional waters of the U.S. found on-site. A total of 10.484 acres of potential waters of the U.S have been mapped on the site. These include 1.823 acre of vernal pool, 1.546 acre of seasonal wetland, 3.134 acres of seasonal wetland swale, 0.029 acre of seep, 0.718 acre of intermittent drainage, 0.445 acre of ditch, and 2.788 acres of pond.

<b>Table 1 – Potential Jurisdictional Waters of the U.S.</b>	
<b>Type</b>	<b>Acreage<sup>1</sup></b>
Vernal Pool	1.823
Seasonal Wetland	1.546
Seasonal Wetland Swale	3.134
Seep	0.029
Intermittent Drainage	0.718
Ditch	0.445
Pond	<u>2.788</u>
<b>TOTAL:</b>	<b>10.484</b>

<sup>1</sup> An additional 0.009 acres of Isolated Vernal Pool and 0.003 acres of Isolated Seasonal Wetlands occur on site

**A DESCRIPTION OF THE MANNER IN WHICH THE ACTION MAY AFFECT ANY LISTED SPECIES OR CRITICAL HABITAT AND AN ANALYSIS OF ANY CUMULATIVE IMPACTS:**

Vernal pools, seasonal wetlands, and seasonal wetland swales will be filled as a result of project implementation. These features may provide habitat to listed branchiopods. The Applicant proposes to survey all potential habitat for listed vernal pool branchiopods. In the event that listed species are found, the Applicant proposes to mitigate in accordance with the Programmatic Consultation for Relatively Minor Impacts to Vernal Pool Branchiopods. In the event that listed branchiopods are not found, no mitigation would appear warranted.

In the event that listed vernal pool branchiopods are found during the pending wet season surveys, the Applicant requests that the project be appended to the Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans within the Jurisdiction of the Sacramento Field Office, California (USFWS 1-1-96-F-1).

**Table 2 – Proposed Impact Acreages\***

<b>Type</b>	<b>Existing</b>	<b>Avoided</b>	<b>Project Impacts</b>	<b>Infrastructure Impacts**</b>
Vernal Pool	1.823	1.196	0.584	0.044
Seasonal Wetland	1.546	0.340	0.953	0.254
Seasonal Wetland Swale	3.134	1.331	1.281	0.522
<b>TOTAL:</b>	<b>6.503</b>	<b>2.867</b>	<b>2.818</b>	<b>0.820</b>

\*Totals may be off due to rounding

\*\*The Backbone Infrastructure and Interchange Impacts are included as the delineation for this project included these areas.

**RELEVANT REPORTS INCLUDING ENVIRONMENTAL IMPACT STATEMENT, ENVIRONMENTAL ASSESSMENT, OR BIOLOGICAL ASSESSMENT PREPARED:**

A Special-Status Plant Survey report was prepared for the project site during April and June 2008.

**ANY OTHER RELEVANT AVAILABLE INFORMATION ON THE ACTION, THE LISTED SPECIES, OR CRITICAL HABITAT:**

There is no other relevant available information applicable to the proposed project, the listed species, or the critical habitat.

**PROPOSED MITIGATION:**

The Applicant requests that the project be appended to the Programmatic Formal Consultation Permitting Projects with Relatively Small Effects on the Valley Elderberry Longhorn Beetle within the Jurisdiction of the Sacramento Field Office, California (USFWS 1-1-96-F-66).

In the event that listed vernal pool branchiopods are found during the pending wet season surveys, the Applicant requests that the project be appended to the Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans Within the Jurisdiction of the Sacramento Field Office, California (USFWS 1-1-96-F-1)

Clean Water Act  
Section 404 Individual Permit Application  
For  
**Prairie City Road Business Park**  
Folsom, California

20 November 2008

Prepared For:  
**GenCorp Realty Investments**



**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

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Attachment A – Section 7 Consultation Information

<b>APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT (33 CFR 325)</b>		<b>OMB APPROVAL NO. 0710-003</b>	
Public reporting burden for this collection of information is estimated to average 5 hours per response, including the time for reviewing instructions, Searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Service Directorate of Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302; and to the Office of Management and Budget, Paperwork Reduction Project (0710-003), Washington, DC 20503. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.			
<b>PRIVACY ACT STATEMENT</b>			
Authority: 33 USC 401, Section 10; 1413, Section 404. Principal Purpose: These laws require permits authorizing activities in, or affecting, navigable waters of the United States; the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Routine uses: Information provided, however, the permit application cannot be processed nor can a permit be issued.			
One set of the original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the proposed activity. An application that is not completed in full will be returned.			
<b>(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)</b>			
1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETED
<b>(ITEMS BELOW TO BE FILLED BY APPLICANT)</b>			
5. APPLICANT'S NAME  David Hatch, Vice President		8. AUTHORIZED AGENT'S NAME & TITLE (AN AGENT IS NOT REQUIRED)  Bjorn Gregersen, Vice President	
6. APPLICANT'S ADDRESS  GenCorp Realty Investments 620 Coolidge Drive, Suite 100 Folsom, CA 95630		9. AGENT'S ADDRESS  ECORP Consulting, Inc. 2525 Warren Drive Rocklin, CA 95677	
7. APPLICANT'S PHONE NUMBERS WITH AREA CODE  a. Residence b. Business (916) 351-8534		10. AGENT'S PHONE NUMBERS WITH AREA CODE  a. Residence b. Business (916) 782-9100	
11. STATEMENT OF AUTHORIZATION  I hereby authorize <u>ECORP Consulting, Inc.</u> to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.  _____ APPLICANT'S SIGNATURE			
_____ DATE			
<b>NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY</b>			
12. PROJECT NAME OR TITLE (see instructions)  Prairie City Road Business Park			

13. NAME OF WATERBODY, IF KNOWN (if applicable)  Unnamed vernal pools, seasonal wetlands, seasonal wetland swales, and intermittent drainages, which are tributary to Alder Creek.	14. PROJECT STREET ADDRESS (if applicable)
15. LOCATION OF PROJECT  COUNTY Sacramento STATE CA	
16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)  The ±71 acre property is located south of Highway 50, west of Prairie City Road, and south of the City of Folsom in eastern Sacramento County, California. The site corresponds to an unsectioned portion of Township 9 North, Range 7 East (MDBM) of the "Folsom, California" 7.5-minute quadrangle (U.S. Department of the Interior, Geological Survey 1980). The approximate center of the site is located at 38° 38' 20" North and 121° 09' 09" West. The site is located within the Lower American Watershed (#18020111, U.S. Department of Interior, Geological Survey 1978).	
17. DIRECTIONS TO THE SITE  From Highway 50 take the Prairie City Road exit and turn south. The property will be directly to the East of Prairie City Road.	
18. NATURE OF ACTIVITY (Description of project, include all features)  The ±71 acre Prairie City Road Business Park project involves the development of a mixed use community in Eastern Sacramento County, California, within the Folsom Plan Area Specific Plan (Folsom Plan Area). Project components include 1.3 acres of Single Family development, 41.3 acres of Industrial/Office Park, 25.3 acres of Preserve/Open Space, and 3.1 acres of Right of Ways within the Folsom Plan Area. The project site contains approximately 4.108 acres of waters of the United States, of which approximately 2.327 acres would be avoided. The land plan for the proposed Prairie City Road Business Park project is shown in Figure 2.	
19. PROJECT PURPOSE (Describe the reason or purpose of the project, see instructions)  The Prairie City Road Business Park project is a portion of the Folsom Plan Area Specific Plan (see block 18). The purpose of the Folsom Plan Area Specific Plan is: (1) to construct a large-scale, mixed-use master-planned community consisting of mixed-density residential uses, a regional shopping center, and other employment-generating uses; (2) to provide associated supporting infrastructure including on-site backbone infrastructure, schools, parks, an on-site trail system, off-site sewer improvements, off-site roadway improvements, off-site highway interchanges, an off-site water supply pipeline from the Freeport Regional Water Authority diversion facility to the site, and an off-site water treatment plant; and (3) to permanently protect 30 percent of the site as open space for the preservation of oak woodlands and sensitive habitat areas in manner consistent with Measure W.	
USE BLOCKS 20-22 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED	
20. REASON(S) FOR DISCHARGE  Fill of waters of the U.S. to support grading and leveling of the land.	
21. TYPE(S) OF MATERIAL BEING DISCHARGED AND THE AMOUNT OF EACH TYPE IN CUBIC YARDS  Material to be discharged will include soil graded and moved on-site. A total of approximately 1,235 cubic yards of soil will be discharged (i.e., surface area of 1.531 acres x 6" assumed depth).	

22. SURFACE AREA IN ACRES OF WETLANDS OR OTHER WATERS FILLED (see instructions)

The project will impact 1.531 acres of waters of the U.S., including wetlands.

23. IS ANY PORTION OF THE WORK ALREADY COMPLETE? YES ☐ NO ☒ IF YES, DESCRIBE THE WORK

24. ADDRESSES OF ADJOINING PROPERTY OWNERS, LESSEES, ETC. WHOSE PROPERTY ADJOINS THE WETERBODY (if more than can be entered her, please attach a supplemental list)

Please see comprehensive Specific Plan Area List included in comprehensive application.

25. LIST OF OTHER CERTIFICATIONS OR APPROVALS/DENIALS RECEIVED FROM OTHER FEDERAL, STATE, OR LOCAL AGENCIES FOR WORK DESCRIBED IN THIS APPLICATION

AGENCY	TYPE APPROVAL	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
--------	---------------	-----------------------	--------------	---------------	-------------

SEE ADDITIONAL INFORMATION SECTION

26. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

\_\_\_\_\_  
SIGNATURE OF APPLICANT

\_\_\_\_\_  
DATE

\_\_\_\_\_  
SIGNATURE OF AGENT

\_\_\_\_\_  
DATE

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious, or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

## **ENG FORM 4345 - CONTINUATION SHEET PRAIRIE CITY ROAD BUSINESS PARK**

### **Block 8 & 9:**

#### *Additional Authorized Agent*

*Project Engineer:* Jim Ray  
*Company Name:* MacKay & Somps Civil Engineers, Inc.  
*Company Address:* 1771 Tribute Road, Suite E  
*City, State Zip:* Sacramento, California 95815  
*Contact:* 916-929-6092

### **Block 16:**

#### *Location Information Descriptions*

The ±71 acre site is located south of Highway 50, west of Prairie City Road, and south of the City of Folsom in eastern Sacramento County, California (Figure 1. *Project Site and Vicinity*). The site corresponds to an unsectioned portion of Township 9 North, Range 7 East (MDBM) of the "Folsom, California" 7.5-minute quadrangle (U.S. Department of the Interior, Geological Survey 1980). The approximate center of the site is located at 38° 38' 20" North and 121° 09' 09" West. The site is located within the Lower American Watershed (#18020111, U.S. Department of Interior, Geological Survey 1978).

### **Block 17:**

#### *Directions to Site*

From Highway 50 take the Prairie City Road exit and turn south. The property will be directly to the East of Prairie City Road.

**Block 18:***Nature of Activity/Project Description*

The ±71 acre Prairie City Road Business Park project involves the development of a mixed use community in Eastern Sacramento County, California, within the proposed Folsom Plan Area Specific Plan (Folsom Plan Area). Project components include 1.3 acres of Single Family development, 41.3 acres of Industrial/Office Park, 25.3 acres of Preserve/Open Space, and 3.1 acres of Right of Ways within the Folsom Plan Area. The project site contains approximately 4.108 acres of waters of the United States, of which approximately 2.327 acres would be avoided. The land plan for the proposed Prairie City Road Business Park project is shown in Figure 2.

**Block 19:***Project Purpose*

The Prairie City Road Business Park project is a portion of the Folsom Plan Area Specific Plan (see block 18). The purpose of the Folsom Plan Area Specific Plan is: (1) to construct a large-scale, mixed-use master-planned community consisting of mixed-density residential uses, a regional shopping center, and other employment-generating uses; (2) to provide associated supporting infrastructure including on-site backbone infrastructure, schools, parks, an on-site trail system, off-site sewer improvements, off-site roadway improvements, off-site highway interchanges, an off-site water supply pipeline from the Freeport Regional Water Authority diversion facility to the site, and an off-site water treatment plant; and (3) to permanently protect 30 percent of the site as open space for the preservation of oak woodlands and sensitive habitat areas in manner consistent with Measure W.

**Block 22:***Surface Area of Waters to be Impacted*

Estimated impacts to potentially jurisdictional waters of the U.S. total 1.531 acres, consisting of Vernal Pools (0.625 acre), Seasonal Wetlands (0.345 acre), Seasonal Wetland Swales (0.208 acre), Creek/Channel (0.335 acre), and Intermittent Drainage (0.018 acre). The delineation is shown in Figure 3.

**ADDITIONAL INFORMATION****Regulatory Background**

Proposed project activities fall under the jurisdiction of several resource agencies. Pursuant to Section 404 of the Clean Water Act, construction activities in waters of the U.S. are subject to the approval of the U.S. Army Corps of Engineers (Corps). The applicant is requesting an Individual Permit from the Corps for the proposed project. Pursuant to Section 401 of the Clean Water Act, this permit will need to be certified by the Central Valley Regional Water Quality Control Board (CVRWQB). In addition, there is the potential for special-status species within the project area; therefore, consultation will be initiated with the U.S. Fish and Wildlife Service (USFWS). Following is a summary regarding the status of relevant regulatory requirements.

Supporting documents, such as wetland delineations, special-status species/rare plant surveys, determinate-level branchiopod surveys, tree surveys, cultural resource reports, etc, that have been prepared for the Prairie City Road Business Park project are not included in this submittal. These documents will be submitted at a later date in bundled-fashion and augmented as new information and/or reports become available.

## Federal Clean Water Act, Section 404

A total of 4.108 acres of potential jurisdictional waters of the U. S. were identified within the greater project area, including vernal pools, seasonal wetlands, seasonal wetland swales, creek, and ephemeral drainage. The applicant is requesting authorization through an individual permit for project impacts to 1.531 acre of waters of the U.S (Figure 4. *Avoidance/Impact Areas*).

**Table 1 – Potential Jurisdictional Waters of the U.S.**

<b>Type</b>	<b>Acreage</b>
Vernal pool	0.670
Seasonal wetland	0.410
Seasonal wetland Swale	0.233
Creek/Channel	2.687
Intermittent Drainage	<u>0.108</u>
<b>TOTAL:</b>	<b>4.108</b>

**Table 2 – Proposed Impact Acreages**

<b>Type</b>	<b>Existing</b>	<b>Avoidance</b>	<b>Project Impacts</b>	<b>Infrastructure Impacts*</b>	<b>Interchange Impacts*</b>
Vernal Pool	0.670	0.000	0.625	0.045	0.000
Seasonal Wetland	0.410	0.015	0.345	0.050	0.000
Seasonal Wetland Swale	0.233	0.013	0.208	0.012	0.000
Creek/Channel	2.687	2.251	0.335	0.088	0.013
Intermittent Drainage	<u>0.108</u>	<u>0.047</u>	<u>0.018</u>	<u>0.042</u>	<u>0.000</u>
<b>Total:</b>	<b>4.108</b>	<b>2.327</b>	<b>1.531</b>	<b>0.237</b>	<b>0.013</b>

\*The Backbone Infrastructure and Interchange Impacts are included as the delineation for this project included these areas.

## Federal Clean Water Act, Section 401

A request for Section 401 Water Quality Certification will be submitted to the Central Valley Regional Water Quality Control Board.

## Federal Endangered Species Act

Project implementation (i.e. fill of seasonal wetlands) represents potential impacts to the federally listed vernal pool fairy shrimp (*Branchinecta lynchi*, federal threatened) and vernal pool tadpole shrimp (*Lepidurus packardii*, federal endangered). The Applicant proposes to survey potential habitat for listed vernal pool branchiopods during the 2008-2009 wet season. In the event that



In the event that listed vernal pool branchiopods are found during the pending wet season surveys, the Applicant requests that the project be appended to the Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans within the Jurisdiction of the Sacramento Field Office, California (USFWS 1-1-96-F-1).

No special-status plant species were identified on the project site during special-status plant surveys, which were conducted during August 2008. Please refer to Attachment A or information to support Section 7 Consultation.

No elderberry shrubs (*Sambucus* species) are planned for impact in accordance with project implementation. Elderberry shrubs are the exclusive host plant to the Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus* – VELB). VELB is listed as “threatened” on the Federal Endangered Species Act.

### **California Fish and Game Code**

The proposed project will require authorization from the California Department of Fish and Game (CDFG) for impacts to the creek/channel and intermittent drainage as a result of project implementation. Project-specific construction will result in 0.353 acre of impact to a CDFG jurisdictional streambed (i.e., intermittent drainages). Therefore, pursuant to Section 1602 of the California Fish and Game Code, a request for a Lake and Streambed Alteration Agreement will be submitted to the California Department of Fish and Game.

### **California Environmental Quality Act**

The City of Folsom is preparing an Environmental Impact Report (EIR) for the proposed project.

### **National Environmental Policy Act (NEPA)**

The Corps, as Lead Agency, is preparing an Environmental Impact Statement (EIS) in accordance with NEPA guidelines.

## **National Historic Preservation Act, Section 106**

This Project must meet the provisions for the treatment of cultural resources contained within Section 106 of the National Historic Preservation Act (NHPA). The goal of Section 106 of the NHPA is to identify significant cultural resources and seek ways to avoid, minimize, or mitigate adverse effects on significant cultural resources that may result from federal undertakings, including federally permitted activities. Significant cultural resources must meet at least one of four criteria that define eligibility for listing on the National Register of Historic Places (NRHP) (36 CFR 60.4; 36 CFR Part 800).

ECORP conducted a cultural resources survey of the Project Area in November 2006 (ECORP 2007). As a result of that study, one previously unrecorded site was documented, a mining adit (P-34-1936). In addition to the adit, three newly identified isolates (P-34-1937, partially buried penstocking; P-34-1938, dredging cable tied around a downed oak; and P-34-1939, a pint-sized brown glass liquor bottle) were recorded. Two previously recorded loci within the Alder Creek Corridor Mining District (ACCMD), 9B and 11B, were also recognized as being located inside the Project Area. As a result of the survey, ECORP recommended testing and archival research to evaluate these resources for eligibility for the NRHP.

The results of the subsequent historic research and evaluation indicate that site P-34-1936 is a contributing element to the ACCMD, which has been previously determined eligible for the NRHP by the Federal Highways Administration. ACCMD Loci 9B and 11B retain integrity and remain contributing elements to the ACCMD. However, isolates P-34-1937, P-34-1938, and P-34-1939 appear to be non-contributing elements to the ACCMD and are not individually significant or eligible for inclusion in the NRHP or CRHR.

If the Corps determines that P-34-1937, P-34-1938, and P-34-1939 are not eligible for the NRHP and the State Historic Preservation Officer (SHPO) concurs, then no mitigation measures for those resources will be necessary under Section 106. If the Corps determines that site P-34-1936, and Loci 9B and 11B are contributing elements to the ACCMD and the SHPO concurs, then the Criteria for Adverse Effect will be applied and mitigation measures will be developed. Mitigation measures

Mitigation measures could consist of preservation, documentation, interpretation, and additional archival research.

## **ADJACENT LAND USE**

Surrounding land uses include rural residences, developed and undeveloped roadways, and pastureland.

## **NOTIFICATION TO ADJACENT PARCEL OWNERS**

Please see the Specific Plan Area List provided with the Comprehensive Clean Water Act Section 404 Application for the Folsom Plan Area Specific Plan.

## **ALTERNATIVES ANALYSIS**

A detailed Alternatives Analysis for the Folsom Sphere of Influence Specific Plan Area will be prepared in accordance with Section 404(b)(1) of the Clean Water Act and submitted under separate cover.

## **MITIGATION PLAN**

The Applicant proposes to participate in a joint mitigation plan with the other participating property owners in the Folsom South Group. The applicants will mitigate unavoidable impacts to waters of the United States through a combination of the on-site enhancement, on-site creation or restoration, the purchase of credits for at Corps-approved mitigation facilities, and/or off-site wetland restoration or creation. This compensatory mitigation proposal will offset the loss of functions and values caused by unavoidable impacts to waters of the United States and will implement the Corps' Mitigation Rule. In addition, the mitigation will ensure that there is no net increase in floodwater surface elevations downstream of the Project.

## **LIST OF FIGURES**

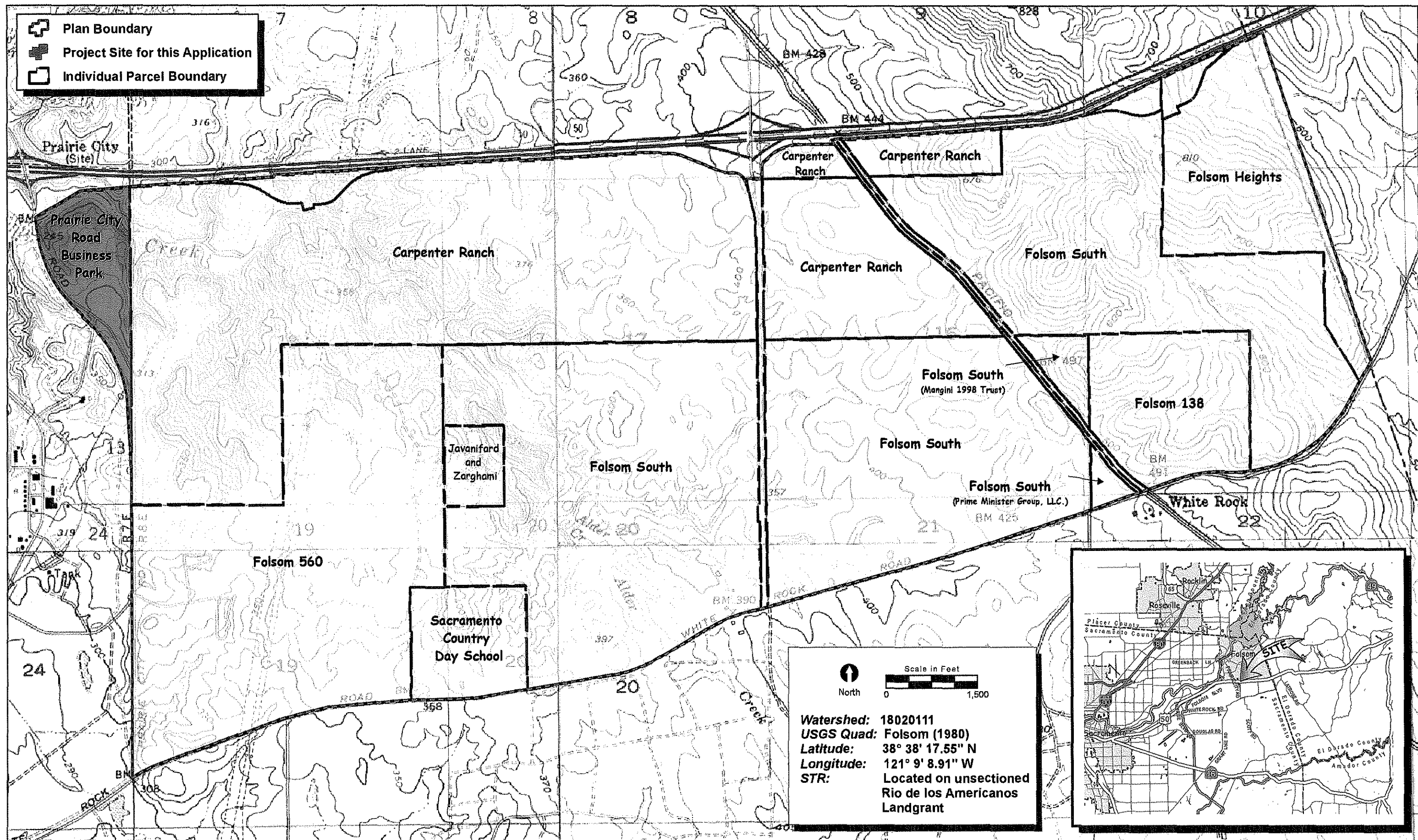
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Figure 1. Project Site and Vicinity

Figure 2. Proposed Land Use Plan

Figure 3. Wetland Delineation

Figure 4. Avoidance/Impact Areas

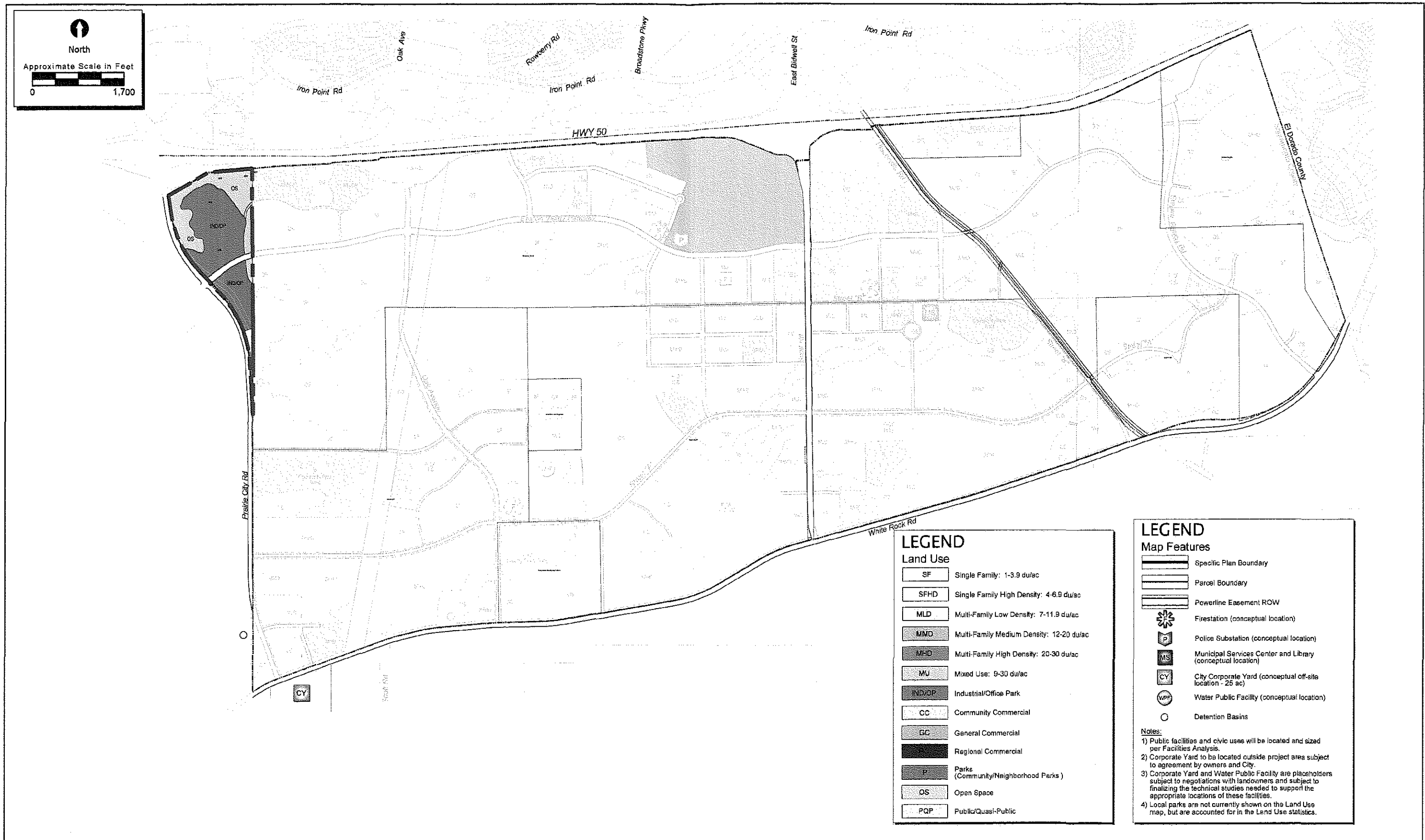


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11/18/08

**Figure 1. Project Site and Vicinity**

2005-429 Folsom Plan Area Specific Plan



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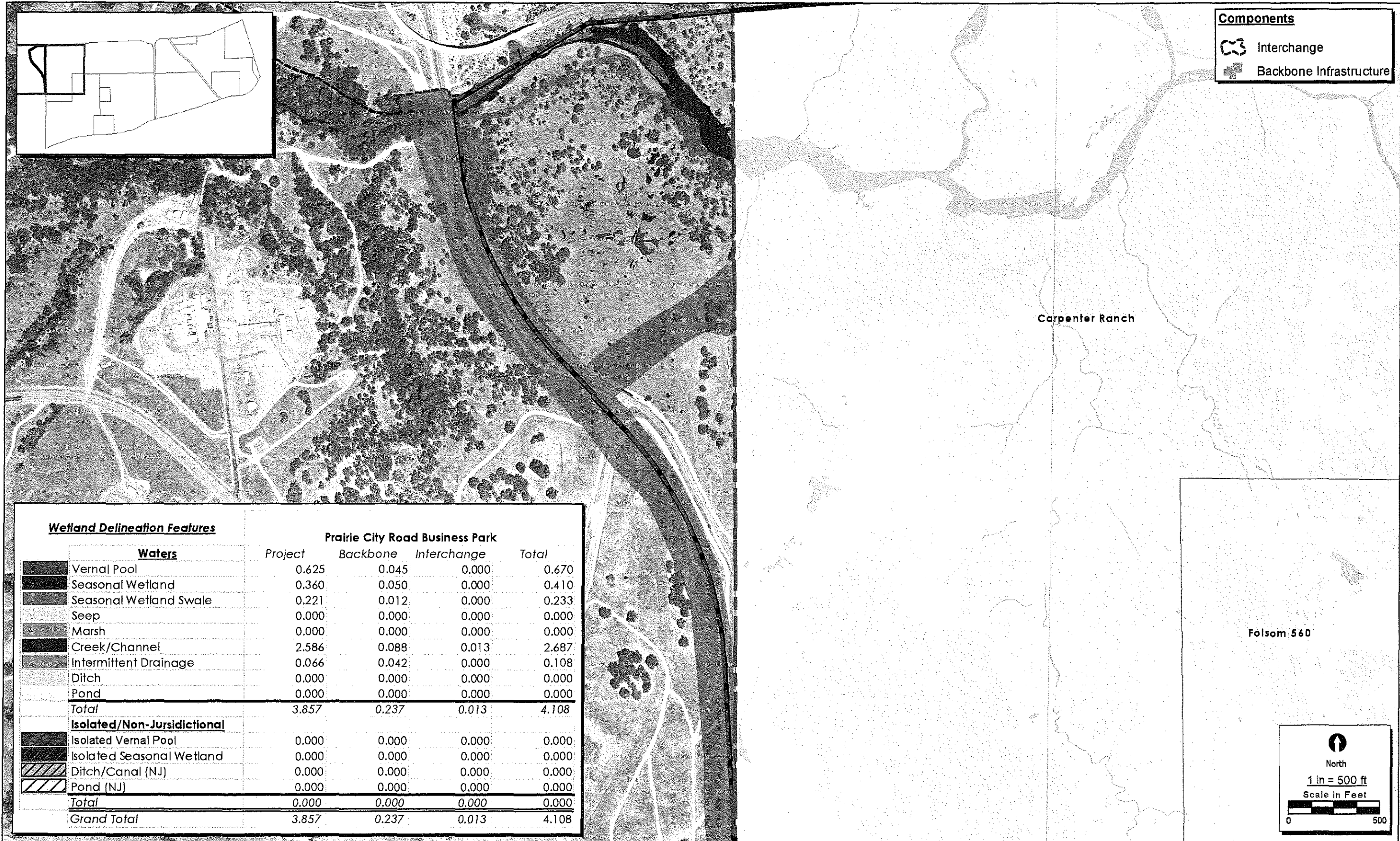
**Figure 2. Proposed Land Use**  
2005-429 Folsom Plan Area Specific Plan

**MACKEY & SOMPS**  
CIVIL ENGINEERS, INC.  
CIVIL ENGINEERING AND PLANNING LAND SURVEYING  
SACRAMENTO, CALIFORNIA 95811-4200  
JULY 1987 - 7536 RW

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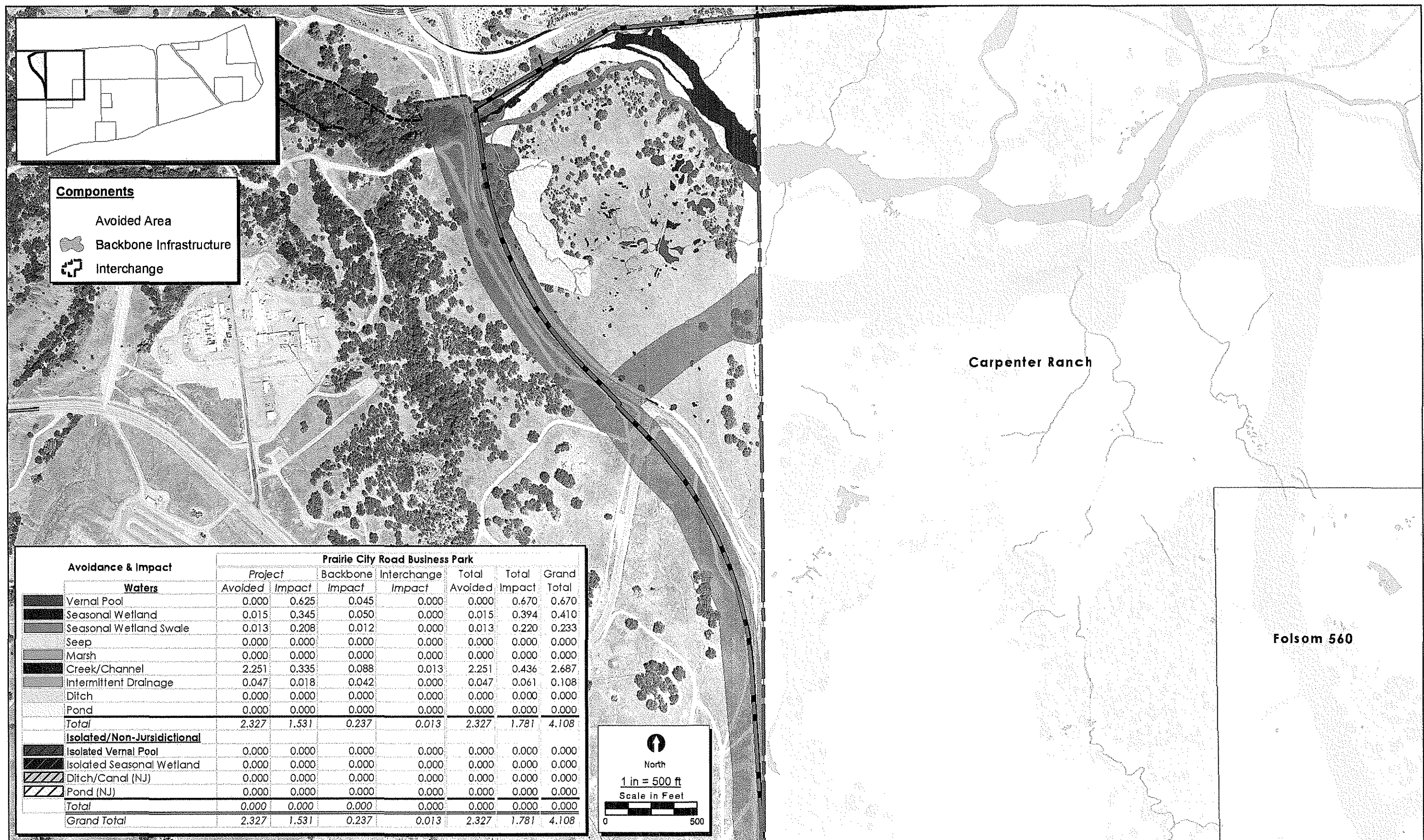




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11/18/08

**Figure 3. Wetland Delineation**  
2005-429 Folsom Plan Area Specific Plan



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11/18/08

**Figure 4. Avoidance/Impact Areas**

2005-429 Folsom Plan Area Specific Plan



## ATTACHMENT A

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### Section 7 Consultation Information

**Proposed Prairie City Road Business Park Project  
Individual Permit  
Section 7 Consultation Information**

**A DESCRIPTION OF THE ACTION TO BE CONSIDERED:**

The ±71 acre Prairie City Road Business Park site is located south of Highway 50, west of Prairie City Road, and south of the City of Folsom in eastern Sacramento County, California. The site corresponds to an unsectioned portion of Township 9 North, Range 7 East (MDBM) of the "Folsom, California" 7.5-minute quadrangle (U.S. Department of the Interior, Geological Survey 1980). The approximate center of the site is located at 38° 38' 20" North and 121° 09' 09" West. The site is located within the Lower American Watershed (#18020111, U.S. Department of Interior, Geological Survey 1978).

The Prairie City Road Business Park project proposes to develop approximately ±71 acres of land in eastern Sacramento currently located within the Folsom Plan Area Specific Plan (Folsom Plan Area). The proposed project consists of the development of 1.3 acres of Single Family development, 41.3 acres of Industrial/Office Park, and 3.1 acres of Right of Ways within the Folsom Plan Area. In addition, the project proposes 25.3 acres of onsite Preserve/Open Space, which will protect 2.327 acres of waters of the U.S., as well as potential special-status species habitat. The plan provides for a mix of land uses and residential densities designed to serve the Highway 50 corridor.

**A DESCRIPTION OF THE SPECIFIC AREA THAT MAY BE AFFECTED BY THE ACTION:**

The Project is located in the Sacramento Valley, east of the Greater Sacramento Metropolitan Area. The Prairie City Road Business Park site consists of a relatively flat terrace with areas of steeper terrain occurring in association with drainage features to the west, north, and east. Alder Creek flows from east to west across the northern portion of the site. Elevations range from approximately 240 to 310 feet above mean sea level (MSL). Historic gold mining activities took place on-site, as evidenced by the tailing piles located to the south of Alder Creek. The

site is currently used for cattle grazing, as is much of the surrounding land. Other land uses in the vicinity of the site include the Aerojet facility to the west, Highway 50 to the north, and ranches to the east and south.

Annual grassland and blue oak woodland are the predominant plant communities on-site. The annual grassland community is composed primarily of non-native annual grasses, including soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), medusahead grass (*Taeniatherum caput-medusae*), slender wild oat (*Avena barbata*), and little quaking grass (*Briza minor*). Other herbaceous species observed in this community include sticky tarweed (*Holocarpha virgata*), yellow star-thistle (*Centaurea solstitialis*), rose clover (*Trifolium hirtum*), shamrock clover (*Trifolium dubium*), Fremont's tidy-tips (*Layia fremontii*), Valley tassels (*Castilleja attenuata*), and hyacinth brodiaea (*Triteleia hyacinthina*).

Blue oak woodland occurs in the northern portion of the site. Blue oaks (*Quercus douglasii*) represent the dominant tree species in this community. Species observed in the understory were generally similar to those found in the annual grassland.

According to the *Soil Survey of Sacramento County, California* (U.S. Department of Agriculture, Soil Conservation Service 1993), seven soil units, or types, have been mapped within the site (See Figure. 10 in Summary - *Natural Resources Conservation Service Soil Types*). These are: (160) Hicksville sandy clay loam, 0 to 2 percent slopes, occasionally flooded; (192) Red Bluff loam, 2 to 5 percent slopes; (196) Red Bluff-Xerorthents-dredge tailings complex, 2 to 50 percent slopes; (198) Redding gravelly loam, 0 to 8 percent slopes; (235) Vleck gravelly loam, 2 to 15 percent slopes; (237) Whiterock loam, 3 to 30 percent slopes; and (245) Xerorthents, dredge tailings, 2 to 50 percent slopes.

## **A DESCRIPTION OF ANY LISTED SPECIES OR CRITICAL HABITAT THAT MAY BE AFFECTED BY THIS ACTION:**

### **Vernal Pool Invertebrates**

Project implementation (i.e. fill of seasonal wetlands) represents potential impacts to the federally listed vernal pool fairy shrimp (*Branchinecta lynchi*, federal threatened) and vernal pool tadpole shrimp (*Lepidurus packardii*, federal endangered). The Applicant proposes to survey potential habitat for listed vernal pool branchiopods during the 2008-2009 wet season. In the event that listed vernal pool branchiopods are found during the pending wet season surveys, the Applicant requests that the project be appended to the Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans within the Jurisdiction of the Sacramento Field Office, California (USFWS 1-1-96-F-1).

### **Valley Elderberry Longhorn Beetle**

No elderberry shrubs (*Sambucus* species) are planned for impact in accordance with project implementation. Elderberry shrubs are the exclusive host plant to the Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus* – VELB). VELB is listed as “threatened” on the Federal Endangered Species Act.

### **Special-Status Plant Species**

Special-status plant surveys were conducted during April and June 2008. No special-status plant species were observed during the 2008 surveys.

### **Jurisdictional Delineation**

Table 1 lists potential jurisdictional waters of the U.S. found on-site. A total of 4.108 acres of potential waters of the U.S have been mapped on the site. These include 0.670 acre of vernal

pool, 0.410 acre of seasonal wetland, 0.233 acres of seasonal wetland swale, 2.687 acre of creek/channel, and 0.108 acre of intermittent drainage.

**Table 1 – Potential Corps Jurisdictional Waters of the U.S.**

<b>Type</b>	<b>Acreage</b>
Vernal pool	0.670
Seasonal wetland	0.410
Seasonal wetland Swale	0.233
Creek/Channel	2.687
Intermittent Drainage	0.108
<b>TOTAL:</b>	<b>4.108</b>

**A DESCRIPTION OF THE MANNER IN WHICH THE ACTION MAY AFFECT ANY LISTED SPECIES OR CRITICAL HABITAT AND AN ANALYSIS OF ANY CUMULATIVE IMPACTS:**

Project implementation (i.e. fill of vernal pools, seasonal wetlands and seasonal wetland swales totaling 1.178 acres) represents potential impacts to the federally listed vernal pool fairy shrimp (*Branchinecta lynchi*, federal threatened) and vernal pool tadpole shrimp (*Lepidurus packardii*, federal endangered). The Applicant proposes to survey potential habitat for listed vernal pool branchiopods during the 2008-2009 wet season. In the event that listed vernal pool branchiopods are found during the pending wet season surveys, the Applicant requests that the project be appended to the Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans within the Jurisdiction of the Sacramento Field Office, California (USFWS 1-1-96-F-1).

**Table 2 – Proposed Impact Acreages**

<b>Type</b>	<b>Existing</b>	<b>Avoidance</b>	<b>Project Impacts</b>	<b>Infrastructure Impacts*</b>	<b>Interchange Impacts*</b>
Vernal Pool	0.670	0.000	0.625	0.045	0.000
Seasonal Wetland	0.410	0.015	0.345	0.050	0.000
Seasonal Wetland Swale	0.233	0.013	0.208	0.012	0.000
Creek/Channel	2.687	2.251	0.335	0.088	0.013
Intermittent Drainage	0.108	0.047	0.018	0.042	0.000
<b>Total:</b>	<b>4.108</b>	<b>2.327</b>	<b>1.531</b>	<b>0.237</b>	<b>0.013</b>

\*The Backbone Infrastructure and Interchange Impacts are included as the delineation for this project included these areas.

**RELEVANT REPORTS INCLUDING ENVIRONMENTAL IMPACT STATEMENT,  
ENVIRONMENTAL ASSESSMENT, OR BIOLOGICAL ASSESSMENT PREPARED:**

ECORP Consulting, Inc. submitted a Wetland Delineation report to the Sacramento District office of the U.S. Army Corps of Engineers (Corps) on January 10, 2006 and received verification on July 11, 2008 (ID#20060538).

A Special-Status Plant Survey report was prepared for the project site during July 2007.

**ANY OTHER RELEVANT AVAILABLE INFORMATION ON THE ACTION, THE  
LISTED SPECIES, OR CRITICAL HABITAT:**

There is no other relevant available information applicable to the proposed project, the listed species, or the critical habitat.

**PROPOSED MITIGATION:**

Project implementation (i.e. fill of vernal pools, seasonal wetlands and seasonal wetland swales totaling 1.178 acres) represents potential impacts to the federally listed vernal pool fairy shrimp (*Branchinecta lynchi*, federal threatened) and vernal pool tadpole shrimp (*Lepidurus packardii*, federal endangered). The Applicant proposes to survey potential habitat for listed vernal pool branchiopods during the 2008-2009 wet season. In the event that listed vernal pool branchiopods are found during the pending wet season surveys, the Applicant requests that the project be appended to the Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans within the Jurisdiction of the Sacramento Field Office, California (USFWS 1-1-96-F-1).

**The Clean Water Act Section 404 Individual Permit  
Application for the Backbone Infrastructure was not  
submitted to the U.S. Army Corps of Engineers on  
20 November 2008**

Clean Water Act  
Section 404 Individual Permit Application  
For  
**Folsom Plan Area Specific Plan – Backbone Infrastructure**  
Folsom, California

20 November 2008

Prepared For:  
**City of Folsom**



**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS



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<b>APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT (33 CFR 325)</b>		<b>OMB APPROVAL NO. 0710-003</b>	
<p>Public reporting burden for this collection of information is estimated to average 5 hours per response, including the time for reviewing instructions, Searching existing data sources, gathering and marinating the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Service Directorate of Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302; and to the Office of Management and Budget, Paperwork Reduction Project (0710-003), Washington, DC 20503. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.</p>			
<b>PRIVACY ACT STATEMENT</b>			
<p>Authority: 33 USC 401, Section 10; 1413, Section 404. Principal Purpose: These laws require permits authorizing activities in, or affecting, navigable waters of the United States; the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Routine uses: Information provided, however, the permit application cannot be processed nor can a permit be issued.</p> <p>One set of the original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the proposed activity. An application that is not completed in full will be returned.</p>			
<b>(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)</b>			
1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETED
<b>(ITEMS BELOW TO BE FILLED BY APPLICANT)</b>			
5. APPLICANT'S NAME City of Folsom		8. AUTHORIZED AGENT'S NAME & TITLE (AN AGENT IS NOT REQUIRED) Bjorn Gregersen	
6. APPLICANT'S ADDRESS 50 Natomas Street Folsom , CA 95630		9. AGENT'S ADDRESS c/o ECorp Consulting, Inc. 2525 Warren Avenue Rocklin, CA 95677	
7. APPLICANT'S PHONE NUMBERS WITH AREA CODE  a. Residence b. Business (916) 355-7248		10. AGENT'S PHONE NUMBERS WITH AREA CODE  a. Residence b. Business (916) 782-9100	
<b>11. STATEMENT OF AUTHORIZATION</b>			
<p>I hereby authorize <u>Bjorn Gregersen</u> to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.</p>			
_____ APPLICANT'S SIGNATURE			_____ DATE
<b>NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY</b>			
12. PROJECT NAME OR TITLE (see instructions) Folsom Plan Area Specific Plan Backbone Infrastructure			
13. NAME OF WATERBODY, IF KNOWN (if applicable)  <i>Please see "Continuation Sheet" for this form</i>		14. PROJECT STREET ADDRESS (if applicable)  <i>Not applicable</i>	
15. LOCATION OF PROJECT  COUNTY Sacramento STATE CA			

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)

The Folsom Plan Area Specific Plan (SPA), and the areas that may be involved in off-site improvements includes portions of the Buffalo Creek, Clarksville, Folsom, and Folsom SE, California, 7.5-minute topographic quadrangles (USGS 1980), Township 9 North, Range 7 East: unsectioned, and Township 9 North, Range 8 East: Sections 15-22.

*Please see "Continuation Sheet" for this form*

17. DIRECTIONS TO THE SITE

*Please see "Continuation Sheet" for this form*

18. NATURE OF ACTIVITY (Description of project, include all features)

Construction and installation of backbone infrastructure required to support the proposed Folsom Plan Area Specific Plan, a mixed-use community in Sacramento County. *Please see Continuation Sheet for this form*

19. PROJECT PURPOSE (Describe the reason or purpose of the project, see instructions)

The purpose of the Backbone Infrastructure project is to allow for phased implementation of the Folsom Plan Area Specific Plan Area project (SPA). The purpose of the SPA is to: 1) to construct a large-scale, mixed-use master-planned community consisting of mixed-density residential uses, a regional shopping center, and other employment-generating uses; (2) to provide associated supporting infrastructure including on-site backbone infrastructure, schools, parks, an on-site trail system, off-site sewer improvements, off-site roadway improvements, off-site highway interchanges, an off-site water supply pipeline from the Freeport Regional Water Authority diversion facility to the site, and an off-site water treatment plant; and (3) to permanently protect 30 percent of the site as open space for the preservation of oak woodlands and sensitive habitat areas in manner consistent with Measure W.

*Please see "Continuation Sheet" for this form*

USE BLOCKS 20-22 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. REASON(S) FOR DISCHARGE

The purpose of the proposed project is to build infrastructure elements to serve a mixed use community within Sacramento County, consistent with the planning and requirements of the Folsom Plan Area Specific Plan. *Please see "Continuation Sheet" for this form.*

21. TYPE(S) OF MATERIAL BEING DISCHARGED AND THE AMOUNT OF EACH TYPE IN CUBIC YARDS

Material to be discharged will include soil graded and moved on-site. A total of approximately 10,700 cubic yards of soil will be discharged (*i.e.*, surface area of 13.278 acres x 6" assumed depth).

22. SURFACE AREA IN ACRES OF WETLANDS OR OTHER WATERS FILLED (see instructions)

Development of the proposed project will result in the fill of approximately 13.278 acres of waters of the United States. *Please see "Continuation Sheet" for breakdown by type of water/wetland.*

23. IS ANY PORTION OF THE WORK ALREADY COMPLETE? YES ☐ NO ☒ IF YES, DESCRIBE THE WORK

24. ADDRESSES OF ADJOINING PROPERTY OWNERS, LESSEES, ETC. WHOSE PROPERTY ADJOINS THE WATERBODY (if more than can be entered here, please attach a supplemental list)

*Please see comprehensive Specific Plan Area List included in comprehensive application.*

25. LIST OF OTHER CERTIFICATIONS OR APPROVALS/DENIALS RECEIVED FROM OTHER FEDERAL, STATE, OR LOCAL AGENCIES

FOR WORK DESCRIBED IN THIS APPLICATION				
AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED
DATE DENIED				

SEE ADDITIONAL INFORMATION SECTION

26. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT	DATE	SIGNATURE OF AGENT	DATE
<p>The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.</p> <p>18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious, or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.</p>			

**ENG FORM 4345 - Continuation Sheet Folsom Plan Area Specific Plan -  
Backbone Infrastructure**

**Block 8:**

*Additional Authorized Agent*

Project Engineer: Jim Ray  
Company Name: MacKay & Somps Civil Engineers, Inc.  
Company Address: 1771 Tribute Road, Suite E  
City, State Zip: Sacramento, California 95815  
Contact: (916) 929-6092

**Block 16:**

*Location Information*

The Backbone Infrastructure for the Folsom Plan Area Specific Plan (SPA), and the areas that may be involved in off-site improvements include portions of the Buffalo Creek, Clarksville, Folsom, and Folsom SE, California, 7.5-minute topographic quadrangles (USGS 1980), Township 9 North, Range 7 East: unsectioned, and Township 9 North, Range 8 East: Sections 15-22.

**Block 17:**

*Directions to Specific Plan Area*

The subject property is generally located in southern Sacramento County on undeveloped lands. Regional access to the project site is be provided from U.S. 50, which also forms the site's northern boundary. Local access to the project site is provided by Prairie City Road, East Bidwell Street, and White Rock Road. Infrastructure elements serving the Plan Area are located both within the Plan Area and immediately north and west of the Plan Area.

**Block 18:***Nature of Activity/Project Description*

The purpose of the Backbone Infrastructure project (Figure 1) is to allow for phased implementation of the Folsom Plan Area Specific Plan Area project (SPA). The purpose of the SPA is to: 1) to construct a large-scale, mixed-use master-planned community consisting of mixed-density residential uses, a regional shopping center, and other employment-generating uses; (2) to provide associated supporting infrastructure including on-site backbone infrastructure, schools, parks, an on-site trail system, off-site sewer improvements, off-site roadway improvements, off-site highway interchanges, an off-site water supply pipeline from the Freeport Regional Water Authority diversion facility to the site, and an off-site water treatment plant; and (3) to permanently protect 30 percent of the site as open space for the preservation of oak woodlands and sensitive habitat areas in manner consistent with Measure W.

The infrastructure plan has been designed to serve the comprehensive needs of the entire plan area in a phased manner. Attachment A provides detailed information on the components and phasing of the Backbone Infrastructure project. The Backbone Infrastructure plan includes major roads and trails, water and sewer infrastructure, and storm drain infrastructure that occur primarily onsite.

**BACKBONE INFRASTRUCTURE COMPONENTS****Roads**

The proposed roadway network would include major circulation roads that will serve the entire SPA and region (Figure 1).

## **Pedestrian/Bicycle Trails**

The proposed project includes a network of Class I and II bicycle trails that would provide connectivity to trails in Sacramento and El Dorado Counties. A multi-use trail system will provide pedestrian and bicycle linkage throughout the plan area. Typically, these are 8 to 12 foot wide paved trails. For the purposes of this infrastructure application, only those trails occurring within open space areas use and which would result in impacts to "waters" have been incorporated into the request for authorization. Wetland and other "waters" impacts accruing to trails within lotting plans areas have been assigned to those applications.

## **Sanitary Sewer**

The main sanitary sewer system planned for SPA is included in the Backbone Infrastructure. This includes sewers in major roadways as well as separate sewer lines and offsite connection under Hwy 50.

## **Drainage and Flood Control**

Included in the Backbone Infrastructure are detention and water quality basins that serve areas greater than the individual parcels on which they are located, including one basin that is located just west of the SPA, on the west side of the existing Prairie City Road.

## **Water Supply**

A water treatment plant (WTP) is included in the Backbone Infrastructure project. The WTP is located in the southwest portion of the SPA, north of the Country Day School property and south of the Javanifard and Zarghami property.



**Block 22:***Surface Area of Waters to be Impacted*

Estimated impacts to potentially jurisdictional waters of the U.S. total 13.278 acres, consisting of vernal pools (0.874), Seasonal Wetlands (0.787 acre), Seasonal Wetland Swales (5.587 acres), Seep (0.699 acre), Marsh (1.452 acre), Creek/Channel (1.679 acre), Intermittent Drainage (1.888 acre), and Ditch (0.311 acre). Another 0.210 acres of non-jurisdictional features will be impacted, consisting of Ditch (0.051 acre) and Pond (0.159 acre).

**ADDITIONAL INFORMATION****Regulatory Background**

Proposed project activities fall under the jurisdiction of several resource agencies. Pursuant to Section 404 of the Clean Water Act, construction activities in waters of the U.S. are subject to the approval of the U.S. Army Corps of Engineers (Corps). The applicant is requesting an Individual Permit from the Corps for the proposed project. Pursuant to Section 401 of the Clean Water Act, this permit will need to be certified by the Central Valley Regional Water Quality Control Board (CVRWQB). In addition, there is the potential for special-status species within the project area; therefore, consultation will be initiated with the U.S. Fish and Wildlife Service (USFWS). Following is a summary regarding the status of relevant regulatory requirements.

Supporting documents, such as wetland delineations, special-status species/rare plant surveys, determinate-level branchiopod surveys, tree surveys, cultural resource reports, etc, that have been prepared for the Backbone Infrastructure are not included in this submittal. These documents will be submitted at a later date in bundled-fashion and augmented as new information and/or reports become available.

## Federal Clean Water Act, Section 404

A total of 13.278 acres of potential jurisdictional waters of the U. S. were identified within the greater project area, including vernal pools, seasonal wetlands, seasonal wetland swales, seep, marsh, creek/channel, intermittent drainage, ditch and pond. As the Infrastructure project is limited to the footprint of the actual infrastructure and its construction corridor, the applicant is requesting an individual permit for project impacts to all 13.278 acres of waters of the U.S (Figure 2. Backbone Infrastructure Impacts).

**Table 1 – Potential Jurisdictional Waters of the U.S.**

<b>Type</b>	<b>Acreage</b>
Vernal pool	0.874
Seasonal wetland	0.787
Seasonal wetland Swale	5.587
Seep	0.699
Marsh	1.452
Creek/Channel	1.679
Intermittent Drainage	1.888
Ditch	<u>0.311</u>
<b>TOTAL:</b>	<b>13.278</b>

**Table 2 – Proposed Impact Acreages**

<b>Type</b>	<b>Existing</b>	<b>Project Impacts</b>
Vernal pool	0.874	0.874
Seasonal wetland	0.787	0.787
Seasonal wetland Swale	5.587	5.587
Seep	0.699	0.699
Marsh	1.452	1.452
Creek/Channel	1.679	1.679
Intermittent Drainage	1.888	1.888
Ditch	<u>0.311</u>	<u>0.311</u>
<b>TOTAL:</b>	<b>13.278</b>	<b>13.278</b>

## Federal Clean Water Act, Section 401

A request for Section 401 Water Quality Certification will be submitted to the Central Valley Regional Water Quality Control Board.

## **Federal Endangered Species Act**

Project implementation (i.e. fill of vernal pool, seasonal wetlands, and seasonal wetland swales totaling 7.248 acres) represents potential impacts to the federally listed vernal pool fairy shrimp (*Branchinecta lynchi*, federal threatened) and vernal pool tadpole shrimp (*Lepidurus packardii*, federal endangered). The majority of the Backbone Infrastructure project has been surveyed or is on parcels that are planning to survey potential habitat for listed vernal pool branchiopods during the 2008-2009 wet season. In the event that listed vernal pool branchiopods are found during the pending wet season surveys, the Applicant requests that the project be appended to the Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans within the Jurisdiction of the Sacramento Field Office, California (USFWS 1-1-96-F-1).

No special-status plant species have been identified on the project site during special-status plant surveys conducted by individual project owners. Rare plant surveys have been conducted or are planned for all participating properties in the SPA. Any portions of the Backbone Infrastructure project that is not surveyed by individual landowners will be surveyed by the City. Please refer to Attachment B for information to support Section 7 Consultation.

There are a number of elderberry shrubs (*Sambucus* species) that may be impacted by project implementation (Figure 3). Elderberry shrubs are the exclusive host plant to the Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus* – VELB). VELB is listed as “threatened” on the Federal Endangered Species Act.

## **California Fish and Game Code**

The proposed project will require authorization from the California Department of Fish and Game (CDFG) for impacts to the streambeds as a result of project implementation. Project-specific construction will result in 3.568 acre of impact to a CDFG jurisdictional streambed (i.e., creek/channel and intermittent drainages). Therefore, pursuant to Section 1602 of the California Fish and Game Code, a request for a Lake and Streambed Alteration Agreement will be submitted to the California Department of Fish and Game.

## **California Environmental Quality Act**

The City of Folsom is preparing an Environmental Impact Report (EIR) for the proposed project.

## **National Environmental Policy Act (NEPA)**

The Corps, as Lead Agency, is preparing an Environmental Impact Statement (EIS) in accordance with NEPA guidelines.

## **National Historic Preservation Act, Section 106**

This Project must meet the provisions for the treatment of cultural resources contained within Section 106 of the National Historic Preservation Act (NHPA). The goal of Section 106 of the NHPA is to identify significant cultural resources and seek ways to avoid, minimize, or mitigate adverse effects on significant cultural resources that may result from federal undertakings, including federally permitted activities. Significant cultural resources must meet at least one of four criteria that define eligibility for listing on the National Register of Historic Places (NRHP) (36 CFR 60.4; 36 CFR Part 800).

The Backbone Infrastructure project will be processed concurrent with Section 106 compliance for the other SPA projects.

## **ADJACENT LAND USE**

Surrounding land uses include rural residences, developed and undeveloped roadways, and pastureland.

## **NOTIFICATION TO ADJACENT PARCEL OWNERS**

Please see the Specific Plan Area List provided with the Comprehensive Clean Water Act Section 404 Application for the Folsom Plan Area Specific Plan.

## **ALTERNATIVES ANALYSIS**

A detailed Alternatives Analysis for the Folsom Plan Area Specific Plan Area will be prepared in accordance with Section 404(b)(1) of the Clean Water Act and submitted under separate cover.

## **MITIGATION PLAN**

The Applicant proposes to participate in a joint mitigation plan with the other participating property owners in the Folsom South Group. The applicants will mitigate unavoidable impacts to waters of the United States through a combination of the on-site enhancement, on-site creation or restoration, the purchase of credits for at Corps-approved mitigation facilities, and/or off-site wetland restoration or creation. This compensatory mitigation proposal will offset the loss of functions and values caused by unavoidable impacts to waters of the United States and will implement the Corps' Mitigation Rule. In addition, the mitigation will ensure that there is no net increase in floodwater surface elevations downstream of the Project.

The backbone Infrastructure project will establish a mitigation plan using ratios that will allow any portion of the Backbone Infrastructure to move forward as dictated by the pace and phasing of development of the SPA properties. As each phase or portion of the backbone infrastructure is implemented, a prorated amount of mitigation will be required (based on amount and types of wetland impacts) to offset impacts.

## **LIST OF FIGURES**

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Figure 1. Backbone Infrastructure Exhibit

Figure 2. Backbone Infrastructure Impacts

Figure 3. Approximate Known Elderberry Locations

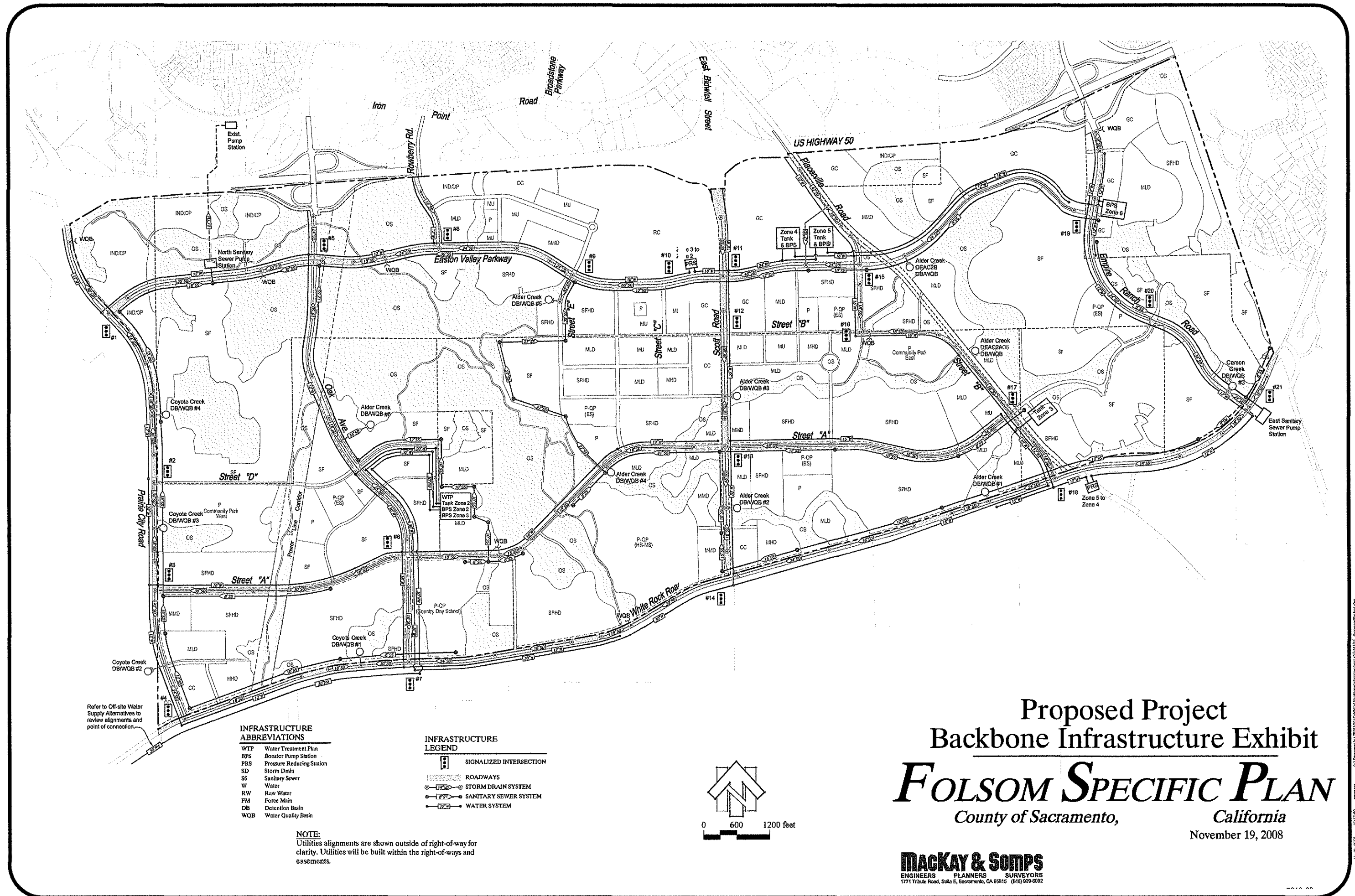
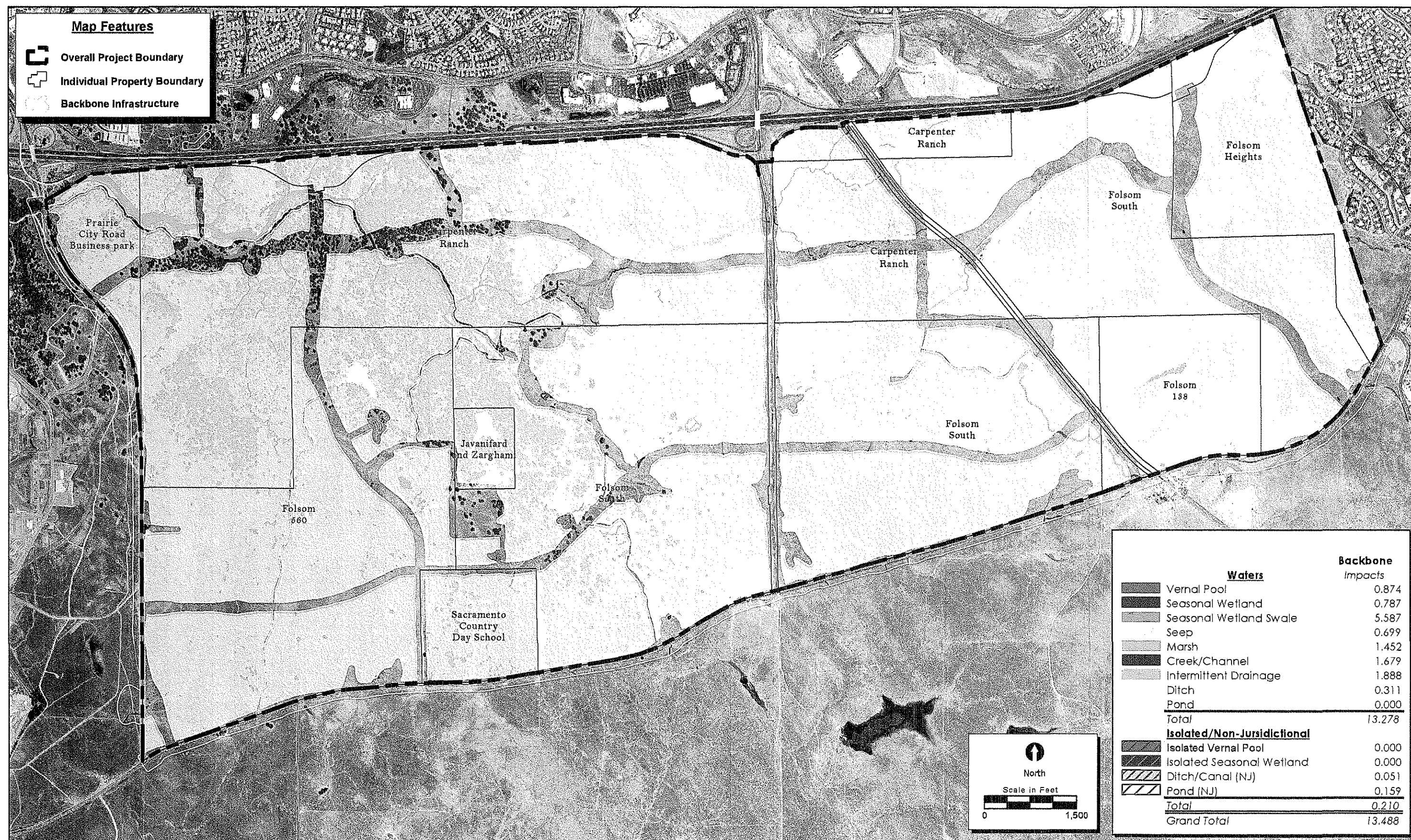


FIGURE 1. Backbone Infrastructure Exhibit





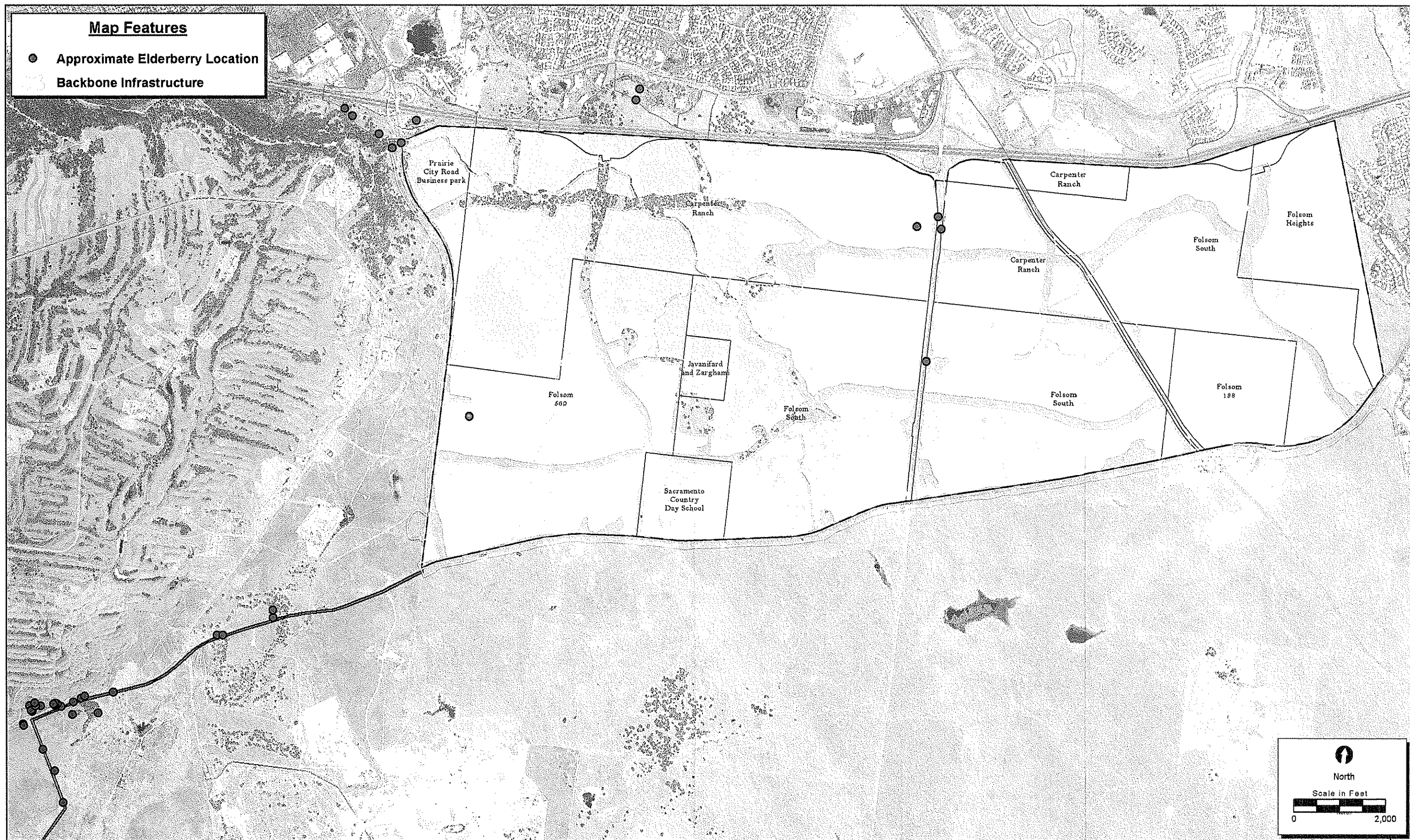
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11/18/08

**Figure 2. Backbone Infrastructure Impacts**

2005-429 Folsom Plan Area Specific Plan





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11/18/08

**Figure 3. Approximate Known Elderberry Locations**  
 2005-429 Folsom Plan Area Specific Plan

## **LIST OF ATTACHMENTS**

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Attachment A – Folsom Specific Plan Implementation Plan

Attachment B – Section 7 Consultation Information



## **ATTACHMENT A**

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Folsom Specific Plan Implementation Plan

## **Folsom Specific Plan Implementation Plan (SPA)**

### **Backbone Infrastructure**

The purpose of this section is to describe conceptually the ultimate backbone infrastructure for the SPA. These development areas represent one possible method of phasing construction of the Specific Plan area. In response to market demands, numerous combinations of development phasing are possible. This is not the only phasing plan possible nor intended to be a prescriptive approach to phasing. The principal which governs acceptable phasing is to provide the necessary infrastructure to meet the service levels identified by the City of Folsom.

Listed below is the ultimate backbone infrastructure required to serve each of the four identified areas, North, South, East, & West should they decide to be the first to develop. Each list represents a comprehensive summary of improvements necessary for each phase to develop independently. Once the first area develops the common infrastructure listed for each area that has been built with the first phase would not be necessary with successive phases. The actual order that each area develops will define the extent of the backbone infrastructure necessary to serve the area developing. Certain elements listed for each area of development may not be necessary to be completely constructed due to the extent of development in any major phase.

The Folsom Specific Plan requires some regional transportation improvements to mitigate cumulative impact of the development. These regional transportation improvements are as follows:

- Oak Avenue/Highway 50 Interchange and associated Highway 50 Improvements.
- Prairie City Road/Highway 50 Interchange Improvements and associated Highway 50 Improvements.
- Empire Ranch Road/Highway 50 Interchange and associated Highway 50 improvements.
- Rowberry Road/Highway 50 Overcrossing.
- White Rock Road Improvements.

White Rock Road is planned to be a 6-lane arterial roadway adjacent to the Folsom Specific Plan. The County of Sacramento is proposing to construct the middle four lanes and median of White Rock Road. The Folsom Specific Plan anticipates constructing the northern frontage lane of White Rock Road.

Dependent on the final negotiations for delivery of the Folsom Specific Plan ultimate water supply, additional initial water system improvements may be necessary.

Be advised that the storm drain pipe line, sanitary sewer pipe line, and water pipe line diameters and alignments indicated on the various exhibits are taken from the available infrastructure studies each at various stages of completeness. Therefore, some pipeline diameters and alignments may be revised as the Folsom Specific Plan continues through the entitlement process, and the technical studies are completed.

## North Area Development

### Circulation Infrastructure (North Area):

- Easton Valley Parkway, OS & SF land use boundary line (approx. 700 feet west of Rowberry Road) to Collector Road (approx. 1,400 feet east of Scott Road).
- Street 'A', Park Lot land use (approx. 2,400 feet west of Scott Road intersection) to Scott Road.
- Rowberry Road, Highway 50 to Easton Valley Parkway.
- Scott Road, Highway 50 to White Rock Road.
- Internal collector and residential streets to provide primary and secondary access.
- Traffic Signal, Easton Valley Parkway & Rowberry Road, (once warrants are met).
- Traffic Signal, Easton Valley Parkway & Street 'E', (once warrants are met).
- Traffic Signal, Easton Valley Parkway & Street 'C', (once warrants are met).
- Traffic Signal, Easton Valley Parkway & Scott Road, (once warrants are met).
- Traffic Signal, Scott Road & Street 'B', (once warrants are met).
- Traffic Signal, Scott Road & White Rock Road (once warrants are met).

### Storm Drainage Infrastructure (North Area):

- Storm drain improvements in Easton Valley Parkway, OS land use storm drain outfall to the land use boundary separating the GC & MHD land uses (approx. 1,500 feet east of Scott Road).
- Storm drain improvements in Street 'A', Alder Creek detention/water quality basin no. 4 to the mid-point of the MLD land use (approx. 300 feet west of Scott Road).
- Storm drain improvements in Rowberry Road, Highway 50 to Easton Valley Parkway.
- Storm drain improvements in Street 'E', Easton Valley Parkway to Alder Creek detention/water quality basin no. 5.
- Storm drain improvements in Scott Road, Highway 50 to White Rock Road.
- Storm drain pipe line and appurtenances adjacent to the land use boundary line separating the GC & MHD land use. Placerville Road to Easton Valley Parkway.
- Storm drain improvements in Placerville Road, Highway 50 to the GC & MHD land use boundary (approx. 1,200 feet north of Easton Valley Parkway).
- Alder Creek detention/water quality basin no. 2.
- Alder Creek detention/water quality basin no. 3.
- Alder Creek detention/water quality basin no. 4.
- Alder Creek detention/water quality basin no. 5.
- Easton Valley Parkway Open Space water quality basin Approx. 1,100 feet east of Oak Avenue).
- Storm drainage improvements within the North Area development limits connecting to storm drain pipe lines in Easton Valley Parkway, Street 'A', Street 'E' and Scott Road.

#### Water Infrastructure (North Area):

- Water transmission main in Easton Valley Parkway, Rowberry Road to Collector Road (approx. 1,400 feet east of Scott Road).
- Water distribution main in Street 'A', Park Lot land use (approx. 2,400 feet west of Scott Road intersection) to Scott Road.
- Water transmission main in Street 'A', Scott Road to Street 'B'
- Water transmission main in White Rock Road, Water Treatment Plant to Street 'B'.
- Water distribution main in Rowberry Road, Highway 50 to Easton Valley Parkway.
- Water transmission main in Scott Road, Highway 50 to White Rock Road.
- Water transmission main in Street 'B', Street 'A' to White Rock Road.
- Water distribution mains within the North Development Area limits providing looping and tie-in's to the transmission mains.
- Surface Water Treatment Plant.
- Pressure Zone 3 Booster Pump Station and Storage Tank.
- Easton Valley Parkway Pressure Reducing Station (Zone 3 to Zone 2)
- Off-Site Raw Water Supply Pipeline.

#### Sanitary Sewer Infrastructure (North Area):

- North Sanitary Sewer Pump Station and force main to existing pump station adjacent to Iron Point Road.
- Sanitary sewer improvements in Easton Valley Parkway, North Sanitary Sewer Pump Station to Collector Road (approx. 1,400 feet east of Scott Road).
- Sanitary sewer improvements in Street 'A', Park Lot land use (Approx. 2,400 feet west of Scott Road) to Scott Road.
- Sanitary sewer improvements Street 'E', Easton Valley Parkway to Street 'B'.
- Sanitary sewer pipe line and appurtenances wrapping around the western limit of the North Area development, Street 'E' to Street 'A'.
- Sanitary sewer improvements in Scott Road, Street 'A' to White Rock Road.
- Sanitary sewer improvements within the North Development Area limit connecting to the pipelines in Easton Valley Parkway, Street 'A' and Street 'E'.

#### South Area Development

#### Circulation Infrastructure (South Area):

- Easton Valley Parkway, Scott Road to Placerville Road.
- Street 'A', Oak Avenue to Street 'B'.
- White Rock Road, Prairie City Road to Street 'B'.
- Prairie City Road, Highway 50 to White Rock Road.
- Oak Avenue Parkway, Power Line Corridor (approx. 1,400 feet north of Street 'D') to White Rock Road.
- Scott Road, Highway 50 to White Rock Road.
- Placerville Road, Highway 50 to Street 'B'.
- Street 'B', Placerville Road to White Rock Road.
- Internal collector and residential streets to provide primary and secondary access.
- Traffic Signal, Prairie City Road & White Rock Road, (once warrants are met).
- Traffic Signal, Oak Avenue & Street 'A', (once warrants are met).
- Traffic Signal, Oak Avenue & White Rock Road, (once warrants are met).
- Traffic Signal, Scott Road & Street 'A', (once warrants are met).
- Traffic Signal, Scott Road & White Rock Road, (once warrants are met).
- Traffic Signal, Placerville Road & Street 'B', (once warrants are met).
- Traffic Signal, Street 'B' & White Rock Road, (once warrants are met).

#### Storm Drainage Infrastructure (South Area):

- Storm drain improvements in Easton Valley Parkway, Street 'E' to Placerville Road.
- Storm drain improvements in Street 'A', Prairie City Road to Street 'B'.
- Storm drain improvements in White Rock Road, Prairie City Road to Street 'B'.
- Storm drain improvements in Prairie City Road, Highway 50 to White Rock
- Storm drain improvements in Oak Avenue, power line corridor (approx. 1,400 north of Street 'D' intersection) to White Rock Road.
- Storm drain pipe and appurtenances in Street 'E', Easton Valley Parkway to Alder Creek detention/water quality basin no. 5.
- Storm drain improvements in Scott Road, Highway 50 to White Rock Road.
- Storm drain pipe line and appurtenances adjacent to the land use boundary line separating the GC & MHD land uses, Placerville Road to Easton Valley Parkway.
- Storm drain improvements in Placerville Road, Highway 50 to Street 'B'.
- Storm drain improvements in Street 'B', Placerville Road to White Rock Road.
- Alder Creek detention/water quality basin no. 1.
- Alder Creek detention/water quality basin no. 2.
- Alder Creek detention/water quality basin no. 3.
- Alder Creek detention/water quality basin no. 4.
- Alder Creek detention/water quality basin no. 5.
- Alder Creek detention/water quality basin no. 6.
- Coyote Creek detention/water quality basin no. 1.
- Coyote Creek detention/water quality basin no. 2.

- Coyote Creek detention/water quality basin no. 3.
- Coyote Creek detention/water quality basin no. 4.
- Street 'A' Open Space water quality basin. Approx. 1,700 feet east of Oak Avenue intersection.
- White Rock Road Open Space water quality basin. Approx. 2,000 feet west of Scott Road intersection.
- Prairie City Road Open Space water quality basin. Approx. 300 feet south of Highway 50.
- Street 'B' Open Space water quality basin. Approx. 200 feet east of Placerville Road intersection.
- Storm drainage improvements within the South Area development limits connecting to storm drain pipe lines in Easton Valley Parkway, Street 'A', White Rock Road, Prairie City Road, Oak Avenue, Scott Road, Placerville Road and Street 'B'.

#### Water Infrastructure (South Area):

- Water transmission main in Easton Valley Parkway, Scott Road to Placerville Road.
- Water transmission main in Street 'A', Prairie City Road to Street 'B'.
- Water transmission mains in White Rock Road, Water Treatment Plant to Street 'B'.
- Water transmission main in Prairie City Road, Highway 50 to White Road.
- Water distribution main in Oak Avenue, Power Line Corridor (approx. 1,400 feet north of Street 'D') to White Rock Road.
- Water transmission main in Scott Road, Highway 50 to White Rock Road.
- Water transmission main in Placerville Road, Highway 50 to Street 'B'.
- Water transmission main is Street 'B', Placerville Road to White Rock Road.
- Water distribution mains within the South Development Area limits providing looping and tie-ins to the transmission mains.
- Surface Water Treatment Plant.
- Pressure Zone 2 Booster Pump Station and Storage Tank.
- Pressure Zone 3 Booster Pump Station and Storage Tank.
- Pressure Zone 4 Booster Pump Station and Storage Tank.
- Off-Site Raw Water Supply Pipeline.

#### Sanitary Sewer Infrastructure (South Area):

- North Sanitary Sewer Pump Station and force main to existing pump station adjacent to Iron Point Road
- Sanitary sewer improvements in Easton Valley Parkway, Prairie City Road to Placerville Road.
- Sanitary sewer improvements in Street 'A', Prairie City Road to Street 'B'.
- Sanitary sewer improvements in White Rock Road, Prairie City Road to Street 'B'.



- Sanitary sewer improvements in Prairie City Road, Easton Valley Parkway to White Rock Road.
- Sanitary sewer improvements in Oak Avenue, Easton Valley Parkway to Street 'D'.
- Sanitary sewer improvements in Street 'D', Oak Avenue to the eastern end of Street 'D' (approx. 1,600 feet east of Oak Avenue).
- Sanitary sewer improvements through the SF, SFHD & MLD land use area to Street 'A'.
- Sanitary sewer improvements in Street 'E', Easton Valley Parkway to Street 'B'.
- Sanitary sewer pipe line and appurtenances wrapping around the western limit of the future North Area development, Street 'B' to Street 'A'.
- Sanitary sewer improvements in Scott Road, Street 'A' to White Rock Road.

## **East Area Development**

### **Circulation Infrastructure (East Area):**

- Easton Valley Parkway, Placerville Road to Empire Ranch Road.
- White Rock Road, Street 'B' to Sacramento/El Dorado County Line.
- Placerville Road, Highway 50 to Street 'B'.
- Street 'B', Placerville Road to White Rock Road.
- Empire Ranch Road, Highway 50 to White Rock Road.
- Traffic Signal, Easton Valley Parkway & Placerville Road, (once warrants are met).
- Traffic Signal, Street 'A' & Street 'B', (once warrants are met).
- Traffic Signal, Empire Ranch Road & Easton Valley Parkway, (once warrants are met).
- Traffic Signal, Empire Ranch Road & Street 'A', (once warrants are met).
- Traffic Signal, Empire Ranch Road & White Rock Road, (once warrants are met).

### **Storm Drainage Infrastructure (East Area):**

- Storm drain improvements in Easton Valley Parkway, Street 'E' to Empire Ranch Road.
- Storm drain improvements in White Rock Road, Alder Creek detention/water quality basin no. 1 to the Sacramento/El Dorado County Line.
- Storm drain improvements in Street 'E', Easton Valley Parkway to Alder Creek detention/water quality basin no.5.
- Storm drain pipe line adjacent to the land use boundary line separating the GC & MHD land uses, Placerville Road to Easton Valley Parkway.
- Storm drain improvements in Placerville Road, Highway 50 to Street 'B'.
- Storm drain improvements in Street 'B', Placerville Road to White Rock Road.
- Storm drain improvements in Empire Ranch Road, Highway 50 to White Rock Road.
- Alder Creek detention/water quality basin no. 1.

- Alder Creek detention/water quality basin no. 5.
- Alder Creek detention/water quality basin no. DEA C2A.
- Alder Creek detention/water quality basin no. DEA C2B.
- Carson Creek detention/water quality basin no. 3.
- Street 'B' Open Space water quality basin. Approx. 200 feet east of Placerville Road intersection.
- Storm drainage improvements within the East Area development limits connecting to storm drain pipe lines in Easton Valley Parkway, White Rock Road, Placerville Road, Street 'B' and Empire Ranch Road.

#### Water Infrastructure (East Area):

- Water transmission main in Easton Valley Parkway, Scott Road to Empire Ranch Road.
- Water transmission main in White Rock Road, Water Treatment Plant to Scott Road and Street 'B' to Empire Ranch Road.
- Water transmission main in Scott Road, Easton Valley Parkway to White Rock Road.
- Water transmission main in Placerville Road, Highway 50 to Street 'B'.
- Water transmission main in Street 'B', Placerville Road to White Rock Road.
- Water distribution main in Empire Ranch Road, Highway 50 to White Rock Road.
- Water distribution mains within the East Development area limits providing looping and tie-ins to the transmission mains.
- Surface Water Treatment Plant.
- Pressure Zone 3 Booster Pump Station.
- Pressure Zone 4 Booster Pump Station and Storage Tank.
- Pressure Zone 5 Booster Pump Station and Storage Tank.
- Pressure Zone 6 Booster Pump Station.
- White Rock Road Pressure Reducing Station (Zone 5 to Zone 4).
- Off-Site Raw Water Supply Pipeline.

#### Sanitary Sewer Infrastructure (East Area):

- North Sanitary Sewer Pump Station and force main to existing pump station adjacent to Iron Point Road.
- Sanitary sewer improvements in Easton Valley Parkway, North Sanitary Sewer Pump Station to Empire Ranch Road.
- Sanitary sewer improvements in Street 'A', Park Site land use (Approx. 2,400 feet west of Scott Road) to Scott Road.
- Sanitary sewer improvements in White Rock Road, Scott Road to the approximate mid-point of the SF land use (approx. 700 feet east of Empire Ranch Road Intersection).
- Sanitary sewer improvements in Street 'B', Easton Valley Parkway to Street 'B'.

- Sanitary sewer pipe line and appurtenances wrapping around the western limit of the future North Area development, Street 'B' to Street 'A'.
- Sanitary sewer improvements in Scott Road, Street 'A' to White Rock Road.
- Sanitary sewer improvements in Empire Ranch Road, land use boundary line separating GC & OS land uses (approx. 500 feet south of Easton Valley Parkway intersection) to White Rock Road.
- Sanitary sewer collector pipe lines within the East Area development limits connecting to the pipelines in Easton Valley Parkway, White Rock Road and Empire Ranch Road.
- East Sanitary Sewer Pump Station.

## **West Area Development**

### **Circulation Infrastructure (West Area):**

- Prairie City Road, Highway 50 to White Rock Road.
- Easton Valley Parkway, Prairie City Road to the Collector Road accessing the IND/OP land use area north of Easton Valley Parkway (approx. 2,800 feet east of Prairie City Road intersection).
- Street 'A', Prairie City Road to Power Line Corridor (approx. 2,100 feet east of Prairie City Road intersection).
- Internal collector and residential streets to provide primary and secondary access.
- Traffic Signal, Prairie City Road & Easton Valley Parkway, (once warrants are met).
- Traffic Signal, Prairie City Road & White Rock Road, (once warrants are met).
- Traffic Signal, Prairie City Road & Street 'D', (once warrants are met).

### **Storm Drainage Infrastructure (West Area):**

- Storm drain improvements in Easton Valley Parkway, Prairie City Road to Easton Valley Parkway Open Space water quality basin (approx. 1,200 feet west of Oak Avenue intersection).
- Storm drain improvements in Street 'A', Prairie City Road to Power Line Corridor land use boundary line (approx. 2,100 feet east of Prairie City Road).
- Storm drain improvements in Prairie City Road, Highway 50 to White Rock Road.
- Coyote Creek detention/water quality basin no. 2.
- Coyote Creek detention/water quality basin no. 3.
- Coyote Creek detention/water quality basin no. 4.
- Prairie City Road Open Space/ Alder Creek water quality basin (approx. 300 feet south of Highway 50).
- Easton Valley Parkway Open Space water quality basin (approx. 1,200 feet west of Oak Avenue intersection).

- Storm drainage improvements within the West Area development limits connecting to internal detention/water quality basins or the pipe lines in Easton Valley Parkway, Street 'A' and Prairie City Road.

#### Water Infrastructure (West Area):

- Water distribution main in Easton Valley Parkway, Prairie City Road to the Collector Road accessing the IND/OP land use area north of Easton Valley Parkway (approx. 2,800 feet east of Prairie City Road)
- Water transmission main in Street 'A', Prairie City Road to power line corridor (approx. 2,100 feet east of Prairie City Road).
- Water transmission main in Prairie City Road, Highway 50 to White Rock Road.
- Water distribution mains within the West Area development limits providing looping and tie-in's to the transmission mains.
- Surface Water Treatment Plant.
- Pressure Zone 2 Booster Pump Station and Storage Tank.
- Off-Site Raw Water Supply Pipeline.

#### Sanitary Sewer Infrastructure (West Area):

- North Sanitary Sewer Pump Station and force main to existing pump station adjacent to Iron Point Road.
- Sanitary sewer improvements in Easton Valley Parkway, Prairie City Road to the North Sanitary Sewer Pump Station
- Sanitary sewer improvements in Street 'A', Prairie City Road to Power Line Corridor (approx. 2,100 feet east of Prairie City Road intersection).
- Sanitary sewer improvements in Prairie City Road, Easton Valley Parkway to White Rock Road.
- Sanitary sewer improvements within the West Area development limits connecting to the pipelines in Prairie City Road, Easton Valley Parkway and Street 'A'.

## **ATTACHMENT B**

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### Section 7 Consultation Information

**Folsom Plan Area – Backbone Infrastructure  
Individual Permit  
Section 7 Consultation Information**

**A DESCRIPTION OF THE ACTION TO BE CONSIDERED:**

The Folsom Plan Area Specific Plan (SPA), and the areas that may be involved in off-site improvements includes portions of the Buffalo Creek, Clarksville, Folsom, and Folsom SE, California, 7.5-minute topographic quadrangles (USGS 1980), Township 9 North, Range 7 East: unsectioned, and Township 9 North, Range 8 East: Sections 15-22.

The purpose of the Backbone Infrastructure project is to allow for phased implementation of the Folsom Plan Area Specific Plan Area project (SPA). The purpose of the SPA is to: (1) to construct a large-scale, mixed-use master-planned community consisting of mixed-density residential uses, a regional shopping center, and other employment-generating uses; (2) to provide associated supporting infrastructure including on-site backbone infrastructure, schools, parks, an on-site trail system, off-site sewer improvements, off-site roadway improvements, off-site highway interchanges, an off-site water supply pipeline from the Freeport Regional Water Authority diversion facility to the site, and an off-site water treatment plant; and (3) to permanently protect 30 percent of the site as open space for the preservation of oak woodlands and sensitive habitat areas in manner consistent with Measure W.

The infrastructure plan has been designed to serve the comprehensive needs of the entire plan area in a phased manner. The Backbone Infrastructure plan includes major roads and trails, water and sewer infrastructure, and storm drain infrastructure that occur primarily onsite.

**BACKBONE INFRASTRUCTURE COMPONENTS:**

**Roads**

The proposed roadway network would include major circulation roads that will serve the entire SPA and region.

## **Pedestrian/Bicycle Trails**

The proposed project includes a network of Class I and II bicycle trails that would provide connectivity to trails in Sacramento and El Dorado Counties. A multi-use trail system will provide pedestrian and bicycle linkage throughout the plan area. Typically, these are 8 to 12 foot wide paved trails. For the purposes of this infrastructure application, only those trails occurring within open space areas use and which would result in impacts to "waters" have been incorporated into the request for authorization. Wetland and other "waters" impacts accruing to trails within lotting plans areas have been assigned to those applications.

## **Sanitary Sewer**

The main sanitary sewer system planned for SPA is included in the Backbone Infrastructure. This includes sewers in major roadways as well as separate sewer lines and offsite connection under Hwy 50.

## **Drainage and Flood Control**

Included in the Backbone Infrastructure are detention and water quality basins that serve areas greater than the individual parcels on which they are located, including one basin that is located just west of the SPA, on the west side of the existing Prairie City Road.

## **Water Supply**

A water treatment plant (WTP) is included in the Backbone Infrastructure project. The WTP is located in the southwest portion of the SPA, north of the Country Day School property and south of the Javanifard and Zarghami property.

## **A DESCRIPTION OF THE SPECIFIC AREA THAT MAY BE AFFECTED BY THE ACTION:**

The Project is located in the Sacramento Valley, east of the Greater Sacramento Metropolitan Area. The Backbone Infrastructure portion of the Folsom Plan Area is comprised of rolling hills at an elevational range of approximately 240 feet to 800 feet above mean sea level. The site is dominated by an annual grassland vegetation community.

The site is currently used as pastureland and surrounding land uses surrounding the site include rural residential, agricultural cropland, and rangeland.

According to the *Soil Survey of Sacramento County, California* (U.S. Department of Agriculture, Soil Conservation Service 1993), sixteen (16) soil units, or types, have been mapped within the site. These are: (107) Argonaut Auburn complex, 3 to 8 percent slopes; (110) Argonaut-Auburn-Rock Outcrop Complex, 8 to 30 percent slopes; (145) Fiddymont fine sandy loam, 1 to 8 percent slopes; (156) Hadselvill-Pentz Complex, 2 to 30 percent slopes; (160) Hicksville sandy clay loam, 0 to 2 percent slopes, occasionally flooded; (183) Orangevale Coarse Sandy Loam, 2 to 5 percent slopes; (190) Pits; (192) Red Bluff loam, 2 to 5 percent slopes; (193) Red Bluff-Redding complex, 0 to 5 percent slopes; (196) Red Bluff-Xerorthents, Dredge Tailings, Complex, 2 to 50 percent slopes; (235) Vleck gravelly loam, 2 to 15 percent slopes; and (237) Whiterock loam, 3 to 30 percent slopes; (245) Xerorthents, dredge tailings, 2 to 50 percent slopes; (AkC) Argonaut Gravelly Loam, 2 to 15 percent slopes; (AWD) Auburn Silt Loam, 2 to 30 percent slopes; and (AxD) Auburn Very Rocky Silt Loam, 2 to 30 percent slopes.

## **A DESCRIPTION OF ANY LISTED SPECIES OR CRITICAL HABITAT THAT MAY BE AFFECTED BY THIS ACTION:**

### **Vernal Pool Invertebrates**

Project implementation (i.e. fill of vernal pool, seasonal wetlands, and seasonal wetland swales totaling 7.248 acres) represents potential impacts to the federally listed vernal pool fairy shrimp



(*Branchinecta lynchi*, federal threatened) and vernal pool tadpole shrimp (*Lepidurus packardii*, federal endangered). The majority of the Backbone Infrastructure project has been surveyed or is on parcels that are planning to survey potential habitat for listed vernal pool branchiopods during the 2008-2009 wet season. In the event that listed vernal pool branchiopods are found during the pending wet season surveys, the Applicant requests that the project be appended to the Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans within the Jurisdiction of the Sacramento Field Office, California (USFWS 1-1-96-F-1).

### **Valley Elderberry Longhorn Beetle**

There are a number of elderberry shrubs (*Sambucus* species) that may be impacted by project implementation. Elderberry shrubs are the exclusive host plant to the Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus* – VELB). VELB is listed as “threatened” on the Federal Endangered Species Act.

### **Special-Status Plant Species**

No special-status plant species have been identified on the project site during special-status plant surveys conducted by individual project owners. Rare plant surveys have been conducted or are planned for all participating properties in the SPA. Any portions of the Backbone Infrastructure project that is not surveyed by individual landowners will be surveyed by the City. Please refer to Attachment B or information to support Section 7 Consultation.

### **Jurisdictional Delineation**

Table 1 lists potential jurisdictional waters of the U.S. found on-site. A total of 13.278 acres of potential jurisdictional waters of the U. S. were identified within the greater project area, including vernal pools, seasonal wetlands, seasonal wetland swales, seep, marsh, creek/channel, intermittent drainage, ditch and pond. As the Infrastructure project is limited to the footprint of the actual infrastructure and its construction corridor, the applicant is requesting an individual permit for project impacts to all 13.278 acres of waters of the U.S.

---

**Table 1 – Potential Jurisdictional Waters of the U.S.**

---

<b>Type</b>	<b>Acreage</b>
Vernal pool	0.874
Seasonal wetland	0.787
Seasonal wetland Swale	5.587
Seep	0.699
Marsh	1.452
Creek/Channel	1.679
Intermittent Drainage	1.888
Ditch	<u>0.311</u>
<b>TOTAL:</b>	<b>13.278</b>

---

**A DESCRIPTION OF THE MANNER IN WHICH THE ACTION MAY AFFECT ANY LISTED SPECIES OR CRITICAL HABITAT AND AN ANALYSIS OF ANY CUMULATIVE IMPACTS:**

Project implementation (i.e. fill of vernal pool, seasonal wetlands, and seasonal wetland swales totaling 7.248 acres) represents potential impacts to the federally listed vernal pool fairy shrimp (*Branchinecta lynchi*, federal threatened) and vernal pool tadpole shrimp (*Lepidurus packardii*, federal endangered). The majority of the Backbone Infrastructure project has been surveyed or is on parcels that are planning to survey potential habitat for listed vernal pool branchiopods during the 2008-2009 wet season. In the event that listed vernal pool branchiopods are found during the pending wet season surveys, the Applicant requests that the project be appended to the Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans within the Jurisdiction of the Sacramento Field Office, California (USFWS 1-1-96-F-1).

**Table 2 – Proposed Impact Acreages**

<b>Type</b>	<b>Existing</b>	<b>Project Impacts</b>
Vernal pool	0.874	0.874
Seasonal wetland	0.787	0.787
Seasonal wetland Swale	5.587	5.587
Seep	0.699	0.699
Marsh	1.452	1.452
Creek/Channel	1.679	1.679
Intermittent Drainage	1.888	1.888
Ditch	<u>0.311</u>	<u>0.311</u>
<b>TOTAL:</b>	<b>13.278</b>	<b>13.278</b>

**RELEVANT REPORTS INCLUDING ENVIRONMENTAL IMPACT STATEMENT, ENVIRONMENTAL ASSESSMENT, OR BIOLOGICAL ASSESSMENT PREPARED:**

Wetland Delineations have been submitted to the Sacramento District office of the U.S. Army Corps of Engineers (Corps) for all properties affected by the Backbone Infrastructure. Wetland Verifications have been received for all participating properties, except Folsom South and Folsom Heights. In April of 2008, a field visit with the U.S. Army Corps of Engineers occurred for verification of onsite wetlands for these properties.

**ANY OTHER RELEVANT AVAILABLE INFORMATION ON THE ACTION, THE LISTED SPECIES, OR CRITICAL HABITAT:**

There is no other relevant available information applicable to the proposed project, the listed species, or the critical habitat.

**PROPOSED MITIGATION:**

The Applicant proposes to participate in a joint mitigation plan with the other participating property owners in the Folsom South Group. The applicants will mitigate unavoidable impacts to waters of the United States through a combination of the on-site enhancement, on-site creation or restoration, the purchase of credits for at Corps-approved mitigation facilities, and/or off-site wetland restoration or creation. This compensatory mitigation proposal will

offset the loss of functions and values caused by unavoidable impacts to waters of the United States and will implement the Corps' Mitigation Rule. In addition, the mitigation will ensure that there is no net increase in floodwater surface elevations downstream of the Project.

The backbone Infrastructure project will establish a phased mitigation plan using ratios that will allow any portion of the Backbone Infrastructure to move forward as dictated by the pace and phasing of development of the SPA properties. As each phase or portion of the backbone infrastructure is implemented, a prorated amount of mitigation will be required (based on amount and types of wetland impacts) to offset impacts.

**The Clean Water Act Section 404 Individual Permit  
Application for the Offsite Waterline was not  
submitted to the U.S. Army Corps of Engineers on  
20 November 2008**

Clean Water Act  
Section 404 Individual Permit Application  
For  
**Folsom Plan Area Offsite Waterline**  
Sacramento County, California

20 November 2008

Prepared For:  
**City of Folsom**



**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

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#### Folsom Plan Area Offsite Waterline

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Attachment A – Information to Support Section 7 Consultation



<b>APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT (33 CFR 325)</b>		<b>OMB APPROVAL NO. 0710-003</b>	
<p>Public reporting burden for this collection of information is estimated to average 5 hours per response, including the time for reviewing instructions, Searching existing data sources, gathering and marinating the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Service Directorate of Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302; and to the Office of Management and Budget, Paperwork Reduction Project (0710-003), Washington, DC 20503. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.</p>			
<b>PRIVACY ACT STATEMENT</b>			
<p>Authority: 33 USC 401, Section 10; 1413, Section 404. Principal Purpose: These laws require permits authorizing activities in, or affecting, navigable waters of the United States; the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Routine uses: Information provided, however, the permit application cannot be processed nor can a permit be issued.</p> <p>One set of the original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the proposed activity. An application that is not completed in full will be returned.</p>			
<b>(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)</b>			
1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLCIATION COMPLETED
<b>(ITEMS BELOW TO BE FILLED BY APPLICANT)</b>			
5. APPLICANT'S NAME  City of Folsom		8. AUTHORIZED AGENT'S NAME & TITLE (AN AGENT IS NOT REQUIRED)  ECORP Consulting, Inc. Attn. Craig W. Hiatt	
6. APPLICANT'S ADDRESS  50 Natomas Street Folsom, CA 95630		9. AGENT'S ADDRESS  2525 Warren Drive Rocklin, CA 95677	
7. APPLICANT'S PHONE NUMBERS WITH AREA CODE  a. Residence b. Business 916-355-7248		10. AGENT'S PHONE NUMBERS WITH AREA CODE  a. Residence b. Business (916) 782-9100	
<b>11. STATEMENT OF AUTHORIZATION</b>			
<p>I hereby authorize <u>ECORP Consulting, Inc.</u> to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.</p>			
_____ APPLICANT'S SIGNATURE			_____ DATE

# NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)	
Folsom Plan Area Off-site Waterline	
13. NAME OF WATERBODY, IF KNOWN (if applicable) Unnamed vernal pools, seasonal wetlands, seasonal wetland swales, intermittent drainages, creek / channel and ditches tributary Alder Creek and Morrison Creek.	14. PROJECT STREET ADDRESS (if applicable)
15. LOCATION OF PROJECT  COUNTY Sacramento STATE CA	
16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)  The site corresponds to a portion of Section 15 Township 9 North, Range 8 East of the "Clarksville, California" 7.5-minute quadrangle (U.S. Department of the Interior Geological Survey). The project is located at approximately 38° 38' 00" North and 121° 05' 30" West within the Lower American (#18020109) and the Upper Cosumnes (#18040013) watersheds.	
17. DIRECTIONS TO THE SITE  The project is generally located in southeast Sacramento County. Please refer to Figure 1 for specific locations.	
18. NATURE OF ACTIVITY (Description of project, include all features)  A 30-inch raw water supply pipeline will be connected to the Freeport Regional Water Authority pipeline at the Gerber Road/Vineyard Road intersection and will be extended to the Folsom Specific Plan Surface Water Treatment Plant. The 30-inch raw water supply pipeline will be installed at a depth that varies from 4 feet to 12 feet below existing ground. The 30-inch raw water supply pipeline will follow the alignment indicated below: <ul style="list-style-type: none"> <li>• Approximately 5,600 linear feet of 30-inch raw water supply pipeline installed in Gerber Road from Vineyard Road to a point approximately 300 feet east of Excelsior Road.</li> <li>• Approximately 14,400 linear feet of 30-inch raw water supply pipeline installed to the east following the projection of Gerber Road through open pasture and agricultural fields to Grant Line Road.</li> <li>• Approximately 51,000 linear feet of 30-inch raw water supply pipeline installed adjacent to the western Grant Line Road shoulder from the point where the pipeline exits the open pastures and agricultural fields and intersects Grant Line Road to the north-east to the White Rock Road intersection.</li> <li>• Approximately 9,000 linear feet of 30-inch raw water supply pipeline in White Rock Road from Grant Line Road to the Prairie City Road intersection (Folsom Specific Plan southwestern corner).</li> </ul>	
19. PROJECT PURPOSE (Describe the reason or purpose of the project, see instructions)  The project purpose is to extend the raw water delivery line from the terminus of the Freeport Regional Water Authority pipeline to the Folsom Plan Area. The purpose of the Folsom Plan Area Specific Plan is: (1) to construct a large-scale, mixed-use master-planned community consisting of mixed-density residential uses, a regional shopping center, and other employment-generating uses; (2) to provide associated supporting infrastructure including on-site backbone infrastructure, schools, parks, an on-site trail system, off-site sewer improvements, off-site roadway improvements, off-site highway interchanges, an off-site water supply pipeline from the Freeport Regional Water Authority diversion facility to the site, and an off-site water treatment plant; and (3) to permanently protect 30 percent of the site as open space for the preservation of oak woodlands and sensitive habitat areas in manner consistent with Measure W.	

USE BLOCKS 20-22 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. REASON(S) FOR DISCHARGE
Fill of waters of the U.S. to install the off-site waterline as described above.
21. TYPE(S) OF MATERIAL BEING DISCHARGED AND THE AMOUNT OF EACH TYPE IN CUBIC YARDS
Approximately 9,200 cubic yards of native fill.
22. SURFACE AREA IN ACRES OF WETLANDS OR OTHER WATERS FILLED (see instructions)
The project will impact 5.695 acres of waters of the U.S., including wetlands.
23. IS ANY PORTION OF THE WORK ALREADY COMPLETE? YES <input type="radio"/> NO <input checked="" type="radio"/> IF YES, DESCRIBE THE WORK
24. ADDRESSES OF ADJOINING PROPERTY OWNERS, LESSEES, ETC. WHOSE PROPERTY ADJOINS THE WATERBODY (if more than can be entered her, please attach a supplemental list)
Please see comprehensive Specific Plan Area List included in comprehensive application.
25. LIST OF OTHER CERTIFICATIONS OR APPROVALS/DENIALS RECEIVED FROM OTHER FEDERAL, STATE, OR LOCAL AGENCIES FOR WORK DESCRIBED IN THIS APPLICATION
SEE ADDITIONAL INFORMATION SECTION

26. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.			
SIGNATURE OF APPLICANT	DATE	SIGNATURE OF AGENT	DATE
<p>The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.</p> <p>18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious, or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.</p>			

**ENG FORM 4345 - CONTINUATION SHEET FOLSOM PLAN AREA OFFSITE  
WATERLINE**

**Blocks 8 and 9:**

Additional Authorized Agent

Project Engineer: Jim Ray  
Company Name: MacKay & Soms Civil Engineers, Inc.  
Company Address: 1771 Tribute Road, Suite E  
City, State Zip Sacramento, California 95815  
Contact: (916) 929-6092

**Block 16:**

*Other Location Descriptions*

The project is located in southeastern Sacramento County, California. Please refer to Figure 1.

**Block 17:**

*Directions to Site*

The project locations are generally found in southeast Sacramento County. Please refer to Figure 1 for specific project locations.

**Block 18:**

*Nature of Activity/Project Description*

A 30-inch raw water supply pipeline will be connected to the Freeport Regional Water Authority pipeline at the Gerber Road/Vineyard Road intersection and will be extended to the Folsom Specific Plan Surface Water Treatment Plant. The 30-inch raw water supply pipeline will be

installed at a depth that varies from 4 feet to 12 feet below existing ground. The 30-inch raw water supply pipeline will follow the alignment indicated below:

- Approximately 5,600 linear feet of 30-inch raw water supply pipeline installed in Gerber Road from Vineyard Road to a point approximately 300 feet east of Excelsior Road.
- Approximately 14,400 linear feet of 30-inch raw water supply pipeline installed to the east following the projection of Gerber Road through open pasture and agricultural fields to Grant Line Road.
- Approximately 51,000 linear feet of 30-inch raw water supply pipeline installed adjacent to the western Grant Line Road shoulder from the point where the pipeline exits the open pastures and agricultural fields and intersects Grant Line Road to the north-east to the White Rock Road intersection.
- Approximately 9,000 linear feet of 30-inch raw water supply pipeline in White Rock Road from Grant Line Road to the Prairie City Road intersection (Folsom Specific Plan southwestern corner).

## **Block 19:**

### *Project Purpose*

The project purpose is to extend the raw water delivery line from the terminus of the Freeport Regional Water Authority pipeline to the Folsom Plan Area. The purpose of the Folsom Plan Area Specific Plan is: (1) to construct a large-scale, mixed-use master-planned community consisting of mixed-density residential uses, a regional shopping center, and other employment-generating uses; (2) to provide associated supporting infrastructure including on-site backbone infrastructure, schools, parks, an on-site trail system, off-site sewer improvements, off-site roadway improvements, off-site highway interchanges, an off-site water supply pipeline from the Freeport Regional Water Authority diversion facility to the site, and an off-site water treatment plant; and (3) to permanently protect 30 percent of the site as open space for the preservation of oak woodlands and sensitive habitat areas in manner consistent with Measure W.

**Block 22:***Surface Area of Waters to be Impacted*

Estimated impacts to potentially jurisdictional waters of the U.S. total 5.695 acres, consisting of vernal pool (4.292 acres), seasonal wetlands (0.853 acre), seasonal wetland swales (0.060 acre), creek / channel (0.081 acre), intermittent drainages (0.010 acre), and ditch (0.399 acre). The impact acreages shown here include portions of wetlands that will not be directly impacted. If the waterline project impacted a portion of a wetland the entire wetland was considered impacted. More detailed project design may result in additional avoidance. The Wetland Assessment & Impacts are shown in Figures 2A through 2H.

**ADDITIONAL INFORMATION****Regulatory Background**

Proposed project activities fall under the jurisdiction of several resource agencies. Pursuant to Section 404 of the Clean Water Act, construction activities in waters of the U.S. are subject to the approval of the U.S. Army Corps of Engineers (Corps). The applicant is requesting an Individual Permit from the Corps for the proposed project. Pursuant to Section 401 of the Clean Water Act, this permit will need to be certified by the Central Valley Regional Water Quality Control Board (CVRWQB). In addition, there is the potential for special-status species within the project area; therefore, consultation will be initiated with the U.S. Fish and Wildlife Service (USFWS). Following is a summary regarding the status of relevant regulatory requirements.

Supporting documents, such as wetland delineations, special-status species/rare plant surveys, determinate-level branchiopod surveys, tree surveys, cultural resource reports, etc, that have been prepared for the project are not included in this submittal. These documents will be submitted at a later date in bundled-fashion and augmented as new information and/or reports become available.

## Federal Clean Water Act, Section 404

A total of 5.695 acres of potential jurisdictional waters of the U. S. were identified within the greater project area, including vernal pools, seasonal wetlands, seasonal wetland swales, marsh, seeps, and ephemeral drainages. The applicant is requesting authorization through an individual permit for project impacts to all waters and wetlands located within the project's area of potential effect (APE). Impacts to Waters of the U.S. are depicted graphically on Figures 2A through 2H. *Wetland Assessment & Impacts.*

**Table 1 – Potential Jurisdictional Waters of the U.S.**

<b>Type</b>	<b>Acreage<sup>1</sup></b>
Vernal Pool	4.292
Seasonal Wetland	0.853
Seasonal Wetland Swale	0.060
Intermittent Drainage	0.010
Creek / Channel	0.081
Ditch	0.399
<b>TOTAL:</b>	<b>5.695</b>

<sup>1</sup> These acreages are based on a wetland assessment which has not yet been verified by the Corps.

**Table 2 – Proposed Impact Acreages**

<b>Type</b>	<b>Existing</b>	<b>Avoided</b>	<b>Project Impacts</b>
Vernal Pool	4.292	0.000	4.292
Seasonal Wetland	0.853	0.000	0.853
Seasonal Wetland	0.060	0.000	0.060
Intermittent Drainage	0.010	0.000	0.010
Creek / Channel	0.081	0.000	0.081
Ditch	0.399	0.000	0.399
<b>TOTAL:</b>	<b>5.695</b>	<b>0.000</b>	<b>5.695</b>

The impact acreages shown here include portions of wetlands that will not be directly impacted. If the waterline project impacted a portion of a wetland the entire wetland was considered impacted. More detailed project design may result in additional avoidance.

## Federal Clean Water Act, Section 401

A request for Section 401 Water Quality Certification will be submitted to the Central Valley Regional Water Quality Control Board.

## **Federal Endangered Species Act**

Project implementation (i.e. fill of vernal pool and seasonal wetlands) represents potential impacts to the federally listed vernal pool fairy shrimp (*Branchinecta lynchi*, federal threatened) and vernal pool tadpole shrimp (*Lepidurus packardii*, federal endangered). To offset these impacts, mitigation will be carried out off-site. The applicant will propose to permanently preserve and protect the appropriate acreage of vernal pool and seasonal wetland habitat to mitigate for the vernal pool/seasonal wetland impacts. The creation component of the mitigation plan will be carried out at an agency-approved mitigation bank or "turn-key" mitigation facility within the project's service area.

There are a number of elderberry shrubs (*Sambucus* species) that may be impacted by project implementation (Figure 3). Elderberry shrubs are the exclusive host plant to the Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus* – VELB). VELB is listed as "threatened" on the Federal Endangered Species Act.

Special-status plant surveys will be conducted during 2009. Results of the special-status plant survey will be forwarded to the Corps and U.S. Fish and Wildlife Service (USFWS) upon completion.

## **National Environmental Policy Act (NEPA)**

The Corps, as federal Lead Agency, will prepare an Environmental Impact Statement (EIS) in accordance with NEPA guidelines.

## **California Fish and Game Code**

The proposed project will require authorization from the California Department of Fish and Game (CDFG) for impacts to streambeds as a result of project implementation. Project-specific construction will result in 0.091 acre of impact to a CDFG jurisdictional streambed (i.e., creek / channel, intermittent drainages and ditch). Therefore, pursuant to Section 1602 of the



California Fish and Game Code, a request for a Lake and Streambed Alteration Agreement will be submitted to the California Department of Fish and Game.

### **California Environmental Quality Act (CEQA)**

The City of Folsom, as the State of California Lead Agency, will prepare an Environmental Impact Report (EIR) in accordance with CEQA guidelines.

### **National Historic Preservation Act, Section 106**

A records search and literature review has been conducted for the offsite waterline. Twenty-three cultural resources studies were conducted along portions of the waterline between 1971 and 2008, resulting in the identification of four cultural resources. The majority of the waterline remains unsurveyed. The evaluation status of the recorded cultural resources within the offsite waterline is currently under review.

### **NOTIFICATION TO ADJACENT PARCEL OWNERS**

Please see the Specific Plan Area List provided with the Comprehensive Clean Water Act Section 404 Application for the Folsom Plan Area Specific Plan.

### **ALTERNATIVES ANALYSIS**

A detailed Alternatives Analysis will be prepared in accordance with Section 404(b)(1) of the Clean Water Act and submitted under separate cover.

### **MITIGATION PLAN**

The Applicant proposes to participate in a joint mitigation plan with the other participating property owners in the Folsom South Group. The applicants will mitigate unavoidable impacts to waters of the United States through a combination of the on-site enhancement, on-site

creation or restoration, the purchase of credits for at Corps-approved mitigation facilities, and/or off-site wetland restoration or creation. This compensatory mitigation proposal will offset the loss of functions and values caused by unavoidable impacts to waters of the United States and will implement the Corps' Mitigation Rule. In addition, the mitigation will ensure that there is no net increase in floodwater surface elevations downstream of the Project.

## LIST OF FIGURES

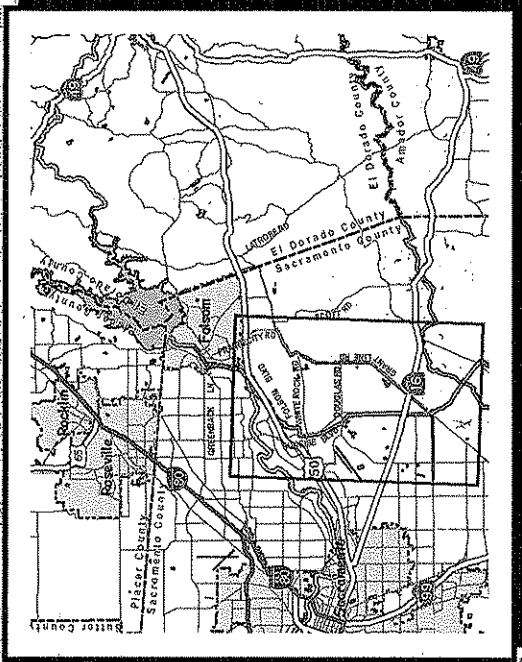
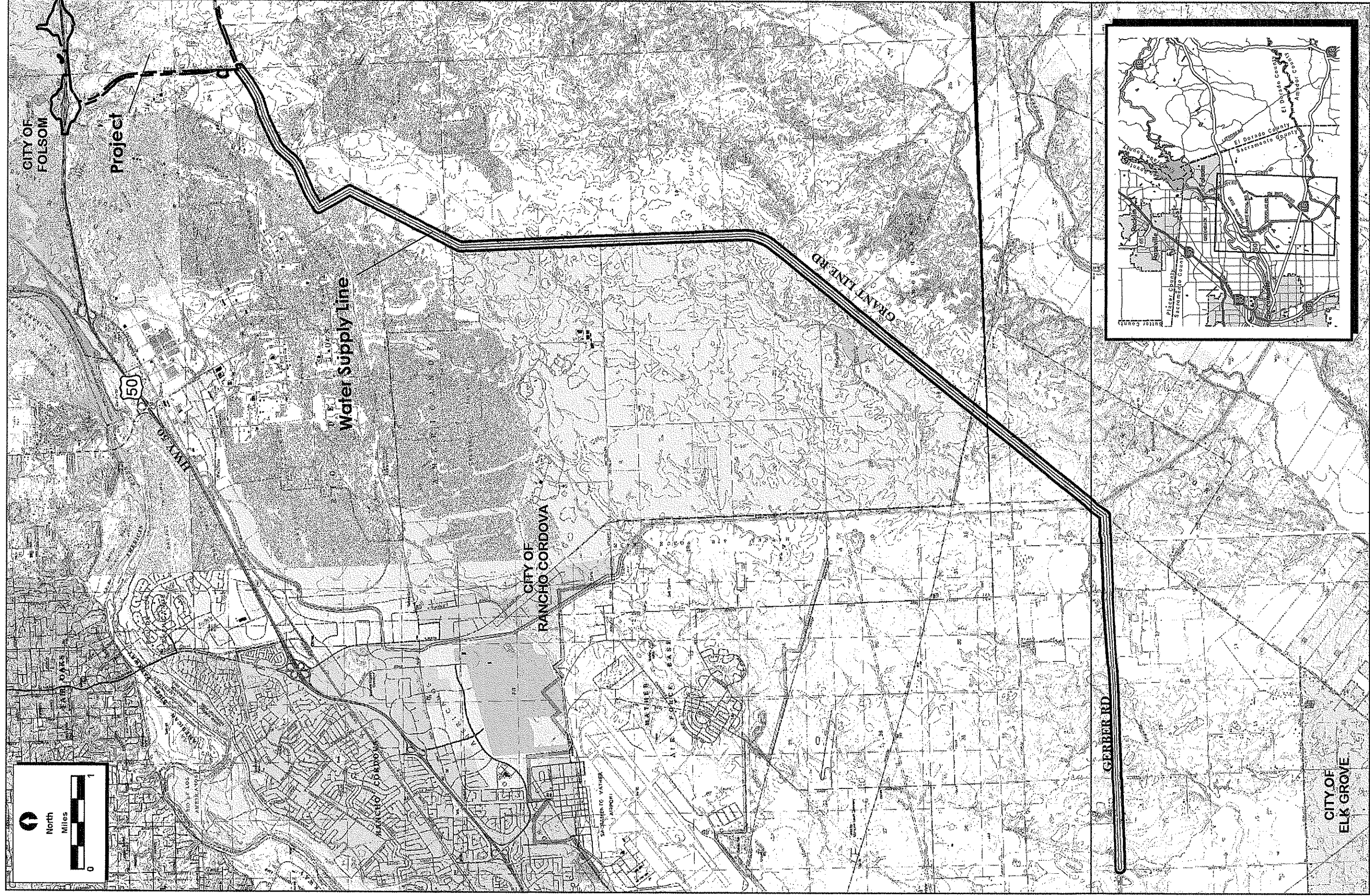
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Figure 1. Project Site and Vicinity

Figures 2a - 2h. Wetland Assessment & Impacts

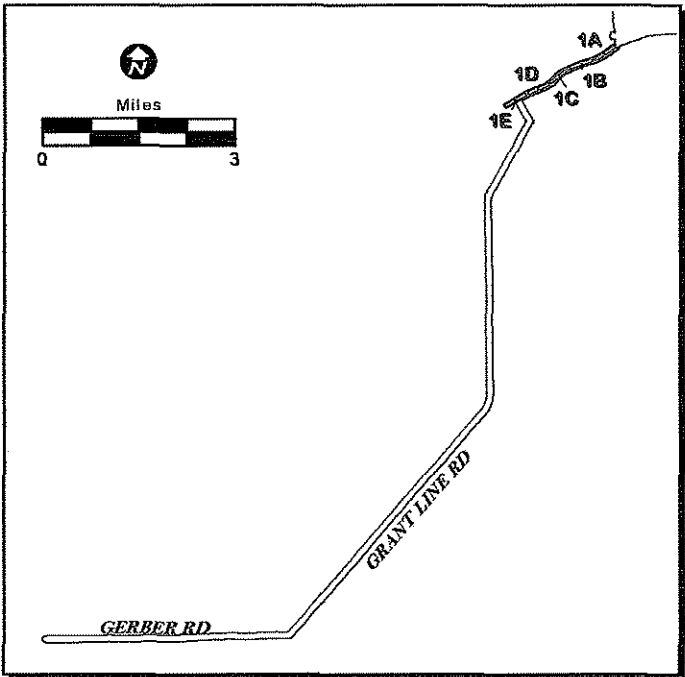
Figure 3. Approximate Known Elderberry Locations





**Figure 1. Project Site and Vicinity**  
*2005-429 Folsom Plan Area Specific Plan*





Existing	Impacted	Waters	Waterline Impacts
		Vernal Pool	4.292
		Seasonal Wetland	0.853
		Seasonal Wetland Swale	0.060
		Seep	0.000
		Marsh	0.000
		Creek/Channel	0.081
		Intermittent Drainage	0.010
		Ditch	0.399
		Pond	0.000
		<b>Total</b>	<b>5.695</b>
		<b>Isolated/Non-Jurisdictional</b>	
		Isolated Vernal Pool	0.000
		Isolated Seasonal Wetland	0.000
		Ditch/Canal (NJ)	0.000
		Pond (NJ)	0.000
		<b>Total</b>	<b>0.000</b>
		<b>Grand Total</b>	<b>5.695</b>

All Detail Maps  
1"=200'

Scale in Feet  
0 200

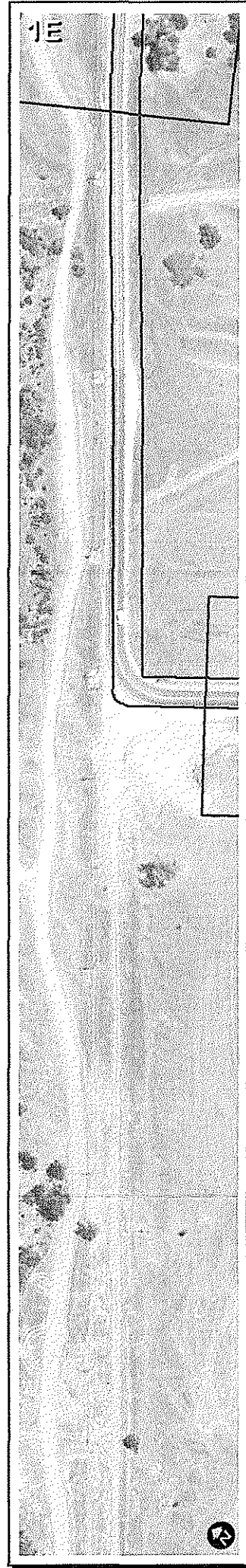
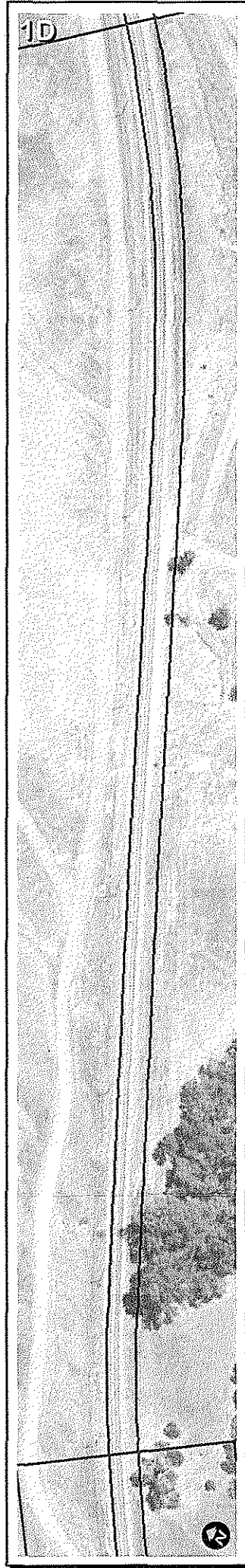
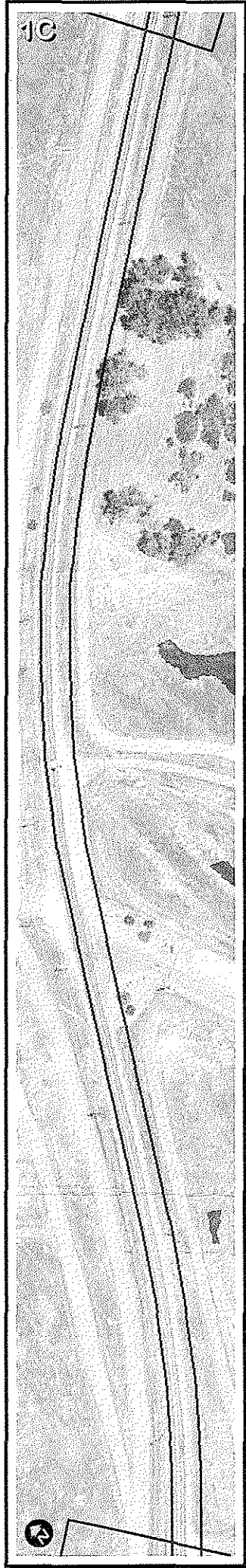
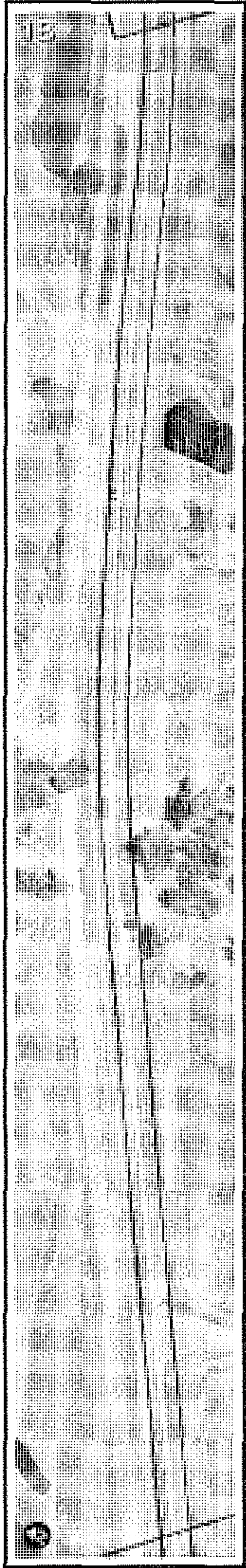
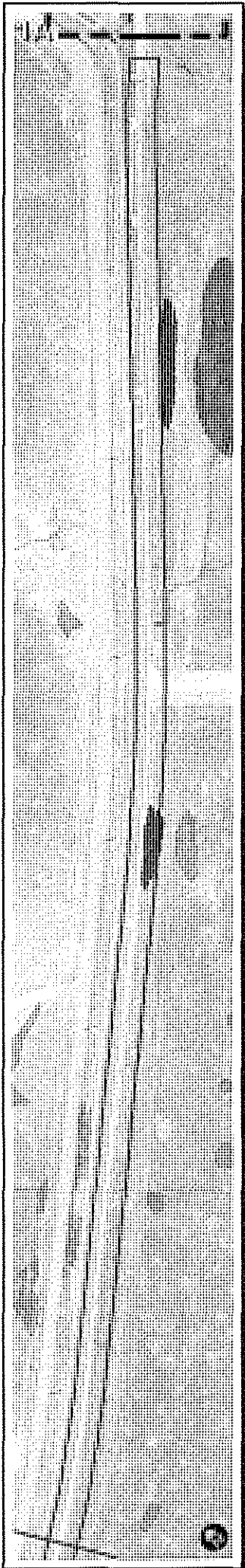


Figure 2a. Water Supply Line Wetland Assessment Impacts - Map 1  
2005-429 Folsom Plan Area Specific Plan







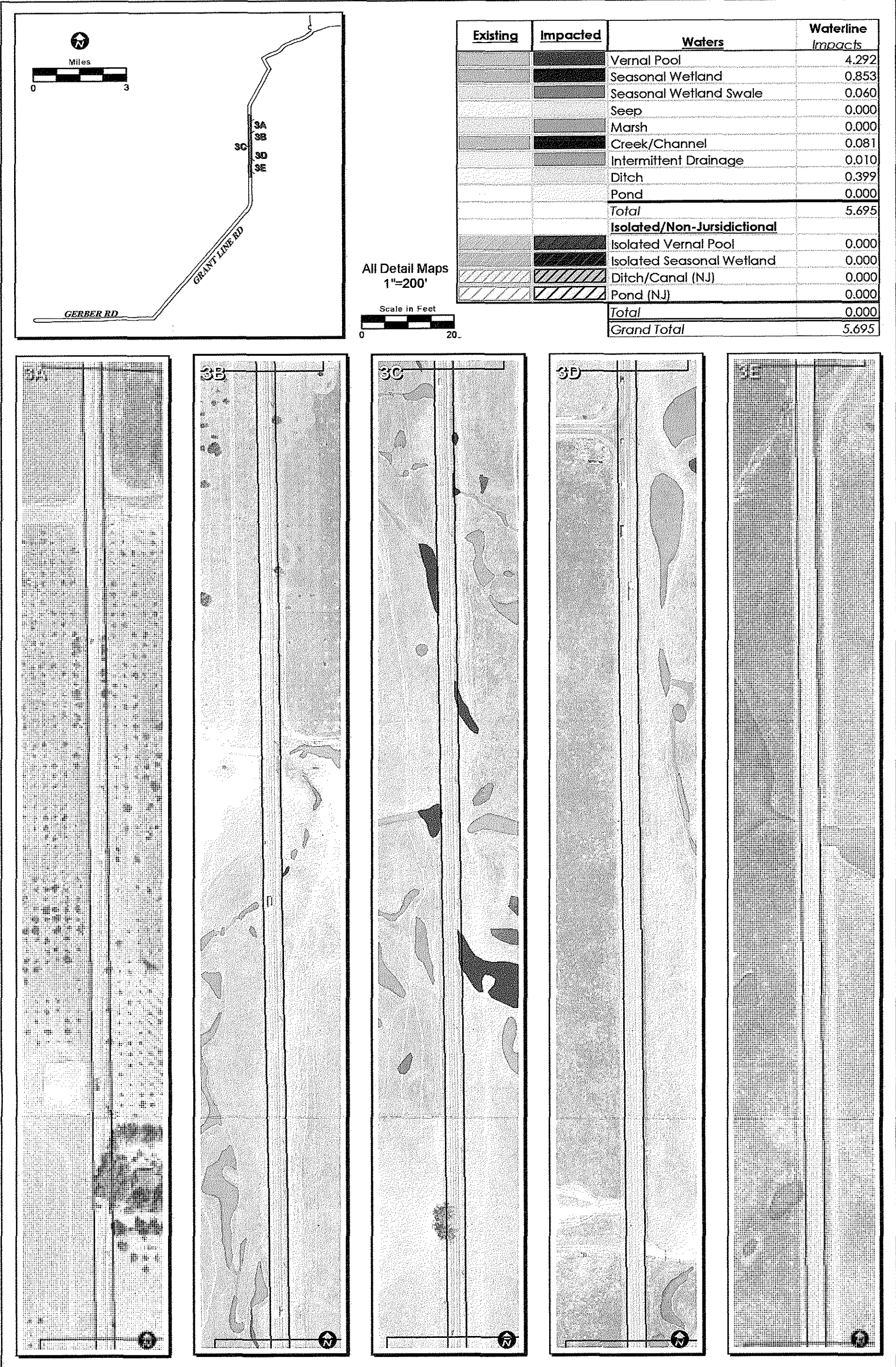
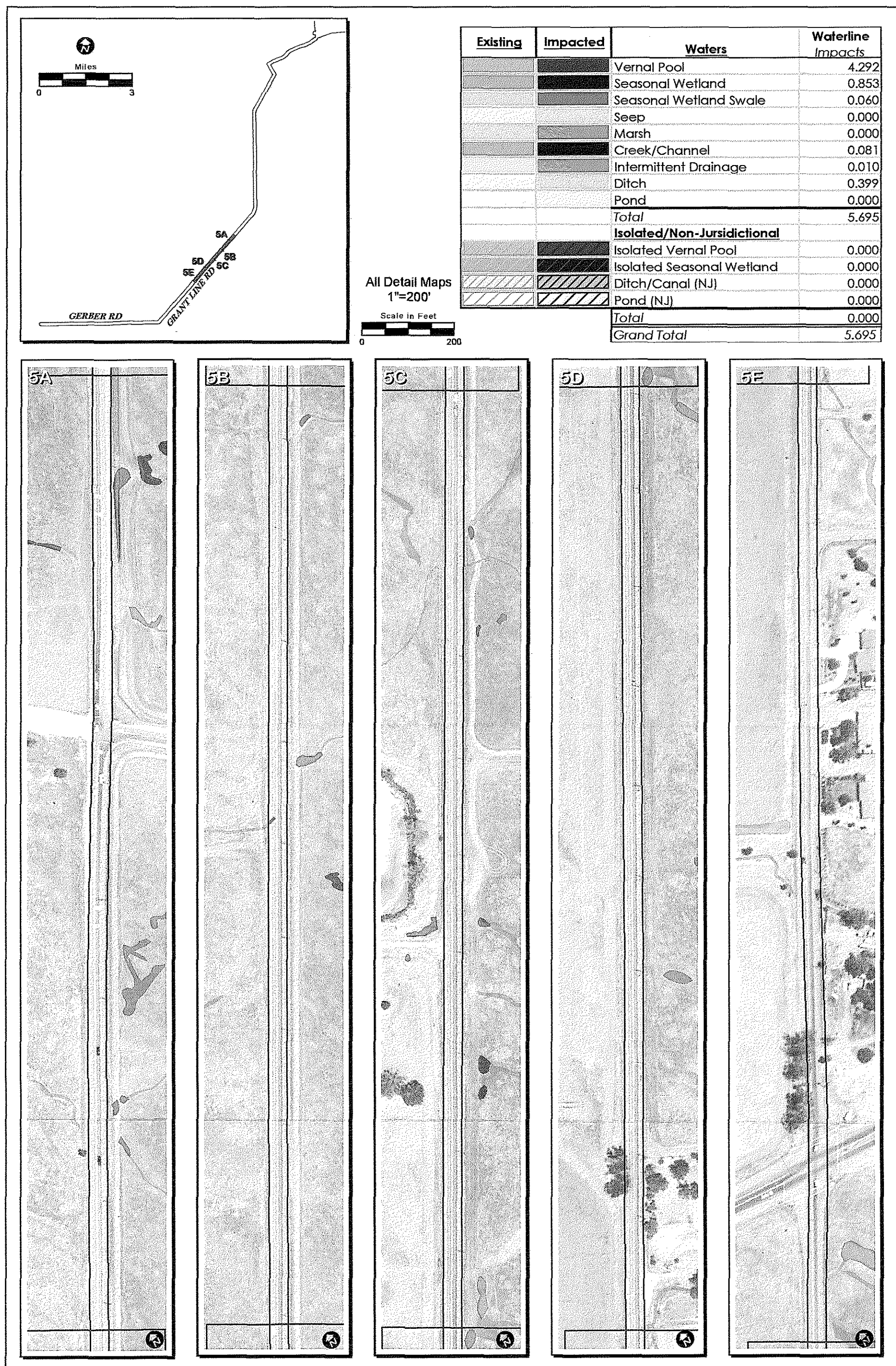


Figure 2c. Water Supply Line Wetland Assessment Impacts - Map 3









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2005-429 Folsom Plan Area Specific Plan



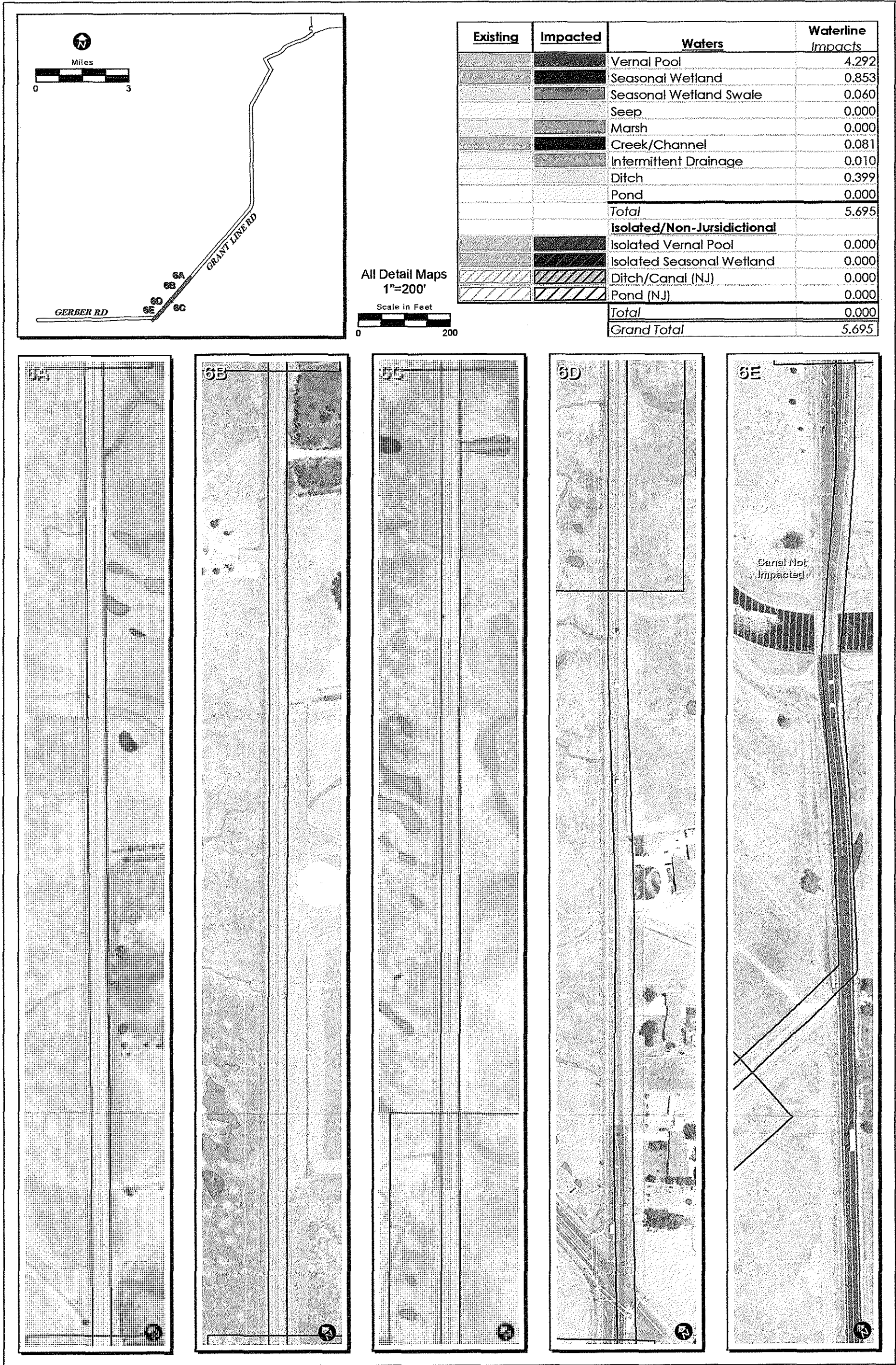
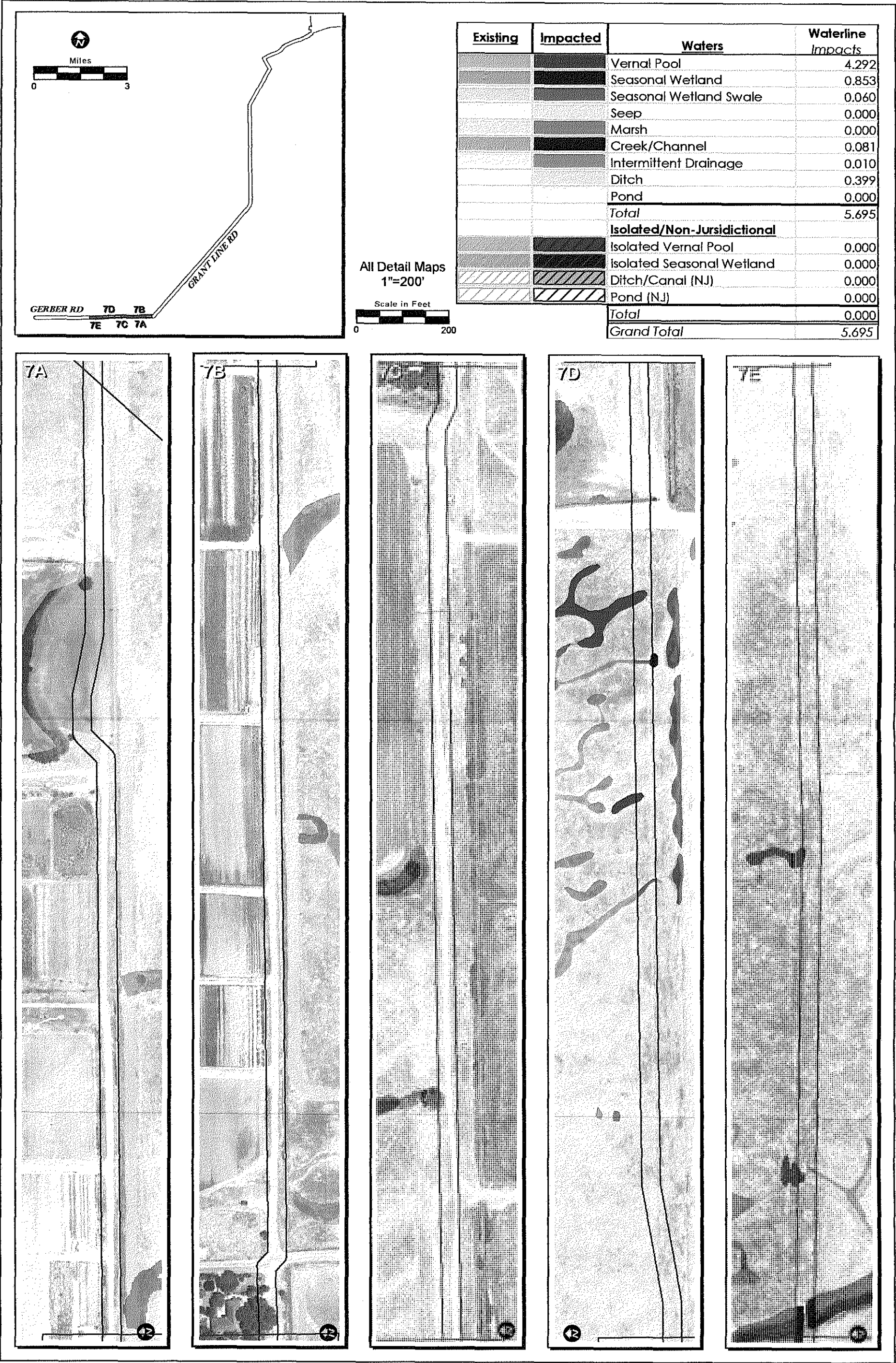


Figure 2f. Water Supply Line Wetland Assessment Impacts - Map 6  
2005-429 Folsom Plan Area Specific Plan

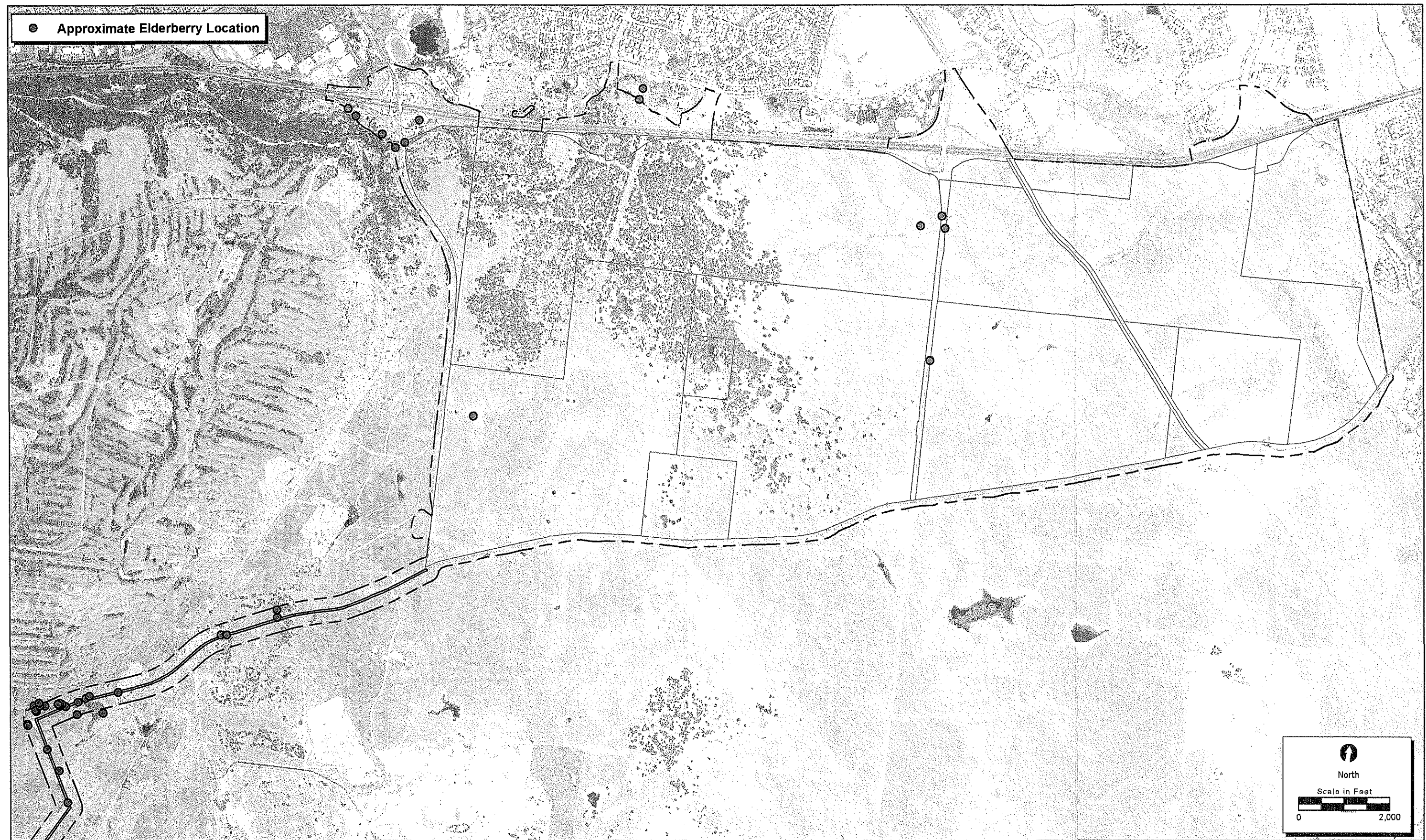












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**Figure 3. Approximate Known Elderberry Locations**  
 2005-429 Folsom Plan Area Specific Plan

## **ATTACHMENT A**

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Information to Support Section 7 Consultation

**Folsom Plan Area – Offsite Waterline  
Individual Permit  
Section 7 Consultation Information**

**A DESCRIPTION OF THE ACTION TO BE CONSIDERED:**

The Folsom Plan Area – Offsite Waterline is located south of Highway 50, west of Prairie City Road, and south of the City of Folsom in eastern Sacramento County, California.

A 30-inch raw water supply pipeline will be connected to the Freeport Regional Water Authority pipeline at the Gerber Road/Vineyard Road intersection and will be extended to the Folsom Specific Plan Surface Water Treatment Plant. The 30-inch raw water supply pipeline will be installed at a depth that varies from 4 feet to 12 feet below existing ground. The 30-inch raw water supply pipeline will follow the alignment indicated below:

- Approximately 5,600 linear feet of 30-inch raw water supply pipeline installed in Gerber Road from Vineyard Road to a point approximately 300 feet east of Excelsior Road.
- Approximately 14,400 linear feet of 30-inch raw water supply pipeline installed to the east following the projection of Gerber Road through open pasture and agricultural fields to Grant Line Road.
- Approximately 51,000 linear feet of 30-inch raw water supply pipeline installed adjacent to the western Grant Line Road shoulder from the point where the pipeline exits the open pastures and agricultural fields and intersects Grant Line Road to the north-east to the White Rock Road intersection.
- Approximately 9,000 linear feet of 30-inch raw water supply pipeline in White Rock Road from Grant Line Road to the Prairie City Road intersection (Folsom Specific Plan southwestern corner).

## **A DESCRIPTION OF THE SPECIFIC AREA THAT MAY BE AFFECTED BY THE ACTION:**

The approximately 15.5-mile long proposed waterline is located in the Sacramento Valley, east of the Greater Sacramento Metropolitan Area. The predominant plant communities on-site are annual grassland and blue oak woodland, with orchards, abandoned orchards, golf courses, and nature preserves also present. Land uses in the area include an aggregate mine, residential housing, and a major irrigation canal. In general, the proposed pipeline occurs within a transit right-of-way along White Rock and Grant Line Roads, departing from roadways west of Folsom South Canal. Part of the area consists of cobble tailings, the result of historic placer mining in nearby waters, and an area of the proposed waterline to the northeast crosses Aerojet property. At the time of ECORPs surveys, a large area west of the corner of Grant Line Road and Sunrise Blvd. (southwest end of the proposed waterline) had been recently cleared and graded for the installation of an unrelated underground utility. The limits of clearing varied between approximately 100- and 200 feet wide, and extended for approximately four miles. Grasslands surrounding the cleared area had been burned off, making the characterization of upland plant species composition in that area impossible.

The annual grassland community dominating throughout the project area is composed primarily of non-native annual grasses, including soft chess (*Bromus hordeaceus*), rigput brome (*Bromus diandrus*), medusahead grass (*Taeniatherum caput-medusae*), slender wild oat (*Avena barbata*), and little quaking grass (*Briza minor*). Other forbs and perennial herbs observed include sticky tarweed (*Holocarpha virgata*), yellow star-thistle (*Centaurea solstitialis*), rose clover (*Trifolium hirtum*), shamrock clover (*Trifolium dubium*), Fremont's tidy-tips (*Layia fremontii*), valley tassels (*Castilleja attenuata*), and hyacinth brodiaea (*Triteleia hyacinthina*). Present within the annual grasslands were geographic features such as vernal pools, seasonal wetlands, seasonal wetland swales, creeks/channels, and intermittent drainages (see Jurisdictional Delineation, below) Vernal pools, seasonal wetlands, seasonal wetland swales, channels, and intermittent drainages usually featured a unique vegetation assemblage including coyote thistle (*Eryngium* spp.), Baltic rush (*Juncus balticus*), Bermuda grass (*Cynodon dactylon*), and/or dallis grass (*Paspalum dilatatum*). One creek (Laguna Creek) crosses the



waterline approximately 0.5 miles east of Excelsior Road, in the areas recently cleared for construction. Dominant plants observed within the creek margins were bulrush (*Scirpus* spp.) and broadleaved cattail (*Typha latifolia*).

The blue oak woodlands found in scattered areas throughout the project site are characterized by their extensive woodland canopy, which provides nesting and foraging habitat for many animal species. In general, the under canopy plant species composition is similar to that of the introduced annual grasslands (above).

The project area includes an area set aside as the Sacramento Valley Conservancy Vernal Pools Preserve. In that area, as in several others, clearly defined vernal pools dominate the landscape within an upland matrix of introduced annual grassland.

## **A DESCRIPTION OF ANY LISTED SPECIES OR CRITICAL HABITAT THAT MAY BE AFFECTED BY THIS ACTION:**

### **Vernal Pool Invertebrates**

Project implementation (i.e. fill of vernal pools and seasonal wetlands) represents potential impacts to the federally listed vernal pool fairy shrimp (*Branchinecta lynchi*, federal threatened) and vernal pool tadpole shrimp (*Lepidurus packardii*, federal endangered).

### **Valley Elderberry Longhorn Beetle**

The northern portion of the waterline alignment runs along White Rock Road, through a mosaic of dredger tailings and annual grassland. Elderberry shrubs (*Sambucus* species) are scattered throughout the tailings piles, and occur intermittently along the waterline route in this area. Elderberry shrubs represent potential habitat for the federally-threatened Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus* - VELB). Elderberry shrubs are the exclusive host plant to the VELB.

## Special-Status Plant Species

It is anticipated that special-status plant surveys will be conducted during the 2009 floristic season.

## Jurisdictional Delineation

Table 1 lists potential Corps jurisdictional waters of the U.S. found on-site. A total of 5.695 acres of potential waters of the U.S have been mapped on the site. These include 4.292 acres of vernal pool, 0.853 acre of seasonal wetland, 0.060 acres of seasonal wetland swale, 0.081 acre of creek/channel, 0.010 acre of intermittent drainage and 0.399 acre of ditch.

<b>Table 1 – Potential Corps Jurisdictional Waters of the U.S.</b>	
<b>Type</b>	<b>Acreage</b>
Vernal pool	4.292
Seasonal wetland	0.853
Seasonal wetland Swale	0.060
Creek/Channel	0.081
Intermittent Drainage	0.010
Ditch	0.399
<b>TOTAL:</b>	<b>5.695</b>

## A DESCRIPTION OF THE MANNER IN WHICH THE ACTION MAY AFFECT ANY LISTED SPECIES OR CRITICAL HABITAT AND AN ANALYSIS OF ANY CUMULATIVE IMPACTS:

Project implementation (i.e. fill of vernal pools, seasonal wetlands and seasonal wetland swales totaling 5.205 acres) represents potential impacts to the federally listed vernal pool fairy shrimp (*Branchinecta lynchi*, federal threatened) and vernal pool tadpole shrimp (*Lepidurus packardii*, federal endangered). The project may also adversely effect the Valley elderberry longhorn beetle.

**Table 2 – Proposed Impact Acreages**

<b>Type</b>	<b>Existing</b>	<b>Avoided</b>	<b>Impacted</b>
Vernal pool	4.292	0.000	4.292
Seasonal wetland	0.853	0.000	0.853
Seasonal wetland Swale	0.060	0.000	0.060
Creek/Channel	0.081	0.000	0.081
Intermittent Drainage	0.010	0.000	0.010
Ditch	0.399	0.399	0.399
<b>TOTAL:</b>	<b>5.695</b>	<b>5.695</b>	<b>5.695</b>

**RELEVANT REPORTS INCLUDING ENVIRONMENTAL IMPACT STATEMENT,  
ENVIRONMENTAL ASSESSMENT, OR BIOLOGICAL ASSESSMENT PREPARED:**

A wetland assessment was prepared for the project. A delineation will be prepared and submitted for verification at a later date.

**ANY OTHER RELEVANT AVAILABLE INFORMATION ON THE ACTION, THE  
LISTED SPECIES, OR CRITICAL HABITAT:**

There is no other relevant available information applicable to the proposed project, the listed species, or the critical habitat.

**PROPOSED MITIGATION:**

Project implementation (i.e. fill of vernal pools, seasonal wetlands, and seasonal wetland swales) represents potential impacts to the federally listed vernal pool fairy shrimp (*Branchinecta lynchi*, federal threatened) and vernal pool tadpole shrimp (*Lepidurus packardii*, federal endangered). The Applicant proposes to mitigate for impacts to vernal pool branchiopod habitat by purchasing the appropriate amount of preservation and compensation credits at a Service approved bank. Regarding impacts to VELB, the applicant proposes to mitigate in accordance with the Programmatic Consultation for impacts to the Valley elderberry longhorn beetle.

## **APPENDIX D19**

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Tree Survey for the Centex –  
Folsom Heights Property

EDAW INC

2022 J STREET

SACRAMENTO, CALIFORNIA

95814

TEL 916 414-5800

FAX 916 414-5850

www.edaw.com

June 29, 2006

Mr. John Jarecki  
Centex Home  
3700 Douglas Boulevard, Suite 150  
Roseville, CA 95661

**Subject: Tree Survey for the Centex – Folsom Heights Property**

Dear Mr. Jarecki;

This letter report presents the results of a tree survey of the Centex – Folsom Heights property located on the Sacramento El Dorado County line (Exhibits 1 and 2) conducted by EDAW on June 23, 2006. During the survey an EDAW botanist inventoried all trees present on the project site. Each tree was identified by species and assigned a unique identification number. The location of each tree was mapped onto an aerial photograph of the site provided by Centex. The locations were then digitized into a GIS shape file. Data taken for each tree included the approximate height, diameter at breast height (dbh), and overall health.

Table 1 below summarizes the results of the tree survey. A total of 5 willows (*Salix goodingii*, *S. laevigata*) and 5 cottonwood (*Populus fremontii*) trees were mapped on the project site. The location of each tree is shown in Exhibit 3.

None of the trees present on the project site would be subject to protection under the Sacramento County tree ordinance, as the ordinance pertains only to native oak trees greater than 6 inches dbh. No native oak trees are present on the project site.

If you have any questions regarding the methods or results of the tree survey or its implications for future project planning, please do not hesitate to contact me at (916) 414-5800 or [ungerp@edaw.com](mailto:ungerp@edaw.com).

Sincerely,

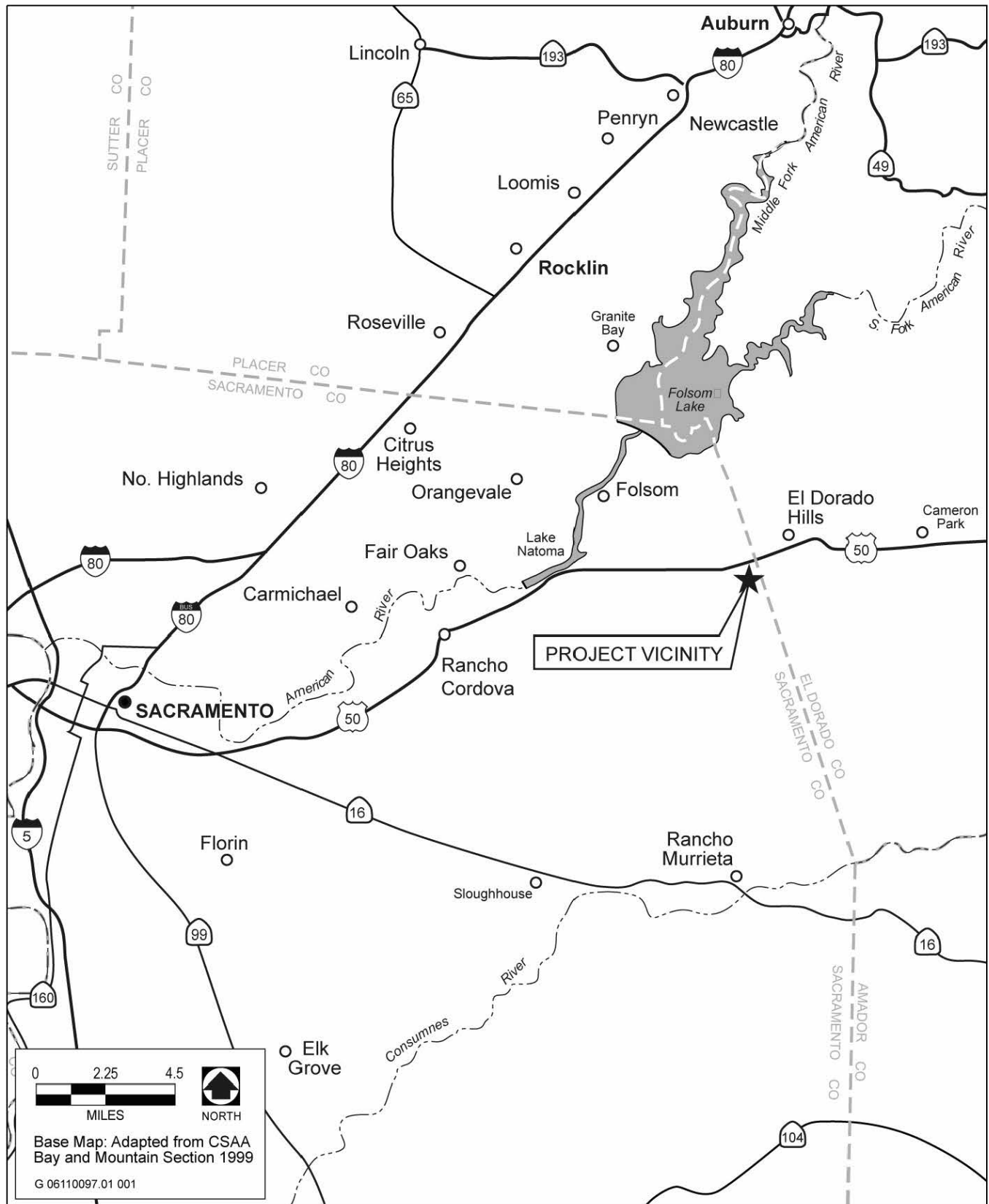


Petra Unger  
Botany Practice Leader/Senior Project Manager  
06110097.01

Enclosures: Exhibit 1. Project Vicinity Map  
Exhibit 2. Project Location Map  
Exhibit 3. Tree Location Map

**Table 1**  
**Trees Inventory for the Centex – Folsom Heights Project Site**

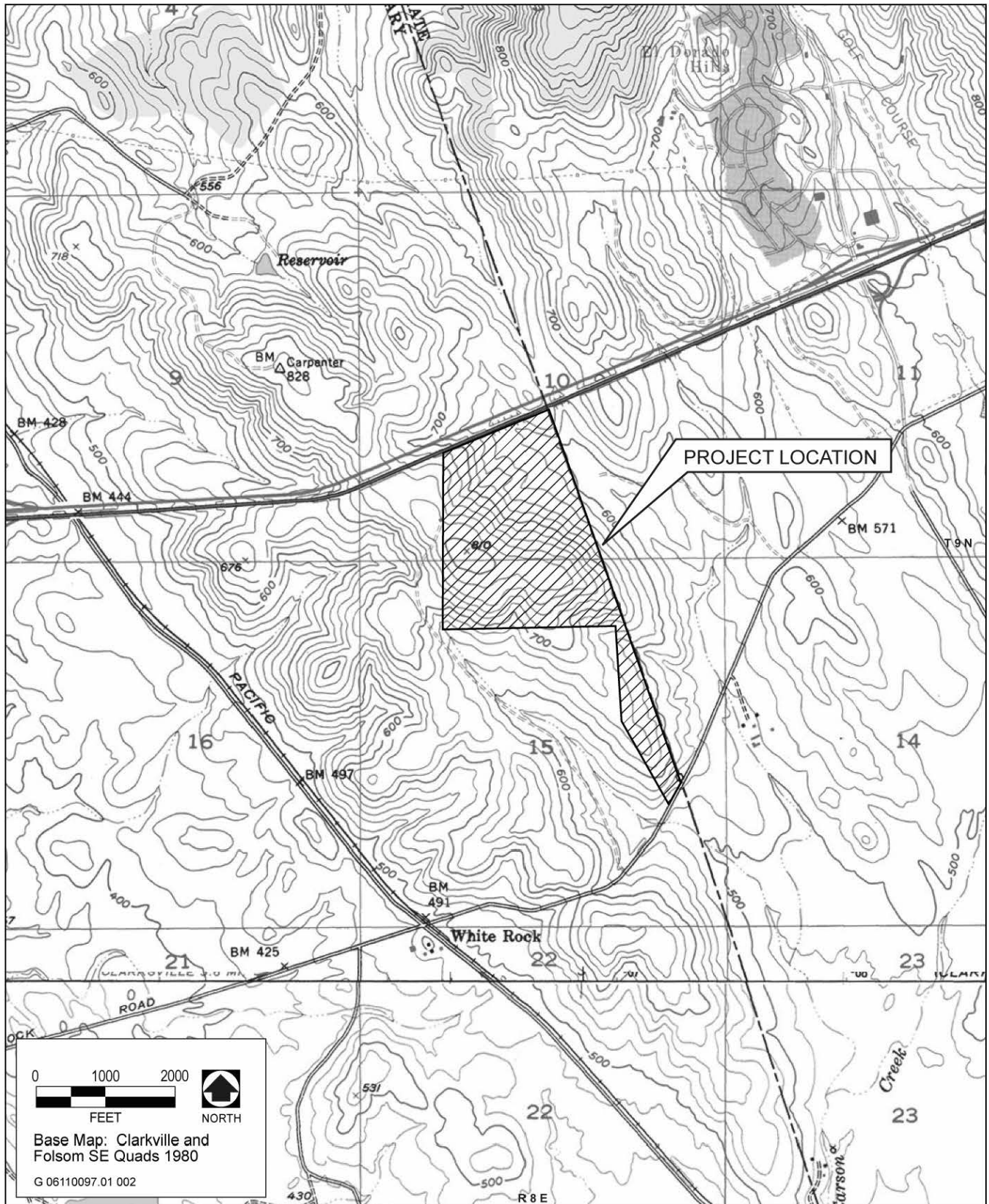
Code	Species	dbh	height	Overall health	notes
Co1	<i>Populus fremontii</i>	16"	24'	very good	
Co2	<i>Populus fremontii</i>	10"	12'	very good	multitrunk tree (2 trunks), branching at base; growing in a clump with Co3.
Co3	<i>Populus fremontii</i>	16"	24'	very good	multitrunk tree (2 trunks); branching at 2 feet from the ground; growing in a clump with Co2.
Co4	<i>Populus fremontii</i>	8"	10'	very good	multitrunk tree (2 trunks), branching at base.
Co5	<i>Populus fremontii</i>	14"	20'	very good	
Wi1	<i>Salix goodingii</i>	24"	30'	very good	primary branching just below breast height; three primary branches are very large (12" – 18" diameter).
Wi2	<i>Salix laevigata</i>	10"	14'	very good	multitrunk tree (2 trunks); branching at base.
Wi3	<i>Salix goodingii</i>	12"	12'	very good	primary branching is very low; almost a multitrunk tree.
Wi4	<i>Salix goodingii</i>	8"	20'	very good	multitrunk tree (2 trunks); branching at base.
Wi5	<i>Salix goodingii</i>	20"	24'	very good	multitrunk tree from the base (4 trunks); branching at base.



Project Vicinity Map

Exhibit 1

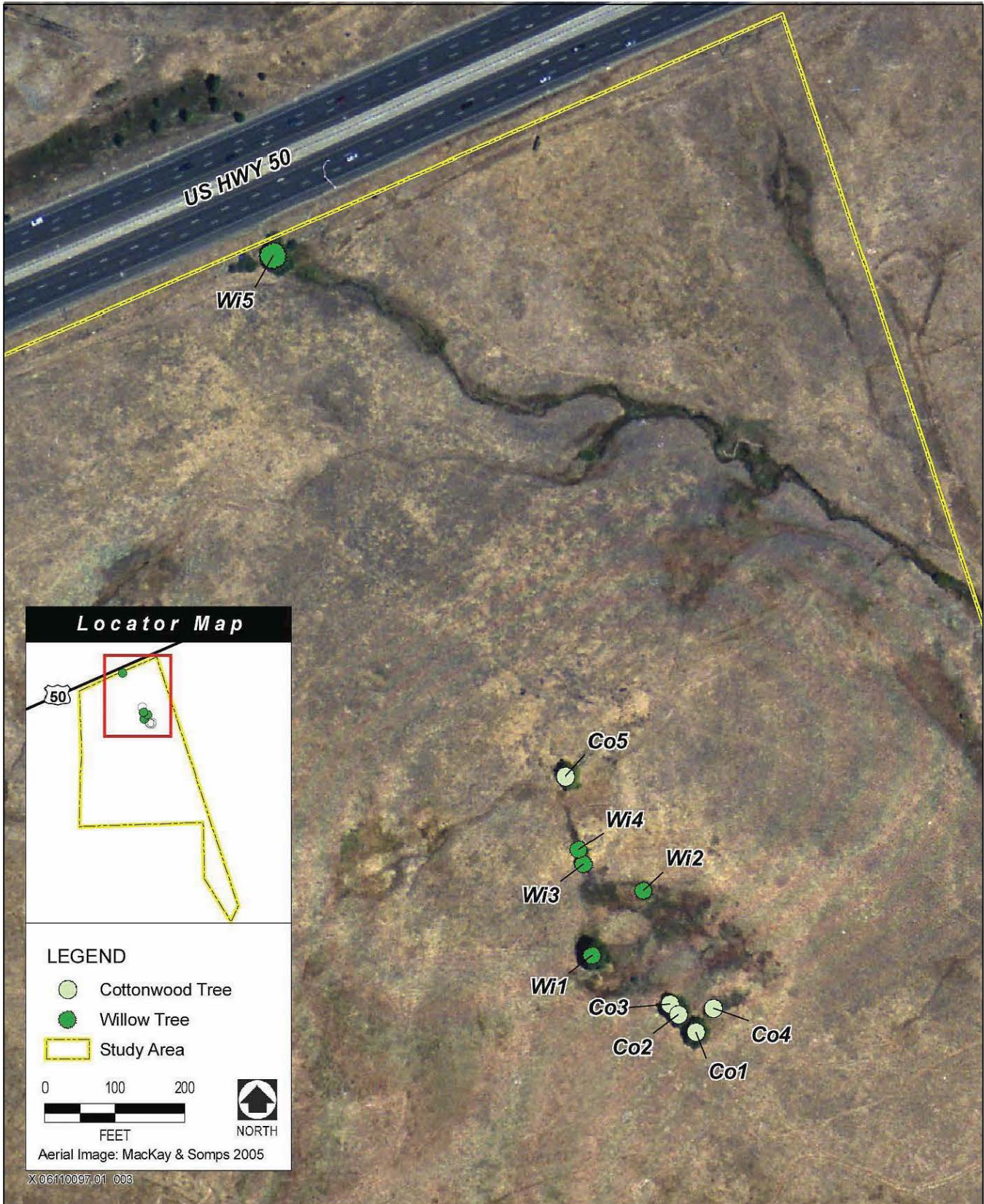




Project Location Map

Exhibit 2





Tree Location Map

Exhibit 3

## **APPENDIX D20**

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Arborist Report on Trees on the  
White Rock Springs Golf Course Project

*Folsom White Rock LLC*

*13*

ARBORIST REPORT

on trees on

WHITEROCK SPRINGS  
GOLF COURSE PROJECT

for

SACRAMENTO VALLEY VIEW  
c/o GENE WILLIAMS, JR.

Wall Street Pacific  
2140 Professional Drive, #200  
Roseville, CA 95661

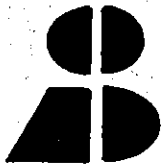
BY  
R-B ENTERPRISES  
9980 Calvine Road  
Sacramento, California 95829  
(916) 689-9426  
Gene Robinson  
Certified Arborist #WC-0295

August 29, 1993

## WHITE ROCK SPRINGS GOLF

### TABLE OF CONTENTS

Beginning of report.....	Page 2
Beginning of recommendations.....	Page 3
EXHIBIT 1: Map Depicting Trees of this report.....	Page 5
EXHIBIT 2: Tree Evaluations.....	Page 7
EXHIBIT 3: Species List.....	Page 12



**R-B ENTERPRISES**  
9980 CALVINE ROAD  
SACRAMENTO, CA 95829  
(916) 689-9426



GENE ROBINSON, W.C.ISA CERTIFIED ARBORIST #WC-0295

August 29, 1993

This report evaluates the eleven trees at the White Rock Springs Golf project. Each tree is numbered by nailing a numbered aluminum disc to the tree. Short nails are used to minimize injury to the trees.

#### MEASUREMENTS

Where possible, diameters of trees are measured as a standard Dbh at 4-1/2 feet above ground. If a tree forks at ground level each individual trunk is measured and listed. If forking is between the ground and 4-1/2 feet up, then the smallest diameter below the forking is listed. Dbh is recorded to the nearest inch. These measurements would require further refinements for an actual value appraisal, but they follow procedural instructions in the "Guide for Plant Appraisal."

#### CONDITION

The condition of each tree is rated as good, fair or poor as follows:

- "Good" condition trees: are generally healthy, vigorous and deserving of special preservation efforts.
- "Fair" condition trees: may have some structural or health flaws, but should be preserved when possible.
- "Poor" condition trees: should be removed, are usually uncorrectably hazardous, likely to break apart or with a life expectancy of five years or less.

#### GENERAL COMMENTS

This site has a unique landscape feature which is well worth preserving in the project golf course landscaping. There is a huge Valley Oak (Tree #1) with a natural spring originating beneath the roots of the tree. This spring is flowing, even though we have had some hot weather and are moving into late summer. The tree appears to be growing vigorously, although some of the roots are partially rotted.

We advise against placing any structure or roadways within range of Tree #1 as it could break and fall at some future date. However, it has obviously lasted for many decades and, therefore, is well worth preserving if it can be fit into the new property usage.

There are six fruiting Olive trees which have grown on the property since it was used as a hotel site. These trees are old and have hollow trunks, but this is characteristic of old Olive trees. They are vigorous and will continue to grow a number of years if retained.

There is a Cottonwood (Tree #10) near the roadway with a dangerously rotted root system. This tree is a definite hazard because it could break at any time and fall into White Road Road. We recommend its immediate removal.

#### CONSTRUCTION

Development will present three new potential tree health threats:

1. Soil compaction
2. Grade changes.
3. Irrigation Changes

All three adversely affect the fine network of feeder roots, which are masses of tiny roots at the end of the root system. Feeder roots provide the water and nutrient uptake into the tree. Compaction damages these fine roots and eliminates the water and air spaces from the soil. Grade cuts remove some roots and damage others. Fills choke off air and water penetration into the soil. Fills may also trap moisture which can encourage root rots. Trees should be protected from construction activities, and soil moisture conditions should not be changed. Adding summer irrigation encourages root decay of oaks accustomed to dry sites.

#### RECOMMENDATIONS

1. When the new landscaping is designed, it should accommodate and retain the natural spring flowing beneath Tree #1. Alteration of the flow of the spring could adversely affect the health of Tree #1. The tree has grown with its root system accustomed to the adjacent water supply, which condition should not be altered.

2. Employ a firm with certified tree workers to clean up and make safe any of the trees scheduled to remain. Workers should remove dead and severely rotted branches, eliminate crossed or rubbing branches and provide any aesthetic shaping needed to better balance one-sided trees. DO NOT ALLOW workers to use SPURS while climbing. Avoid any damage to branch collars.
3. Where construction is scheduled, install temporary fencing around the dripline (outer perimeter of the crown). Set up signs prohibiting parking, storage of materials, operation of equipment, spilling of liquids, washing out of cement trucks, grading, filling or trenching inside this fence. DO NOT nail the sign to the tree! Set this fence up before any grubbing, clearing or grading is started.
4. Ensure that any weed control chemicals utilized prior to laying of new paving are not applied where they can leach into the dripline area.
5. Prohibit trenching inside the dripline area. If utilities cannot be located away from the dripline area, then bore or jack conduits, rather than trenching.
6. During construction try to maintain the same watering frequency around the trees that they are used to receiving.

Thank you for the opportunity to be of service to you.

Sincerely,

A handwritten signature in cursive script that reads "Gene Robinson". The signature is written in dark ink and is positioned above the printed name and title.

Gene Robinson  
Certified Arborist #WC-0295

**EXHIBIT 1**

**Map Depicting Trees Of This Report**



390.59 ± N.

# White Rock Springs Golf

NOT TO SCALE

S. 83° 42' 56" W.

2,446.14'

15



7.74'

NOT TO SCALE

(6)

124.19 ± N

SBE 872-321-145-10

(25)

8 7 6 5 4 3 2 1

10

2

N. 0° 36' E. 13592  
N. 00° 04' 51" W.

15:25

EXHIBIT 2

Tree Evaluations

TREE EVALUATIONS

- Tree# 1: DBH: 44"  
COMMON NAME: Valley Oak  
TECHNICAL NAME: *Quercus lobata* Née  
DRIPLINE RADIUS: 28'  
CONDITION: Fair  
COMMENTS: Tree needs pruning to remove dead limbs. Tree has spring originating directly beneath it. Root system shows sign of decay.
- Tree# 2: DBH: 8"  
COMMON NAME: Valley Oak  
TECHNICAL NAME: *Quercus lobata* Née  
DRIPLINE RADIUS: 10'  
CONDITION: Good  
COMMENTS: Tree is just outside the fenceline.
- Tree# 3: DBH: 13"  
COMMON NAME: Olive  
TECHNICAL NAME: *Olea europa* L.  
DRIPLINE RADIUS: 17'  
CONDITION: Good  
COMMENTS: This is an old European Olive and needs some trimming to remove deadwood. The trunk is partially hollow, as is typical in old olive trees.
- Tree# 4: DBH: 16"  
COMMON NAME: Olive  
TECHNICAL NAME: *Olea europa* L.  
DRIPLINE RADIUS: 15'  
CONDITION: Good  
COMMENTS: This is an old European Olive and needs some trimming to remove deadwood. The trunk is partially hollow, as is typical in old olive trees.
- Tree# 5: DBH: 10" and 14"  
COMMON NAME: Olive  
TECHNICAL NAME: *Olea europa* L.  
DRIPLINE RADIUS: 14'  
CONDITION: Good  
COMMENTS: This is an old European Olive and needs some trimming to remove deadwood. The trunk is partially hollow, as is typical in old olive trees.

Tree# 6: DBH: 12" and 13"  
COMMON NAME: Olive  
TECHNICAL NAME: *Olea europaea* L.  
DRIPLINE RADIUS: 17'  
CONDITION: Good  
COMMENTS: This is an old European Olive and needs some trimming to remove deadwood. The trunk is partially hollow, as is typical in old olive trees. The tree has canker on north trunk.

Tree# 7: DBH: 13", 7" and 12"  
COMMON NAME: Olive  
TECHNICAL NAME: *Olea europaea* L.  
DRIPLINE RADIUS: 15'  
CONDITION: Good  
COMMENTS: This is an old European Olive and needs some trimming to remove deadwood. The trunk is partially hollow, as is typical in old olive trees.

Tree# 8: DBH: 16"  
COMMON NAME: Olive  
TECHNICAL NAME: *Olea europaea* L.  
DRIPLINE RADIUS: 15'  
CONDITION: Good  
COMMENTS: This is an old European Olive and needs some trimming to remove deadwood. The trunk is partially hollow, as is typical in old olive trees.

Tree# 9: DBH: 22"  
COMMON NAME: Pacific Willow  
TECHNICAL NAME: *Salix lasiandra* Benth.  
DRIPLINE RADIUS: 22'  
CONDITION: Fair  
COMMENTS: Tree roots have decayed and tree has toppled to one side, but is still growing vigorously.

Tree# Large Broken Snag adjacent to Tree #9  
COMMON NAME: Pacific Willow  
TECHNICAL NAME: *Salix lasiandra* Benth.  
DRIPLINE RADIUS: N/A  
CONDITION: Mostly dead.  
COMMENTS: Remove all remains of this broken tree.

R-B ENTERPRISES \* 9980 CALVINE ROAD \* SACRAMENTO, CA 95829 \* (916)689-9426  
GENE ROBINSON, ISA CERTIFIED ARBORIST WC-0295

Tree# 10: DBH: 38"

COMMON NAME: Cottonwood

TECHNICAL NAME: *Populus fremontii* Wats.

DRIPLINE RADIUS: 25'

CONDITION: Poor

COMMENTS: This tree is hazardous and should be removed. The entire root system is severely decayed. WARNING! This tree could fall onto the road at any time.

Tree# 11: DBH: 7"

COMMON NAME: Black Locust

TECHNICAL NAME: *Robinia pseudoacacia* L.

DRIPLINE RADIUS: 11'

CONDITION: Poor

COMMENTS: Tree has decay at ground level and should be removed.

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GENE ROBINSON, ISA CERTIFIED ARBORIST WC-0295

EXHIBIT 3

Species List

## SPECIES LIST

BLACK LOCUST - *Robinia pseudoacacia* L.

COTTONWOOD - *Populus fremontii* Wats.

OLIVE - *Olea europaea* L.

PACIFIC WILLOW - *Salix lasiandra* Benth.

VALLEY OAK - *Quercus lobata* Née

## **APPENDIX D21**

---

Folsom South SOI Project Site Native Oak and  
Non Oak Tree Tabulation





# SIERRA NEVADA ARBORISTS

## MJM PROPERTIES

FOLSOM SOUTH SOI PROJECT SITE  
County of Sacramento, California

### NATIVE OAK AND NON-OAK TREE TABULATION FOR GRID AREAS 1-7

Prepared by:

Edwin E. Stirtz, Consulting Arborist  
ISA Certified Arborist WE-0510A  
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SIERRA NEVADA ARBORISTS

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December 20, 2005

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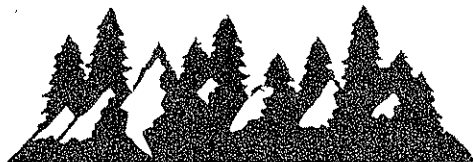
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### **QUALIFICATION STATEMENT**

Sierra Nevada Arborists is a Loomis-based arboricultural consulting firm founded in January of 1998 by its Principal, Edwin E. Stirtz. The company is fully insured, and Mr. Stirtz is an ISA Certified Arborist, and a member of the International Society of Arboriculture and American Society of Consulting Arborists. Mr. Stirtz possess in excess of 25 years experience in horticulture and arboriculture, both maintenance and construction, and has spent the last 14 years as a consulting and preservation specialist in the Sacramento region.

Wayne R. McKee is a consulting arborist with 16 years experience in Forestry and Arboriculture, and has been an ISA Certified Arborist since 1992, providing consulting arboricultural services in the Sacramento area since 1991.



# SIERRA NEVADA ARBORISTS

December 20, 2005

Mr. Mike McDugle  
MJM PROPERTIES  
c/o Mr. David Storer  
P.O. Box 6763  
Folsom, California 95763-6763

Re: *Initial Tree Tabulation -  
Folsom South SOI Project: County of Sacramento, California*

Dear Mr. McDugle and Mr. Storer:

Accompanying this correspondence you will find the Native Oak and Non-Oak Tree Tabulation Tables which have been prepared pursuant to your direction for the trees located within MJM Properties' portion of the Folsom South SOI project area currently located in the County of Sacramento, California. It should be noted that the accompanying Tree Tabulation Tables quantify the number of trees located within the various "grid areas" as depicted on the enclosed aerial exhibits prepared by Foothill Associates which were provided for field reference by your office, and is not meant to be, nor does it meet the specifications of, a detailed Arborist Inventory Summary for the trees located within the grid areas. Rather, the Tree Tabulation Tables have been prepared at your direction to simply quantify the number of trees within the depicted grid areas.

## METHODOLOGY

### Cruise Count Method

During the period December 7-14, 2005, Sierra Nevada Arborists reviewed on foot the trees located within the seven separate "grid areas" as depicted on the 1" = 400' aerial exhibits prepared by Foothill Associates © 2005. The purpose of this field review was to count all native trees within the grid areas which measured six inches and larger in diameter measured at breast height ("DBH"). For the purpose of this review, native trees included Blue Oak (*Quercus douglasii*), Interior Live Oak (*Quercus wislizenii*), Valley Oak (*Quercus lobata*), and other non-oak native species which measured 19 inches and larger in diameter measured at breast height. The trees which met the defined criteria were memorialized by species and diameter classifications ranging from 6"-11", 12"-17", 18"-23" and 24"+, and a separate Tree Tabulation Table was prepared for each of the "grid areas" to summarize the number of trees found within the specific grid area. The separate Tree Tabulation Tables for the seven "grid areas" are included within the Appendix of this report, along with a copy of the corresponding aerial exhibit.

Mr. Mike McDugle  
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RE: Folsom South SOI Project Area –  
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### **TABULATION SUMMARY**

As you will see from the accompanying Tree Tabulation Tables, our field review found a total of 3,077 oak and non-oak species within the seven grid areas. Composition of the 3,077 trees includes 3,067 oak trees and 10 non-oak trees apportioned as follows:

Blue Oak .....	3,010 trees
Interior Live Oak .....	45 trees
Valley Oak .....	12 trees
 Fremont Cottonwood .....	 3 trees
Willow species .....	6 trees
Foothill Pine .....	0 trees
Pecan .....	1 tree

Our field review found that the oak species were predominantly located within grid areas 1 and 2, with one additional oak tree being found within grid area 3, with the largest number of oak trees falling within the 6"-11" and 12"-17" diameter classifications. The non-oak species -- including Fremont Cottonwood (*Populus fremontii*), Willow species (*Salix spp.*) and Pecan (*Carya illinoensis*) -- were found within grid areas 2, 3, 4, 5 and 7. Finally, it should be noted that no trees were found within grid area 6.

### **GENERAL COMMENTS AND ARBORIST'S DISCLAIMER**

As we mentioned earlier, this initial site review was performed by Sierra Nevada Arborists to tabulate and quantify the number of trees located within the seven depicted "grid areas". This report and the information contained herein should not be viewed by the client and/or any regulatory agencies as a substitution for a thorough assessment and Inventory Summary of the trees within the project areas which should be prepared by an ISA Certified Arborist prior to making an final development decisions, specifically including the placement of homes and/or other pedestrian activities within or near the fall zone of specific trees. The information contained within this report and/or the accompanying Tree Tabulation Tables should not be viewed as a guarantee or warranty against the trees' ultimate demise and/or failure in the future. Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of the trees and ***attempt to reduce the risk of living near trees***. Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Since trees are living organisms conditions are often hidden within the tree and below ground and their condition may change at any time. Arborists cannot guarantee that a tree will be healthy and/or safe under all circumstances or for a

Mr. Mike McDugle  
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specific period of time. Likewise remedial treatments cannot be guaranteed. Trees can be managed but they cannot be controlled. To develop land and live near trees is to accept some degree of risk and the only way to eliminate all risk associated with trees is to eliminate all of the trees. *An entity who develops land and/or builds homes with a tree in the vicinity should be aware of this Arborists' Disclaimer and be further advised that the developer and their future homeowners assume the risk that a tree could at any time suffer a branch and/or limb failure, blow over in a storm and/or fail for no apparent reason which may cause bodily injury or property damage.* Sierra Nevada Arborists cannot predict acts of nature including, without limitation, storms of sufficient strength which can take down even a healthy tree. Neither this author nor Sierra Nevada Arborists has assumed any responsibility for liability associated with the trees on or adjacent to this project site, their future demise and/or any damage which may result therefrom.

Thank you for allowing Sierra Nevada Arborists to assist you with the review and tabulation. Please feel free to give me a call if you have any questions or require additional information.

Sincerely,



Edwin E. Stirtz  
ISA Certified Arborist WE-0510A  
Member, American Society of Consulting Arborists

EES:ks  
Enclosures





MJM PROPERTIES  
Folsom South SOI Project  
Grid Area No. 1 Tree Tabulation

OAK SPECIES	DIAMETER CLASSES				TOTAL
	6"-11"	12"-17"	18"-23"	24"+	
Blue Oak ( <i>Quercus douglasii</i> )	1150	760	346	233	2489
Interior Live Oak ( <i>Quercus wislizenii</i> )	8	15	6	6	35
Valley Oak ( <i>Quercus lobata</i> )	2	2	2	5	11
Subtotal	1160	777	354	244	2535

NON-OAK SPECIES	DIAMETER CLASS				TOTAL
				19"+	
Fremont Cottonwood ( <i>Populus fremontii</i> )				0	0
Willow species ( <i>Salix spp.</i> )				0	0
Foothill Pine ( <i>Pinus sabiniana</i> )				0	0
Subtotal				0	0

Total number of trees counted in Grid Area No. 1 ..... 2535

MJM PROPERTIES  
Folsom South SOI Project  
Grid Area No. 2 Tree Tabulation

OAK SPECIES	DIAMETER CLASSES				TOTAL
	6"-11"	12"-17"	18"-23"	24"+	
Blue Oak ( <i>Quercus douglasii</i> )	97	136	117	170	520
Interior Live Oak ( <i>Quercus wislizenii</i> )	0	2	4	4	10
Valley Oak ( <i>Quercus lobata</i> )	0	0	0	1	1
Subtotal	97	138	121	175	531

NON-OAK SPECIES	DIAMETER CLASS				TOTAL
				19"+	
Fremont Cottonwood ( <i>Populus fremontii</i> )				0	0
Willow species ( <i>Salix spp.</i> )				1	1
Foothill Pine ( <i>Pinus sabiniana</i> )				0	0
Pecan ( <i>Carya illinoensis</i> )				1	1
Subtotal				2	2

Total number of trees counted in Grid Area No. 2 ..... 533

MJM PROPERTIES  
Folsom South SOI Project  
Grid Area No. 3 Tree Tabulation

OAK SPECIES	DIAMETER CLASSES				TOTAL
	6"-11"	12"-17"	18"-23"	24"+	
Blue Oak ( <i>Quercus douglasii</i> )	0	0	0	1	1
Interior Live Oak ( <i>Quercus wislizenii</i> )	0	0	0	0	0
Valley Oak ( <i>Quercus lobata</i> )	0	0	0	0	0
Subtotal	0	0	0	1	1

NON-OAK SPECIES	DIAMETER CLASS				TOTAL
				19"+	
Fremont Cottonwood ( <i>Populus fremontii</i> )				0	0
Willow species ( <i>Salix spp.</i> )				1	1
Foothill Pine ( <i>Pinus sabiniana</i> )				0	0
Subtotal				1	1

Total number of trees counted in Grid Area No. 3 ..... 2

MJM PROPERTIES  
Folsom South SOI Project  
Grid Area No. 4 Tree Tabulation

OAK SPECIES	DIAMETER CLASSES				TOTAL
	6"-11"	12"-17"	18"-23"	24"+	
Blue Oak ( <i>Quercus douglasii</i> )	0	0	0	0	0
Interior Live Oak ( <i>Quercus wislizenii</i> )	0	0	0	0	0
Valley Oak ( <i>Quercus lobata</i> )	0	0	0	0	0
Subtotal	0	0	0	0	0

NON-OAK SPECIES	DIAMETER CLASS				TOTAL
				19"+	
Fremont Cottonwood ( <i>Populus fremontii</i> )				0	0
Willow species ( <i>Salix spp.</i> )				2	2
Foothill Pine ( <i>Pinus sabiniana</i> )				0	0
Subtotal				2	2

Total number of trees counted in Grid Area No. 4 ..... 2

MJM PROPERTIES  
Folsom South SOI Project  
Grid Area No. 5 Tree Tabulation

OAK SPECIES	DIAMETER CLASSES				TOTAL
	6"-11"	12"-17"	18"-23"	24"+	
Blue Oak ( <i>Quercus douglasii</i> )	0	0	0	0	0
Interior Live Oak ( <i>Quercus wislizenii</i> )	0	0	0	0	0
Valley Oak ( <i>Quercus lobata</i> )	0	0	0	0	0
Subtotal	0	0	0	0	0

NON-OAK SPECIES	DIAMETER CLASS				TOTAL
				19"+	
Fremont Cottonwood ( <i>Populus fremontii</i> )				0	0
Willow species ( <i>Salix spp.</i> )				2	2
Foothill Pine ( <i>Pinus sabiniana</i> )				0	0
Subtotal				2	2

Total number of trees counted in Grid Area No. 5 ..... 2

MJM PROPERTIES  
Folsom South SOI Project  
Grid Area No. 6 Tree Tabulation

OAK SPECIES	DIAMETER CLASSES				TOTAL
	6"-11"	12"-17"	18"-23"	24"+	
Blue Oak ( <i>Quercus douglasii</i> )	0	0	0	0	0
Interior Live Oak ( <i>Quercus wislizenii</i> )	0	0	0	0	0
Valley Oak ( <i>Quercus lobata</i> )	0	0	0	0	0
Subtotal	0	0	0	0	0

NON-OAK SPECIES	DIAMETER CLASS				TOTAL
				19"+	
Fremont Cottonwood ( <i>Populus fremontii</i> )				0	0
Willow species ( <i>Salix spp.</i> )				0	0
Foothill Pine ( <i>Pinus sabiniana</i> )				0	0
Subtotal				0	0

Total number of trees counted in Grid Area No. 6 ..... 0

MJM PROPERTIES  
Folsom South SOI Project  
Grid Area No. 7 Tree Tabulation

OAK SPECIES	DIAMETER CLASSES				TOTAL
	6"-11"	12"-17"	18"-23"	24"+	
Blue Oak ( <i>Quercus douglasii</i> )	0	0	0	0	0
Interior Live Oak ( <i>Quercus wislizenii</i> )	0	0	0	0	0
Valley Oak ( <i>Quercus lobata</i> )	0	0	0	0	0
Subtotal	0	0	0	0	0

NON-OAK SPECIES	DIAMETER CLASS				TOTAL
				19"+	
Fremont Cottonwood ( <i>Populus fremontii</i> )				3	3
Willow species ( <i>Salix spp.</i> )				0	0
Foothill Pine ( <i>Pinus sabiniana</i> )				0	0
Subtotal				3	3

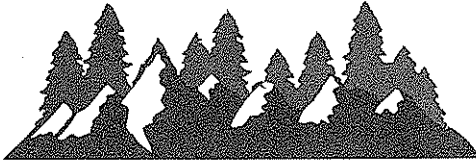
Total number of trees counted in Grid Area No. 7 ..... 3

## **APPENDIX D22**

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Carpenter Ranch – Folsom SOI Project Site  
Initial Arborist Report and Inventory Summary





# SIERRA NEVADA ARBORISTS

## CARPENTER RANCH, LP

CARPENTER RANCH - FOLSOM SOI PROJECT SITE  
County of Sacramento, California

### *INITIAL* ARBORIST REPORT AND INVENTORY SUMMARY

Prepared by:

Edwin E. Stirtz, Consulting Arborist  
ISA Certified Arborist WE-0510A  
Member, American Society of Consulting Arborists  
SIERRA NEVADA ARBORISTS

Wayne R. McKee, Consulting Arborist  
ISA Certified Arborist WE-0959A

February 17, 2006

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### **QUALIFICATION STATEMENT**

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Wayne R. McKee is a consulting arborist with 15 years experience in forestry, surveying and arboriculture. Mr. McKee received a B.S. degree in Forestry from Humbolt State University and worked as a Forestry and Surveying Technician for Hunt Surveying and Forestry prior to becoming an ISA Certified Arborist in 1992. Since that time Mr. McKee has been providing consulting arboricultural services in the Sacramento region.



# SIERRA NEVADA ARBORISTS

February 17, 2006

Mr. Steve Chamberlain  
CARPENTER RANCH, LP  
1610 Arden Way, Suite 240  
Sacramento, California 95815-4028

Re: *Initial Arborist Report and Inventory –  
Carpenter Ranch Project Site, County of Sacramento*

Dear Mr. Chamberlain:

During the period January 3, 2006 through February 7, 2006, Sierra Nevada Arborists visited the proposed Carpenter Ranch project site located in Eastern Sacramento County, California. The purpose of these site visits was to conduct field inspections to identify, inventory and evaluate any trees falling within the requirements of the Sacramento County Tree Preservation and Protection Ordinance (Title 19, Chapter 19.12) which requires an inventory and field identification of any single-trunked native oak tree having at least one trunk measuring 6 inches or more in diameter measured 4.5 feet above ground ("DBH"), or a multi-trunked native oak tree having an aggregate diameter of 10 inches DBH or larger, as well as any other significant trees which measure 19 inches DBH or larger (i.e., "Heritage" or "Landmark" trees). Two separate methods were utilized by Sierra Nevada Arborists to compile the data contained within the current report and accompanying Inventory Summary. These methods include the visual inspection/tagging method and a separate tree count inventory.

## SITE DESCRIPTION

The Carpenter Ranch project site is located in Eastern Sacramento County and is roughly bordered by Prairie City Road on the west, State Route 50 on the north, Scott Road on the east and Grant Line Road on the south. The project site has rolling topography covered with exposed rocks and boulders, and is punctuated by a small valley through which Alder Creek flows from the east side of the site to the west boundary. In addition, several side drainages flow into Alder Creek throughout the site. Several old mine shafts and evidence of diggings were observed on site; however, all are minor and not of the massive dredging efforts found elsewhere in the region. It appears that the site has been used exclusively for cattle grazing for many years.

The predominant tree species found on site was native Blue Oak (*Quercus douglasii*) with annual grasses growing beneath the trees. Very few other tree species or under story shrubs were observed on the site. It is also noted that trees within several areas of the site exhibit varying degrees of old fire damage.

Mr. Steve Chamberlain  
CARPENTER RANCH, LP  
RE: Carpenter Ranch - Folsom SOI Project Site  
County of Sacramento, California  
February 17, 2006  
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## **METHODOLOGIES**

### **Visual Inspection/Tagging Method**

During the project period Sierra Nevada Arborists was provided by MacKay & Soms Engineers (Sacramento office) aerial mapping to identify the potential development and/or impact areas. Based on the geographic delineations provided, the trees within the large lot residential, Business/Professional and Executive parcels as delineated on the aerial maps were visually inspected. Trees within these areas which met the criteria of Sacramento County Tree Preservation and Protection Ordinance were assigned a round, stamped metal number tag bearing numbers 1 through 4,055 which was affixed to the tree's trunk. At the time of tagging and field data collection, the tree's location was roughly delineated by number series on the aerial maps provided by MacKay & Soms. Specific data was then gathered for each tagged tree, including the tree's diameter measured at breast height ("DBH"), the tree's dripline radius ("DLR"), and an assessment was made of the tree's root crown, trunk, limbs and foliage. Utilizing this data, the trees' overall structural condition and vigor were assessed ranging from "poor" to "good".<sup>1</sup> In addition, notable characteristics were also documented and recommendations on a tree-by-tree basis were made which logically followed the observed characteristics noted within the trees at the time of inventory effort.

### **Tree Count Inventory**

In addition to the tagged Inventory, trees within four separate areas identified as Open Space Areas 1-4 on the aerial maps were inventoried utilizing a tree count method. Ordinance-size trees within the four open space areas were counted and quantified by species and trunk diameter classifications.

## **INVENTORIES AND SUMMARIES**

### **Tagged and Inventoried Trees**

As you will see from the accompanying Inventory Summary 4,055 ordinance-size trees were tagged, inventoried and documented within this initial report and accompanying Inventory Summary. Composition of the 4,055 tagged and inventoried trees within the large lot residential, Business/Professional and Executive parcels include the following species and accompanying aggregate diameter inches:

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<sup>1</sup> It should be noted that there were no trees observed within the project boundaries which fell within the criteria of a "good" rating. A complete description of the terms and ratings utilized in this Report and accompanying Inventory Summary are found on pages 11-12.

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Blue Oak (*Quercus douglasii*) = 3,968 trees (60,861 aggregate diameter inches)

Valley Oak (*Quercus lobata*) = 13 trees (369 aggregate diameter inches)

Other Ordinance-size Non-Oak Natives = 0 trees

Area 1

Total number of trees counted in Area No. 1	413
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## Area 2

Total number of trees counted in Area No. 2.....	215
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Mr. Steve Chamberlain  
 CARPENTER RANCH, LP  
 RE: Carpenter Ranch - Folsom SOI Project Site  
 County of Sacramento, California  
 February 17, 2006  
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### Area 3

OAK SPECIES	DIAMETER CLASSES								TOTAL
	6"-10"	11"-15"	16"-20"	21"-25"	26"-30"	31"-35"	36"-40"	>40"	
Blue Oak ( <i>Quercus douglasii</i> )	2755	2660	1205	355	109	40	12	4	7140
Interior Live Oak ( <i>Quercus wislizenii</i> )	40	46	26	13	9	6	2	13	155
Valley Oak ( <i>Quercus lobata</i> )	24	30	17	12	8	1	1	3	96
Subtotal	2819	2736	1248	380	126	47	15	20	7391
NON-OAK NATIVE SPECIES	DIAMETER CLASS								TOTAL
	6"-10"	11"-15"	16"-20"	21"-25"	26"-30"	31"-35"	36"-40"	>40"	
Pacific Willow ( <i>Salix lasiandra</i> )	1	2	10	7	2	1	1	1	25
Fremont Cottonwood ( <i>Populus fremontii</i> )	0	0	1	1	0	0	0	1	3
Subtotal	1	2	11	8	2	1	1	2	28
Total number of trees counted in Area No. 3..... 7419									

### Area 4

OAK SPECIES	DIAMETER CLASSES								TOTAL
	6"-10"	11"-15"	16"-20"	21"-25"	26"-30"	31"-35"	36"-40"	>40"	
Blue Oak ( <i>Quercus douglasii</i> )	340	310	100	30	10	1	1	1	793
Interior Live Oak ( <i>Quercus wislizenii</i> )	0	0	0	0	0	0	0	0	0
Valley Oak ( <i>Quercus lobata</i> )	0	0	0	0	0	0	0	0	0
Subtotal	340	310	100	30	10	1	1	1	793
NON-OAK NATIVE SPECIES	DIAMETER CLASSES								TOTAL
	6"-10"	11"-15"	16"-20"	21"-25"	26"-30"	31"-35"	36"-40"	>40"	
									0
Subtotal									0
Total number of trees counted in Area No. 4..... 793									

### SUMMARY

Total tagged and inventoried trees.....	4,055
Total recommended removals.....	330
Total tree count inventory (Open Space Areas 1-4) .....	<u>9,840</u>
TOTAL INVENTORIED TREES TAGGED AND COUNTED	
WITHIN PROJECT AREA.....	13,895



### **Recommended Removals**

At this time 330 of the 4,055 tagged and inventoried trees within the large lot residential, Business/Professional and Executive parcels have been recommended for removal due to structural defects, compromised health and/or questionable integrity which may pose a hazard if retained in a developed environment. The specific defects for each of these trees is noted within the accompanying Inventory Summary, and the trees have been highlighted for reference in green within the accompanying Inventory Summary.

In addition, many trees within the large lot residential, Business/Professional and Executive parcel areas currently exhibit characteristics which either warrant further evaluation (i.e. root collar excavation and analysis and/or aerial inspection) and/or ongoing periodic monitoring to assess the trees' structural integrity as further described within the accompanying Inventory Summary. For reference, these trees have been separately highlighted in yellow within the accompanying Inventory Summary. At this juncture we have not recommended the removal of these trees since development plans, including proposed home sites and building footprints, have not yet been finalized. It is strongly recommended, however, that further analysis and/or evaluation of these trees be performed by an ISA Certified Arborist prior to making final development decisions, especially if these trees are planned for retention near homes and development, residential and/or pedestrian activities will occur within their fall zone. At this juncture we recommend that these trees be periodically monitored and thoroughly inspected by an ISA Certified Arborist to keep abreast of the trees' changing conditions and to assess the trees' ongoing structural integrity and potential for hazard in a developed environment.

### **GENERAL CONSERVATION AND MAINTENANCE RECOMMENDATIONS**

Please note that while this is a detailed review of the tagged and inventoried trees within the large lot residential, Business/Professional and Executive parcels there may be circumstances where further inspection and/or evaluation may be required in the future. Trees are living organisms whose condition may change at any time; therefore, a complete assessment of construction impacts and specific recommendations to help mitigate for the adverse impacts which may be sustained by contemplated construction activities cannot be made until those development plans have been refined and finalized. Once final improvement plans have been developed for the site an ISA Certified Arborist should review those plans and provide a more detailed impact assessment, including identification of trees which may require removal for home construction and other contemplated site development activities. This will be particularly important if homes, residential and/or pedestrian activities will fall within or near the fall zone of a tree which has been noted as having structural defects, questionable long-term longevity and/or a conditional rating which is less than "Fair", and for trees which measure 16 inches and greater in diameter which will be retained within close proximity to development, especially trees which

Mr. Steve Chamberlain  
CARPENTER RANCH, LP  
RE: Carpenter Ranch - Folsom SOI Project Site  
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will be retained on home sites. Trees of this size may pose a more significant hazard if a sudden limb shed and/or failure should occur. The review should also include an assessment of impacts which will be sustained by those trees which will be retained within the development area, along with recommendations to help reduce adverse impacts of construction on the retained trees, where possible, to a less than significant level. In the meantime, this report provides recommendations which logically follow the observed characteristics noted in the trees at the time of our initial field inventory effort, as well as some General Conservation Recommendations which should be utilized as a guideline for the protection of trees which may be retained within the development area.

Finally, standard arboricultural maintenance including pruning, cabling, fertilization and pest control should be performed by a Certified Arborist Maintenance Company consistent with American National Standards Institute ("ANSI") standards -- A300, Parts 1, 2 and 3 -- for all trees planned to be retained within or adjacent to the developed and/or improved areas. ANSI standards were developed by the American National Standards Institute, Inc. in order to present performance standards for the care and maintenance of trees, shrubs and other woody plants. Parts 1, 2 and 3 of these standards cover pruning, fertilization and support systems, respectively.

#### **GENERAL COMMENTS AND ARBORIST'S DISCLAIMER**

As you know, a tree permit and/or authorization to develop should be obtained from the County of Sacramento approving contemplated development activities, including the removal of protected trees, within the project area. All terms and conditions of the tree permit are the sole and exclusive responsibility of the developer. It should also be noted that prior to final inspection the County *may* require written verification from an ISA Certified Arborist certifying the approved removal activities and/or implementation of the mitigation measures outlined for the preserved trees on the site. Sierra Nevada Arborists cannot provide written Certification of Compliance unless we have been provided with a copy of the approved site development plans and applicable permits, and are on site to monitor and observe regulated activities during the course of construction. Therefore, it will be necessary for the developer to notify Sierra Nevada Arborists well in advance (at least 72-hours prior notice) of any regulated activities which are scheduled to occur on site so that those activities can be properly monitored and documented for compliance certification.

Lastly, at this juncture we believe implementation of the general recommendations outlined within this report will attempt to reduce adverse impacts of construction on the retained trees, where possible, to a less than significant level. However, these recommendations are generic in nature and their implementation should not be viewed as a guarantee or warranty against the trees' ultimate demise and/or failure in the future. Arborists are tree specialists who

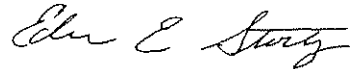
Mr. Steve Chamberlain  
CARPENTER RANCH, LP  
RE: Carpenter Ranch - Folsom SOI Project Site  
County of Sacramento, California  
February 17, 2006  
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use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of the trees and ***attempt to reduce the risk of living near trees.*** Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Since trees are living organisms conditions are often hidden within the tree and below ground and their condition may change at any time. Arborists cannot guarantee that a tree will be healthy and/or safe under all circumstances or for a specific period of time. Likewise remedial treatments cannot be guaranteed. Trees can be managed but they cannot be controlled. To develop land and live near trees is to accept some degree of risk and the only way to eliminate all risk associated with trees is to eliminate all of the trees. ***An entity who develops land and builds homes with a tree in the vicinity should be aware of this Arborists' Disclaimer and be further advised that the developer and the future homeowners assume the risk that a tree could at any time suffer a branch and/or limb failure, blow over in a storm and/or fail for no apparent reason which may cause bodily injury or property damage.*** Sierra Nevada Arborists cannot predict acts of nature including, without limitation, storms of sufficient strength which can take down even a healthy tree. The information contained within this report is believed to be true to the best of the author's knowledge and experience as of the date it was prepared; however, certain conditions may exist which only a comprehensive, scientific, investigation might reveal which should be performed by other consulting professionals. Neither this author nor Sierra Nevada Arborists has assumed any responsibility for liability associated with the trees on or adjacent to this project site, their future demise and/or any damage which may result therefrom.

Thank you for allowing Sierra Nevada Arborists to assist you with this initial review. Please feel free to give me a call if you have any questions or require additional information.

Sincerely,



Edwin E. Stirtz  
ISA Certified Arborist WE-0510A  
Member, American Society of Consulting Arborists

EES:ks  
Enclosures

### **GENERAL CONSERVATION RECOMMENDATIONS**

The following information is provided in an effort to protect those trees which may be impacted by construction within the project site. It should be noted that these recommendations are generic in nature. As plans are developed and refined, a more detailed evaluation of tree impacts and/or removals should be made by an ISA Certified Arborist. At that time specific preservation recommendations may be made for individual trees within the project site.

### **MITIGATION OVERVIEW**

In order to afford the greatest potential for tree protection during construction, there are general guidelines to provide this protection. The critical root zone area for a tree should include the dripline radius measurement taken from the tree trunk to the tip of the farthest reaching branch. In some circumstances, such as with a one-sided tree, this measurement could be somewhat skewed. In these situations, the Project Arborist should determine the critical root zone area. Generally, encroachments should be held to no more than 30% of the critical root zone area where potential root damage could be moderate or significant. In limited situations, encroachment exceeding 30% of the critical root zone area may be possible provided that potential root damage is not severe. The critical root zone area should be fenced prior to any activities on the site.

Canopy impacts can also pose a detriment to preserved trees. Frequently overlooked are conflicts between low-hanging tree branches and necessary clearance beneath a tree for construction equipment or home building purposes. Canopy impacts should also be maintained at 20% or less.

### **PAD GRADING MITIGATION MEASURES**

#### **Grade Cuts.**

Cuts within a dripline of a tree should be maintained at less than 30% of the critical root zone area. Grade cuts should be supervised by the Project Arborist and any damaged roots encountered should be root pruned and properly treated as soon as possible after excavation. Cut faces which will be exposed for more than 2-3 days during cool temperatures or 1 day during warm weather should be covered with dense burlap fabric and watered to maintain soil moisture at least on a daily basis (or possibly more frequently during summer months) or as directed by the Project Arborist.

### **Grade Fills.**

Fill materials less than 1 foot in depth and encroaching less than 30% into the critical root zone area should not require special mitigative measures. Should fills exceed 1 foot in depth up to 30% of the critical root zone area, aeration systems installed as directed by the Project Arborist may serve to mitigate the presence of the fill materials.

Should it be necessary to build fill materials on two or three sides of a tree the use of retaining walls may reduce encroachment and the degree of fill beneath the tree. It is critical to provide for drainage away from the critical root zone area of the tree -- particularly when considering heavy winter rainfalls. Overland releases and subterranean drains dug outside the critical root zone area and tied directly to the main storm drain system are two possible options.

### **Structure Encroachment.**

In some cases it may be necessary for a proposed home to encroach into the critical root zone area. Again, this encroachment should be maintained at less than 30%. In this situation, a slab foundation with an aeration system installed beneath the slab and footings excavated by hand may provide adequate root protection. Where tree roots tend to be shallow, even a hand-excavated footing can be detrimental. In this situation, a "post-tension" type slab may minimize root damage. If it is necessary for encroachment to exceed 30%, raised floor construction with a grade-beam type foundation footing may be a viable option.

When evaluating encroachment from a proposed structure the structure height and tree branch conflicts are critical to evaluate in order to ensure that no more than 30% of the tree's canopy requires removal.

## **STREET AND UTILITY MITIGATION MEASURES**

Generally, impacts from street construction alone are less of an impact than those occurring with dry and wet utility construction. Often it is very difficult or impossible to effectively preserve a tree with more than 30% of its critical root zone area falling within the PUE/street.

### **Dry Utilities.**

Since dry utilities are typically located behind the curb and gutter and/or sidewalks, where applicable, they fall within the closest proximity to trees preserved outside of the roadway. The dry utilities tend to be shallow, within the top 5 feet of the soil profile. Unfortunately, in this region that

is also typically where tree roots are found. Where possible, dry utilities should be routed on the opposite side of the street from tree locations. This would require more street crossings than normally planned; however, impacts to trees would be greatly lessened. In some circumstances, hand digging the utilities through critical root zone areas may be an option. Since the dry utility profile is usually 3-4 in depth and includes multiple conduits or plumbing due to the various utilities, boring beneath the critical root zone area is not usually effective.

### **Wet Utilities.**

The greatest conflicts with wet utilities typically arise from deep sanitary sewers or storm drains. Soil conditions and safety concerns often require that trench openings at ground level be quite large. Therefore, the storm and sewer locations must be carefully considered. In some circumstances where a particularly valuable tree may be impacted by wet utilities boring may be an option. Since water main construction tends to be more shallow than storm drains or sewers, and flow lines are not as critical, boring can often be most effective in preserving tree roots.

### **Streets/Hardscape.**

Should the street construction sections be 18" or less, the percentage of encroachment into the critical root zone area may be able to exceed 30%. If this is possible, determinations cannot be made until an accurate evaluation of the root system profiles on the site has been completed. It is impossible to preserve roots within the street section profile. Further, the construction of the street alters the gaseous exchange and oxygen to the tree's root system. In some circumstances aeration systems may mitigate a small portion of these impacts.

Hardscape (concrete slabs, walkways, etc.) should be minimized within the critical root zone area. Grade cuts in excess of 12" should be avoided. In some circumstances aeration systems may be required to reduce root system stress.

## **CONCLUSION**

In an effort to minimize tree removals in the early phases of a project a category for potential tree removals should be established. This category would include those trees which are located in areas that would expose them to moderate or significant encroachments and/or construction impacts. As construction occurs and construction staking is installed assessment of impacts are much more accurate than those based simply on plan review. At that time, determinations by the Project Arborist prior to construction and following staking may result in preservation of trees which may have previously appeared to require removal on the plans.

## DEFINITIONS AND RATINGS

Within this report will find the following information defined as follows:

Tree Number:	Corresponds to aluminum tag attached to the tree.
Species Identification:	Scientific and common species name.
Diameter ("DBH"):	This is the trunk diameter as measured at breast height (industry standard 4.5 feet above ground level).
Dripline radius ("DLR")	Measurement of the tree's dripline from the trunk to the farthest most branch tip.
Root Crown:	Assessment of the root crown area located at the base of the trunk of the tree at soil level.
Trunk:	Assessment of the tree's main trunk from ground level generally to the point of the primary crotch structure.
Limbs:	Assessment of both smaller and larger branching, generally from primary crotch structure to branch tips.
Foliage:	Tree's leaves.
Overall Condition:	Describes overall condition of the tree in terms of structure and vigor.
Notable Comments:	Memorializes defects, notable characteristics and/or growth habits observed during visual inspection

**GOOD** - A tree in this category has no trunk or root crown cavities or injuries; there is no indication of hollowness; no foreign objects are embedded in its structure; the root crown is above grade; there is no decay present except for small stubs; the structure is strong; the trunk tapers; the bark thickness is normal; there is no fluxing; no fungus is evident; there is a below average amount of dead limbs and twigs present which is normal for the size and age of the species; there is no co-dominant branching present; there are no large callused areas and any small callusing present is vigorous and intact; there are no abnormally heavy insect infestations; the growth rate is and has been average or above; limb weight is not excessive; buds are normal size and viable; the leaf size, color, and density is normal or better; and barring any unforeseen negative effects, the life expectancy should exceed thirty years.

**FAIR** - There is no decay or indications of large hollow areas in the large limbs, root crown, or trunk; a few small callused-over foreign objects, e.g., nails, may be present, the structure is strong; no fungus is evident other than small saprophytes on exposed wood; some small, callusing injuries may be present, some small limbs may be dead and decaying but callus is forming at their base; some excessive limb weight may exist; there may be some minor fluxing; the amount of dead limbs and twigs present is within the normal range; some large callused areas may be present; some small cavities and areas of decay may be present; the growth rate is average or slightly below average; and some leaf size, color, and density may vary.

**POOR** - Significant cavities, dead areas, and decay may be present; the tree is actually defective; fungus fruiting bodies may be present; the amount of dead limbs and twigs is far above normal; major co-dominant branching with embedded bark may be present; buds are small and some may not be viable; leaves may be below average size and may be abnormal in color; significant pest damage may be present; and the predicted structural life and/or viability is less than ten years.

The ratings "good to fair" and "fair to poor" are used to describe trees that fall between the described major categories and have elements of both.

**CROWN CLEAN OUT:** This shall consist of the removal of all dead, dying, diseased, interfering, objectionable, obstructing, and weak branches, as well as selective thinning to lessen wind resistance.

**SUBSURFACE LIQUID SOIL INJECTION/DEEP ROOT FERTILIZATION (D.R.F.):** A method employed to induce vigor and stimulate new root growth. This is used as a means of feeding a large tree, as well as deep watering at the same time. Water soluble fertilizers are mixed in water and hydraulically pumped with a probe into the ground, delivering water and nutrients directly to the root zone, allowing for uptake from the tree. In this way, vigor can be improved and new root growth stimulated.



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1	Blue Oak	( <i>Quercus douglasii</i> )		22	24	Poor	Poor	Poor to fair	Dormant	Poor	Fair	22	Callusing basal/lower trunk wound, north side, to 8' above grade with significant decay; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2	Blue Oak	( <i>Quercus douglasii</i> )	12, 14	26	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing lower trunk wound, north side, 3.5' to 6' above grade; minor interior decay; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
4	Blue Oak	( <i>Quercus douglasii</i> )		9	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
5	Blue Oak	( <i>Quercus douglasii</i> )		14	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed, one-sided west; slightly above average amount of deadwood	Clean out crown
6	Blue Oak	( <i>Quercus douglasii</i> )		18	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
7	Blue Oak	( <i>Quercus douglasii</i> )		10	10	Fair	Fair	Poor to fair	Dormant	Fair	Poor to fair		Sprout growth on lower trunk; above average amount of deadwood	Clean out crown
8	Blue Oak	( <i>Quercus douglasii</i> )		15	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
9	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
10	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed, one-sided west; above average amount of deadwood	Clean out crown
11	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
12	Blue Oak	( <i>Quercus douglasii</i> )		12	18	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
13	Blue Oak	( <i>Quercus douglasii</i> )		30	28	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
14	Blue Oak	( <i>Quercus douglasii</i> )		16	21	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly west; slightly above average amount of deadwood	Clean out crown
15	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Poor to fair	Dormant	Fair	Poor to fair		Above average amount of deadwood	Clean out crown
16	Blue Oak	( <i>Quercus douglasii</i> )		20	27	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
17	Blue Oak	( <i>Quercus douglasii</i> )		16	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
18	Blue Oak	( <i>Quercus douglasii</i> )		19	21	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Inherently weak primary crotch with evidence of included bark; possible stress fracture; above average amount of deadwood	Install rotary cable system and/or through bolt to help support weak primary crotch; clean out crown
19	Blue Oak	( <i>Quercus douglasii</i> )		11	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
20	Blue Oak	( <i>Quercus douglasii</i> )		26	32	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
21	Blue Oak	( <i>Quercus douglasii</i> )		6	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
22	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
23	Blue Oak	( <i>Quercus douglasii</i> )		27	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
24	Blue Oak	( <i>Quercus douglasii</i> )		12	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed, one-sided northeast; slightly above average amount of deadwood	Clean out crown
25	Blue Oak	( <i>Quercus douglasii</i> )		19	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
26	Blue Oak	( <i>Quercus douglasii</i> )		16	34	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
27	Blue Oak	( <i>Quercus douglasii</i> )	14, 17	31	26	Fair	Fair	Fair	Dormant	Fair	Fair		14-inch stem is one-sided west; slightly above average amount of deadwood	Clean out crown
28	Blue Oak	( <i>Quercus douglasii</i> )		30	34	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing lower trunk wound, east side, 5.5' to 6' above grade; minor interior decay; majority of branching is on southwest side	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
29	Blue Oak	( <i>Quercus douglasii</i> )		17	26	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided south; slightly above average amount of deadwood	Clean out crown
30	Blue Oak	( <i>Quercus douglasii</i> )		15	26	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
31	Blue Oak	( <i>Quercus douglasii</i> )		18	27	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
32	Blue Oak	( <i>Quercus douglasii</i> )		24	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
33	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans northwest; above average amount of deadwood	Clean out crown
34	Blue Oak	( <i>Quercus douglasii</i> )		17	24	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Slightly above average amount of deadwood	Clean out crown
35	Blue Oak	( <i>Quercus douglasii</i> )		20	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans east; above average amount of deadwood	Clean out crown
36	Blue Oak	( <i>Quercus douglasii</i> )		23	34	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
37	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
38	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans south; above average amount of deadwood	Clean out crown
39	Blue Oak	( <i>Quercus douglasii</i> )		9	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
40	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
41	Blue Oak	( <i>Quercus douglasii</i> )		19	33	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
42	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
43	Blue Oak	( <i>Quercus douglasii</i> )		14	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
44	Blue Oak	( <i>Quercus douglasii</i> )		7	13	Poor	Poor	Poor to fair	Dormant	Poor	Fair	7	Callusing basal/lower trunk wound, east side, to 3' above grade; moderate decay; leans southwest; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
45	Blue Oak	( <i>Quercus douglasii</i> )		19	28	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
46	Blue Oak	( <i>Quercus douglasii</i> )		16	20	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing lower trunk wound, east side, measuring 30 inches in width by 4 inches in height; minor interior decay; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
47	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
48	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
49	Blue Oak	( <i>Quercus douglasii</i> )		11	20	Poor	Poor	Fair	Dormant	Poor	Fair	11	Callusing basal/lower trunk wound, east side, to 1' above grade; moderate interior decay; leans west	<b>Recommend removal due to noted defects</b>
50	Blue Oak	( <i>Quercus douglasii</i> )		12	21	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
51	Blue Oak	( <i>Quercus douglasii</i> )		11	20	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans west; above average amount of deadwood	Clean out crown
52	Blue Oak	( <i>Quercus douglasii</i> )		19	25	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Leans west; above average amount of deadwood	Clean out crown
53	Blue Oak	( <i>Quercus douglasii</i> )		13	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
54	Blue Oak	( <i>Quercus douglasii</i> )		11	22	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, west side, 1' above grade; minor interior decay; leans east; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
55	Blue Oak	( <i>Quercus douglasii</i> )		23	33	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
56	Blue Oak	( <i>Quercus douglasii</i> )		21	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
57	Blue Oak	( <i>Quercus douglasii</i> )		22	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
58	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
59	Blue Oak	( <i>Quercus douglasii</i> )		16	27	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided west; above average amount of deadwood	Clean out crown
60	Blue Oak	( <i>Quercus douglasii</i> )		18	27	Poor	Poor to fair	Poor to fair	Dormant	Poor	Fair	18	Callusing basal/lower trunk wound to 3' above grade, south and west sides, with significant decay; leans southwest; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
61	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Poor to fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal wound, south and southwest sides, with minor to moderate interior decay; suppressed, one-sided southwest; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
62	Blue Oak	( <i>Quercus douglasii</i> )	6, 6, 6	18	12	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed, one-sided south; slightly above average amount of deadwood	Clean out crown
63	Blue Oak	( <i>Quercus douglasii</i> )		12	23	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided west; above average amount of deadwood	Clean out crown
64	Blue Oak	( <i>Quercus douglasii</i> )		19	33	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
65	Blue Oak	( <i>Quercus douglasii</i> )	7, 9	16	13	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing lower trunk wound, south side; minor decay; leans southwest; above average amount of deadwood	Clean out crown
66	Blue Oak	( <i>Quercus douglasii</i> )		12	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
67	Blue Oak	( <i>Quercus douglasii</i> )		12	21	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed, one-sided west; above average amount of deadwood	Clean out crown
68	Blue Oak	( <i>Quercus douglasii</i> )		12	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
69	Blue Oak	( <i>Quercus douglasii</i> )		11	22	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided southwest; above average amount of deadwood	Clean out crown
70	Blue Oak	( <i>Quercus douglasii</i> )		14	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
71	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Poor to fair	Fair	Fair	Dormant	Poor to fair	Fair	14	Callusing basal/lower trunk wound, southeast side, 3 inches in width by 6 inches in height; minor to moderate interior decay; leans slightly toward southwest; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
72	Blue Oak	( <i>Quercus douglasii</i> )	11, 12	23	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
73	Blue Oak	( <i>Quercus douglasii</i> )	11, 12	23	21	Poor	Poor	Fair	Dormant	Poor	Fair	23	Callusing basal/lower trunk wound, north side, to 18" above grade; significant decay	<b>Recommend removal due to noted defects</b>
74	Blue Oak	( <i>Quercus douglasii</i> )		19	23	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower/middle trunk wounds resulting from a bacterial canker infection; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
75	Blue Oak	( <i>Quercus douglasii</i> )	22, 22	44	33	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Inherently weak primary crotch with included bark, grade to 3' above grade; slightly above average amount of deadwood	Install rotary cable system and/or through bolt to help support weak primary crotch; clean out crown
76	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly east; above average amount of deadwood	Clean out crown
77	Blue Oak	( <i>Quercus douglasii</i> )		12	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
78	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
79	Blue Oak	( <i>Quercus douglasii</i> )		19	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
80	Blue Oak	( <i>Quercus douglasii</i> )		35	31	Fair	Poor	Poor	Dormant	Poor	Fair	35	Numerous old branch failures with moderate to significant decay reaching into main trunk and large scaffold limbs, various locations; several nesting cavities	<b>Recommend removal due to noted defects</b>
81	Blue Oak	( <i>Quercus douglasii</i> )		16	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
82	Blue Oak	( <i>Quercus douglasii</i> )		17	24	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
83	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
84	Blue Oak	( <i>Quercus douglasii</i> )	9, 13	22	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
85	Blue Oak	( <i>Quercus douglasii</i> )		19	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
86	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
87	Blue Oak	( <i>Quercus douglasii</i> )	11, 13, 20	44	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
88	Blue Oak	( <i>Quercus douglasii</i> )		40	36	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Inherently weak primary crotch with included bark; slightly above average amount of deadwood	Install rotary cable system and/or through bolt to help support weak primary crotch; clean out crown
89	Blue Oak	( <i>Quercus douglasii</i> )		22	28	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
90	Blue Oak	( <i>Quercus douglasii</i> )		18	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
91	Blue Oak	( <i>Quercus douglasii</i> )		30	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
92	Blue Oak	( <i>Quercus douglasii</i> )		16	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
93	Blue Oak	( <i>Quercus douglasii</i> )		33	39	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
94	Blue Oak	( <i>Quercus douglasii</i> )		18	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
95	Blue Oak	( <i>Quercus douglasii</i> )		38	40	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Inherently weak primary crotch with callused bulge, east side, 6' above grade; two large stems tending south and north carry substantial amount of canopy weight	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist; AVOID DEVELOPMENT WITHIN FALL ZONE</b>
96	Blue Oak	( <i>Quercus douglasii</i> )		29	31	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
97	Blue Oak	( <i>Quercus douglasii</i> )		31	32	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing lower trunk wound, west side; minor to moderate interior decay; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
98	Blue Oak	( <i>Quercus douglasii</i> )		21	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
99	Blue Oak	( <i>Quercus douglasii</i> )		41	48	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Several large scaffold failures in upper canopy, none appearing to compromise main trunk; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
100	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed, one-sided south; above average amount of deadwood	Clean out crown
101	Blue Oak	( <i>Quercus douglasii</i> )	8, 9, 13	30	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
102	Blue Oak	( <i>Quercus douglasii</i> )		25	26	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
103	Blue Oak	( <i>Quercus douglasii</i> )		23	34	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
104	Blue Oak	( <i>Quercus douglasii</i> )		20	21	Fair	Poor	Poor to fair	Dormant	Poor	Fair	20	Basal/lower trunk defects; moderate to significant decay, various locations, to 12' above grade, with interior hollowing in lower trunk; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
105	Blue Oak	( <i>Quercus douglasii</i> )		25	32	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
106	Blue Oak	( <i>Quercus douglasii</i> )		21	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
107	Blue Oak	( <i>Quercus douglasii</i> )		22	29	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
108	Blue Oak	( <i>Quercus douglasii</i> )		25	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
109	Blue Oak	( <i>Quercus douglasii</i> )		48	30	Poor	Poor	Poor	Dormant	Poor	Fair	48	Callusing basal/lower trunk wound with significant decay, grade to 4' above grade; approximately one-half of interior is hollow; two co-dominant stems failed with significant; two small laterals remain	<b>Recommend removal due to noted defects</b>
110	Blue Oak	( <i>Quercus douglasii</i> )		38	31	Poor	Poor	Poor	Dormant	Poor	Fair	38	Callusing lower/middle trunk wound, north side, to 18' above grade with some decay and large stress fractures exposed; leans southeast; major scaffolds failed with significant decay into main trunk	<b>Recommend removal due to noted defects</b>
111	Blue Oak	( <i>Quercus douglasii</i> )		36	43	Fair	Fair	Fair	Dormant	Fair	Fair			<b>Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection</b>



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
112	Blue Oak	( <i>Quercus douglasii</i> )		37	40	Fair	Poor	Poor to fair	Dormant	Poor	Fair	37	Callusing trunk wound, north side, 8' to 12' above grade with interior decay; occurs just below primary crotch; additional defect areas in large scaffold limbs	<i>Recommend removal due to noted defects</i>
113	Blue Oak	( <i>Quercus douglasii</i> )		39	42	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor	Fair	39	Callusing basal wound, southwest side; no decay apparent at this time; callusing trunk wound, northwest side, with moderate interior decay suspected; leans south; several failures and defects in scaffold limbs	<i>Recommend removal due to noted defects and potential hazard</i>
114	Blue Oak	( <i>Quercus douglasii</i> )		33	36	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
115	Blue Oak	( <i>Quercus douglasii</i> )		27	33	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
116	Blue Oak	( <i>Quercus douglasii</i> )		6	5	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
117	Blue Oak	( <i>Quercus douglasii</i> )		27	30	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly south; above average amount of deadwood	Clean out crown
118	Blue Oak	( <i>Quercus douglasii</i> )		20	21	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
119	Blue Oak	( <i>Quercus douglasii</i> )		24	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
120	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed, one-sided northeast; slightly above average amount of deadwood	Clean out crown
121	Blue Oak	( <i>Quercus douglasii</i> )		7	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
122	Blue Oak	( <i>Quercus douglasii</i> )		25	27	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
123	Blue Oak	( <i>Quercus douglasii</i> )		12	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
124	Blue Oak	( <i>Quercus douglasii</i> )		18	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
125	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
126	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
127	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Poor	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, northeast side; minor decay; leans southwest; slightly above average amount of deadwood	<i>None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT</i>
128	Blue Oak	( <i>Quercus douglasii</i> )		21	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
129	Blue Oak	( <i>Quercus douglasii</i> )		7	20	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed, one-sided north; slightly above average amount of deadwood	Clean out crown
130	Blue Oak	( <i>Quercus douglasii</i> )		12	19	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided east; above average amount of deadwood	Clean out crown
131	Blue Oak	( <i>Quercus douglasii</i> )	16, 19	35	27	Poor	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wounds, south side; minor to moderate interior decay; leans southwest; above average amount of deadwood	<i>Perform root collar excavation to assess nature and extent of decay in basal cavity; provide further recommendations following root collar excavation/inspection</i>
132	Blue Oak	( <i>Quercus douglasii</i> )		12	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
133	Blue Oak	( <i>Quercus douglasii</i> )		13	20	Poor	Poor to fair	Poor to fair	Dormant	Poor	Fair	13	Measured at 3' above grade; callusing basal/lower trunk wound, southeast side, with moderate decay; leans west	<i>Recommend removal due to noted defects</i>
134	Blue Oak	( <i>Quercus douglasii</i> )	24, 27	51	31	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
135	Blue Oak	( <i>Quercus douglasii</i> )		8	22	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed, one-sided west; slightly above average amount of deadwood	Clean out crown
136	Blue Oak	( <i>Quercus douglasii</i> )		11	20	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed, one-sided west; above average amount of deadwood	Clean out crown
137	Blue Oak	( <i>Quercus douglasii</i> )		11	26	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed, one-sided west; slightly above average amount of deadwood	Clean out crown
138	Blue Oak	( <i>Quercus douglasii</i> )		13	26	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed, one-sided north; above average amount of deadwood	Clean out crown
139	Blue Oak	( <i>Quercus douglasii</i> )		31	37	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Several large scaffold failures and nesting cavities in upper canopy	<i>Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection</i>
140	Blue Oak	( <i>Quercus douglasii</i> )		14	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
141	Blue Oak	( <i>Quercus douglasii</i> )		20	22	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
142	Blue Oak	( <i>Quercus douglasii</i> )		16	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
143	Blue Oak	( <i>Quercus douglasii</i> )		10	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
144	Blue Oak	( <i>Quercus douglasii</i> )		18	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
145	Blue Oak	( <i>Quercus douglasii</i> )		15	27	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided west; above average amount of deadwood	Clean out crown
146	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
147	Blue Oak	( <i>Quercus douglasii</i> )		19	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
148	Blue Oak	( <i>Quercus douglasii</i> )		8	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
149	Blue Oak	( <i>Quercus douglasii</i> )		13	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
150	Blue Oak	( <i>Quercus douglasii</i> )		24	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
151	Blue Oak	( <i>Quercus douglasii</i> )		19	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
152	Blue Oak	( <i>Quercus douglasii</i> )		19	27	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
153	Blue Oak	( <i>Quercus douglasii</i> )		39	39	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	<i>Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection</i>
154	Blue Oak	( <i>Quercus douglasii</i> )		39	39	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Large 17-inch diameter scaffold limb failure, east side, 13' above grade; no decay apparent in parent stem at this time	<i>Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection</i>
155	Blue Oak	( <i>Quercus douglasii</i> )		16	18	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
156	Blue Oak	( <i>Quercus douglasii</i> )		23	26	Fair	Fair	Poor	Dormant	Fair	Fair		Smaller branches afflicted with bacterial canker; potential defect areas	<i>Perform aerial inspection to further assess structural integrity of canopy and potential for hazard; provide further recommendations following aerial inspection</i>
157	Blue Oak	( <i>Quercus douglasii</i> )		21	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
158	Blue Oak	( <i>Quercus douglasii</i> )		17	21	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
159	Blue Oak	( <i>Quercus douglasii</i> )		10	17	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
160	Blue Oak	( <i>Quercus douglasii</i> )		17	24	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
161	Blue Oak	( <i>Quercus douglasii</i> )		12	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided south; above average amount of deadwood	Clean out crown
162	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed, one-sided west; above average amount of deadwood	Clean out crown
163	Blue Oak	( <i>Quercus douglasii</i> )		14	22	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed, one-sided south; slightly above average amount of deadwood	Clean out crown
164	Blue Oak	( <i>Quercus douglasii</i> )		14	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
165	Blue Oak	( <i>Quercus douglasii</i> )		19	36	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
166	Blue Oak	( <i>Quercus douglasii</i> )		19	29	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
167	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
168	Blue Oak	( <i>Quercus douglasii</i> )		10	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
169	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
170	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
171	Blue Oak	( <i>Quercus douglasii</i> )	6, 7, 8, 9	30	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
172	Blue Oak	( <i>Quercus douglasii</i> )		18	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
173	Blue Oak	( <i>Quercus douglasii</i> )	10, 13	23	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
174	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
175	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
176	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
177	Blue Oak	( <i>Quercus douglasii</i> )	17, 22	39	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
178	Blue Oak	( <i>Quercus douglasii</i> )		26	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
179	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Trunk bends 6' above grade; one-sided south; slightly above average amount of deadwood	Clean out crown
180	Blue Oak	( <i>Quercus douglasii</i> )		40	6	Poor	Poor	Poor	Dormant	Poor	Poor	40	Callusing basal/lower trunk wound to 7' above grade with significant decay and exposed stress fractures; trunk failed 8' to 12' above grade; only sprouts remain	<i>Recommend removal due to noted defects</i>
181	Blue Oak	( <i>Quercus douglasii</i> )		20	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Small area of exfoliating bark, lower trunk with some evidence of wood boring insects; slightly above average amount of deadwood	Clean out crown
182	Blue Oak	( <i>Quercus douglasii</i> )		20	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
183	Blue Oak	( <i>Quercus douglasii</i> )		17	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
184	Blue Oak	( <i>Quercus douglasii</i> )		22	28	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
185	Blue Oak	( <i>Quercus douglasii</i> )		21	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
186	Blue Oak	( <i>Quercus douglasii</i> )		40	33	Poor	Poor	Poor	Dormant	Poor	Fair	40	Basal cavity, south side; some obvious decay; leans east; several failures of large scaffolds in upper canopy; resulting decay into parent stems and main trunk; additional large deadwood	<i>Recommend removal due to noted defects</i>
187	Blue Oak	( <i>Quercus douglasii</i> )		42	40	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Trunk has moderate bend 12' above grade toward northwest with obvious bark buckling from compression; additional nesting cavities in upper canopy	<i>Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection</i>
188	Blue Oak	( <i>Quercus douglasii</i> )		26	30	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		15-inch scaffold bends south 12' above grade with old tear out, moderate interior decay and active bee hive; upright stem has old break out 18' above grade with interior decay; <b>MODERATE HAZARD POTENTIAL</b>	<i>Perform aerial inspection to further assess structural integrity of canopy and potential for hazard; provide further recommendations following aerial inspection</i>
189	Blue Oak	( <i>Quercus douglasii</i> )		24	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
190	Blue Oak	( <i>Quercus douglasii</i> )		31	40	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	<i>Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection</i>
191	Blue Oak	( <i>Quercus douglasii</i> )		17	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
192	Blue Oak	( <i>Quercus douglasii</i> )		31	29	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Several large scaffold failures in upper canopy with resulting decay in large stems	<i>Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection</i>
193	Blue Oak	( <i>Quercus douglasii</i> )		25	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	<i>Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection</i>
194	Blue Oak	( <i>Quercus douglasii</i> )		23	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided west; above average amount of deadwood	Clean out crown
195	Blue Oak	( <i>Quercus douglasii</i> )		30	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
196	Blue Oak	( <i>Quercus douglasii</i> )	12, 13	25	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
197	Blue Oak	( <i>Quercus douglasii</i> )	5, 6, 18	29	22	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Measured at 3' above grade; leans southwest; slightly above average amount of deadwood	Clean out crown
198	Blue Oak	( <i>Quercus douglasii</i> )		22	29	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
199	Blue Oak	( <i>Quercus douglasii</i> )		7	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
200	Blue Oak	( <i>Quercus douglasii</i> )		12	30	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
201	Blue Oak	( <i>Quercus douglasii</i> )		9	19	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
202	Blue Oak	( <i>Quercus douglasii</i> )		6	8	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
203	Blue Oak	( <i>Quercus douglasii</i> )		14	17	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Measured at 3' above grade, forks at 4.5' above grade; above average amount of deadwood	Clean out crown
204	Blue Oak	( <i>Quercus douglasii</i> )		22	27	Fair	Fair	Fair	Dormant	Fair	Fair		Measured at 3' above grade, forks at 4.5' above grade; one-sided west; above average amount of deadwood	Clean out crown
205	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
206	Blue Oak	( <i>Quercus douglasii</i> )		17	29	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided southwest; above average amount of deadwood	Clean out crown
207	Blue Oak	( <i>Quercus douglasii</i> )		24	32	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
208	Blue Oak	( <i>Quercus douglasii</i> )		12	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided southwest; above average amount of deadwood	Clean out crown
209	Blue Oak	( <i>Quercus douglasii</i> )		20	22	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
210	Blue Oak	( <i>Quercus douglasii</i> )		25	30	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Measured 3' above grade, forks at 4.5' above grade; above average amount of deadwood	Clean out crown
211	Blue Oak	( <i>Quercus douglasii</i> )		19	30	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
212	Blue Oak	( <i>Quercus douglasii</i> )	8, 13	21	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed, one-sided southwest; above average amount of deadwood	Clean out crown
213	Blue Oak	( <i>Quercus douglasii</i> )		27	35	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
214	Blue Oak	( <i>Quercus douglasii</i> )		27	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
215	Blue Oak	( <i>Quercus douglasii</i> )		22	26	Poor	Poor	Poor	Dormant	Poor	Fair	22	Tree was originally a multi-trunked tree; entire center is burned out; over 3/4 of northerly stem is compromised with decay	<i>Recommend removal due to noted defects</i>



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
216	Blue Oak	( <i>Quercus douglasii</i> )	8, 11, 19	38	28	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
217	Blue Oak	( <i>Quercus douglasii</i> )		22	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
218	Blue Oak	( <i>Quercus douglasii</i> )		45	43	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Recent large limb failure, southeast side; partially compromised parent stem; slightly above average amount of deadwood	<i>Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection</i>
219	Blue Oak	( <i>Quercus douglasii</i> )		45	45	Poor to fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/trunk wound, south side; no decay apparent at this time; main stem failed 30' and 35' above grade; large laterals attached below that point with no obvious decay	<i>Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection</i>
220	Blue Oak	( <i>Quercus douglasii</i> )		28	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
221	Blue Oak	( <i>Quercus douglasii</i> )		41	5	Poor	Poor	Poor	Dormant	Poor	Poor	41	Both co-dominant leaders have failed 8' to 12' above grade with significant interior decay and hollowing; one 4-inch lateral branch remains	<i>Recommend removal due to noted defects</i>
222	Blue Oak	( <i>Quercus douglasii</i> )		39	42	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Southerly scaffold has old wounding with significant decay; one-sided northeast; slightly above average amount of deadwood	<i>Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection</i>
223	Blue Oak	( <i>Quercus douglasii</i> )		35	38	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
224	Blue Oak	( <i>Quercus douglasii</i> )		25	27	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
225	Blue Oak	( <i>Quercus douglasii</i> )		18	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
226	Blue Oak	( <i>Quercus douglasii</i> )		18	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
227	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
228	Blue Oak	( <i>Quercus douglasii</i> )		20	26	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Small areas of exfoliating bark on lower trunk; slightly above average amount of deadwood	Clean out crown
229	Blue Oak	( <i>Quercus douglasii</i> )		20	27	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided east; slightly above average amount of deadwood	Clean out crown
230	Blue Oak	( <i>Quercus douglasii</i> )	12, 12	24	22	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
231	Blue Oak	( <i>Quercus douglasii</i> )		24	27	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Measured 3' above grade; above average amount of deadwood	Clean out crown
232	Blue Oak	( <i>Quercus douglasii</i> )		14	22	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
233	Blue Oak	( <i>Quercus douglasii</i> )		12	21	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed, one-sided northeast; slightly above average amount of deadwood	Clean out crown
234	Blue Oak	( <i>Quercus douglasii</i> )		19	23	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
235	Blue Oak	( <i>Quercus douglasii</i> )		27	31	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Two medium-sized limb failures, southwest side; no significant decay into main stem apparent at this time	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
236	Blue Oak	( <i>Quercus douglasii</i> )		31	15	Fair	Poor	Poor	Dormant	Poor	Fair	31	Callusing trunk wounds, various locations, with significant interior hollowing; two co-dominant leaders failed 12' and 16' above grade; small laterals remain	<i>Recommend removal due to noted defects</i>
237	Blue Oak	( <i>Quercus douglasii</i> )		40	35	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Several large scaffold limbs failures -- one on north side partially compromising main trunk; potential decay in other locations	<i>Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection</i>
238	Blue Oak	( <i>Quercus douglasii</i> )		41	40	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Several smaller scaffold failures and apparent nesting cavities in upper canopy; slightly above average amount of deadwood	<i>Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection</i>
239	Blue Oak	( <i>Quercus douglasii</i> )		17	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
240	Blue Oak	( <i>Quercus douglasii</i> )		37	35	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans west; above average amount of deadwood	<i>Perform root collar excavation to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation/inspection</i>
241	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
242	Blue Oak	( <i>Quercus douglasii</i> )		19	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
243	Blue Oak	( <i>Quercus douglasii</i> )	19, 22	41	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
244	Blue Oak	( <i>Quercus douglasii</i> )		29	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
245	Blue Oak	( <i>Quercus douglasii</i> )		16	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
246	Blue Oak	( <i>Quercus douglasii</i> )		12	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
247	Blue Oak	( <i>Quercus douglasii</i> )		18	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
248	Blue Oak	( <i>Quercus douglasii</i> )		21	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
249	Blue Oak	( <i>Quercus douglasii</i> )		30	35	Fair	Poor	Poor to fair	Dormant	Poor	Fair	30	Main stem failed 12' above grade resulting in cavity with decay reaching into lower trunk; secondary stem on northwest side has evidence of several nesting cavities	<b>Recommend removal due to noted defects</b>
250	Blue Oak	( <i>Quercus douglasii</i> )		36	42	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Various defect areas in large scaffolds due to old failures	<b>Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection</b>
251	Blue Oak	( <i>Quercus douglasii</i> )		17	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
252	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
253	Blue Oak	( <i>Quercus douglasii</i> )		13	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
254	Blue Oak	( <i>Quercus douglasii</i> )		32	34	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
255	Blue Oak	( <i>Quercus douglasii</i> )		18	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
256	Blue Oak	( <i>Quercus douglasii</i> )		16	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
257	Blue Oak	( <i>Quercus douglasii</i> )		14	16	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
258	Blue Oak	( <i>Quercus douglasii</i> )		14	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
259	Blue Oak	( <i>Quercus douglasii</i> )		16	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
260	Blue Oak	( <i>Quercus douglasii</i> )		11	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
261	Blue Oak	( <i>Quercus douglasii</i> )		9	12	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
262	Blue Oak	( <i>Quercus douglasii</i> )		10	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
263	Blue Oak	( <i>Quercus douglasii</i> )		10	12	Fair	Poor	Poor to fair	Dormant	Poor to fair	Fair		Old callusing lower trunk wound, southwest side; moderate interior decay; leans northeast	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
264	Blue Oak	( <i>Quercus douglasii</i> )		12	15	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
265	Blue Oak	( <i>Quercus douglasii</i> )		7	9	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
266	Blue Oak	( <i>Quercus douglasii</i> )		14	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
267	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
268	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
269	Blue Oak	( <i>Quercus douglasii</i> )		9	10	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
270	Blue Oak	( <i>Quercus douglasii</i> )		9	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
271	Blue Oak	( <i>Quercus douglasii</i> )		8	13	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
272	Blue Oak	( <i>Quercus douglasii</i> )		8	9	Poor	Poor	Poor to fair	Dormant	Poor	Fair	8	Lower/middle trunk cavities with significant decay; leans west; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
273	Blue Oak	( <i>Quercus douglasii</i> )	7, 10	17	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
274	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
275	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
276	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
277	Blue Oak	( <i>Quercus douglasii</i> )		8	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
278	Blue Oak	( <i>Quercus douglasii</i> )		9	13	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
279	Blue Oak	( <i>Quercus douglasii</i> )		9	19	Poor	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal cavity, south side; minor interior decay; callusing wound, co-dominant stem dieback, southeast side, with interior decay; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
280	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
281	Blue Oak	( <i>Quercus douglasii</i> )		6	12	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans west; slightly above average amount of deadwood	Clean out crown
282	Blue Oak	( <i>Quercus douglasii</i> )	12, 13	25	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
283	Blue Oak	( <i>Quercus douglasii</i> )		14	18	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
284	Blue Oak	( <i>Quercus douglasii</i> )	12, 15	27	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
285	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
286	Blue Oak	( <i>Quercus douglasii</i> )		17	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
287	Blue Oak	( <i>Quercus douglasii</i> )		18	22	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
288	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
289	Blue Oak	( <i>Quercus douglasii</i> )		14	19	Poor to fair	Poor to fair	Fair	Dormant	Fair	Fair		Callusing basal/lower trunk wound, northeast side; no decay apparent at this time; slightly above average amount of deadwood	Clean out crown



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
290	Blue Oak	( <i>Quercus douglasii</i> )		11	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
291	Blue Oak	( <i>Quercus douglasii</i> )		13	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided northeast; slightly above average amount of deadwood	Clean out crown
292	Blue Oak	( <i>Quercus douglasii</i> )		10	13	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing lower trunk wound, west side; minor to moderate interior decay; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
293	Blue Oak	( <i>Quercus douglasii</i> )	12, 15	27	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
294	Blue Oak	( <i>Quercus douglasii</i> )	8, 10	18	24	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, southwest side; no decay apparent at this time; leans southwest; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
295	Blue Oak	( <i>Quercus douglasii</i> )		14	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
296	Blue Oak	( <i>Quercus douglasii</i> )		15	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
297	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
298	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Bird nesting cavity, north side, 4' above grade; minor decay; slightly above average amount of deadwood	Clean out crown
299	Blue Oak	( <i>Quercus douglasii</i> )		31	29	Fair	Poor	Poor	Dormant	Poor	Fair	31	Main stem failed 9' to 12' above grade with decay into lower trunk; two laterals remain, south and west sides	<b>Recommend removal due to noted defects</b>
300	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
301	Blue Oak	( <i>Quercus douglasii</i> )	12, 20	32	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
302	Blue Oak	( <i>Quercus douglasii</i> )	13, 18	31	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
303	Blue Oak	( <i>Quercus douglasii</i> )	12, 17	29	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
304	Blue Oak	( <i>Quercus douglasii</i> )	8, 11	19	21	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans east; slightly above average amount of deadwood	Clean out crown
305	Blue Oak	( <i>Quercus douglasii</i> )		11	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
306	Blue Oak	( <i>Quercus douglasii</i> )	14, 18	32	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
307	Blue Oak	( <i>Quercus douglasii</i> )	8, 10	18	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
308	Blue Oak	( <i>Quercus douglasii</i> )	7, 8	15	20	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Larger stem makes an abrupt bend 3' above grade toward east; small callusing wound; above average amount of deadwood	Clean out crown
309	Blue Oak	( <i>Quercus douglasii</i> )		12	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
310	Blue Oak	( <i>Quercus douglasii</i> )		14	27	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
311	Blue Oak	( <i>Quercus douglasii</i> )		8	20	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans southeast; slightly above average amount of deadwood	Clean out crown
312	Blue Oak	( <i>Quercus douglasii</i> )		9	20	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans east; above average amount of deadwood	Clean out crown
313	Blue Oak	( <i>Quercus douglasii</i> )		17	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
314	Blue Oak	( <i>Quercus douglasii</i> )		21	28	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
315	Blue Oak	( <i>Quercus douglasii</i> )		18	29	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
316	Blue Oak	( <i>Quercus douglasii</i> )		16	27	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
317	Blue Oak	( <i>Quercus douglasii</i> )		13	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
318	Blue Oak	( <i>Quercus douglasii</i> )	7, 14	21	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
319	Blue Oak	( <i>Quercus douglasii</i> )		19	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
320	Blue Oak	( <i>Quercus douglasii</i> )		9	21	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans west; slightly above average amount of deadwood	Clean out crown
321	Blue Oak	( <i>Quercus douglasii</i> )		30	30	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Measured 3' above grade; above average amount of deadwood	Clean out crown
322	Blue Oak	( <i>Quercus douglasii</i> )		9	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans west; above average amount of deadwood	Clean out crown
323	Blue Oak	( <i>Quercus douglasii</i> )		8	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans west; above average amount of deadwood	Clean out crown
324	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
325	Blue Oak	( <i>Quercus douglasii</i> )		8	17	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly toward north; above average amount of deadwood	Clean out crown
326	Blue Oak	( <i>Quercus douglasii</i> )		19	28	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Measured 3' above grade; suppressed; leans southeast; above average amount of deadwood	Clean out crown
327	Blue Oak	( <i>Quercus douglasii</i> )		18	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
328	Blue Oak	( <i>Quercus douglasii</i> )	11, 12	23	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
329	Blue Oak	( <i>Quercus douglasii</i> )		13	22	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Bark exfoliation, lower trunk, due to bacterial canker infection; no decay apparent at this time; leans slightly west; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
330	Blue Oak	( <i>Quercus douglasii</i> )		21	28	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
331	Blue Oak	( <i>Quercus douglasii</i> )		11	20	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans northeast; above average amount of deadwood	Clean out crown
332	Blue Oak	( <i>Quercus douglasii</i> )		16	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
333	Blue Oak	( <i>Quercus douglasii</i> )	10, 13	23	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
334	Blue Oak	( <i>Quercus douglasii</i> )	20, 21	41	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
335	Blue Oak	( <i>Quercus douglasii</i> )		30	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
336	Blue Oak	( <i>Quercus douglasii</i> )	8, 11	19	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
337	Blue Oak	( <i>Quercus douglasii</i> )		11	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
338	Blue Oak	( <i>Quercus douglasii</i> )		9	12	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
339	Blue Oak	( <i>Quercus douglasii</i> )		8	7	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
340	Blue Oak	( <i>Quercus douglasii</i> )	9, 12	21	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
341	Blue Oak	( <i>Quercus douglasii</i> )		7	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
342	Blue Oak	( <i>Quercus douglasii</i> )		16	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Measured 3' above grade; above average amount of deadwood	Clean out crown
343	Blue Oak	( <i>Quercus douglasii</i> )		14	18	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
344	Blue Oak	( <i>Quercus douglasii</i> )		13	16	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
345	Blue Oak	( <i>Quercus douglasii</i> )		13	19	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
346	Blue Oak	( <i>Quercus douglasii</i> )		9	12	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
347	Blue Oak	( <i>Quercus douglasii</i> )		20	25	Poor	Poor	Fair	Dormant	Poor	Fair		Large area of lower trunk absent of bark; central leader has apparent stress fracture 5' to 14' above grade; both resulting from old lightening strike	<b><i>None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT</i></b>
348	Blue Oak	( <i>Quercus douglasii</i> )		18	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
349	Blue Oak	( <i>Quercus douglasii</i> )		20	22	Fair	Poor	Poor	Dormant	Poor	Fair	20	Callusing lower trunk wound, southwest side; moderate decay; above average amount of deadwood	<b><i>Recommend removal due to noted defects</i></b>
350	Blue Oak	( <i>Quercus douglasii</i> )		19	21	Poor	Poor to fair	Poor to fair	Dormant	Poor	Fair		Basal cavities, south side; moderate decay; old fire injury; callusing seam, northeast side; possible interior decay; above average amount of deadwood	<b><i>Perform root collar excavation to further assess structural stability and potential for hazard; further assess callusing seam; provide further recommendations following root collar excavation/inspection</i></b>
351	Blue Oak	( <i>Quercus douglasii</i> )	11, 11	22	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
352	Blue Oak	( <i>Quercus douglasii</i> )		20	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
353	Blue Oak	( <i>Quercus douglasii</i> )		15	26	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans north; slightly above average amount of deadwood	Clean out crown
354	Blue Oak	( <i>Quercus douglasii</i> )		16	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
355	Blue Oak	( <i>Quercus douglasii</i> )		21	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
356	Blue Oak	( <i>Quercus douglasii</i> )		11	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
357	Blue Oak	( <i>Quercus douglasii</i> )		20	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
358	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Poor	Poor	Poor to fair	Dormant	Poor	Fair	12	Callusing basal/lower trunk wound/cavity to 3' above grade with moderate to significant decay; above average amount of deadwood	<b><i>Recommend removal due to noted defects</i></b>
359	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
360	Blue Oak	( <i>Quercus douglasii</i> )		12	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
361	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Poor	Poor	Poor to fair	Dormant	Poor	Fair	11	Basal/lower trunk cavities, east and west sides, with moderate decay; leans east; above average amount of deadwood	<b><i>Recommend removal due to noted defects</i></b>
362	Blue Oak	( <i>Quercus douglasii</i> )		6	12	Poor	Poor	Poor to fair	Dormant	Poor	Fair	6	Basal/lower trunk cavity to 3' above grade with significant decay; leans north; above average amount of deadwood	<b><i>Recommend removal due to noted defects</i></b>
363	Blue Oak	( <i>Quercus douglasii</i> )		15	24	Poor	Poor	Poor to fair	Dormant	Poor	Fair	15	Old basal/lower trunk wounds, various locations, with fungal fruiting bodies present; some decay and bark exfoliation; callusing seam at primary crotch; old stress fracture 7' above grade; above average amount of deadwood	<b><i>Recommend removal due to noted defects</i></b>
364	Blue Oak	( <i>Quercus douglasii</i> )		14	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
365	Blue Oak	( <i>Quercus douglasii</i> )		9	13	Poor	Poor	Poor to fair	Dormant	Poor	Fair	9	Basal/lower trunk cavity to 4' above grade, west side; significant decay; leans east; above average amount of deadwood	<b><i>Recommend removal due to noted defects</i></b>
366	Blue Oak	( <i>Quercus douglasii</i> )		11	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
367	Blue Oak	( <i>Quercus douglasii</i> )		14	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
368	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Measured 3' above grade; above average amount of deadwood	Clean out crown
369	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Poor	Poor to fair	Dormant	Poor	Fair	9	Lower trunk cavity, northwest side; moderate decay; leans east; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
370	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
371	Blue Oak	( <i>Quercus douglasii</i> )		13	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
372	Blue Oak	( <i>Quercus douglasii</i> )		7	9	Poor	Poor	Fair	Dormant	Poor	Fair	7	Callusing basal/lower trunk wound with moderate decay, south and west sides; leans northwest	<b>Recommend removal due to noted defects</b>
373	Blue Oak	( <i>Quercus douglasii</i> )		9	6	Poor	Poor	Poor	Dormant	Poor	Fair	9	Basal/lower trunk cavity to 3' above grade with significant decay; main stem broke 8' above grade; only water sprouts remain	<b>Recommend removal due to noted defects</b>
374	Blue Oak	( <i>Quercus douglasii</i> )		14	22	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
375	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
376	Blue Oak	( <i>Quercus douglasii</i> )		31	13	Poor	Poor	Poor	Dormant	Poor	Fair	31	Entire south and west side of tree is defective with large cavity; main stem failed 8' and 10' above grade; two small sprouts remain	<b>Recommend removal due to noted defects</b>
377	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
378	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
379	Blue Oak	( <i>Quercus douglasii</i> )		6	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
380	Blue Oak	( <i>Quercus douglasii</i> )		14	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
381	Blue Oak	( <i>Quercus douglasii</i> )	13, 16	29	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, southwest side; interior decay suspected; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
382	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
383	Blue Oak	( <i>Quercus douglasii</i> )	10, 15	25	16	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Bark exfoliation and callusing wounds through center of primary crotch; evidence of seam extending down 2' to 3' from primary crotch; above average amount of deadwood	Install rotary cable system and/or through bolt to help support weak primary crotch; clean out crown
384	Blue Oak	( <i>Quercus douglasii</i> )	15, 17	32	23	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
385	Blue Oak	( <i>Quercus douglasii</i> )	10, 13	23	21	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, south side westerly stem, to 2' above grade; minor decay; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
386	Blue Oak	( <i>Quercus douglasii</i> )		8	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
387	Blue Oak	( <i>Quercus douglasii</i> )		12	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
388	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
389	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Poor	Poor	Poor	Dormant	Poor	Fair		Callusing basal/lower trunk wound, east side, to 2' above grade; minor to moderate decay; leans south; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
390	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
391	Blue Oak	( <i>Quercus douglasii</i> )		10	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
392	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
393	Blue Oak	( <i>Quercus douglasii</i> )	9, 12	21	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
394	Blue Oak	( <i>Quercus douglasii</i> )		9	16	Poor	Poor	Poor to fair	Dormant	Poor	Fair	9	Callusing basal/lower trunk wound with moderate decay to 16-inches above grade, south side; one-sided northeast; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
395	Blue Oak	( <i>Quercus douglasii</i> )		16	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
396	Blue Oak	( <i>Quercus douglasii</i> )		6	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
397	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
398	Blue Oak	( <i>Quercus douglasii</i> )	10, 12	22	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
399	Blue Oak	( <i>Quercus douglasii</i> )		13	20	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
400	Blue Oak	( <i>Quercus douglasii</i> )		11	18	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, southwest side; minor to moderate decay; leans toward west; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
401	Blue Oak	( <i>Quercus douglasii</i> )		18	24	Poor to fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Minor evidence of old fire injury around root collar; no decay apparent at this time; leans slightly toward northeast	<b>Perform root collar excavation to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation/inspection</b>



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
402	Blue Oak	( <i>Quercus douglasii</i> )		32	38	Fair	Fair	Fair	Dormant	Fair	Fair		Callusing wound, northerly scaffold, 12' above grade; minor interior decay; leans west; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
403	Blue Oak	( <i>Quercus douglasii</i> )	7, 9	16	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
404	Blue Oak	( <i>Quercus douglasii</i> )		9	12	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 3' above grade; slightly above average amount of deadwood	Clean out crown
405	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
406	Blue Oak	( <i>Quercus douglasii</i> )	6, 7	13	14	Poor	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair	13	Callusing basal/lower trunk wound, north side, to 1' above grade; leans north; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
407	Blue Oak	( <i>Quercus douglasii</i> )		12	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
408	Blue Oak	( <i>Quercus douglasii</i> )	13, 17	30	28	Fair	Poor	Poor to fair	Dormant	Poor	Fair	30	Callusing trunk wound, west side, 3' to 4' above grade with moderate interior decay; wound occurs just below primary crotch; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
409	Blue Oak	( <i>Quercus douglasii</i> )		6	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
410	Blue Oak	( <i>Quercus douglasii</i> )		7	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
411	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
412	Blue Oak	( <i>Quercus douglasii</i> )		11	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
413	Blue Oak	( <i>Quercus douglasii</i> )		19	17	Poor	Poor	Poor	Dormant	Poor	Fair	19	Entire center of tree's trunk is hollow; old fire damage, primarily on north and east sides; one 10-inch west-tending lateral remains	<b>Recommend removal due to noted defects</b>
414	Blue Oak	( <i>Quercus douglasii</i> )		9	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
415	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
416	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
417	Blue Oak	( <i>Quercus douglasii</i> )		8	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
418	Blue Oak	( <i>Quercus douglasii</i> )		10	13	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
419	Blue Oak	( <i>Quercus douglasii</i> )		9	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
420	Blue Oak	( <i>Quercus douglasii</i> )		6	12	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided south; above average amount of deadwood	Clean out crown
421	Blue Oak	( <i>Quercus douglasii</i> )		10	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
422	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
423	Blue Oak	( <i>Quercus douglasii</i> )		8	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
424	Blue Oak	( <i>Quercus douglasii</i> )		8	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
425	Blue Oak	( <i>Quercus douglasii</i> )		8	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
426	Blue Oak	( <i>Quercus douglasii</i> )		8	9	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
427	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
428	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
429	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
430	Blue Oak	( <i>Quercus douglasii</i> )		10	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
431	Blue Oak	( <i>Quercus douglasii</i> )		8	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
432	Interior Live Oak	( <i>Quercus wislizenii</i> )		11	17	Poor	Poor to fair	Poor to fair	Fair	Poor	Fair		Callusing basal trunk wound, east side; minor to moderate interior decay; above average amount of deadwood; slightly sparse foliage	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
433	Blue Oak	( <i>Quercus douglasii</i> )		9	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
434	Blue Oak	( <i>Quercus douglasii</i> )		9	12	Fair	Fair	Poor	Dormant	Fair	Poor to fair		Above average amount of deadwood	Clean out crown
435	Blue Oak	( <i>Quercus douglasii</i> )		6	8	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, southwest side; minor interior decay; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
436	Blue Oak	( <i>Quercus douglasii</i> )		6	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
437	Blue Oak	( <i>Quercus douglasii</i> )		6	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
438	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
439	Blue Oak	( <i>Quercus douglasii</i> )		13	18	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
440	Blue Oak	( <i>Quercus douglasii</i> )	9, 10	19	17	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
441	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
442	Blue Oak	( <i>Quercus douglasii</i> )		9	11	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
443	Blue Oak	( <i>Quercus douglasii</i> )		10	11	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
444	Blue Oak	( <i>Quercus douglasii</i> )	10, 11	21	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
445	Blue Oak	( <i>Quercus douglasii</i> )		15	20	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
446	Blue Oak	( <i>Quercus douglasii</i> )		14	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
447	Blue Oak	( <i>Quercus douglasii</i> )		13	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
448	Blue Oak	( <i>Quercus douglasii</i> )	7, 8	15	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
449	Blue Oak	( <i>Quercus douglasii</i> )		9	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
450	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
451	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound; some bark exfoliation, north side, with minor to moderate interior decay; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
452	Blue Oak	( <i>Quercus douglasii</i> )		9	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
453	Blue Oak	( <i>Quercus douglasii</i> )		12	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
454	Blue Oak	( <i>Quercus douglasii</i> )		9	14	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
455	Blue Oak	( <i>Quercus douglasii</i> )		14	16	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 3' above grade; slightly above average amount of deadwood	Clean out crown
456	Blue Oak	( <i>Quercus douglasii</i> )	5, 9	14	14	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly east; above average amount of deadwood	Clean out crown
457	Blue Oak	( <i>Quercus douglasii</i> )		25	29	Fair	Fair	Fair	Dormant	Fair	Fair		Callusing wound, northwest side, 10' above grade; minor to moderate interior decay; slightly above average amount of deadwood	Clean out crown
458	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
459	Blue Oak	( <i>Quercus douglasii</i> )		10	13	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
460	Blue Oak	( <i>Quercus douglasii</i> )		10	14	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
461	Blue Oak	( <i>Quercus douglasii</i> )		6	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
462	Blue Oak	( <i>Quercus douglasii</i> )		7	12	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, southwest side, to 12-inches above grade; minor interior decay; leans northwest; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
463	Blue Oak	( <i>Quercus douglasii</i> )	8, 9	17	17	Poor	Poor	Fair	Dormant	Poor	Fair	17	Basal trunk cavity 16-inches above grade with significant decay; additional cavity 3' above grade just below primary crotch through trunk; leans slightly north	<b>Recommend removal due to noted defects</b>
464	Blue Oak	( <i>Quercus douglasii</i> )		16	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
465	Blue Oak	( <i>Quercus douglasii</i> )		13	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
466	Blue Oak	( <i>Quercus douglasii</i> )	10, 14	24	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
467	Blue Oak	( <i>Quercus douglasii</i> )		15	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
468	Blue Oak	( <i>Quercus douglasii</i> )		11	15	Poor	Poor	Fair	Dormant	Poor	Fair	11	Callusing basal/lower trunk wound, south and west sides, to 3' above grade with moderate to significant interior decay and hollowing; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
469	Blue Oak	( <i>Quercus douglasii</i> )		11	13	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
470	Blue Oak	( <i>Quercus douglasii</i> )		8	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
471	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
472	Blue Oak	( <i>Quercus douglasii</i> )		11	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
473	Blue Oak	( <i>Quercus douglasii</i> )	6, 11	17	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
474	Blue Oak	( <i>Quercus douglasii</i> )	9, 10	19	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
475	Blue Oak	( <i>Quercus douglasii</i> )		10	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
476	Blue Oak	( <i>Quercus douglasii</i> )		6	10	Poor	Poor	Poor to fair	Dormant	Poor	Fair	6	Callusing basal/lower trunk wound, west side; moderate to significant decay; leans west and bends east; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
477	Blue Oak	( <i>Quercus douglasii</i> )		13	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
478	Blue Oak	( <i>Quercus douglasii</i> )		11	15	Poor to fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Old basal fire injury, west and north sides; no decay apparent at this time; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
479	Blue Oak	( <i>Quercus douglasii</i> )		13	16	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, south side; minor interior decay; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
480	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Old basal fire injury, west and south sides; no decay apparent at this time; some bark exfoliation; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
481	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
482	Blue Oak	( <i>Quercus douglasii</i> )		15	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
483	Blue Oak	( <i>Quercus douglasii</i> )		11	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
484	Blue Oak	( <i>Quercus douglasii</i> )		16	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
485	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
486	Blue Oak	( <i>Quercus douglasii</i> )	6, 9	15	8	Poor	Poor	Poor	Poor	Poor	Poor	15	Callusing basal cavity, west side, to 1' above grade; leans east; excessive amount of large deadwood; few twigs	<b>Recommend removal due to noted defects</b>
487	Blue Oak	( <i>Quercus douglasii</i> )	7, 8	15	9	Poor	Poor	Poor	Poor	Poor	Poor	15	Entire lower trunk through both stems to 6' above grade is rotten and decayed	<b>Recommend removal due to noted defects</b>
488	Blue Oak	( <i>Quercus douglasii</i> )	11, 11	22	18	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Old basal fire injury, various locations; small cavity, west side, with no obvious decay at this time; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
489	Blue Oak	( <i>Quercus douglasii</i> )		12	13	Poor	Poor	Poor	Dormant	Poor	Poor to fair	12	Callusing basal/lower trunk cavity to 5' above grade, north side; significant decay; leans south	<b>Recommend removal due to noted defects</b>
490	Blue Oak	( <i>Quercus douglasii</i> )		11	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
491	Blue Oak	( <i>Quercus douglasii</i> )		25	34	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
492	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
493	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
494	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
495	Blue Oak	( <i>Quercus douglasii</i> )		8	13	Poor	Poor	Poor to fair	Dormant	Poor	Fair	8	Callusing basal/lower trunk wound, southwest side, to 2' above grade with moderate interior decay; leans south; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
496	Blue Oak	( <i>Quercus douglasii</i> )		12	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
497	Blue Oak	( <i>Quercus douglasii</i> )		10	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
498	Blue Oak	( <i>Quercus douglasii</i> )		12	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
499	Blue Oak	( <i>Quercus douglasii</i> )	6, 6	12	11	Poor	Poor	Poor	Dormant	Poor	Poor	12	Callusing basal/lower trunk wound, north side; significant decay; leans south; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
500	Blue Oak	( <i>Quercus douglasii</i> )	9, 9	18	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
501	Blue Oak	( <i>Quercus douglasii</i> )		12	12	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
502	Blue Oak	( <i>Quercus douglasii</i> )		21	29	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, west side; no decay apparent at this time; leans east; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
503	Blue Oak	( <i>Quercus douglasii</i> )		22	24	Fair	Poor	Poor	Dormant	Poor	Fair	22	Main stem failed 12' above grade; other scaffold failures with resulting decay into main trunk	<b>Recommend removal due to noted defects</b>
504	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
505	Blue Oak	( <i>Quercus douglasii</i> )		7	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
506	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Poor	Poor	Poor to fair	Dormant	Poor	Fair	8	Callusing basal/lower trunk wound to 3' above grade; moderate decay; leans east; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
507	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
508	Blue Oak	( <i>Quercus douglasii</i> )		13	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
509	Blue Oak	( <i>Quercus douglasii</i> )		21	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
510	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
511	Blue Oak	( <i>Quercus douglasii</i> )	9, 11	20	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
512	Blue Oak	( <i>Quercus douglasii</i> )		12	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
513	Blue Oak	( <i>Quercus douglasii</i> )		10	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
514	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
515	Blue Oak	( <i>Quercus douglasii</i> )		11	13	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing lower trunk wound, east side; minor interior decay; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
516	Blue Oak	( <i>Quercus douglasii</i> )		22	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
517	Blue Oak	( <i>Quercus douglasii</i> )	13, 17	30	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
518	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans southwest; slightly above average amount of deadwood	Clean out crown
519	Blue Oak	( <i>Quercus douglasii</i> )		18	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
520	Blue Oak	( <i>Quercus douglasii</i> )		16	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
521	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
522	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
523	Blue Oak	( <i>Quercus douglasii</i> )		12	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
524	Blue Oak	( <i>Quercus douglasii</i> )		10	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
525	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California

**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
526	Blue Oak	( <i>Quercus douglasii</i> )		13	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
527	Blue Oak	( <i>Quercus douglasii</i> )		15	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
528	Blue Oak	( <i>Quercus douglasii</i> )		12	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
529	Blue Oak	( <i>Quercus douglasii</i> )		20	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
530	Blue Oak	( <i>Quercus douglasii</i> )		9	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
531	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
532	Blue Oak	( <i>Quercus douglasii</i> )		13	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
533	Blue Oak	( <i>Quercus douglasii</i> )		14	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided east; slightly above average amount of deadwood	Clean out crown
534	Blue Oak	( <i>Quercus douglasii</i> )		10	14	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
535	Blue Oak	( <i>Quercus douglasii</i> )		11	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
536	Blue Oak	( <i>Quercus douglasii</i> )		8	7	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
537	Blue Oak	( <i>Quercus douglasii</i> )		9	10	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
538	Blue Oak	( <i>Quercus douglasii</i> )		6	10	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided south; above average amount of deadwood	Clean out crown
539	Blue Oak	( <i>Quercus douglasii</i> )		9	16	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans southwest; above average amount of deadwood	Clean out crown
540	Blue Oak	( <i>Quercus douglasii</i> )		13	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
541	Blue Oak	( <i>Quercus douglasii</i> )		7	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
542	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
543	Blue Oak	( <i>Quercus douglasii</i> )		7	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
544	Blue Oak	( <i>Quercus douglasii</i> )	8, 10	18	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
545	Blue Oak	( <i>Quercus douglasii</i> )		11	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
546	Blue Oak	( <i>Quercus douglasii</i> )		13	20	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
547	Blue Oak	( <i>Quercus douglasii</i> )		12	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
548	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing trunk wound, north side, 6' above grade; old limb failures; minor decay	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
549	Blue Oak	( <i>Quercus douglasii</i> )	9, 10	19	18	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
550	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 3' above grade; above average amount of deadwood	Clean out crown
551	Blue Oak	( <i>Quercus douglasii</i> )	7, 10	17	22	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided north; slightly above average amount of deadwood	Clean out crown
552	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
553	Blue Oak	( <i>Quercus douglasii</i> )		13	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
554	Blue Oak	( <i>Quercus douglasii</i> )		16	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
555	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Some sprout growth on larger wood; above average amount of deadwood	Clean out crown
556	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
557	Blue Oak	( <i>Quercus douglasii</i> )		6	9	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
558	Blue Oak	( <i>Quercus douglasii</i> )		9	10	Fair	Poor	Poor to fair	Dormant	Poor	Poor to fair		Main stem dead 8' above grade; north-tending co-dominant remains; one-sided north; above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
559	Blue Oak	( <i>Quercus douglasii</i> )	6, 10	16	15	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing lower trunk wound, north side; minor to moderate callusing lower trunk cavity, north side, at point of co-dominant limb dieback; minor to moderate decay; leans south; above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
560	Blue Oak	( <i>Quercus douglasii</i> )		9	10	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
561	Blue Oak	( <i>Quercus douglasii</i> )		10	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
562	Blue Oak	( <i>Quercus douglasii</i> )		9	10	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
563	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans north; slightly above average amount of deadwood	Clean out crown
564	Blue Oak	( <i>Quercus douglasii</i> )		11	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
565	Blue Oak	( <i>Quercus douglasii</i> )		12	12	Poor	Poor	Poor to fair	Dormant	Poor	Poor to fair		Callusing basal/lower trunk wound/cavity to 1' above grade; moderate decay; one-sided north; above average amount of deadwood; sprout growth on larger wood	<i>None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT</i>
566	Blue Oak	( <i>Quercus douglasii</i> )		8	13	Poor	Poor	Fair	Dormant	Poor	Fair	8	Callusing basal/lower trunk wound, east side, with moderate decay; leans south	<i>Recommend removal due to noted defects</i>
567	Blue Oak	( <i>Quercus douglasii</i> )	7, 7, 8	22	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
568	Blue Oak	( <i>Quercus douglasii</i> )		16	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
569	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans west; slightly above average amount of deadwood	Clean out crown
570	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 3' above grade; above average amount of deadwood	Clean out crown
571	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
572	Blue Oak	( <i>Quercus douglasii</i> )	11, 13	24	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
573	Blue Oak	( <i>Quercus douglasii</i> )	5, 6	11	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
574	Blue Oak	( <i>Quercus douglasii</i> )		9	10	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing lower trunk wound, southwest side; minor decay; slightly above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
575	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
576	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
577	Blue Oak	( <i>Quercus douglasii</i> )		10	14	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Areas of exfoliating bark on lower trunk; probable bacterial infection; above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
578	Blue Oak	( <i>Quercus douglasii</i> )		17	22	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing trunk wound, northeast side; minor interior decay; above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
579	Blue Oak	( <i>Quercus douglasii</i> )		11	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
580	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
581	Interior Live Oak	( <i>Quercus wislizenii</i> )		11	17	Fair	Poor	Poor to fair	Poor to fair	Poor	Poor to fair	11	Large trunk cavity, west side, 1' to 3' above grade with significant interior hollowing; trunk bends just above defect area toward south; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
582	Blue Oak	( <i>Quercus douglasii</i> )		9	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
583	Blue Oak	( <i>Quercus douglasii</i> )		12	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
584	Blue Oak	( <i>Quercus douglasii</i> )		8	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
585	Blue Oak	( <i>Quercus douglasii</i> )		8	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
586	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
587	Blue Oak	( <i>Quercus douglasii</i> )		12	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
588	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Poor	Poor	Poor to fair	Dormant	Poor	Poor to fair	12	Callusing basal/lower trunk wounds with minor to moderate decay, various locations; leans south; slightly above average amount of deadwood	<i>Recommend removal due to noted defects</i>
589	Blue Oak	( <i>Quercus douglasii</i> )		18	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
590	Blue Oak	( <i>Quercus douglasii</i> )		21	24	Poor	Poor to fair	Poor	Dormant	Poor	Fair	21	Basal defects with fungal fruiting bodies; several large scaffold failures with resulting decay reaching into larger stems; above average amount of deadwood	<i>Re commend removal due to noted defects</i>
591	Blue Oak	( <i>Quercus douglasii</i> )		22	26	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Several cavities in upper trunk and large scaffolds due to limb dieback or failure; above average amount of deadwood	<i>Perform aerial inspection to further assess structural integrity of canopy and potential for hazard; provide further recommendations following aerial inspection</i>
592	Blue Oak	( <i>Quercus douglasii</i> )		28	35	Poor to fair	Poor	Poor	Dormant	Poor	Fair	28	Basal/lower trunk defects with some decay, various locations; several scaffold failures with large areas of decay reaching into middle trunk and parent limbs; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
593	Blue Oak	( <i>Quercus douglasii</i> )		29	33	Fair	Fair	Fair	Dormant	Fair	Fair		Evidence of attempted nesting cavities in upper trunk	<i>Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection</i>
594	Blue Oak	( <i>Quercus douglasii</i> )		21	27	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Several areas of nesting cavities in upper trunk and large scaffolds	<i>Perform aerial inspection to further assess structural integrity of canopy and potential for hazard; provide further recommendations following aerial inspection</i>
595	Blue Oak	( <i>Quercus douglasii</i> )		23	27	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
596	Blue Oak	( <i>Quercus douglasii</i> )		20	28	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
597	Blue Oak	( <i>Quercus douglasii</i> )	9, 11	20	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
598	Blue Oak	( <i>Quercus douglasii</i> )		16	17	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 3' above grade; slightly above average amount of deadwood	Clean out crown
599	Blue Oak	( <i>Quercus douglasii</i> )		13	16	Poor	Poor	Poor to fair	Dormant	Poor	Fair	13	Significant basal/lower trunk decay to 6' above grade; south-tending lateral remains	<i>Recommend removal due to noted defects</i>
600	Blue Oak	( <i>Quercus douglasii</i> )		14	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
601	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
602	Blue Oak	( <i>Quercus douglasii</i> )		12	19	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Basal/lower trunk wound, south side; no decay apparent at this time; above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
603	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
604	Blue Oak	( <i>Quercus douglasii</i> )		9	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
605	Blue Oak	( <i>Quercus douglasii</i> )		14	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
606	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
607	Blue Oak	( <i>Quercus douglasii</i> )		10	13	Poor	Poor	Poor to fair	Dormant	Poor to fair	Fair		Basal/lower trunk cavity, north side; minor to moderate decay; above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
608	Blue Oak	( <i>Quercus douglasii</i> )		11	15	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
609	Blue Oak	( <i>Quercus douglasii</i> )	7, 7	14	8	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing lower trunk wound, east side; minor interior decay; above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
610	Blue Oak	( <i>Quercus douglasii</i> )		6	8	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
611	Blue Oak	( <i>Quercus douglasii</i> )	7, 9	16	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
612	Blue Oak	( <i>Quercus douglasii</i> )		31	28	Poor	Poor	Poor to fair	Dormant	Poor	Fair	31	Callusing basal defects with some decay, majority of root collar; several cavities in middle trunk and upper scaffolds at old branch failures with interior decay; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
613	Blue Oak	( <i>Quercus douglasii</i> )		16	22	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
614	Blue Oak	( <i>Quercus douglasii</i> )	5, 9	14	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
615	Blue Oak	( <i>Quercus douglasii</i> )		13	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
616	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
617	Blue Oak	( <i>Quercus douglasii</i> )		14	16	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Measured 3' above grade; callusing lower trunk wound, south side; no decay apparent at this time; above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
618	Blue Oak	( <i>Quercus douglasii</i> )		12	15	Fair	Poor	Poor to fair	Dormant	Poor	Fair		Callusing lower trunk wound/cavity to 3' above grade with moderate interior decay	<i>None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT</i>
619	Blue Oak	( <i>Quercus douglasii</i> )		12	19	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
620	Blue Oak	( <i>Quercus douglasii</i> )		21	23	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Large deadwood; two failures of scaffolds in upper canopy	Clean out crown
621	Blue Oak	( <i>Quercus douglasii</i> )		13	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
622	Blue Oak	( <i>Quercus douglasii</i> )		10	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
623	Blue Oak	( <i>Quercus douglasii</i> )		16	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
624	Blue Oak	( <i>Quercus douglasii</i> )		21	21	Fair	Poor	Poor	Dormant	Poor	Fair	21	Several failures of large scaffolds in upper canopy with incipient decay reaching into main trunk with hollowing; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
625	Blue Oak	( <i>Quercus douglasii</i> )		13	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
626	Blue Oak	( <i>Quercus douglasii</i> )		7	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
627	Blue Oak	( <i>Quercus douglasii</i> )		15	24	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
628	Blue Oak	( <i>Quercus douglasii</i> )		11	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
629	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
630	Blue Oak	( <i>Quercus douglasii</i> )		7	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
631	Blue Oak	( <i>Quercus douglasii</i> )		8	13	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
632	Blue Oak	( <i>Quercus douglasii</i> )		9	14	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
633	Blue Oak	( <i>Quercus douglasii</i> )	5, 7	12	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
634	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
635	Blue Oak	( <i>Quercus douglasii</i> )		8	9	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
636	Blue Oak	( <i>Quercus douglasii</i> )		8	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
637	Blue Oak	( <i>Quercus douglasii</i> )		9	12	Fair	Poor	Fair	Dormant	Poor	Fair	9	Callusing trunk wound 4' above grade, west side; moderate interior decay; bends east of that point	<i>Recommend removal due to noted defects</i>
638	Blue Oak	( <i>Quercus douglasii</i> )		7	10	Poor	Poor	Poor to fair	Dormant	Poor	Poor to fair	7	Callusing basal/lower trunk wound to 4' above grade with moderate interior decay; leans west; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
639	Blue Oak	( <i>Quercus douglasii</i> )		8	9	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
640	Blue Oak	( <i>Quercus douglasii</i> )		7	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
641	Blue Oak	( <i>Quercus douglasii</i> )		10	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
642	Blue Oak	( <i>Quercus douglasii</i> )		9	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
643	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
644	Blue Oak	( <i>Quercus douglasii</i> )		10	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
645	Blue Oak	( <i>Quercus douglasii</i> )		8	7	Fair	Poor	Poor to fair	Dormant	Poor	Fair	8	Callusing lower trunk wound with significant decay, west side, to 3' above grade; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
646	Blue Oak	( <i>Quercus douglasii</i> )		7	7	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
647	Blue Oak	( <i>Quercus douglasii</i> )		7	9	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
648	Blue Oak	( <i>Quercus douglasii</i> )		15	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
649	Blue Oak	( <i>Quercus douglasii</i> )		10	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
650	Blue Oak	( <i>Quercus douglasii</i> )		17	13	Fair	Poor	Poor	Dormant	Poor	Poor	17	Several failures; excessive amount of large deadwood; apparent twig dieback	<b>Recommend removal due to irreversibly declining condition</b>
651	Blue Oak	( <i>Quercus douglasii</i> )		7	6	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
652	Blue Oak	( <i>Quercus douglasii</i> )		8	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
653	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
654	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
655	Blue Oak	( <i>Quercus douglasii</i> )		7	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
656	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
657	Blue Oak	( <i>Quercus douglasii</i> )		7	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
658	Blue Oak	( <i>Quercus douglasii</i> )	7, 8	15	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
659	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
660	Blue Oak	( <i>Quercus douglasii</i> )		10	14	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
661	Blue Oak	( <i>Quercus douglasii</i> )		9	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
662	Blue Oak	( <i>Quercus douglasii</i> )		9	13	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
663	Blue Oak	( <i>Quercus douglasii</i> )		10	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
664	Blue Oak	( <i>Quercus douglasii</i> )		15	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
665	Blue Oak	( <i>Quercus douglasii</i> )		12	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Measured 3' above grade; above average amount of deadwood	Clean out crown
666	Blue Oak	( <i>Quercus douglasii</i> )	9, 11	20	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
667	Blue Oak	( <i>Quercus douglasii</i> )	8, 8	16	13	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
668	Blue Oak	( <i>Quercus douglasii</i> )		14	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
669	Blue Oak	( <i>Quercus douglasii</i> )		7	6	Poor	Poor	Poor	Dormant	Poor	Poor		Basal/lower trunk defects, various locations; minor decay; excessive amount of deadwood; sparse foliage	<b>None at this time; longevity and integrity of this tree are questionable</b>
670	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
671	Blue Oak	( <i>Quercus douglasii</i> )		8	14	Fair	Poor	Poor to fair	Dormant	Poor	Fair	8	Callusing basal/middle trunk wounds, west and south sides, with interior decay; suppressed, one-sided north; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
672	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
673	Blue Oak	( <i>Quercus douglasii</i> )		7	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
674	Blue Oak	( <i>Quercus douglasii</i> )		12	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
675	Blue Oak	( <i>Quercus douglasii</i> )	8, 8	16	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
676	Blue Oak	( <i>Quercus douglasii</i> )		11	21	Poor	Poor	Poor	Dormant	Poor	Poor	11	Basal/lower trunk defects with exfoliating bark; exposed interior wood; partial failure of root system; growing at angle toward east; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
677	Blue Oak	( <i>Quercus douglasii</i> )		18	21	Fair	Poor	Fair	Dormant	Poor	Fair	18	Callusing middle trunk wound, south side, 4' to 7' above grade with moderate decay; leans west; slightly above average amount of deadwood	<b>Recommend removal due to noted defects</b>
678	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
679	Blue Oak	( <i>Quercus douglasii</i> )		10	18	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed, one-sided northeast; slightly above average amount of deadwood	Clean out crown
680	Blue Oak	( <i>Quercus douglasii</i> )	9, 12	21	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
681	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
682	Blue Oak	( <i>Quercus douglasii</i> )		16	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
683	Blue Oak	( <i>Quercus douglasii</i> )		16	24	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
684	Blue Oak	( <i>Quercus douglasii</i> )	6, 8	14	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
685	Blue Oak	( <i>Quercus douglasii</i> )		20	27	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
686	Blue Oak	( <i>Quercus douglasii</i> )		7	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
687	Blue Oak	( <i>Quercus douglasii</i> )		8	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
688	Blue Oak	( <i>Quercus douglasii</i> )		17	29	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
689	Blue Oak	( <i>Quercus douglasii</i> )		9	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
690	Blue Oak	( <i>Quercus douglasii</i> )		19	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
691	Blue Oak	( <i>Quercus douglasii</i> )		22	31	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
692	Blue Oak	( <i>Quercus douglasii</i> )		15	27	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed, one-sided north; above average amount of deadwood	Clean out crown
693	Blue Oak	( <i>Quercus douglasii</i> )	6, 13	19	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
694	Blue Oak	( <i>Quercus douglasii</i> )		14	25	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, southeast side; minor decay; bends slightly north; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
695	Blue Oak	( <i>Quercus douglasii</i> )	8, 10	18	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
696	Blue Oak	( <i>Quercus douglasii</i> )		16	30	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
697	Blue Oak	( <i>Quercus douglasii</i> )		16	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
698	Blue Oak	( <i>Quercus douglasii</i> )	7, 10	17	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
699	Blue Oak	( <i>Quercus douglasii</i> )	8, 15	23	26	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
700	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
701	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
702	Blue Oak	( <i>Quercus douglasii</i> )		18	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
703	Blue Oak	( <i>Quercus douglasii</i> )		18	22	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
704	Blue Oak	( <i>Quercus douglasii</i> )		21	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
705	Blue Oak	( <i>Quercus douglasii</i> )		15	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
706	Blue Oak	( <i>Quercus douglasii</i> )		21	27	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
707	Blue Oak	( <i>Quercus douglasii</i> )	14, 14	28	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
708	Blue Oak	( <i>Quercus douglasii</i> )		19	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
709	Blue Oak	( <i>Quercus douglasii</i> )		14	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
710	Blue Oak	( <i>Quercus douglasii</i> )		14	18	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
711	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
712	Blue Oak	( <i>Quercus douglasii</i> )		6	12	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
713	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
714	Blue Oak	( <i>Quercus douglasii</i> )		29	34	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Rodent burrow, west side of trunk; no decay apparent at this time; sounding indicates lower trunk hollowing to some degree	Drill and inspect lower trunk; provide further recommendations following further trunk analysis
715	Blue Oak	( <i>Quercus douglasii</i> )		12	13	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
716	Blue Oak	( <i>Quercus douglasii</i> )		17	25	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
717	Blue Oak	( <i>Quercus douglasii</i> )	10, 13	23	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
718	Blue Oak	( <i>Quercus douglasii</i> )	7, 8, 8	23	24	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
719	Blue Oak	( <i>Quercus douglasii</i> )		8	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided east; above average amount of deadwood	Clean out crown
720	Blue Oak	( <i>Quercus douglasii</i> )		26	34	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
721	Blue Oak	( <i>Quercus douglasii</i> )		18	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
722	Blue Oak	( <i>Quercus douglasii</i> )		6	15	Fair	Poor	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans west; main stem dead 12' above grade; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
723	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
724	Blue Oak	( <i>Quercus douglasii</i> )		10	28	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided west; slightly above average amount of deadwood	Clean out crown
725	Blue Oak	( <i>Quercus douglasii</i> )	7, 10	17	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
726	Blue Oak	( <i>Quercus douglasii</i> )		6	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
727	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing lower trunk wound, west side; co-dominant stem dieback; above average amount of deadwood	Clean out crown
728	Blue Oak	( <i>Quercus douglasii</i> )		12	21	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
729	Blue Oak	( <i>Quercus douglasii</i> )		15	29	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed, one-sided east; slightly above average amount of deadwood	Clean out crown
730	Blue Oak	( <i>Quercus douglasii</i> )	10, 15	25	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
731	Blue Oak	( <i>Quercus douglasii</i> )		14	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
732	Blue Oak	( <i>Quercus douglasii</i> )		16	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
733	Blue Oak	( <i>Quercus douglasii</i> )	6, 8	14	15	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided north; slightly above average amount of deadwood	Clean out crown



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
734	Blue Oak	( <i>Quercus douglasii</i> )		13	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans east; above average amount of deadwood	Clean out crown
735	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
736	Blue Oak	( <i>Quercus douglasii</i> )	5, 7	12	13	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
737	Blue Oak	( <i>Quercus douglasii</i> )		6	6	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
738	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
739	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
740	Blue Oak	( <i>Quercus douglasii</i> )		11	19	Poor to fair	Fair	Fair	Dormant	Poor to fair	Fair		Callusing basal/trunk wound, southeast side; minor decay; slightly above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
741	Blue Oak	( <i>Quercus douglasii</i> )		9	13	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
742	Blue Oak	( <i>Quercus douglasii</i> )		13	20	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, north side; no decay apparent at this time; above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
743	Blue Oak	( <i>Quercus douglasii</i> )		14	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
744	Blue Oak	( <i>Quercus douglasii</i> )		17	29	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
745	Blue Oak	( <i>Quercus douglasii</i> )		8	14	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
746	Blue Oak	( <i>Quercus douglasii</i> )	7, 9	16	24	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans east; above average amount of deadwood	Clean out crown
747	Blue Oak	( <i>Quercus douglasii</i> )		13	20	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
748	Blue Oak	( <i>Quercus douglasii</i> )		6	9	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
749	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
750	Blue Oak	( <i>Quercus douglasii</i> )		9	13	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
751	Blue Oak	( <i>Quercus douglasii</i> )		8	9	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
752	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal wound, north side; no decay apparent at this time; suppressed, leans south; above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
753	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Poor	Poor	Poor to fair	Dormant	Poor	Poor to fair	6	Callusing basal/lower trunk wound, east side, to 24-inches above grade; moderate interior decay; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
754	Blue Oak	( <i>Quercus douglasii</i> )		12	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
755	Blue Oak	( <i>Quercus douglasii</i> )		7	12	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans west; slightly above average amount of deadwood	Clean out crown
756	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
757	Blue Oak	( <i>Quercus douglasii</i> )		14	18	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
758	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing lower trunk wound, west side; no decay apparent at this time; leans slightly east; slightly above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
759	Blue Oak	( <i>Quercus douglasii</i> )		12	14	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
760	Blue Oak	( <i>Quercus douglasii</i> )		12	15	Poor	Poor	Poor	Dormant	Poor	Fair	12	Callusing basal/lower trunk wound/cavity to 4' above grade with interior decay; leans west; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
761	Blue Oak	( <i>Quercus douglasii</i> )		13	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
762	Blue Oak	( <i>Quercus douglasii</i> )		14	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
763	Blue Oak	( <i>Quercus douglasii</i> )		22	31	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
764	Blue Oak	( <i>Quercus douglasii</i> )		19	19	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, west side; no decay apparent at this time; above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
765	Blue Oak	( <i>Quercus douglasii</i> )		14	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
766	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
767	Blue Oak	( <i>Quercus douglasii</i> )		9	13	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
768	Blue Oak	( <i>Quercus douglasii</i> )		11	10	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
769	Blue Oak	( <i>Quercus douglasii</i> )	11, 12	23	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
770	Blue Oak	( <i>Quercus douglasii</i> )		9	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
771	Blue Oak	( <i>Quercus douglasii</i> )	9, 9	18	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
772	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
773	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
774	Blue Oak	( <i>Quercus douglasii</i> )		10	11	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
775	Blue Oak	( <i>Quercus douglasii</i> )		14	15	Poor	Poor	Poor	Dormant	Poor	Fair	14	Callusing basal/lower trunk wound/cavity, northwest side, to 2' above grade; moderate interior decay; above average amount of deadwood	<i>Recommend removal due to noted defects</i>

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (Inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
776	Blue Oak	( <i>Quercus douglasii</i> )		8	7	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
777	Blue Oak	( <i>Quercus douglasii</i> )	8, 8	16	15	Poor	Poor to fair	Fair	Dormant	Poor	Fair		Callusing basal/lower trunk wound/cavity with minor to moderate decay, south side, to 1' above grade	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
778	Blue Oak	( <i>Quercus douglasii</i> )		9	13	Fair	Poor	Poor to fair	Dormant	Poor to fair	Fair		Callusing lower trunk wound, west side; minor decay; suppressed, leans west; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
779	Blue Oak	( <i>Quercus douglasii</i> )		10	11	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
780	Blue Oak	( <i>Quercus douglasii</i> )		11	12	Poor to fair	Poor	Poor to fair	Dormant	Poor	Fair	11	Callusing basal/lower trunk wound, southwest side, to 3' above grade; moderate decay; trunk has bend just above defect area; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
781	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
782	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
783	Blue Oak	( <i>Quercus douglasii</i> )		8	7	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
784	Blue Oak	( <i>Quercus douglasii</i> )		7	6	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
785	Blue Oak	( <i>Quercus douglasii</i> )		7	7	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
786	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
787	Blue Oak	( <i>Quercus douglasii</i> )		13	12	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
788	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
789	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
790	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
791	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
792	Blue Oak	( <i>Quercus douglasii</i> )		12	14	Fair	Fair	Poor	Dormant	Poor to fair	Poor		Apparent tip dieback; above average amount of deadwood	<b>None at this time; re-evaluate in Spring</b>
793	Blue Oak	( <i>Quercus douglasii</i> )		16	20	Poor	Poor	Poor to fair	Dormant	Poor	Fair	16	Callusing basal/lower trunk cavity to 3' above grade; moderate interior decay; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
794	Blue Oak	( <i>Quercus douglasii</i> )		15	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
795	Blue Oak	( <i>Quercus douglasii</i> )		14	24	Poor to fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal wound, southwest side; minor decay; leans west; slightly above average amount of deadwood	Clean out crown
796	Blue Oak	( <i>Quercus douglasii</i> )		15	19	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
797	Blue Oak	( <i>Quercus douglasii</i> )	8, 9	17	24	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor	Fair		Stems fork at grade; callusing basal/lower trunk wound/cavity through primary crotch; minor to moderate decay	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
798	Blue Oak	( <i>Quercus douglasii</i> )	8, 9	17	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
799	Blue Oak	( <i>Quercus douglasii</i> )		10	20	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
800	Blue Oak	( <i>Quercus douglasii</i> )		11	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
801	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
802	Blue Oak	( <i>Quercus douglasii</i> )		6	6	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing lower trunk wound, west side; no decay apparent at this time; main stem dead/broken 11' above grade; slightly above average amount of deadwood	<b>None at this time; longevity and structural integrity are questionable</b>
803	Blue Oak	( <i>Quercus douglasii</i> )		8	9	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
804	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
805	Blue Oak	( <i>Quercus douglasii</i> )	7, 8	15	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
806	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
807	Blue Oak	( <i>Quercus douglasii</i> )		10	13	Poor	Poor	Poor to fair	Dormant	Poor	Fair	10	Callusing basal/lower trunk wound, southwest side, to 2.5' above grade with moderate interior decay; leans slightly northeast; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
808	Blue Oak	( <i>Quercus douglasii</i> )		8	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
809	Blue Oak	( <i>Quercus douglasii</i> )		34	41	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Several break outs with resulting incipient decay in main trunk and parent scaffold limbs	<b>Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection</b>
810	Blue Oak	( <i>Quercus douglasii</i> )		16	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
811	Blue Oak	( <i>Quercus douglasii</i> )		17	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
812	Blue Oak	( <i>Quercus douglasii</i> )	6, 9	15	13	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
813	Blue Oak	( <i>Quercus douglasii</i> )		16	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
814	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
815	Blue Oak	( <i>Quercus douglasii</i> )	8, 8	16	16	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans north; above average amount of deadwood	Clean out crown
816	Blue Oak	( <i>Quercus douglasii</i> )	7, 8	15	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
817	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
818	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
819	Blue Oak	( <i>Quercus douglasii</i> )	7, 7	14	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
820	Blue Oak	( <i>Quercus douglasii</i> )	8, 10	18	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
821	Blue Oak	( <i>Quercus douglasii</i> )		10	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
822	Blue Oak	( <i>Quercus douglasii</i> )		17	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
823	Blue Oak	( <i>Quercus douglasii</i> )		10	17	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly northwest; slightly above average amount of deadwood	Clean out crown
824	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
825	Blue Oak	( <i>Quercus douglasii</i> )		17	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
826	Blue Oak	( <i>Quercus douglasii</i> )		16	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
827	Blue Oak	( <i>Quercus douglasii</i> )	11, 11	22	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
828	Blue Oak	( <i>Quercus douglasii</i> )		17	26	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
829	Blue Oak	( <i>Quercus douglasii</i> )		7	6	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed, one-sided east; slightly above average amount of deadwood	Clean out crown
830	Blue Oak	( <i>Quercus douglasii</i> )		15	24	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed, one-sided south; slightly above average amount of deadwood	Clean out crown
831	Blue Oak	( <i>Quercus douglasii</i> )		26	30	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Measured 5' above grade; old dead branch stubs with decay into parent stems in at least three locations	<b>Perform aerial inspection to further assess structural integrity of canopy and potential for hazard; provide further recommendations following aerial inspection</b>
832	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
833	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
834	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
835	Blue Oak	( <i>Quercus douglasii</i> )	10, 11	21	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
836	Blue Oak	( <i>Quercus douglasii</i> )	10, 11	21	20	Fair	Poor	Poor to fair	Dormant	Poor to fair	Fair	21	Forks 3' above grade; inherently weak primary crotch with included bark; evidence of stress fracture; decay from old branch dieback; fungal fruiting bodies present; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
837	Blue Oak	( <i>Quercus douglasii</i> )	8, 11	19	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
838	Blue Oak	( <i>Quercus douglasii</i> )	9, 13	22	22	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
839	Blue Oak	( <i>Quercus douglasii</i> )	8, 10	18	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
840	Blue Oak	( <i>Quercus douglasii</i> )	11, 13	24	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
841	Blue Oak	( <i>Quercus douglasii</i> )	9, 13	22	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
842	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
843	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
844	Blue Oak	( <i>Quercus douglasii</i> )		9	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed, one-sided north; slightly above average amount of deadwood	Clean out crown
845	Blue Oak	( <i>Quercus douglasii</i> )		12	19	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
846	Blue Oak	( <i>Quercus douglasii</i> )		16	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
847	Blue Oak	( <i>Quercus douglasii</i> )		9	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed, one-sided southeast; slightly above average amount of deadwood	Clean out crown
848	Blue Oak	( <i>Quercus douglasii</i> )		12	21	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed, one-sided south; above average amount of deadwood	Clean out crown
849	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
850	Blue Oak	( <i>Quercus douglasii</i> )		7	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
851	Blue Oak	( <i>Quercus douglasii</i> )		13	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
852	Blue Oak	( <i>Quercus douglasii</i> )		10	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
853	Blue Oak	( <i>Quercus douglasii</i> )		14	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
854	Blue Oak	( <i>Quercus douglasii</i> )		15	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
855	Blue Oak	( <i>Quercus douglasii</i> )	14, 14	28	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
856	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Measured 3' above grade; suppressed; leans southwest; slightly above average amount of deadwood	Clean out crown
857	Blue Oak	( <i>Quercus douglasii</i> )		13	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
858	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
859	Blue Oak	( <i>Quercus douglasii</i> )		12	22	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Measured 3' above grade; leans slightly west; above average amount of deadwood	Clean out crown



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
860	Blue Oak	( <i>Quercus douglasii</i> )		11	23	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, west side; no decay apparent at this time; slightly above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
861	Blue Oak	( <i>Quercus douglasii</i> )		8	7	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
862	Blue Oak	( <i>Quercus douglasii</i> )		40	41	Poor	Poor	Fair	Dormant	Poor	Fair	40	Callusing basal/lower trunk wound/cavity, north side, to approximately 4' above grade with moderate to significant decay; additional cavities, north side, just above primary crotch 12' to 14' above grade with decay extending into trunk; nesting cavities in larger scaffolds; slightly above average amount of deadwood	<i>Recommend removal due to noted defects</i>
863	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
864	Blue Oak	( <i>Quercus douglasii</i> )		11	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
865	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
866	Blue Oak	( <i>Quercus douglasii</i> )		11	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
867	Blue Oak	( <i>Quercus douglasii</i> )		11	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
868	Blue Oak	( <i>Quercus douglasii</i> )		13	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
869	Blue Oak	( <i>Quercus douglasii</i> )	10, 12	22	23	Fair	Fair	Fair	Dormant	Fair	Fair		Forks 2' above grade; slightly above average amount of deadwood	Clean out crown
870	Blue Oak	( <i>Quercus douglasii</i> )	13, 16	29	19	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
871	Blue Oak	( <i>Quercus douglasii</i> )		27	35	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
872	Blue Oak	( <i>Quercus douglasii</i> )		16	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
873	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
874	Blue Oak	( <i>Quercus douglasii</i> )		15	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
875	Blue Oak	( <i>Quercus douglasii</i> )		22	29	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
876	Blue Oak	( <i>Quercus douglasii</i> )		19	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
877	Blue Oak	( <i>Quercus douglasii</i> )		21	29	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
878	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided southwest; slightly above average amount of deadwood	Clean out crown
879	Blue Oak	( <i>Quercus douglasii</i> )		11	30	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans south; above average amount of deadwood	Clean out crown
880	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
881	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
882	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
883	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
884	Blue Oak	( <i>Quercus douglasii</i> )		13	21	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided east; above average amount of deadwood	Clean out crown
885	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided east; slightly above average amount of deadwood	Clean out crown
886	Blue Oak	( <i>Quercus douglasii</i> )		12	15	Fair	Fair	Poor	Dormant	Fair	Poor to fair		Above average amount of deadwood	Clean out crown
887	Blue Oak	( <i>Quercus douglasii</i> )		8	13	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
888	Blue Oak	( <i>Quercus douglasii</i> )		10	14	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
889	Blue Oak	( <i>Quercus douglasii</i> )		17	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
890	Blue Oak	( <i>Quercus douglasii</i> )		6	8	Fair	Fair	Poor	Dormant	Poor to fair	Poor		Suppressed; leans south; above average amount of deadwood	Clean out crown
891	Blue Oak	( <i>Quercus douglasii</i> )	13, 15	28	27	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Old callusing lower trunk wound, north side; small nesting cavity 3' above grade; no decay apparent at this time; one-sided southwest; above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
892	Blue Oak	( <i>Quercus douglasii</i> )		31	34	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
893	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
894	Blue Oak	( <i>Quercus douglasii</i> )		14	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans south; above average amount of deadwood	Clean out crown
895	Blue Oak	( <i>Quercus douglasii</i> )		16	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
896	Blue Oak	( <i>Quercus douglasii</i> )		14	24	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans east; above average amount of deadwood	Clean out crown
897	Blue Oak	( <i>Quercus douglasii</i> )		17	25	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
898	Blue Oak	( <i>Quercus douglasii</i> )		11	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
899	Blue Oak	( <i>Quercus douglasii</i> )		18	26	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
900	Blue Oak	( <i>Quercus douglasii</i> )		8	13	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans south; slightly above average amount of deadwood	Clean out crown
901	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
902	Blue Oak	( <i>Quercus douglasii</i> )		20	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
903	Blue Oak	( <i>Quercus douglasii</i> )		16	27	Fair	Poor to fair	Poor to fair	Dormant	Poor	Fair	16	Callusing basal/lower trunk wounds, various locations; minor to moderate decay; additional exposed interior wood with some decay on scaffold branches; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
904	Blue Oak	( <i>Quercus douglasii</i> )		25	36	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
905	Blue Oak	( <i>Quercus douglasii</i> )		21	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
906	Blue Oak	( <i>Quercus douglasii</i> )		25	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
907	Blue Oak	( <i>Quercus douglasii</i> )		15	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
908	Blue Oak	( <i>Quercus douglasii</i> )		23	29	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans south; above average amount of deadwood	Clean out crown
909	Blue Oak	( <i>Quercus douglasii</i> )		23	28	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
910	Blue Oak	( <i>Quercus douglasii</i> )		12	5	Fair	Poor to fair	Poor	Dormant	Poor	Fair	12	Main stem dead/failed 12' above grade; numerous nesting cavities in upper trunk; no large lateral limbs	<b>Recommend removal due to noted defects</b>
911	Blue Oak	( <i>Quercus douglasii</i> )	17, 17	34	31	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Inherently weak primary crotch with included bark; slightly above average amount of deadwood	Install single direct pick cable system to help support weak primary crotch; clean out crown
912	Blue Oak	( <i>Quercus douglasii</i> )		8	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
913	Blue Oak	( <i>Quercus douglasii</i> )		18	33	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans north; above average amount of deadwood	Clean out crown
914	Blue Oak	( <i>Quercus douglasii</i> )		16	28	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided west; above average amount of deadwood	Clean out crown
915	Blue Oak	( <i>Quercus douglasii</i> )		12	28	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans south; above average amount of deadwood	Clean out crown
916	Blue Oak	( <i>Quercus douglasii</i> )	10, 12	22	20	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans south; above average amount of deadwood	Clean out crown
917	Blue Oak	( <i>Quercus douglasii</i> )		14	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans south; slightly above average amount of deadwood	Clean out crown
918	Blue Oak	( <i>Quercus douglasii</i> )		14	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
919	Blue Oak	( <i>Quercus douglasii</i> )		16	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
920	Blue Oak	( <i>Quercus douglasii</i> )		12	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
921	Blue Oak	( <i>Quercus douglasii</i> )	10, 12	22	25	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, west side; no decay apparent at this time; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
922	Blue Oak	( <i>Quercus douglasii</i> )		10	24	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans south; above average amount of deadwood	Clean out crown
923	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Poor to fair	Poor	Dormant	Poor to fair	Poor		Leans south; excessive amount of large deadwood; poor bud formation	<b>None at this time; re-evaluate in Spring</b>
924	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
925	Blue Oak	( <i>Quercus douglasii</i> )		12	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
926	Blue Oak	( <i>Quercus douglasii</i> )		28	23	Fair	Poor	Poor	Dormant	Poor	Fair	28	Main stem failed 7' and 9' above grade with significant interior hollowing; one 10-inch lateral remains growing toward north	<b>Recommend removal due to noted defects</b>
927	Blue Oak	( <i>Quercus douglasii</i> )	15, 17	32	29	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
928	Blue Oak	( <i>Quercus douglasii</i> )		17	29	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans east; above average amount of deadwood	Clean out crown
929	Blue Oak	( <i>Quercus douglasii</i> )		18	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
930	Blue Oak	( <i>Quercus douglasii</i> )		6	11	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
931	Blue Oak	( <i>Quercus douglasii</i> )		10	27	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans south; above average amount of deadwood	Clean out crown
932	Blue Oak	( <i>Quercus douglasii</i> )		16	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
933	Blue Oak	( <i>Quercus douglasii</i> )		9	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
934	Blue Oak	( <i>Quercus douglasii</i> )	11, 15	26	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
935	Blue Oak	( <i>Quercus douglasii</i> )		11	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
936	Blue Oak	( <i>Quercus douglasii</i> )		8	22	Poor	Poor to fair	Poor to fair	Dormant	Poor	Fair	8	Old callusing basal/lower trunk wound, southwest side, with minor to moderate decay where co-dominant stem failed; remaining stem leans northeast; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
937	Blue Oak	( <i>Quercus douglasii</i> )		8	17	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
938	Blue Oak	( <i>Quercus douglasii</i> )		8	19	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans south; slightly above average amount of deadwood	Clean out crown
939	Blue Oak	( <i>Quercus douglasii</i> )		10	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
940	Blue Oak	( <i>Quercus douglasii</i> )		9	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
941	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
942	Blue Oak	( <i>Quercus douglasii</i> )		11	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
943	Blue Oak	( <i>Quercus douglasii</i> )		20	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (Inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
944	Blue Oak	( <i>Quercus douglasii</i> )	6, 15	21	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
945	Blue Oak	( <i>Quercus douglasii</i> )	5, 7	12	16	Poor	Poor	Poor	Dormant	Poor	Fair	12	Leans south; callusing basal/lower trunk wound to 3' above grade with moderate decay; above average amount of deadwood; poor bud formation	<b>Recommend removal due to noted defects</b>
946	Blue Oak	( <i>Quercus douglasii</i> )	6, 12	18	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
947	Blue Oak	( <i>Quercus douglasii</i> )		11	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
948	Blue Oak	( <i>Quercus douglasii</i> )		11	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
949	Blue Oak	( <i>Quercus douglasii</i> )		12	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
950	Blue Oak	( <i>Quercus douglasii</i> )	13, 13	26	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
951	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
952	Blue Oak	( <i>Quercus douglasii</i> )	6, 9, 10, 12	37	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
953	Blue Oak	( <i>Quercus douglasii</i> )		11	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
954	Blue Oak	( <i>Quercus douglasii</i> )		14	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
955	Blue Oak	( <i>Quercus douglasii</i> )		7	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
956	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
957	Blue Oak	( <i>Quercus douglasii</i> )		9	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
958	Blue Oak	( <i>Quercus douglasii</i> )		6	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
959	Blue Oak	( <i>Quercus douglasii</i> )		7	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
960	Blue Oak	( <i>Quercus douglasii</i> )		7	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
961	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
962	Blue Oak	( <i>Quercus douglasii</i> )		8	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
963	Blue Oak	( <i>Quercus douglasii</i> )		6	16	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
964	Blue Oak	( <i>Quercus douglasii</i> )		8	24	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans east; above average amount of deadwood	Clean out crown
965	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
966	Blue Oak	( <i>Quercus douglasii</i> )		6	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
967	Blue Oak	( <i>Quercus douglasii</i> )		7	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
968	Blue Oak	( <i>Quercus douglasii</i> )		8	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
969	Blue Oak	( <i>Quercus douglasii</i> )		12	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
970	Blue Oak	( <i>Quercus douglasii</i> )		8	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided south; above average amount of deadwood	Clean out crown
971	Blue Oak	( <i>Quercus douglasii</i> )		9	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
972	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
973	Blue Oak	( <i>Quercus douglasii</i> )		8	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
974	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	( <i>Quercus douglasii</i> )
975	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
976	Blue Oak	( <i>Quercus douglasii</i> )		8	8	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
977	Blue Oak	( <i>Quercus douglasii</i> )		9	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
978	Blue Oak	( <i>Quercus douglasii</i> )		8	11	Poor	Poor	Poor to fair	Dormant	Poor	Fair		Callusing basal/lower trunk cavity with moderate decay to 1' above grade; above average amount of deadwood	<b>None at this time; longevity and structural integrity are questionable</b>
979	Blue Oak	( <i>Quercus douglasii</i> )		17	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
980	Blue Oak	( <i>Quercus douglasii</i> )		16	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
981	Blue Oak	( <i>Quercus douglasii</i> )		16	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
982	Blue Oak	( <i>Quercus douglasii</i> )		14	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
983	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
984	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided south; above average amount of deadwood	Clean out crown
985	Blue Oak	( <i>Quercus douglasii</i> )		12	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
986	Blue Oak	( <i>Quercus douglasii</i> )		13	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
987	Blue Oak	( <i>Quercus douglasii</i> )		10	29	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided north; above average amount of deadwood	Clean out crown
988	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 3' above grade; slightly above average amount of deadwood	Clean out crown
989	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
990	Blue Oak	( <i>Quercus douglasii</i> )		18	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
991	Blue Oak	( <i>Quercus douglasii</i> )		18	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
992	Blue Oak	( <i>Quercus douglasii</i> )	7, 16	23	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
993	Blue Oak	( <i>Quercus douglasii</i> )		17	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
994	Blue Oak	( <i>Quercus douglasii</i> )		21	25	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Old callusing trunk wound, west side, 4.5' to 6' above grade; sounding indicates possible interior hollowing	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
995	Blue Oak	( <i>Quercus douglasii</i> )		21	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
996	Blue Oak	( <i>Quercus douglasii</i> )		25	33	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided north; slightly above average amount of deadwood	Clean out crown
997	Blue Oak	( <i>Quercus douglasii</i> )		17	21	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair	17	Scaffold failures with resulting decay into parent stems; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
998	Blue Oak	( <i>Quercus douglasii</i> )		20	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
999	Blue Oak	( <i>Quercus douglasii</i> )		15	24	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1000	Blue Oak	( <i>Quercus douglasii</i> )		23	30	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided north; above average amount of deadwood	Clean out crown
1001	Blue Oak	( <i>Quercus douglasii</i> )		25	30	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1002	Blue Oak	( <i>Quercus douglasii</i> )		33	16	Fair	Poor	Poor	Dormant	Poor	Poor to fair	33	Trunk failed 7' above grade; 12-inch lateral remains toward southwest with sprout growth on end	<b>Recommend removal due to noted defects</b>
1003	Blue Oak	( <i>Quercus douglasii</i> )		27	31	Poor	Poor to fair	Poor	Dormant	Poor to fair	Fair		Callusing basal wound, various locations; small lower trunk cavity, southwest side; minor decay; above average amount of deadwood; poor bud formation	<b>Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection</b>
1004	Blue Oak	( <i>Quercus douglasii</i> )		22	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1005	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1006	Blue Oak	( <i>Quercus douglasii</i> )	6, 7	13	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1007	Blue Oak	( <i>Quercus douglasii</i> )		17	24	Fair	Fair	Poor	Dormant	Fair	Poor to fair		Limited bud formation in some locations; above average amount of deadwood	Clean out crown
1008	Blue Oak	( <i>Quercus douglasii</i> )		14	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1009	Blue Oak	( <i>Quercus douglasii</i> )	14, 16	30	28	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1010	Blue Oak	( <i>Quercus douglasii</i> )	8, 9	17	23	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, north side; minor decay; leans south; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
1011	Blue Oak	( <i>Quercus douglasii</i> )		16	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1012	Blue Oak	( <i>Quercus douglasii</i> )		22	32	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1013	Blue Oak	( <i>Quercus douglasii</i> )	13, 16	29	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1014	Blue Oak	( <i>Quercus douglasii</i> )		19	25	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal wounds, north side; no decay apparent at this time; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
1015	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1016	Blue Oak	( <i>Quercus douglasii</i> )		11	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1017	Blue Oak	( <i>Quercus douglasii</i> )		10	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1018	Blue Oak	( <i>Quercus douglasii</i> )		17	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Measured 3' above grade; above average amount of deadwood	Clean out crown
1019	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1020	Blue Oak	( <i>Quercus douglasii</i> )		13	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1021	Blue Oak	( <i>Quercus douglasii</i> )		18	29	Fair	Poor	Poor to fair	Dormant	Poor	Fair	18	Callusing lower trunk cavity, northwest side, with significant interior decay; leans southeast; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
1022	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1023	Blue Oak	( <i>Quercus douglasii</i> )		19	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1024	Blue Oak	( <i>Quercus douglasii</i> )		7	5	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Top dead 12' above grade; above average amount of deadwood	Clean out crown
1025	Blue Oak	( <i>Quercus douglasii</i> )		10	23	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1026	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1027	Blue Oak	( <i>Quercus douglasii</i> )	9, 13	22	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1028	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1029	Blue Oak	( <i>Quercus douglasii</i> )		7	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1030	Blue Oak	( <i>Quercus douglasii</i> )		21	29	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1031	Blue Oak	( <i>Quercus douglasii</i> )		9	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1032	Blue Oak	( <i>Quercus douglasii</i> )		15	30	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1033	Blue Oak	( <i>Quercus douglasii</i> )		22	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1034	Blue Oak	( <i>Quercus douglasii</i> )		28	32	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 3' above grade; above average amount of deadwood	Clean out crown
1035	Blue Oak	( <i>Quercus douglasii</i> )		9	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1036	Blue Oak	( <i>Quercus douglasii</i> )		21	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1037	Blue Oak	( <i>Quercus douglasii</i> )		20	27	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1038	Blue Oak	( <i>Quercus douglasii</i> )		19	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1039	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1040	Blue Oak	( <i>Quercus douglasii</i> )		14	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1041	Blue Oak	( <i>Quercus douglasii</i> )		17	26	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1042	Blue Oak	( <i>Quercus douglasii</i> )		24	26	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1043	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1044	Blue Oak	( <i>Quercus douglasii</i> )		16	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1045	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1046	Blue Oak	( <i>Quercus douglasii</i> )		31	32	Fair	Poor	Poor	Dormant	Poor	Fair	31	Inherently weak primary crotch with callusing cavity through center; several failures of large scaffolds in upper canopy	<b>Recommend removal due to noted defects</b>
1047	Blue Oak	( <i>Quercus douglasii</i> )		18	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1048	Blue Oak	( <i>Quercus douglasii</i> )		12	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1049	Blue Oak	( <i>Quercus douglasii</i> )		16	24	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1050	Blue Oak	( <i>Quercus douglasii</i> )		10	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1051	Blue Oak	( <i>Quercus douglasii</i> )		10	27	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided southwest; above average amount of deadwood	Clean out crown
1052	Blue Oak	( <i>Quercus douglasii</i> )		19	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1053	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1054	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1055	Blue Oak	( <i>Quercus douglasii</i> )		9	18	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans west; slightly above average amount of deadwood	Clean out crown
1056	Blue Oak	( <i>Quercus douglasii</i> )		17	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1057	Blue Oak	( <i>Quercus douglasii</i> )		20	26	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 3' above grade; slightly above average amount of deadwood	Clean out crown
1058	Blue Oak	( <i>Quercus douglasii</i> )		14	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1059	Blue Oak	( <i>Quercus douglasii</i> )		15	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1060	Blue Oak	( <i>Quercus douglasii</i> )		17	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1061	Blue Oak	( <i>Quercus douglasii</i> )		19	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1062	Blue Oak	( <i>Quercus douglasii</i> )		20	28	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided north; slightly above average amount of deadwood	Clean out crown
1063	Blue Oak	( <i>Quercus douglasii</i> )		7	19	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans west; above average amount of deadwood	Clean out crown
1064	Blue Oak	( <i>Quercus douglasii</i> )		9	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1065	Blue Oak	( <i>Quercus douglasii</i> )		13	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1066	Blue Oak	( <i>Quercus douglasii</i> )		8	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1067	Blue Oak	( <i>Quercus douglasii</i> )		12	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1068	Blue Oak	( <i>Quercus douglasii</i> )		10	22	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans southwest; slightly above average amount of deadwood	Clean out crown
1069	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1070	Blue Oak	( <i>Quercus douglasii</i> )		12	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans southwest; slightly above average amount of deadwood	Clean out crown
1071	Blue Oak	( <i>Quercus douglasii</i> )		13	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1072	Blue Oak	( <i>Quercus douglasii</i> )		9	13	Poor	Poor	Fair	Dormant	Poor	Fair	9	Callusing basal/lower trunk wound/cavity with moderate decay to 3' above grade, northeast side	<b>Recommend removal due to noted defects</b>
1073	Blue Oak	( <i>Quercus douglasii</i> )		14	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1074	Blue Oak	( <i>Quercus douglasii</i> )		13	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1075	Blue Oak	( <i>Quercus douglasii</i> )		8	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1076	Blue Oak	( <i>Quercus douglasii</i> )		15	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1077	Blue Oak	( <i>Quercus douglasii</i> )		13	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1078	Blue Oak	( <i>Quercus douglasii</i> )		15	18	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1079	Blue Oak	( <i>Quercus douglasii</i> )		17	24	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1080	Blue Oak	( <i>Quercus douglasii</i> )		12	4	Fair	Poor	Poor	Dormant	Poor	Poor	12	Main stem dead 10' above grade; only two or three small water sprouts remain on lower trunk	<b>Recommend removal due to noted defects</b>
1081	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, east side; no decay apparent at this time; leans west; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
1082	Blue Oak	( <i>Quercus douglasii</i> )		12	27	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound; no decay apparent at this time; leans north; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
1083	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1084	Blue Oak	( <i>Quercus douglasii</i> )		9	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1085	Blue Oak	( <i>Quercus douglasii</i> )		15	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1086	Blue Oak	( <i>Quercus douglasii</i> )		17	28	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1087	Blue Oak	( <i>Quercus douglasii</i> )		17	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1088	Blue Oak	( <i>Quercus douglasii</i> )	10, 24	34	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1089	Blue Oak	( <i>Quercus douglasii</i> )	17, 18	35	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1090	Blue Oak	( <i>Quercus douglasii</i> )		20	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1091	Blue Oak	( <i>Quercus douglasii</i> )		19	29	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1092	Blue Oak	( <i>Quercus douglasii</i> )		23	28	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1093	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1094	Blue Oak	( <i>Quercus douglasii</i> )		15	27	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1095	Blue Oak	( <i>Quercus douglasii</i> )		22	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1096	Blue Oak	( <i>Quercus douglasii</i> )		13	21	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided northwest; above average amount of deadwood	Clean out crown
1097	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1098	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1099	Blue Oak	( <i>Quercus douglasii</i> )		6	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1100	Blue Oak	( <i>Quercus douglasii</i> )		16	27	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing lower trunk wound, south side; no decay apparent at this time; slightly above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
1101	Blue Oak	( <i>Quercus douglasii</i> )	10, 11	21	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1102	Blue Oak	( <i>Quercus douglasii</i> )		8	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1103	Blue Oak	( <i>Quercus douglasii</i> )		26	30	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1104	Blue Oak	( <i>Quercus douglasii</i> )		25	29	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair	25	One-sided east; callusing basal/lower trunk wounds with moderate decay; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
1105	Blue Oak	( <i>Quercus douglasii</i> )		22	27	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 3' above grade; above average amount of deadwood	Clean out crown
1106	Blue Oak	( <i>Quercus douglasii</i> )		23	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1107	Blue Oak	( <i>Quercus douglasii</i> )		17	24	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided south; above average amount of deadwood	Clean out crown
1108	Blue Oak	( <i>Quercus douglasii</i> )		24	29	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wounds, various locations; minor decay; slightly above average amount of deadwood	<i>Perform root collar excavation to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation/inspection</i>
1109	Blue Oak	( <i>Quercus douglasii</i> )		29	35	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Inherently weak primary crotch with evidence of old stress fracture and included bark 9' above grade; above average amount of deadwood	<i>Perform thorough evaluation of primary crotch to further assess structural stability and potential for hazard; provide further recommendations following primary crotch inspection</i>
1110	Blue Oak	( <i>Quercus douglasii</i> )		22	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1111	Blue Oak	( <i>Quercus douglasii</i> )		27	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1112	Blue Oak	( <i>Quercus douglasii</i> )		22	25	Poor	Poor	Poor to fair	Dormant	Poor	Fair	22	Callusing basal/lower trunk cavity, northeast side, with active bee hive; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
1113	Blue Oak	( <i>Quercus douglasii</i> )		10	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1114	Blue Oak	( <i>Quercus douglasii</i> )		21	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1115	Blue Oak	( <i>Quercus douglasii</i> )		9	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1116	Blue Oak	( <i>Quercus douglasii</i> )		12	18	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Two areas of bark exfoliation with interior wood exposed; minor decay, lower trunk; above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
1117	Blue Oak	( <i>Quercus douglasii</i> )		16	26	Poor	Poor	Fair	Dormant	Poor	Fair	16	Callusing basal/lower trunk cavity, northeast side; moderate interior decay; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
1118	Blue Oak	( <i>Quercus douglasii</i> )		27	32	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1119	Blue Oak	( <i>Quercus douglasii</i> )		38	41	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1120	Blue Oak	( <i>Quercus douglasii</i> )		32	35	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1121	Blue Oak	( <i>Quercus douglasii</i> )		12	25	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
1122	Blue Oak	( <i>Quercus douglasii</i> )		17	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided northeast; slightly above average amount of deadwood	Clean out crown
1123	Blue Oak	( <i>Quercus douglasii</i> )		21	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1124	Blue Oak	( <i>Quercus douglasii</i> )		9	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1125	Blue Oak	( <i>Quercus douglasii</i> )		9	13	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1126	Blue Oak	( <i>Quercus douglasii</i> )		12	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1127	Blue Oak	( <i>Quercus douglasii</i> )		19	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1128	Blue Oak	( <i>Quercus douglasii</i> )		10	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1129	Blue Oak	( <i>Quercus douglasii</i> )		10	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1130	Blue Oak	( <i>Quercus douglasii</i> )	7, 11	18	22	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1131	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1132	Blue Oak	( <i>Quercus douglasii</i> )		9	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1133	Blue Oak	( <i>Quercus douglasii</i> )	4, 6	10	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1134	Blue Oak	( <i>Quercus douglasii</i> )	13, 15	28	29	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1135	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1136	Blue Oak	( <i>Quercus douglasii</i> )		13	20	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1137	Blue Oak	( <i>Quercus douglasii</i> )		24	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1138	Blue Oak	( <i>Quercus douglasii</i> )		9	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1139	Blue Oak	( <i>Quercus douglasii</i> )		17	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1140	Blue Oak	( <i>Quercus douglasii</i> )		14	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1141	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1142	Blue Oak	( <i>Quercus douglasii</i> )	8, 9	17	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1143	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1144	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1145	Blue Oak	( <i>Quercus douglasii</i> )		8	12	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1146	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Old callusing wound 8' above grade, northeast side, at point of limb dieback; trunk bends at that location toward southwest; above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
1147	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1148	Blue Oak	( <i>Quercus douglasii</i> )		18	26	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1149	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1150	Blue Oak	( <i>Quercus douglasii</i> )		14	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1151	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1152	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1153	Blue Oak	( <i>Quercus douglasii</i> )		12	19	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1154	Blue Oak	( <i>Quercus douglasii</i> )		13	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Measured 3' above grade; above average amount of deadwood	Clean out crown
1155	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1156	Blue Oak	( <i>Quercus douglasii</i> )		12	13	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1157	Blue Oak	( <i>Quercus douglasii</i> )		7	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1158	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1159	Blue Oak	( <i>Quercus douglasii</i> )		8	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1160	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1161	Blue Oak	( <i>Quercus douglasii</i> )		8	13	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Main stem dead 13' above grade; remaining lateral grows toward northwest; slightly above average amount of deadwood	Clean out crown
1162	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1163	Blue Oak	( <i>Quercus douglasii</i> )		8	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1164	Blue Oak	( <i>Quercus douglasii</i> )		9	14	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, northeast side; minor decay; slightly above average amount of deadwood	Clean out crown
1165	Blue Oak	( <i>Quercus douglasii</i> )	8, 11	19	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1166	Blue Oak	( <i>Quercus douglasii</i> )		9	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1167	Blue Oak	( <i>Quercus douglasii</i> )		10	18	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1168	Blue Oak	( <i>Quercus douglasii</i> )		8	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1169	Blue Oak	( <i>Quercus douglasii</i> )		24	30	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wounds where tree has been growing against rocks	<i>Perform root collar excavation to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation/inspection</i>
1170	Blue Oak	( <i>Quercus douglasii</i> )		10	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1171	Blue Oak	( <i>Quercus douglasii</i> )	10, 12	22	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1172	Blue Oak	( <i>Quercus douglasii</i> )		8	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1173	Blue Oak	( <i>Quercus douglasii</i> )		9	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1174	Blue Oak	( <i>Quercus douglasii</i> )	11, 12	23	20	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, east side; old fire damage; no decay apparent at this time; forks 4' above grade with inherently weak primary crotch; slightly above average amount of deadwood	<i>None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT</i>
1175	Blue Oak	( <i>Quercus douglasii</i> )		13	15	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
1176	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
1177	Blue Oak	( <i>Quercus douglasii</i> )		18	24	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1178	Blue Oak	( <i>Quercus douglasii</i> )		28	30	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Old basal wound, south side; some decay evident; above average amount of deadwood	<i>Perform root collar excavation to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation/inspection</i>
1179	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1180	Blue Oak	( <i>Quercus douglasii</i> )		13	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1181	Blue Oak	( <i>Quercus douglasii</i> )		12	21	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans southwest; slightly above average amount of deadwood	Clean out crown
1182	Blue Oak	( <i>Quercus douglasii</i> )		17	27	Fair	Poor	Fair	Dormant	Poor	Fair	17	Old lower trunk wounds/incomplete chain saw cuts, east and west sides	<i>Recommend removal due to compromised integrity</i>
1183	Blue Oak	( <i>Quercus douglasii</i> )		10	21	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
1184	Blue Oak	( <i>Quercus douglasii</i> )		19	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1185	Blue Oak	( <i>Quercus douglasii</i> )		7	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1186	Blue Oak	( <i>Quercus douglasii</i> )		15	18	Poor	Poor	Poor to fair	Dormant	Poor	Fair	15	Callusing basal/lower trunk cavity, southwest side; moderate decay; leans north	<i>Recommend removal due to noted defects</i>
1187	Blue Oak	( <i>Quercus douglasii</i> )		13	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1188	Blue Oak	( <i>Quercus douglasii</i> )		13	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1189	Blue Oak	( <i>Quercus douglasii</i> )	6, 12	18	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1190	Blue Oak	( <i>Quercus douglasii</i> )		13	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1191	Blue Oak	( <i>Quercus douglasii</i> )		17	28	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 3' above grade; slightly above average amount of deadwood	Clean out crown
1192	Blue Oak	( <i>Quercus douglasii</i> )		24	32	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1193	Blue Oak	( <i>Quercus douglasii</i> )		29	43	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1194	Blue Oak	( <i>Quercus douglasii</i> )		23	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1195	Blue Oak	( <i>Quercus douglasii</i> )		18	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1196	Blue Oak	( <i>Quercus douglasii</i> )		12	10	Poor	Poor	Poor to fair	Dormant	Poor	Fair	12	Callusing basal cavity, south side, to 10-inches above grade with moderate decay; callusing trunk cavity, west side, 6' above grade with significant decay	<i>Recommend removal due to noted defects</i>
1197	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Main stem dead 10' above grade	Clean out crown
1198	Blue Oak	( <i>Quercus douglasii</i> )	17, 23	40	30	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1199	Blue Oak	( <i>Quercus douglasii</i> )	11, 12	23	22	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1200	Blue Oak	( <i>Quercus douglasii</i> )		10	26	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans northeast; above average amount of deadwood	Clean out crown
1201	Blue Oak	( <i>Quercus douglasii</i> )		18	24	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1202	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1203	Blue Oak	( <i>Quercus douglasii</i> )		17	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided southwest; slightly above average amount of deadwood	Clean out crown
1204	Blue Oak	( <i>Quercus douglasii</i> )		12	24	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided west; slightly above average amount of deadwood	Clean out crown
1205	Blue Oak	( <i>Quercus douglasii</i> )		18	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1206	Blue Oak	( <i>Quercus douglasii</i> )		24	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1207	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1208	Blue Oak	( <i>Quercus douglasii</i> )		17	26	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1209	Blue Oak	( <i>Quercus douglasii</i> )		22	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1210	Blue Oak	( <i>Quercus douglasii</i> )		11	24	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided north; slightly above average amount of deadwood	Clean out crown
1211	Blue Oak	( <i>Quercus douglasii</i> )		21	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1212	Blue Oak	( <i>Quercus douglasii</i> )		16	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1213	Blue Oak	( <i>Quercus douglasii</i> )		14	19	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1214	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1215	Blue Oak	( <i>Quercus douglasii</i> )		21	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1216	Blue Oak	( <i>Quercus douglasii</i> )		26	30	Poor to fair	Poor	Poor to fair	Dormant	Poor	Fair	26	Basal callusing due to contact with rock; lower trunk cavity, east side, 1.5' above grade with moderate interior decay; leans northwest; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
1217	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1218	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1219	Blue Oak	( <i>Quercus douglasii</i> )		10	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1220	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1221	Blue Oak	( <i>Quercus douglasii</i> )		13	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1222	Blue Oak	( <i>Quercus douglasii</i> )		7	16	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly west; slightly above average amount of deadwood	Clean out crown
1223	Blue Oak	( <i>Quercus douglasii</i> )		16	22	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1224	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1225	Blue Oak	( <i>Quercus douglasii</i> )		14	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1226	Blue Oak	( <i>Quercus douglasii</i> )		10	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1227	Blue Oak	( <i>Quercus douglasii</i> )		14	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1228	Blue Oak	( <i>Quercus douglasii</i> )		8	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1229	Blue Oak	( <i>Quercus douglasii</i> )		13	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1230	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1231	Blue Oak	( <i>Quercus douglasii</i> )		8	14	Poor	Poor	Poor to fair	Dormant	Poor	Fair	8	Callusing basal/lower trunk wound to 4.5' above grade with moderate decay; leans northeast; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
1232	Blue Oak	( <i>Quercus douglasii</i> )		13	19	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1233	Blue Oak	( <i>Quercus douglasii</i> )		13	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1234	Blue Oak	( <i>Quercus douglasii</i> )		24	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1235	Blue Oak	( <i>Quercus douglasii</i> )		14	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1236	Blue Oak	( <i>Quercus douglasii</i> )		16	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1237	Blue Oak	( <i>Quercus douglasii</i> )		8	19	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans east; above average amount of deadwood	Clean out crown
1238	Blue Oak	( <i>Quercus douglasii</i> )		18	22	Poor	Poor	Poor to fair	Dormant	Poor	Fair	18	Callusing basal cavity with significant decay, south side; leans slightly north; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
1239	Blue Oak	( <i>Quercus douglasii</i> )		26	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1240	Blue Oak	( <i>Quercus douglasii</i> )		19	23	Poor	Poor	Poor to fair	Dormant	Poor	Fair	19	Callusing basal/lower trunk cavity, south side, with moderate decay; leans north; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
1241	Blue Oak	( <i>Quercus douglasii</i> )		20	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1242	Blue Oak	( <i>Quercus douglasii</i> )		21	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1243	Blue Oak	( <i>Quercus douglasii</i> )		21	26	Fair	Poor to fair	Fair	Dormant	Fair	Fair		Callusing lower trunk wounds, south and east sides; no decay apparent at this time; slightly above average amount of deadwood	Clean out crown
1244	Blue Oak	( <i>Quercus douglasii</i> )		12	21	Poor to fair	Poor	Poor to fair	Dormant	Poor	Fair	12	Callusing roll where tree is in contact with rocks; lower trunk wound, south side, to 3' above grade with moderate decay; leans north; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
1245	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1246	Blue Oak	( <i>Quercus douglasii</i> )		22	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1247	Blue Oak	( <i>Quercus douglasii</i> )		44	34	Poor to fair	Poor	Poor to fair	Dormant	Poor	Fair	44	Callusing basal wounds, various locations; some root collar decay expected; large trunk cavity, northwest side, 7' above grade extending into center of lower trunk; majority of upper trunk bends east at 13' above grade	<b>Recommend removal due to noted defects</b>
1248	Blue Oak	( <i>Quercus douglasii</i> )		34	47	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing wounds on root collar, north side; no decay apparent at this time; 22-inch lateral arises 4.5' above grade on south side of trunk; growing horizontal to grade with some tips lying on grade toward south; old limb shed 8' above grade, south side; no significant decay noted	<b>Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection</b>
1249	Blue Oak	( <i>Quercus douglasii</i> )		28	36	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1250	Blue Oak	( <i>Quercus douglasii</i> )	19, 22	41	30	Poor to fair	Fair	Fair	Dormant	Poor to fair	Fair		Northerly stem has callusing areas around root collar	<i>Perform root collar excavation to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation/inspection</i>
1251	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1252	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Measured 2' above grade; above average amount of deadwood	Clean out crown
1253	Blue Oak	( <i>Quercus douglasii</i> )		10	12	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1254	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1255	Blue Oak	( <i>Quercus douglasii</i> )		12	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1256	Blue Oak	( <i>Quercus douglasii</i> )		10	13	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1257	Blue Oak	( <i>Quercus douglasii</i> )	6, 7	13	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1258	Blue Oak	( <i>Quercus douglasii</i> )		8	8	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1259	Blue Oak	( <i>Quercus douglasii</i> )	6, 7	13	14	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1260	Blue Oak	( <i>Quercus douglasii</i> )		8	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1261	Blue Oak	( <i>Quercus douglasii</i> )		11	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1262	Blue Oak	( <i>Quercus douglasii</i> )		7	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1263	Blue Oak	( <i>Quercus douglasii</i> )		6	9	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal wound, west side; minor to moderate decay; above average amount of deadwood	<i>None at this time; longevity and structural integrity are questionable</i>
1264	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1265	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1266	Blue Oak	( <i>Quercus douglasii</i> )		8	14	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided south; slightly above average amount of deadwood	Clean out crown
1267	Blue Oak	( <i>Quercus douglasii</i> )		8	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1268	Blue Oak	( <i>Quercus douglasii</i> )	9, 10	19	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1269	Blue Oak	( <i>Quercus douglasii</i> )		7	11	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1270	Blue Oak	( <i>Quercus douglasii</i> )		9	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1271	Blue Oak	( <i>Quercus douglasii</i> )		8	6	Fair	Poor	Poor to fair	Dormant	Poor	Fair		Main stem dead 10' above grade	Clean out crown
1272	Blue Oak	( <i>Quercus douglasii</i> )		10	14	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1273	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1274	Blue Oak	( <i>Quercus douglasii</i> )		17	26	Fair	Fair	Poor	Dormant	Poor to fair	Fair		Above average amount of deadwood	Clean out crown
1275	Blue Oak	( <i>Quercus douglasii</i> )		14	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1276	Blue Oak	( <i>Quercus douglasii</i> )		13	19	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1277	Blue Oak	( <i>Quercus douglasii</i> )		11	25	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1278	Blue Oak	( <i>Quercus douglasii</i> )	10, 11	21	26	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1279	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1280	Blue Oak	( <i>Quercus douglasii</i> )		8	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1281	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1282	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1283	Blue Oak	( <i>Quercus douglasii</i> )		8	8	Fair	Poor to fair	Poor	Dormant	Poor	Poor to fair		Main stem dead 8' above grade; large deadwood; limited bud formation	<i>None at this time; longevity and structural integrity are questionable</i>
1284	Blue Oak	( <i>Quercus douglasii</i> )		7	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1285	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
1286	Blue Oak	( <i>Quercus douglasii</i> )		9	11	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1287	Blue Oak	( <i>Quercus douglasii</i> )		11	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1288	Blue Oak	( <i>Quercus douglasii</i> )		7	6	Fair	Poor	Poor to fair	Dormant	Poor to fair	Fair		Main stem dead 7' above grade; some interior hollowing at remaining stub; slightly above average amount of deadwood	Clean out crown
1289	Blue Oak	( <i>Quercus douglasii</i> )	4, 6	10	6	Poor	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair	10	Callusing basal/lower trunk wound, primarily on westerly stem; easterly stem has wounding 4.5' to 6' above grade with interior decay; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
1290	Blue Oak	( <i>Quercus douglasii</i> )		12	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1291	Blue Oak	( <i>Quercus douglasii</i> )		7	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1292	Blue Oak	( <i>Quercus douglasii</i> )		6	14	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1293	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1294	Blue Oak	( <i>Quercus douglasii</i> )	7, 9	16	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1295	Blue Oak	( <i>Quercus douglasii</i> )		8	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1296	Blue Oak	( <i>Quercus douglasii</i> )		8	9	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1297	Blue Oak	( <i>Quercus douglasii</i> )	8, 10	18	22	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1298	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1299	Blue Oak	( <i>Quercus douglasii</i> )		7	12	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1300	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Poor	Poor to fair	Dormant	Poor to fair	Fair		Secondary stem has died back 7' above grade with some decay into main trunk; leans slightly south; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
1301	Blue Oak	( <i>Quercus douglasii</i> )		8	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1302	Blue Oak	( <i>Quercus douglasii</i> )		7	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1303	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1304	Blue Oak	( <i>Quercus douglasii</i> )		8	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1305	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1306	Blue Oak	( <i>Quercus douglasii</i> )		6	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1307	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1308	Blue Oak	( <i>Quercus douglasii</i> )	6, 7	13	14	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1309	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1310	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1311	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1312	Blue Oak	( <i>Quercus douglasii</i> )		6	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1313	Blue Oak	( <i>Quercus douglasii</i> )		9	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1314	Blue Oak	( <i>Quercus douglasii</i> )		7	15	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans southwest; slightly above average amount of deadwood	Clean out crown
1315	Blue Oak	( <i>Quercus douglasii</i> )		8	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1316	Blue Oak	( <i>Quercus douglasii</i> )		9	10	Fair	Poor	Poor to fair	Dormant	Poor	Fair	9	Leans south; old branch die back 3' above grade, west side; decay into main trunk at point of bend	<b>Recommend removal due to noted defects</b>
1317	Blue Oak	( <i>Quercus douglasii</i> )		8	12	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing lower trunk wound, west side; minor decay; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
1318	Blue Oak	( <i>Quercus douglasii</i> )		16	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1319	Blue Oak	( <i>Quercus douglasii</i> )		11	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1320	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1321	Blue Oak	( <i>Quercus douglasii</i> )		11	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided south; above average amount of deadwood	Clean out crown
1322	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Embedded barded wire 3' above grade; girdling with callusing roll; above average amount of deadwood	<b>None at this time; longevity and structural integrity are questionable</b>
1323	Blue Oak	( <i>Quercus douglasii</i> )		7	7	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1324	Blue Oak	( <i>Quercus douglasii</i> )		14	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1325	Blue Oak	( <i>Quercus douglasii</i> )		9	13	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1326	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 3' above grade; slightly above average amount of deadwood	Clean out crown
1327	Blue Oak	( <i>Quercus douglasii</i> )		8	11	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair	8	Nesting cavities in central trunk with interior hollowing; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
1328	Blue Oak	( <i>Quercus douglasii</i> )	5, 7	12	11	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1329	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1330	Blue Oak	( <i>Quercus douglasii</i> )		8	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1331	Blue Oak	( <i>Quercus douglasii</i> )		6	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1332	Blue Oak	( <i>Quercus douglasii</i> )		7	18	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Minor basal bark exfoliation, south side; suppressed; leans south; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
1333	Blue Oak	( <i>Quercus douglasii</i> )		9	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1334	Blue Oak	( <i>Quercus douglasii</i> )	6, 8	14	17	Poor	Poor	Poor to fair	Dormant	Poor	Fair	14	Callusing basal/lower trunk wound, south side; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
1335	Blue Oak	( <i>Quercus douglasii</i> )	6, 7	13	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1336	Blue Oak	( <i>Quercus douglasii</i> )		6	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1337	Blue Oak	( <i>Quercus douglasii</i> )		9	12	Poor	Poor	Fair	Dormant	Poor	Fair	9	Callusing basal/lower trunk wound, south side, to 3' above grade; moderate to significant interior decay; leans north	<b>Recommend removal due to noted defects</b>
1338	Blue Oak	( <i>Quercus douglasii</i> )		9	12	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Large deadwood	Clean out crown
1339	Blue Oak	( <i>Quercus douglasii</i> )		7	6	Poor to fair	Poor	Fair	Dormant	Poor	Fair	7	Callusing basal/middle trunk wounds, north and south sides, with significant decay	<b>Recommend removal due to noted defects</b>
1340	Blue Oak	( <i>Quercus douglasii</i> )		7	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1341	Blue Oak	( <i>Quercus douglasii</i> )		6	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1342	Blue Oak	( <i>Quercus douglasii</i> )		7	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1343	Blue Oak	( <i>Quercus douglasii</i> )		6	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1344	Blue Oak	( <i>Quercus douglasii</i> )		9	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1345	Blue Oak	( <i>Quercus douglasii</i> )		6	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1346	Blue Oak	( <i>Quercus douglasii</i> )	8, 8	16	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1347	Blue Oak	( <i>Quercus douglasii</i> )		10	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1348	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1349	Blue Oak	( <i>Quercus douglasii</i> )		7	6	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1350	Blue Oak	( <i>Quercus douglasii</i> )		13	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1351	Blue Oak	( <i>Quercus douglasii</i> )		12	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal trunk wound, south side, to 1' above grade; no obvious decay; leans slightly south; above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
1352	Blue Oak	( <i>Quercus douglasii</i> )	6, 7	13	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1353	Blue Oak	( <i>Quercus douglasii</i> )		9	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1354	Blue Oak	( <i>Quercus douglasii</i> )		15	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1355	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1356	Blue Oak	( <i>Quercus douglasii</i> )		9	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1357	Blue Oak	( <i>Quercus douglasii</i> )	7, 8	15	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1358	Blue Oak	( <i>Quercus douglasii</i> )		12	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1359	Blue Oak	( <i>Quercus douglasii</i> )		8	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided south; above average amount of deadwood	Clean out crown
1360	Blue Oak	( <i>Quercus douglasii</i> )		11	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1361	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans southwest; above average amount of deadwood	Clean out crown
1362	Blue Oak	( <i>Quercus douglasii</i> )		11	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1363	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1364	Blue Oak	( <i>Quercus douglasii</i> )		10	19	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing wound, east side, 3.5' above grade at co-dominant stem dieback; some interior decay; slightly above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
1365	Blue Oak	( <i>Quercus douglasii</i> )		6	14	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1366	Blue Oak	( <i>Quercus douglasii</i> )		10	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1367	Blue Oak	( <i>Quercus douglasii</i> )		7	7	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1368	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans west; above average amount of deadwood	Clean out crown
1369	Blue Oak	( <i>Quercus douglasii</i> )	7, 8	15	16	Fair	Poor	Poor	Dormant	Poor	Poor to fair		Excessive amount of large deadwood; poor bud formation	<i>None at this time; longevity and structural integrity are questionable</i>
1370	Blue Oak	( <i>Quercus douglasii</i> )		8	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1371	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1372	Blue Oak	( <i>Quercus douglasii</i> )	9, 10	19	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1373	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1374	Blue Oak	( <i>Quercus douglasii</i> )		8	12	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1375	Blue Oak	( <i>Quercus douglasii</i> )		7	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1376	Blue Oak	( <i>Quercus douglasii</i> )		11	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1377	Blue Oak	( <i>Quercus douglasii</i> )		8	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1378	Blue Oak	( <i>Quercus douglasii</i> )		12	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1379	Blue Oak	( <i>Quercus douglasii</i> )		11	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1380	Blue Oak	( <i>Quercus douglasii</i> )		12	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1381	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1382	Blue Oak	( <i>Quercus douglasii</i> )		7	14	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1383	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1384	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Measured 2' above grade; forks 4' and 5' above grade; above average amount of deadwood	Clean out crown
1385	Blue Oak	( <i>Quercus douglasii</i> )		13	15	Poor	Poor	Poor	Dormant	Poor	Poor to fair	13	Basal/lower trunk cavity with significant decay to 7' above grade; leans southwest; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
1386	Blue Oak	( <i>Quercus douglasii</i> )		18	22	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wounds; no decay apparent at this time; excessive amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
1387	Blue Oak	( <i>Quercus douglasii</i> )		14	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1388	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1389	Blue Oak	( <i>Quercus douglasii</i> )		11	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1390	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Fair	Fair	Poor	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1391	Blue Oak	( <i>Quercus douglasii</i> )		6	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1392	Blue Oak	( <i>Quercus douglasii</i> )		12	19	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1393	Blue Oak	( <i>Quercus douglasii</i> )		8	13	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1394	Blue Oak	( <i>Quercus douglasii</i> )	9, 11	20	24	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1395	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Poor	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1396	Blue Oak	( <i>Quercus douglasii</i> )		11	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1397	Blue Oak	( <i>Quercus douglasii</i> )		12	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1398	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1399	Blue Oak	( <i>Quercus douglasii</i> )		6	9	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1400	Blue Oak	( <i>Quercus douglasii</i> )	7, 7	14	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1401	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1402	Blue Oak	( <i>Quercus douglasii</i> )		7	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1403	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1404	Blue Oak	( <i>Quercus douglasii</i> )		8	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1405	Blue Oak	( <i>Quercus douglasii</i> )		6	13	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans southeast; slightly above average amount of deadwood	Clean out crown
1406	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1407	Blue Oak	( <i>Quercus douglasii</i> )		10	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1408	Blue Oak	( <i>Quercus douglasii</i> )		8	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1409	Blue Oak	( <i>Quercus douglasii</i> )		7	4	Fair	Poor	Poor	Dormant	Poor	Fair	7	Old callusing upper trunk wounds 12'+ above grade with decay; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
1410	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1411	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1412	Blue Oak	( <i>Quercus douglasii</i> )		8	17	Fair	Poor	Poor to fair	Dormant	Poor	Fair	8	Callusing lower trunk wound, north side; moderate decay; leans south; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
1413	Blue Oak	( <i>Quercus douglasii</i> )		12	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1414	Blue Oak	( <i>Quercus douglasii</i> )		8	19	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans northeast; slightly above average amount of deadwood	Clean out crown
1415	Blue Oak	( <i>Quercus douglasii</i> )		7	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans north; above average amount of deadwood	Clean out crown
1416	Blue Oak	( <i>Quercus douglasii</i> )		6	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1417	Blue Oak	( <i>Quercus douglasii</i> )		9	20	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair	9	Callusing basal/lower trunk wounds, various locations; minor decay; leans southwest; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
1418	Blue Oak	( <i>Quercus douglasii</i> )		8	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1419	Blue Oak	( <i>Quercus douglasii</i> )		8	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans south; above average amount of deadwood	Clean out crown
1420	Blue Oak	( <i>Quercus douglasii</i> )		7	9	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1421	Blue Oak	( <i>Quercus douglasii</i> )		12	20	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1422	Blue Oak	( <i>Quercus douglasii</i> )		13	19	Fair	Fair	Poor	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1423	Blue Oak	( <i>Quercus douglasii</i> )		13	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1424	Blue Oak	( <i>Quercus douglasii</i> )	8, 10	18	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1425	Blue Oak	( <i>Quercus douglasii</i> )		14	22	Poor	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair	14	Callusing basal/lower trunk wound, east side; minor to moderate decay; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
1426	Blue Oak	( <i>Quercus douglasii</i> )		17	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1427	Blue Oak	( <i>Quercus douglasii</i> )		19	28	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1428	Blue Oak	( <i>Quercus douglasii</i> )		9	22	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans southwest; above average amount of deadwood	Clean out crown
1429	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1430	Blue Oak	( <i>Quercus douglasii</i> )		18	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1431	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1432	Blue Oak	( <i>Quercus douglasii</i> )		15	22	Fair	Fair	Poor	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1433	Blue Oak	( <i>Quercus douglasii</i> )		19	27	Fair	Fair	Poor	Dormant	Fair	Poor to fair		Poor bud formation; above average amount of deadwood	<b>None at this time; re-evaluate in Spring</b>
1434	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1435	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Poor	Poor	Poor to fair	Dormant	Poor	Fair	8	Basal/lower trunk cavity, northeast side, to 8-inches above grade with moderate interior hollowing; second lower trunk cavity, north side, 3' above grade with some interior decay; leans west; above average amount of deadwood	<b>Recommend removal due to noted defects</b>



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1436	Blue Oak	( <i>Quercus douglasii</i> )	12, 14	26	32	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Co-dominant stems are rubbing and grafting 6' to 8' above grade; both bending horizontal toward southwest; slightly above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
1437	Blue Oak	( <i>Quercus douglasii</i> )		27	35	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Several failures of large scaffolds in upper canopy with some decay extending into parent limbs; one 18-inch lateral arising 12' above grade growing almost horizontal toward northeast	<i>Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection</i>
1438	Blue Oak	( <i>Quercus douglasii</i> )		12	38	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided southeast; above average amount of deadwood	Clean out crown
1439	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1440	Blue Oak	( <i>Quercus douglasii</i> )		6	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callused roll, southeast side, against adjacent rock; leans north; above average amount of deadwood	Clean out crown
1441	Blue Oak	( <i>Quercus douglasii</i> )		8	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1442	Blue Oak	( <i>Quercus douglasii</i> )		6	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1443	Blue Oak	( <i>Quercus douglasii</i> )		7	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1444	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1445	Blue Oak	( <i>Quercus douglasii</i> )		7	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1446	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1447	Blue Oak	( <i>Quercus douglasii</i> )		17	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1448	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1449	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1450	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1451	Blue Oak	( <i>Quercus douglasii</i> )		11	12	Fair	Fair	Poor	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1452	Blue Oak	( <i>Quercus douglasii</i> )		17	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1453	Blue Oak	( <i>Quercus douglasii</i> )		9	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1454	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 2' above grade; forks approximately 5' above grade; slightly above average amount of deadwood	Clean out crown
1455	Blue Oak	( <i>Quercus douglasii</i> )		7	6	Poor	Poor	Poor	Dormant	Poor	Poor	7	Callusing basal cavity, south side; minor decay; callusing trunk cavity, south side, with moderate decay; above average amount of deadwood; poor bud formation	<i>Recommend removal due to noted defects</i>
1456	Blue Oak	( <i>Quercus douglasii</i> )		6	4	Fair	Poor	Poor	Dormant	Poor	Fair		Main stem dead 8' above grade; above average amount of deadwood	<i>None at this time; longevity and structural integrity are questionable</i>
1457	Blue Oak	( <i>Quercus douglasii</i> )		8	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1458	Blue Oak	( <i>Quercus douglasii</i> )		9	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1459	Blue Oak	( <i>Quercus douglasii</i> )		9	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1460	Blue Oak	( <i>Quercus douglasii</i> )		7	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1461	Blue Oak	( <i>Quercus douglasii</i> )		6	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1462	Blue Oak	( <i>Quercus douglasii</i> )		9	10	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1463	Blue Oak	( <i>Quercus douglasii</i> )		13	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1464	Blue Oak	( <i>Quercus douglasii</i> )		7	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1465	Blue Oak	( <i>Quercus douglasii</i> )		10	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1466	Blue Oak	( <i>Quercus douglasii</i> )		10	19	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1467	Blue Oak	( <i>Quercus douglasii</i> )		10	13	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1468	Blue Oak	( <i>Quercus douglasii</i> )		13	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1469	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Poor	Poor	Dormant	Poor	Fair	14	Nesting cavity, south side, just below primary crotch with interior hollowing; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
1470	Blue Oak	( <i>Quercus douglasii</i> )		9	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1471	Blue Oak	( <i>Quercus douglasii</i> )		8	9	Fair	Poor	Poor to fair	Dormant	Poor	Fair	8	Main stem dead 11' above grade; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
1472	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1473	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1474	Blue Oak	( <i>Quercus douglasii</i> )		7	9	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, south side; minor decay; slightly above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
1475	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1476	Blue Oak	( <i>Quercus douglasii</i> )		8	9	Fair	Poor	Poor	Dormant	Poor	Fair	8	Callusing lower trunk cavity, west side, 2' above grade with interior hollowing at bend in trunk; secondary stem dead 10' above grade	<b>Recommend removal due to noted defects</b>
1477	Blue Oak	( <i>Quercus douglasii</i> )		9	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1478	Blue Oak	( <i>Quercus douglasii</i> )		14	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1479	Blue Oak	( <i>Quercus douglasii</i> )		7	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1480	Blue Oak	( <i>Quercus douglasii</i> )		13	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1481	Blue Oak	( <i>Quercus douglasii</i> )		13	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1482	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1483	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1484	Blue Oak	( <i>Quercus douglasii</i> )		9	24	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans south; growing nearly horizontal to grade; above average amount of deadwood	Clean out crown
1485	Blue Oak	( <i>Quercus douglasii</i> )	6, 6	12	15	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, south side; minor decay; above average amount of deadwood	<b>None at this time; longevity and structural integrity are questionable</b>
1486	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1487	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1488	Blue Oak	( <i>Quercus douglasii</i> )		8	13	Fair	Poor	Poor to fair	Dormant	Poor to fair	Fair		Main stem dead at primary crotch 8' above grade; above average amount of deadwood	<b>None at this time; longevity and structural integrity are questionable</b>
1489	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1490	Blue Oak	( <i>Quercus douglasii</i> )		22	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1491	Blue Oak	( <i>Quercus douglasii</i> )		20	25	Fair	Fair	Poor	Dormant	Poor to fair	Fair		Evidence of bacterial canker infection; above average amount of deadwood	Clean out crown
1492	Interior Live Oak	( <i>Quercus wislizenii</i> )		12	20	Poor to fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Leans southeast; callusing against rocks; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
1493	Blue Oak	( <i>Quercus douglasii</i> )		15	20	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Minor to moderate basal bark exfoliation, southwest side; leans north; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
1494	Blue Oak	( <i>Quercus douglasii</i> )		19	28	Fair	Fair	Fair	Dormant	Fair	Fair		Minor mistletoe infestation	Clean out crown
1495	Blue Oak	( <i>Quercus douglasii</i> )	8, 9	17	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1496	Blue Oak	( <i>Quercus douglasii</i> )	6, 6	12	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1497	Blue Oak	( <i>Quercus douglasii</i> )		6	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1498	Blue Oak	( <i>Quercus douglasii</i> )		13	24	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1499	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1500	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1501	Blue Oak	( <i>Quercus douglasii</i> )		9	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1502	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1503	Blue Oak	( <i>Quercus douglasii</i> )		8	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1504	Blue Oak	( <i>Quercus douglasii</i> )		7	13	Poor	Poor	Poor to fair	Dormant	Poor	Fair		Callusing basal/lower trunk wound, northwest side; minor decay; leans south; above average amount of deadwood	<b>None at this time; longevity and structural integrity are questionable</b>
1505	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1506	Blue Oak	( <i>Quercus douglasii</i> )	9, 10	19	19	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1507	Blue Oak	( <i>Quercus douglasii</i> )		10	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1508	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1509	Blue Oak	( <i>Quercus douglasii</i> )		18	23	Poor	Poor	Poor to fair	Dormant	Poor	Fair	18	Callusing basal/lower trunk wound/cavity, southwest side, to 4' above grade; evidence of horizontal and vertical fractures; leans northeast; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
1510	Blue Oak	( <i>Quercus douglasii</i> )		7	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1511	Blue Oak	( <i>Quercus douglasii</i> )	9, 9	18	20	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1512	Blue Oak	( <i>Quercus douglasii</i> )	10, 11	21	22	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing wound through primary crotch 4' above grade; some decay; slightly above average amount of deadwood	<b>None at this time; longevity and structural integrity are questionable</b>
1513	Blue Oak	( <i>Quercus douglasii</i> )		15	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1514	Blue Oak	( <i>Quercus douglasii</i> )		20	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1515	Blue Oak	( <i>Quercus douglasii</i> )	11, 12	23	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1516	Blue Oak	( <i>Quercus douglasii</i> )		13	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1517	Blue Oak	( <i>Quercus douglasii</i> )		12	18	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, north side; no decay apparent at this time; leans slightly south; above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1518	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1519	Blue Oak	( <i>Quercus douglasii</i> )		16	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Minor mistletoe infestation; above average amount of deadwood	Clean out crown
1520	Blue Oak	( <i>Quercus douglasii</i> )		14	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1521	Blue Oak	( <i>Quercus douglasii</i> )		20	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1522	Blue Oak	( <i>Quercus douglasii</i> )		18	27	Fair	Poor	Poor	Dormant	Poor to fair	Poor to fair		Evidence of bacterial canker infection along lower and middle trunk; above average amount of deadwood	<b><i>None at this time; longevity and structural integrity are questionable</i></b>
1523	Blue Oak	( <i>Quercus douglasii</i> )	8, 10	18	22	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided northwest; slightly above average amount of deadwood	Clean out crown
1524	Blue Oak	( <i>Quercus douglasii</i> )		23	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1525	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1526	Blue Oak	( <i>Quercus douglasii</i> )		22	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1527	Blue Oak	( <i>Quercus douglasii</i> )		13	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1528	Blue Oak	( <i>Quercus douglasii</i> )		8	17	Poor to fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Evidence of bacterial canker infection on base with large area of exfoliating bark, southwest side; no decay apparent at this time; leans south; slightly above average amount of deadwood	<b><i>None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT</i></b>
1529	Blue Oak	( <i>Quercus douglasii</i> )		7	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1530	Blue Oak	( <i>Quercus douglasii</i> )		6	13	Poor	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Evidence of bacterial canker infection on lower trunk with moderate area of exfoliating bark, southwest side; no decay apparent at this time; leans east; slightly above average amount of deadwood	<b><i>None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT</i></b>
1531	Blue Oak	( <i>Quercus douglasii</i> )	5, 6, 12	23	17	Poor	Poor to fair	Poor to fair	Dormant	Poor	Fair	23	Callusing basal/lower trunk wounds, various locations, with moderate decay; above average amount of deadwood	<b><i>Recommend removal due to noted defects</i></b>
1532	Blue Oak	( <i>Quercus douglasii</i> )		7	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1533	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1534	Blue Oak	( <i>Quercus douglasii</i> )		6	14	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
1535	Blue Oak	( <i>Quercus douglasii</i> )		11	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1536	Blue Oak	( <i>Quercus douglasii</i> )		10	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1537	Blue Oak	( <i>Quercus douglasii</i> )		7	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1538	Blue Oak	( <i>Quercus douglasii</i> )	9, 15	24	25	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, south side; no decay apparent at this time; slightly above average amount of deadwood	Clean out crown; <b><i>recommend annual inspection by an ISA Certified Arborist</i></b>
1539	Blue Oak	( <i>Quercus douglasii</i> )	7, 9	16	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1540	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1541	Blue Oak	( <i>Quercus douglasii</i> )		7	15	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wounds, various locations; no decay apparent at this time; leans south; above average amount of deadwood	Clean out crown; <b><i>recommend annual inspection by an ISA Certified Arborist</i></b>
1542	Blue Oak	( <i>Quercus douglasii</i> )		19	28	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 2' above grade; above average amount of deadwood	Clean out crown
1543	Blue Oak	( <i>Quercus douglasii</i> )		13	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1544	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1545	Blue Oak	( <i>Quercus douglasii</i> )		23	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1546	Blue Oak	( <i>Quercus douglasii</i> )		12	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1547	Blue Oak	( <i>Quercus douglasii</i> )	10, 17	27	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1548	Blue Oak	( <i>Quercus douglasii</i> )		12	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1549	Blue Oak	( <i>Quercus douglasii</i> )		20	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1550	Blue Oak	( <i>Quercus douglasii</i> )		28	36	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1551	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1552	Blue Oak	( <i>Quercus douglasii</i> )		12	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1553	Blue Oak	( <i>Quercus douglasii</i> )		10	13	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1554	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1555	Blue Oak	( <i>Quercus douglasii</i> )		12	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1556	Blue Oak	( <i>Quercus douglasii</i> )		11	19	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1557	Blue Oak	( <i>Quercus douglasii</i> )		7	9	Poor	Poor	Fair	Dormant	Poor	Fair	7	Callusing basal/lower trunk cavity with moderate to significant decay to 3' above grade, north side	<b><i>Recommend removal due to noted defects</i></b>
1558	Blue Oak	( <i>Quercus douglasii</i> )		11	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1559	Blue Oak	( <i>Quercus douglasii</i> )	7, 8	15	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1560	Blue Oak	( <i>Quercus douglasii</i> )		8	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1561	Blue Oak	( <i>Quercus douglasii</i> )		6	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1562	Blue Oak	( <i>Quercus douglasii</i> )		17	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1563	Blue Oak	( <i>Quercus douglasii</i> )		10	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1564	Blue Oak	( <i>Quercus douglasii</i> )		10	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided southwest; above average amount of deadwood	Clean out crown
1565	Blue Oak	( <i>Quercus douglasii</i> )		11	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1566	Blue Oak	( <i>Quercus douglasii</i> )		8	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1567	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1568	Blue Oak	( <i>Quercus douglasii</i> )		19	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1569	Blue Oak	( <i>Quercus douglasii</i> )		11	18	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Above average amount of deadwood	Clean out crown
1570	Blue Oak	( <i>Quercus douglasii</i> )		19	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1571	Blue Oak	( <i>Quercus douglasii</i> )		12	15	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans south; above average amount of deadwood	Clean out crown
1572	Blue Oak	( <i>Quercus douglasii</i> )		10	10	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans east; excessive amount of deadwood	Clean out crown
1573	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1574	Blue Oak	( <i>Quercus douglasii</i> )		13	19	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing trunk wound 7' above grade, west side, at point of stem dieback; some interior decay; leans east; above average amount of deadwood	Clean out crown
1575	Blue Oak	( <i>Quercus douglasii</i> )		12	13	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1576	Blue Oak	( <i>Quercus douglasii</i> )		15	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1577	Blue Oak	( <i>Quercus douglasii</i> )		14	22	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1578	Blue Oak	( <i>Quercus douglasii</i> )		20	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1579	Blue Oak	( <i>Quercus douglasii</i> )		18	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1580	Blue Oak	( <i>Quercus douglasii</i> )		13	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1581	Blue Oak	( <i>Quercus douglasii</i> )	12, 13	25	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1582	Blue Oak	( <i>Quercus douglasii</i> )		10	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided south; above average amount of deadwood	Clean out crown
1583	Blue Oak	( <i>Quercus douglasii</i> )		19	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1584	Blue Oak	( <i>Quercus douglasii</i> )	8, 11	19	20	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans south; slightly above average amount of deadwood	Clean out crown
1585	Blue Oak	( <i>Quercus douglasii</i> )		15	24	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1586	Blue Oak	( <i>Quercus douglasii</i> )	8, 12	20	18	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1587	Blue Oak	( <i>Quercus douglasii</i> )		22	28	Fair	Poor	Poor	Dormant	Poor	Fair	22	Measured 2' above grade; forks into three separate stems at 4' to 5' above grade; old callusing wound through center of primary crotch with central interior decay; obvious stress fractures	<b>Recommend removal due to noted defects</b>
1588	Blue Oak	( <i>Quercus douglasii</i> )	17, 20	37	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1589	Blue Oak	( <i>Quercus douglasii</i> )		17	27	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans southeast; above average amount of deadwood	Clean out crown
1590	Blue Oak	( <i>Quercus douglasii</i> )		19	30	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1591	Blue Oak	( <i>Quercus douglasii</i> )		7	13	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans northwest; slightly above average amount of deadwood	Clean out crown
1592	Blue Oak	( <i>Quercus douglasii</i> )		29	35	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Forks into multiple stems 8' above grade with obvious stress fracture on north side below westerly stem	<b>Perform aerial inspection to further assess structural integrity of canopy and potential for hazard; provide further recommendations following aerial inspection</b>
1593	Blue Oak	( <i>Quercus douglasii</i> )		24	33	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1594	Blue Oak	( <i>Quercus douglasii</i> )		22	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1595	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1596	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1597	Blue Oak	( <i>Quercus douglasii</i> )		11	29	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans southwest; slightly above average amount of deadwood	Clean out crown
1598	Blue Oak	( <i>Quercus douglasii</i> )	8, 24	32	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1599	Blue Oak	( <i>Quercus douglasii</i> )		19	28	Fair	Fair	Poor	Dormant	Poor to fair	Poor to fair		Limited bud formation; above average amount of deadwood	<b>None at this time; re-evaluate in Spring</b>
1600	Blue Oak	( <i>Quercus douglasii</i> )		17	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1601	Blue Oak	( <i>Quercus douglasii</i> )		8	26	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided northwest; above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1602	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1603	Blue Oak	( <i>Quercus douglasii</i> )		6	10	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing lower trunk wound 1' above grade, southwest side, with minor decay; leans northwest; slightly above average amount of deadwood	Clean out crown
1604	Blue Oak	( <i>Quercus douglasii</i> )		15	22	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1605	Blue Oak	( <i>Quercus douglasii</i> )		19	28	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans south; above average amount of deadwood	Clean out crown
1606	Blue Oak	( <i>Quercus douglasii</i> )		15	28	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1607	Blue Oak	( <i>Quercus douglasii</i> )	8, 8, 9	25	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1608	Blue Oak	( <i>Quercus douglasii</i> )	13, 16	29	29	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1609	Blue Oak	( <i>Quercus douglasii</i> )		16	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1610	Blue Oak	( <i>Quercus douglasii</i> )		16	26	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1611	Blue Oak	( <i>Quercus douglasii</i> )		17	25	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly south; slightly above average amount of deadwood	Clean out crown
1612	Blue Oak	( <i>Quercus douglasii</i> )		20	28	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 2' above grade; above average amount of deadwood	Clean out crown
1613	Blue Oak	( <i>Quercus douglasii</i> )	6, 8	14	21	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided south; slightly above average amount of deadwood	Clean out crown
1614	Blue Oak	( <i>Quercus douglasii</i> )		8	27	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided south; slightly above average amount of deadwood	Clean out crown
1615	Blue Oak	( <i>Quercus douglasii</i> )		13	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1616	Blue Oak	( <i>Quercus douglasii</i> )		19	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1617	Blue Oak	( <i>Quercus douglasii</i> )		6	6	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; trunk has several bends; generally upright; one-sided west; above average amount of deadwood	Clean out crown
1618	Blue Oak	( <i>Quercus douglasii</i> )	10, 12	22	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided north; above average amount of deadwood	Clean out crown
1619	Blue Oak	( <i>Quercus douglasii</i> )		23	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1620	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1621	Blue Oak	( <i>Quercus douglasii</i> )		17	29	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1622	Blue Oak	( <i>Quercus douglasii</i> )		25	32	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1623	Blue Oak	( <i>Quercus douglasii</i> )		10	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided northeast; above average amount of deadwood	Clean out crown
1624	Blue Oak	( <i>Quercus douglasii</i> )	22, 24	46	35	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
1625	Blue Oak	( <i>Quercus douglasii</i> )		11	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1626	Blue Oak	( <i>Quercus douglasii</i> )		18	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1627	Blue Oak	( <i>Quercus douglasii</i> )	13, 19	32	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1628	Blue Oak	( <i>Quercus douglasii</i> )	7, 18	25	28	Fair	Poor	Poor to fair	Dormant	Poor	Poor to fair	25	Callusing lower trunk wound, south side, just above small stem attachment; moderate decay; leans south; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
1629	Blue Oak	( <i>Quercus douglasii</i> )		17	37	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1630	Blue Oak	( <i>Quercus douglasii</i> )		21	22	Poor	Poor	Poor	Dormant	Poor	Poor	21	Callusing basal wound, west side, with interior decay; callusing lower trunk wound, west side, with minor decay; fungal fruiting bodies, predominantly on west side of lower trunk; excessive amount of deadwood; sparse bud formation	<b>Recommend removal due to noted defects</b>
1631	Blue Oak	( <i>Quercus douglasii</i> )		13	18	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing lower trunk cavity, west side; minor to moderate interior decay; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
1632	Blue Oak	( <i>Quercus douglasii</i> )		13	29	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
1633	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1634	Blue Oak	( <i>Quercus douglasii</i> )		7	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1635	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1636	Blue Oak	( <i>Quercus douglasii</i> )		9	18	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans northeast; above average amount of deadwood	Clean out crown
1637	Blue Oak	( <i>Quercus douglasii</i> )		11	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1638	Blue Oak	( <i>Quercus douglasii</i> )		21	32	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1639	Blue Oak	( <i>Quercus douglasii</i> )		16	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1640	Blue Oak	( <i>Quercus douglasii</i> )		22	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1641	Blue Oak	( <i>Quercus douglasii</i> )		22	33	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1642	Blue Oak	( <i>Quercus douglasii</i> )		19	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1643	Blue Oak	( <i>Quercus douglasii</i> )		23	33	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 3' above grade; above average amount of deadwood	Clean out crown



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1644	Blue Oak	( <i>Quercus douglasii</i> )		23	29	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Measured 3' above grade; above average amount of deadwood	Clean out crown
1645	Blue Oak	( <i>Quercus douglasii</i> )		10	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1646	Blue Oak	( <i>Quercus douglasii</i> )		13	26	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided west; above average amount of deadwood	Clean out crown
1647	Blue Oak	( <i>Quercus douglasii</i> )		10	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1648	Blue Oak	( <i>Quercus douglasii</i> )		15	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1649	Blue Oak	( <i>Quercus douglasii</i> )		10	25	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
1650	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1651	Blue Oak	( <i>Quercus douglasii</i> )		11	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1652	Blue Oak	( <i>Quercus douglasii</i> )		19	33	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1653	Blue Oak	( <i>Quercus douglasii</i> )		13	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1654	Blue Oak	( <i>Quercus douglasii</i> )		19	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1655	Blue Oak	( <i>Quercus douglasii</i> )		12	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided southeast; above average amount of deadwood	Clean out crown
1656	Blue Oak	( <i>Quercus douglasii</i> )		18	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Measured 3' above grade; above average amount of deadwood	Clean out crown
1657	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1658	Blue Oak	( <i>Quercus douglasii</i> )		19	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1659	Blue Oak	( <i>Quercus douglasii</i> )		10	14	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1660	Blue Oak	( <i>Quercus douglasii</i> )		8	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1661	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1662	Blue Oak	( <i>Quercus douglasii</i> )		14	29	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided southeast; above average amount of deadwood	Clean out crown
1663	Blue Oak	( <i>Quercus douglasii</i> )		13	21	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided south; slightly above average amount of deadwood	Clean out crown
1664	Blue Oak	( <i>Quercus douglasii</i> )		25	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1665	Blue Oak	( <i>Quercus douglasii</i> )		11	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1666	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wounds, various locations; probable result of bacterial canker infection; no decay apparent at this time; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
1667	Blue Oak	( <i>Quercus douglasii</i> )		19	26	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly south; slightly above average amount of deadwood	Clean out crown
1668	Blue Oak	( <i>Quercus douglasii</i> )		21	27	Fair	Poor	Poor to fair	Dormant	Poor	Fair		Trunk defects in area just below primary crotch 11' above grade; bark exfoliation with what appears to be interior decay; above average amount of deadwood	<b>Perform aerial inspection to further assess structural integrity of canopy and potential for hazard; provide further recommendations following aerial inspection</b>
1669	Blue Oak	( <i>Quercus douglasii</i> )		21	28	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1670	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1671	Blue Oak	( <i>Quercus douglasii</i> )		14	27	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1672	Blue Oak	( <i>Quercus douglasii</i> )		11	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1673	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1674	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1675	Blue Oak	( <i>Quercus douglasii</i> )		10	23	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
1676	Blue Oak	( <i>Quercus douglasii</i> )	11, 14	25	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1677	Blue Oak	( <i>Quercus douglasii</i> )		8	10	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Poor to fair		Forks into co-dominants 6' above grade; southerly stem is dead at 11' above grade; excessive amount of deadwood; poor bud formation	<b>None at this time; longevity and structural integrity are questionable</b>
1678	Blue Oak	( <i>Quercus douglasii</i> )		9	18	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly south; slightly above average amount of deadwood	Clean out crown
1679	Blue Oak	( <i>Quercus douglasii</i> )		9	24	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans south; above average amount of deadwood	Clean out crown
1680	Blue Oak	( <i>Quercus douglasii</i> )		12	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1681	Blue Oak	( <i>Quercus douglasii</i> )		6	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1682	Blue Oak	( <i>Quercus douglasii</i> )		14	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1683	Blue Oak	( <i>Quercus douglasii</i> )		11	24	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly south; above average amount of deadwood	Clean out crown
1684	Blue Oak	( <i>Quercus douglasii</i> )		7	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1685	Blue Oak	( <i>Quercus douglasii</i> )		15	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1686	Blue Oak	( <i>Quercus douglasii</i> )		8	19	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided east; slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1687	Blue Oak	( <i>Quercus douglasii</i> )		14	22	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1688	Blue Oak	( <i>Quercus douglasii</i> )		13	22	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly south; slightly above average amount of deadwood	Clean out crown
1689	Blue Oak	( <i>Quercus douglasii</i> )		13	24	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair	13	Callusing basal/lower trunk wound, north side, to 1' above grade; minor to moderate interior decay; additional fire wounding on northerly stem 7' above grade with moderate to significant interior decay; this stem bends/leans northwest; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
1690	Blue Oak	( <i>Quercus douglasii</i> )		21	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1691	Blue Oak	( <i>Quercus douglasii</i> )		19	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1692	Blue Oak	( <i>Quercus douglasii</i> )		33	26	Fair	Fair	Poor to fair	Dormant	Fair	Poor to fair		Sparse bud formation; above average amount of deadwood	<b>None at this time; re-evaluate in Spring</b>
1693	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1694	Blue Oak	( <i>Quercus douglasii</i> )		19	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1695	Blue Oak	( <i>Quercus douglasii</i> )		13	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1696	Blue Oak	( <i>Quercus douglasii</i> )		15	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1697	Blue Oak	( <i>Quercus douglasii</i> )		20	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1698	Blue Oak	( <i>Quercus douglasii</i> )	11, 12	23	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1699	Blue Oak	( <i>Quercus douglasii</i> )		19	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1700	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Poor	Poor	Poor	Dormant	Poor	Poor to fair	14	Callusing basal/lower trunk wounds with significant decay to 4' above grade; leans north; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
1701	Blue Oak	( <i>Quercus douglasii</i> )		11	24	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided south; slightly above average amount of deadwood	Clean out crown
1702	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided southwest; slightly above average amount of deadwood	Clean out crown
1703	Blue Oak	( <i>Quercus douglasii</i> )		13	30	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly north; slightly above average amount of deadwood	Clean out crown
1704	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1705	Blue Oak	( <i>Quercus douglasii</i> )		17	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1706	Blue Oak	( <i>Quercus douglasii</i> )		14	26	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1707	Blue Oak	( <i>Quercus douglasii</i> )		18	26	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1708	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1709	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1710	Blue Oak	( <i>Quercus douglasii</i> )		13	27	Poor	Poor	Poor to fair	Dormant	Poor	Fair	13	Callusing basal/lower trunk wound, east side, to 3' above grade; significant decay; trunk leans south; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
1711	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal trunk wound, northwest side; minor decay; one-sided south; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
1712	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1713	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1714	Blue Oak	( <i>Quercus douglasii</i> )		13	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1715	Blue Oak	( <i>Quercus douglasii</i> )		16	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1716	Blue Oak	( <i>Quercus douglasii</i> )		25	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1717	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
1718	Blue Oak	( <i>Quercus douglasii</i> )		12	18	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing trunk wounds 5' to 8' above grade; possible interior decay; leans southwest; slightly above average amount of deadwood	<b>None at this time; longevity and structural integrity are questionable</b>
1719	Blue Oak	( <i>Quercus douglasii</i> )		13	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1720	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1721	Blue Oak	( <i>Quercus douglasii</i> )	7, 8	15	15	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided southeast; slightly above average amount of deadwood	Clean out crown
1722	Blue Oak	( <i>Quercus douglasii</i> )		13	18	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1723	Blue Oak	( <i>Quercus douglasii</i> )	14, 17	31	25	Poor	Poor	Poor to fair	Dormant	Poor	Fair	31	Callusing basal/lower trunk wounds, various locations; moderate to significant decay; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
1724	Blue Oak	( <i>Quercus douglasii</i> )		17	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1725	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1726	Blue Oak	( <i>Quercus douglasii</i> )		14	24	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided northeast; slightly above average amount of deadwood	Clean out crown
1727	Blue Oak	( <i>Quercus douglasii</i> )		17	26	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Measured 2; above grade; above average amount of deadwood	Clean out crown
1728	Blue Oak	( <i>Quercus douglasii</i> )	9, 9	18	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1729	Blue Oak	( <i>Quercus douglasii</i> )		20	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1730	Blue Oak	( <i>Quercus douglasii</i> )		23	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1731	Blue Oak	( <i>Quercus douglasii</i> )		12	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1732	Blue Oak	( <i>Quercus douglasii</i> )		22	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1733	Blue Oak	( <i>Quercus douglasii</i> )		13	22	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
1734	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1735	Blue Oak	( <i>Quercus douglasii</i> )		13	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1736	Blue Oak	( <i>Quercus douglasii</i> )		11	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1737	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1738	Blue Oak	( <i>Quercus douglasii</i> )	10, 12	22	19	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans east; above average amount of deadwood	Clean out crown
1739	Blue Oak	( <i>Quercus douglasii</i> )		21	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1740	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1741	Blue Oak	( <i>Quercus douglasii</i> )		12	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1742	Blue Oak	( <i>Quercus douglasii</i> )		12	24	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided southeast; above average amount of deadwood	Clean out crown
1743	Blue Oak	( <i>Quercus douglasii</i> )		16	28	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans northeast; above average amount of deadwood	Clean out crown
1744	Blue Oak	( <i>Quercus douglasii</i> )	8, 9	17	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided east; above average amount of deadwood	Clean out crown
1745	Blue Oak	( <i>Quercus douglasii</i> )		14	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1746	Blue Oak	( <i>Quercus douglasii</i> )		12	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided south; slightly above average amount of deadwood	Clean out crown
1747	Blue Oak	( <i>Quercus douglasii</i> )		22	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1748	Blue Oak	( <i>Quercus douglasii</i> )		18	24	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans northwest; slightly above average amount of deadwood	Clean out crown
1749	Blue Oak	( <i>Quercus douglasii</i> )		19	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1750	Blue Oak	( <i>Quercus douglasii</i> )		13	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1751	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1752	Blue Oak	( <i>Quercus douglasii</i> )		20	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1753	Blue Oak	( <i>Quercus douglasii</i> )		19	27	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Trunk bends 6' to 7' above grade which results with three upright laterals; above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
1754	Blue Oak	( <i>Quercus douglasii</i> )	11, 12	23	24	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1755	Blue Oak	( <i>Quercus douglasii</i> )		12	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1756	Blue Oak	( <i>Quercus douglasii</i> )		12	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided north; slightly above average amount of deadwood	Clean out crown
1757	Blue Oak	( <i>Quercus douglasii</i> )		17	28	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1758	Blue Oak	( <i>Quercus douglasii</i> )		7	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1759	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1760	Blue Oak	( <i>Quercus douglasii</i> )		16	24	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1761	Blue Oak	( <i>Quercus douglasii</i> )		17	26	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1762	Blue Oak	( <i>Quercus douglasii</i> )		9	16	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided south; slightly above average amount of deadwood	Clean out crown
1763	Blue Oak	( <i>Quercus douglasii</i> )		20	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1764	Blue Oak	( <i>Quercus douglasii</i> )	5, 6	11	7	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1765	Blue Oak	( <i>Quercus douglasii</i> )		7	6	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1766	Blue Oak	( <i>Quercus douglasii</i> )		13	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1767	Blue Oak	( <i>Quercus douglasii</i> )		8	21	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided north; above average amount of deadwood	Clean out crown
1768	Blue Oak	( <i>Quercus douglasii</i> )		19	24	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1769	Blue Oak	( <i>Quercus douglasii</i> )		20	22	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1770	Blue Oak	( <i>Quercus douglasii</i> )		22	27	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1771	Blue Oak	( <i>Quercus douglasii</i> )		19	27	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided southwest; above average amount of deadwood	Clean out crown
1772	Blue Oak	( <i>Quercus douglasii</i> )		21	26	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided west; above average amount of deadwood	Clean out crown
1773	Blue Oak	( <i>Quercus douglasii</i> )		19	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1774	Blue Oak	( <i>Quercus douglasii</i> )		11	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1775	Blue Oak	( <i>Quercus douglasii</i> )		19	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1776	Blue Oak	( <i>Quercus douglasii</i> )		6	5	Fair	Poor	Poor	Dormant	Poor	Fair		Nesting cavities in lower trunk with interior decay; main stem dead 7' above grade and upward; small laterals remain	<b><i>None at this time; longevity and structural integrity are questionable</i></b>
1777	Blue Oak	( <i>Quercus douglasii</i> )		13	21	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1778	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly north; slightly above average amount of deadwood	Clean out crown
1779	Blue Oak	( <i>Quercus douglasii</i> )		8	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1780	Blue Oak	( <i>Quercus douglasii</i> )		7	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1781	Blue Oak	( <i>Quercus douglasii</i> )		8	22	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided north; slightly above average amount of deadwood	Clean out crown
1782	Blue Oak	( <i>Quercus douglasii</i> )		19	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1783	Blue Oak	( <i>Quercus douglasii</i> )		7	13	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/trunk wound, south side; no decay apparent at this time; leans north; slightly above average amount of deadwood	Clean out crown
1784	Blue Oak	( <i>Quercus douglasii</i> )		7	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1785	Blue Oak	( <i>Quercus douglasii</i> )		18	26	Poor to fair	Poor	Poor to fair	Dormant	Poor	Fair	18	Callusing basal/lower trunk wounds with minor to moderate decay to 3' above grade, south and west sides; one-sided east; slightly above average amount of deadwood	<b><i>Recommend removal due to noted defects</i></b>
1786	Blue Oak	( <i>Quercus douglasii</i> )		19	27	Poor	Poor	Poor to fair	Dormant	Poor	Fair	19	Callusing basal/lower trunk cavity to 3' above grade with moderate interior decay; leans north; above average amount of deadwood	<b><i>Recommend removal due to noted defects</i></b>
1787	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1788	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1789	Blue Oak	( <i>Quercus douglasii</i> )		19	30	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/trunk wound, south side; minor decay; additional trunk wounds, south and north sides, with minor decay; leans north; slightly above average amount of deadwood	<b><i>Perform further evaluation of upper cavities to assess structural integrity and potential for hazard; provide further recommendations following inspection of cavities</i></b>
1790	Blue Oak	( <i>Quercus douglasii</i> )		8	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1791	Blue Oak	( <i>Quercus douglasii</i> )		9	21	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/trunk wound, south side; no decay apparent at this time; some areas of bark exfoliation; possible bacterial canker; trunk bends toward southwest; above average amount of deadwood	Clean out crown; <b><i>recommend annual inspection by an ISA Certified Arborist</i></b>
1792	Blue Oak	( <i>Quercus douglasii</i> )	13, 21	34	30	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1793	Blue Oak	( <i>Quercus douglasii</i> )		19	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1794	Blue Oak	( <i>Quercus douglasii</i> )		9	18	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided south; slightly above average amount of deadwood	Clean out crown
1795	Blue Oak	( <i>Quercus douglasii</i> )		19	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1796	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1797	Blue Oak	( <i>Quercus douglasii</i> )		6	12	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Trunk bends 6' above grade toward southwest; above average amount of deadwood	Clean out crown
1798	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
1799	Blue Oak	( <i>Quercus douglasii</i> )		23	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1800	Blue Oak	( <i>Quercus douglasii</i> )		15	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1801	Blue Oak	( <i>Quercus douglasii</i> )	7, 8	15	17	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, south side; no decay apparent at this time; leans north; slightly above average amount of deadwood	Clean out crown
1802	Blue Oak	( <i>Quercus douglasii</i> )		8	18	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided east; above average amount of deadwood	Clean out crown
1803	Blue Oak	( <i>Quercus douglasii</i> )		16	26	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southeast; above average amount of deadwood	Clean out crown
1804	Blue Oak	( <i>Quercus douglasii</i> )		20	26	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1805	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1806	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
1807	Blue Oak	( <i>Quercus douglasii</i> )		18	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1808	Blue Oak	( <i>Quercus douglasii</i> )		21	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1809	Blue Oak	( <i>Quercus douglasii</i> )		24	28	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1810	Blue Oak	( <i>Quercus douglasii</i> )		30	32	Poor	Poor	Poor to fair	Dormant	Poor	Fair	30	Callusing basal/lower trunk wounds, south side, to 4' above grade with significant interior decay; leans north; slightly above average amount of deadwood	<b>Recommend removal due to noted defects</b>
1811	Blue Oak	( <i>Quercus douglasii</i> )		26	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1812	Blue Oak	( <i>Quercus douglasii</i> )		18	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1813	Blue Oak	( <i>Quercus douglasii</i> )		16	24	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
1814	Blue Oak	( <i>Quercus douglasii</i> )		14	17	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly southwest; slightly above average amount of deadwood	Clean out crown
1815	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1816	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1817	Blue Oak	( <i>Quercus douglasii</i> )		16	19	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, north side; no decay apparent at this time; slightly above average amount of deadwood	Clean out crown
1818	Blue Oak	( <i>Quercus douglasii</i> )		20	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1819	Blue Oak	( <i>Quercus douglasii</i> )		10	21	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided north; slightly above average amount of deadwood	Clean out crown
1820	Blue Oak	( <i>Quercus douglasii</i> )		20	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1821	Blue Oak	( <i>Quercus douglasii</i> )		20	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1822	Blue Oak	( <i>Quercus douglasii</i> )		25	32	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1823	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1824	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
1825	Blue Oak	( <i>Quercus douglasii</i> )		20	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1826	Blue Oak	( <i>Quercus douglasii</i> )		7	22	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Trunk bends 6' above grade; growing horizontal toward southeast; slightly above average amount of deadwood	Clean out crown
1827	Blue Oak	( <i>Quercus douglasii</i> )		22	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1828	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1829	Blue Oak	( <i>Quercus douglasii</i> )		15	22	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1830	Blue Oak	( <i>Quercus douglasii</i> )		20	30	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1831	Blue Oak	( <i>Quercus douglasii</i> )		32	33	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1832	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1833	Blue Oak	( <i>Quercus douglasii</i> )		23	28	Fair	Poor	Poor	Dormant	Poor	Fair	23	Tree originally grew with co-dominant stems with primary crotch 4.5' to 5' above grade; southerly stem has been removed with decay extending into lower trunk; remaining portion of tree is one-sided toward north	<b>Recommend removal due to noted defects</b>
1834	Blue Oak	( <i>Quercus douglasii</i> )		26	32	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1835	Blue Oak	( <i>Quercus douglasii</i> )		24	29	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans west; scaffold failures in upper canopy; no obvious decay at this time	<b>Perform aerial inspection to further assess structural integrity of canopy and potential for hazard; provide further recommendations following aerial inspection</b>
1836	Blue Oak	( <i>Quercus douglasii</i> )		25	33	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1837	Blue Oak	( <i>Quercus douglasii</i> )	13, 16	29	31	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Forks 2.5' above grade; above average amount of deadwood	Clean out crown
1838	Blue Oak	( <i>Quercus douglasii</i> )		28	34	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Forks 6' above grade; inherently weak primary crotch with included bark	Clean out crown; evaluate for installation of rotary cable system and/or through bolt to help support primary crotch
1839	Blue Oak	( <i>Quercus douglasii</i> )		29	32	Poor	Poor	Poor to fair	Dormant	Poor	Fair	29	Callusing basal/lower trunk wound, south side, to 3' above grade; moderate decay; forks 5.5' above grade with inherently weak crotch with included bark and evidence of possible stress fracture; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
1840	Blue Oak	( <i>Quercus douglasii</i> )		12	23	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, west side; minor decay; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
1841	Blue Oak	( <i>Quercus douglasii</i> )		15	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

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Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1842	Blue Oak	( <i>Quercus douglasii</i> )		26	34	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1843	Blue Oak	( <i>Quercus douglasii</i> )	13, 25	38	35	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Larger stem suppressed, completely one-sided southwest; slightly above average amount of deadwood	Clean out crown
1844	Blue Oak	( <i>Quercus douglasii</i> )		31	37	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1845	Blue Oak	( <i>Quercus douglasii</i> )		13	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1846	Blue Oak	( <i>Quercus douglasii</i> )		14	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1847	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1848	Blue Oak	( <i>Quercus douglasii</i> )		18	27	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly north; slightly above average amount of deadwood	Clean out crown
1849	Blue Oak	( <i>Quercus douglasii</i> )		27	43	Poor	Poor	Poor	Dormant	Poor	Fair	27	Callusing basal/lower trunk wound, west side, to 3' above grade with significant decay; additional wounding with decay in upper scaffolds; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
1850	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
1851	Blue Oak	( <i>Quercus douglasii</i> )		8	17	Poor	Poor	Poor to fair	Dormant	Poor	Fair	8	Callusing basal/lower trunk wound, south side, to 2' above grade with significant decay; leans southeast; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
1852	Blue Oak	( <i>Quercus douglasii</i> )		15	26	Poor	Poor	Poor to fair	Dormant	Poor	Fair	15	Callusing basal/lower trunk wound, south side, to 2' above grade; moderate to significant decay; leans south; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
1853	Blue Oak	( <i>Quercus douglasii</i> )		22	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1854	Blue Oak	( <i>Quercus douglasii</i> )		15	28	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans south; above average amount of deadwood	Clean out crown
1855	Blue Oak	( <i>Quercus douglasii</i> )		13	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1856	Blue Oak	( <i>Quercus douglasii</i> )		29	34	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1857	Blue Oak	( <i>Quercus douglasii</i> )		17	26	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided southwest; above average amount of deadwood	Clean out crown
1858	Blue Oak	( <i>Quercus douglasii</i> )		22	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1859	Blue Oak	( <i>Quercus douglasii</i> )		16	28	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided east; above average amount of deadwood	Clean out crown
1860	Blue Oak	( <i>Quercus douglasii</i> )		14	28	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans north then bends east; above average amount of deadwood	Clean out crown
1861	Blue Oak	( <i>Quercus douglasii</i> )		12	15	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans south; above average amount of deadwood	Clean out crown
1862	Blue Oak	( <i>Quercus douglasii</i> )		30	36	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided west; slightly above average amount of deadwood	Clean out crown
1863	Blue Oak	( <i>Quercus douglasii</i> )		20	26	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Poor to fair		One-sided east; above average amount of deadwood; sprout growth on large wood; poor bud formation	<b>None at this time; re-evaluate in Spring</b>
1864	Blue Oak	( <i>Quercus douglasii</i> )		32	45	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1865	Blue Oak	( <i>Quercus douglasii</i> )		17	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1866	Blue Oak	( <i>Quercus douglasii</i> )		17	31	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided south; above average amount of deadwood	Clean out crown
1867	Blue Oak	( <i>Quercus douglasii</i> )		23	29	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1868	Blue Oak	( <i>Quercus douglasii</i> )		21	30	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided north; above average amount of deadwood	Clean out crown
1869	Blue Oak	( <i>Quercus douglasii</i> )		33	40	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1870	Blue Oak	( <i>Quercus douglasii</i> )		27	32	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1871	Blue Oak	( <i>Quercus douglasii</i> )		30	35	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Inherently weak primary crotch 7' above grade with included bark; several other suspect areas on scaffold limbs	<b>Perform aerial inspection to further assess structural integrity of canopy and potential for hazard; provide further recommendations following aerial inspection</b>
1872	Blue Oak	( <i>Quercus douglasii</i> )		14	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1873	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1874	Blue Oak	( <i>Quercus douglasii</i> )		23	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1875	Blue Oak	( <i>Quercus douglasii</i> )		7	11	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided northeast; slightly above average amount of deadwood	Clean out crown
1876	Blue Oak	( <i>Quercus douglasii</i> )		28	35	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Several failures of scaffolds in upper canopy	<b>Perform aerial inspection to further assess structural integrity of canopy and potential for hazard; provide further recommendations following aerial inspection</b>
1877	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1878	Blue Oak	( <i>Quercus douglasii</i> )		16	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1879	Blue Oak	( <i>Quercus douglasii</i> )	9, 10	19	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1880	Blue Oak	( <i>Quercus douglasii</i> )		25	35	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown



CARPENTER RANCH, LP  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1881	Blue Oak	( <i>Quercus douglasii</i> )		13	22	Poor	Poor	Poor to fair	Dormant	Poor	Fair	13	Callusing basal/lower trunk cavity, southwest side, to 3' above grade with moderate decay; callusing seams, northeast side; leans west; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
1882	Blue Oak	( <i>Quercus douglasii</i> )		23	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1883	Blue Oak	( <i>Quercus douglasii</i> )		28	35	Poor to fair	Fair	Fair	Dormant	Poor to fair	Fair		Several suspect areas around root crown; one old callusing wound 8' above grade, north side, at point of limb dieback	<b>Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection</b>
1884	Blue Oak	( <i>Quercus douglasii</i> )		14	29	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided west; slightly above average amount of deadwood	Clean out crown
1885	Blue Oak	( <i>Quercus douglasii</i> )		22	34	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1886	Blue Oak	( <i>Quercus douglasii</i> )		20	35	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1887	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1888	Blue Oak	( <i>Quercus douglasii</i> )		8	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1889	Blue Oak	( <i>Quercus douglasii</i> )		19	29	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided east; slightly above average amount of deadwood	Clean out crown
1890	Blue Oak	( <i>Quercus douglasii</i> )		15	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1891	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided east; slightly above average amount of deadwood	Clean out crown
1892	Blue Oak	( <i>Quercus douglasii</i> )	13, 23	36	35	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided southeast; slightly above average amount of deadwood	Clean out crown
1893	Blue Oak	( <i>Quercus douglasii</i> )		20	25	Poor	Poor	Poor	Dormant	Poor	Fair	20	Callusing basal/lower trunk cavity to 8' above grade with significant decay; nesting cavities in upper scaffolds; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
1894	Blue Oak	( <i>Quercus douglasii</i> )		8	10	Poor	Poor	Poor to fair	Dormant	Poor	Fair	8	Callusing basal/lower trunk wound, southeast side, to 2' above grade; moderate decay; slightly above average amount of deadwood	<b>Recommend removal due to noted defects</b>
1895	Blue Oak	( <i>Quercus douglasii</i> )		14	23	Poor	Poor	Poor to fair	Dormant	Poor	Fair	14	Callusing basal/lower trunk cavity, southwest side, to 3' above grade; moderate decay; slightly above average amount of deadwood	<b>Recommend removal due to noted defects</b>
1896	Blue Oak	( <i>Quercus douglasii</i> )		10	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Trunk bends 4.5' above grade; growing at angle toward west; slightly above average amount of deadwood	Clean out crown
1897	Blue Oak	( <i>Quercus douglasii</i> )		24	13	Poor	Poor	Poor	Dormant	Poor	Poor to fair	24	Entire center of trunk is decaying and hollowed from grade to 20' above grade; three sprouts remain alive	<b>Recommend removal due to noted defects</b>
1898	Blue Oak	( <i>Quercus douglasii</i> )		34	41	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1899	Blue Oak	( <i>Quercus douglasii</i> )		24	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1900	Blue Oak	( <i>Quercus douglasii</i> )		20	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1901	Blue Oak	( <i>Quercus douglasii</i> )		24	28	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1902	Blue Oak	( <i>Quercus douglasii</i> )		25	33	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly one-sided south; slightly above average amount of deadwood	Clean out crown
1903	Blue Oak	( <i>Quercus douglasii</i> )		20	27	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided east; above average amount of deadwood	Clean out crown
1904	Blue Oak	( <i>Quercus douglasii</i> )		18	26	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1905	Blue Oak	( <i>Quercus douglasii</i> )		35	35	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1906	Blue Oak	( <i>Quercus douglasii</i> )		33	42	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing/suspicious wounds around root collar; leans north; slightly above average amount of deadwood	<b>Perform root collar excavation and inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and inspection</b>
1907	Blue Oak	( <i>Quercus douglasii</i> )		22	28	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suspicious areas around root collar; one-sided south; above average amount of deadwood	<b>Perform root collar excavation and inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and inspection</b>
1908	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1909	Blue Oak	( <i>Quercus douglasii</i> )		13	26	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans northwest; slightly above average amount of deadwood	Clean out crown
1910	Blue Oak	( <i>Quercus douglasii</i> )		13	26	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly south; slightly above average amount of deadwood	Clean out crown

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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1911	Interior Live Oak	<i>(Quercus wislizenii)</i>		31	30	Poor	Poor	Poor	Poor to fair	Poor	Poor to fair	31	Basal/lower trunk defects with significant decay, various locations; originally grew as a co-dominant, forking at 7' above grade; easterly one-half has failed; nesting cavities; large deadwood; sparse foliage	<i>Recommend removal due to noted defects</i>
1912	Blue Oak	<i>(Quercus douglasii)</i>		49	45	Poor	Poor to fair	Poor to fair	Dormant	Poor	Poor to fair	49	Callusing basal/buttreass wounds around 80% of root collar; fungal fruiting body, east side; above average amount of deadwood; poor bud formation	<i>Recommend removal due to noted defects</i>
1913	Blue Oak	<i>(Quercus douglasii)</i>		40	22	Poor	Poor	Poor	Dormant	Poor	Poor	40	Basal/lower trunk defects/decay, various locations; main stem failed 16' above grade; one 10-inch north-tending lateral remains	<i>Recommend removal due to noted defects</i>
1914	Blue Oak	<i>(Quercus douglasii)</i>		24	26	Poor	Poor to fair	Poor to fair	Dormant	Poor	Fair	24	Callusing basal/buttreass wounds, various locations, with moderate decay; leans north; additional suspect area in central trunk with bark deformation; slightly above average amount of deadwood	<i>Recommend removal due to noted defects</i>
1915	Blue Oak	<i>(Quercus douglasii)</i>		22	22	Poor	Poor	Poor	Dormant	Poor	Fair	22	Callusing basal/buttreass wounds with minor to moderate decay, various locations; leans south; additional wounding to large scaffolds with interior decay	<i>Recommend removal due to noted defects</i>
1916	Blue Oak	<i>(Quercus douglasii)</i>		32	35	Poor	Poor	Poor to fair	Dormant	Poor	Fair	32	Callusing basal/buttreass wounds with minor to moderate decay, various locations; leans south; several failed scaffolds with resulting decay in parent stems; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
1917	Blue Oak	<i>(Quercus douglasii)</i>		34	33	Poor	Poor	Poor	Dormant	Poor	Fair	34	Callusing basal/buttreass wounds with minor to moderate decay, various locations; lower trunk hollow from grade to 7' above grade; one-sided north; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
1918	Blue Oak	<i>(Quercus douglasii)</i>		18	27	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, west side; minor decay; slightly above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
1919	Blue Oak	<i>(Quercus douglasii)</i>		12	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1920	Blue Oak	<i>(Quercus douglasii)</i>		20	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1921	Blue Oak	<i>(Quercus douglasii)</i>		21	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1922	Blue Oak	<i>(Quercus douglasii)</i>		16	22	Poor	Poor	Poor	Dormant	Poor	Fair	16	Entire trunk from grade to 14' above grade is hollow; leans northeast; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
1923	Blue Oak	<i>(Quercus douglasii)</i>		16	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wounds, various locations; no decay obvious at this time; slightly above average amount of deadwood	Clean out crown
1924	Blue Oak	<i>(Quercus douglasii)</i>		10	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1925	Blue Oak	<i>(Quercus douglasii)</i>		23	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1926	Blue Oak	<i>(Quercus douglasii)</i>		14	31	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided west; above average amount of deadwood	Clean out crown
1927	Blue Oak	<i>(Quercus douglasii)</i>		19	26	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 2' above grade; slightly above average amount of deadwood	Clean out crown
1928	Blue Oak	<i>(Quercus douglasii)</i>		15	22	Poor	Poor	Poor to fair	Dormant	Poor	Fair	15	Callusing basal/lower trunk cavity, west side, to 3' above grade; moderate to significant decay; leans north; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
1929	Blue Oak	<i>(Quercus douglasii)</i>		22	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1930	Blue Oak	<i>(Quercus douglasii)</i>	9, 12	21	23	Poor	Poor	Poor to fair	Dormant	Poor	Fair	21	Callusing basal/lower trunk cavity to 2' above grade, west side; moderate decay; leans south and east; forks 3' above grade	<i>Recommend removal due to noted defects</i>
1931	Blue Oak	<i>(Quercus douglasii)</i>		8	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1932	Blue Oak	<i>(Quercus douglasii)</i>		13	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1933	Blue Oak	<i>(Quercus douglasii)</i>		12	15	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, north side; no obvious decay at this time; one-sided south; slightly above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
1934	Blue Oak	<i>(Quercus douglasii)</i>		8	23	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly south; slightly above average amount of deadwood	Clean out crown



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TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1935	Blue Oak	<i>(Quercus douglasii)</i>		9	22	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided southwest; slightly above average amount of deadwood	Clean out crown
1936	Blue Oak	<i>(Quercus douglasii)</i>		13	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1937	Blue Oak	<i>(Quercus douglasii)</i>		6	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1938	Blue Oak	<i>(Quercus douglasii)</i>		12	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided west; slightly above average amount of deadwood	Clean out crown
1939	Blue Oak	<i>(Quercus douglasii)</i>		9	27	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided west; slightly above average amount of deadwood	Clean out crown
1940	Blue Oak	<i>(Quercus douglasii)</i>		14	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1941	Blue Oak	<i>(Quercus douglasii)</i>		12	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1942	Blue Oak	<i>(Quercus douglasii)</i>		12	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1943	Blue Oak	<i>(Quercus douglasii)</i>		14	17	Fair	Fair	Poor	Dormant	Poor	Poor to fair		Excessive deadwood; poor bud formation	<i>None at this time; re-evaluate in Spring</i>
1944	Blue Oak	<i>(Quercus douglasii)</i>		20	26	Fair	Fair	Poor to fair	Dormant	Poor to fair	Poor to fair		Poor bud formation; above average amount of deadwood	<i>None at this time; re-evaluate in Spring</i>
1945	Blue Oak	<i>(Quercus douglasii)</i>		15	25	Poor	Poor	Poor to fair	Dormant	Poor	Fair	15	Callusing basal/lower trunk wound/cavity, primarily on west side, with moderate decay; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
1946	Blue Oak	<i>(Quercus douglasii)</i>		14	25	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly south; slightly above average amount of deadwood	Clean out crown
1947	Blue Oak	<i>(Quercus douglasii)</i>		19	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1948	Blue Oak	<i>(Quercus douglasii)</i>		7	7	Poor	Poor to fair	Poor to fair	Dormant	Poor	Fair	7	Callusing basal/lower trunk cavity, northwest side, to 1.5' above grade with interior decay; slightly one-sided southeast; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
1949	Blue Oak	<i>(Quercus douglasii)</i>		16	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1950	Blue Oak	<i>(Quercus douglasii)</i>		11	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1951	Blue Oak	<i>(Quercus douglasii)</i>		9	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1952	Blue Oak	<i>(Quercus douglasii)</i>		16	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1953	Blue Oak	<i>(Quercus douglasii)</i>		16	30	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided northeast; above average amount of deadwood	Clean out crown
1954	Blue Oak	<i>(Quercus douglasii)</i>		19	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1955	Blue Oak	<i>(Quercus douglasii)</i>		10	24	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
1956	Blue Oak	<i>(Quercus douglasii)</i>		14	24	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1957	Blue Oak	<i>(Quercus douglasii)</i>	10, 20	30	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1958	Blue Oak	<i>(Quercus douglasii)</i>		18	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1959	Blue Oak	<i>(Quercus douglasii)</i>	18, 19	37	30	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1960	Blue Oak	<i>(Quercus douglasii)</i>		26	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1961	Blue Oak	<i>(Quercus douglasii)</i>		27	35	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1962	Blue Oak	<i>(Quercus douglasii)</i>		15	29	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
1963	Blue Oak	<i>(Quercus douglasii)</i>		7	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1964	Blue Oak	<i>(Quercus douglasii)</i>		14	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1965	Blue Oak	<i>(Quercus douglasii)</i>		13	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1966	Blue Oak	<i>(Quercus douglasii)</i>		20	25	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 2' above grade; slightly above average amount of deadwood	Clean out crown
1967	Blue Oak	<i>(Quercus douglasii)</i>	11, 16	27	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1968	Blue Oak	<i>(Quercus douglasii)</i>		13	17	Fair	Poor	Poor to fair	Dormant	Poor	Fair	13	Callusing middle trunk cavity 5' to 8' above grade, east side, with interior decay; leans west; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
1969	Blue Oak	<i>(Quercus douglasii)</i>		14	22	Fair	Fair	Poor	Dormant	Poor to fair	Poor to fair		One-sided southeast; above average amount of deadwood; poor bud formation	<i>None at this time; re-evaluate in Spring</i>
1970	Blue Oak	<i>(Quercus douglasii)</i>		17	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1971	Blue Oak	<i>(Quercus douglasii)</i>		18	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1972	Blue Oak	<i>(Quercus douglasii)</i>		12	20	Poor	Poor	Poor	Dormant	Poor	Poor to fair	12	One-sided east; callusing basal/lower trunk wound to 8' above grade with moderate decay; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
1973	Blue Oak	<i>(Quercus douglasii)</i>		10	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided south; slightly above average amount of deadwood	Clean out crown
1974	Blue Oak	<i>(Quercus douglasii)</i>		11	24	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided west; slightly above average amount of deadwood	Clean out crown
1975	Blue Oak	<i>(Quercus douglasii)</i>		12	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

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TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1976	Blue Oak	( <i>Quercus douglasii</i> )		14	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1977	Blue Oak	( <i>Quercus douglasii</i> )		19	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1978	Blue Oak	( <i>Quercus douglasii</i> )		15	24	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal wound, west side; minor decay; callusing trunk wound, west side, 3' above grade with minor decay; above average amount of deadwood	<b><i>None at this time; longevity and integrity are questionable</i></b>
1979	Blue Oak	( <i>Quercus douglasii</i> )		11	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1980	Blue Oak	( <i>Quercus douglasii</i> )		11	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1981	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Poor	Poor	Poor to fair	Dormant	Poor	Fair	16	Callusing basal/lower trunk cavity to 4' above grade; significant decay; leans west	<b><i>Recommend removal due to noted defects</i></b>
1982	Blue Oak	( <i>Quercus douglasii</i> )		19	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1983	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided west; slightly above average amount of deadwood	Clean out crown
1984	Blue Oak	( <i>Quercus douglasii</i> )		19	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1985	Blue Oak	( <i>Quercus douglasii</i> )		14	27	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
1986	Blue Oak	( <i>Quercus douglasii</i> )		13	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1987	Blue Oak	( <i>Quercus douglasii</i> )		16	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1988	Blue Oak	( <i>Quercus douglasii</i> )		14	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
1989	Blue Oak	( <i>Quercus douglasii</i> )		18	24	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 2' above grade; slightly above average amount of deadwood	Clean out crown
1990	Blue Oak	( <i>Quercus douglasii</i> )		16	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1991	Blue Oak	( <i>Quercus douglasii</i> )		23	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1992	Blue Oak	( <i>Quercus douglasii</i> )	7, 15, 18	40	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1993	Blue Oak	( <i>Quercus douglasii</i> )		25	26	Poor	Poor	Poor to fair	Dormant	Poor	Fair	25	Callusing basal/lower trunk cavity to 6' above grade with significant decay; leans south	<b><i>Recommend removal due to noted defects</i></b>
1994	Blue Oak	( <i>Quercus douglasii</i> )		28	30	Poor	Poor	Poor to fair	Dormant	Poor	Fair	28	Entire lower portion of trunk is rotten and decayed; leans north	<b><i>Recommend removal due to noted defects</i></b>
1995	Blue Oak	( <i>Quercus douglasii</i> )		15	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, southwest side; no decay apparent at this time; slightly above average amount of deadwood	Clean out crown; <b><i>recommend annual inspection by an ISA Certified Arborist</i></b>
1996	Blue Oak	( <i>Quercus douglasii</i> )	16, 17	33	26	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Northwesterly stem has callusing basal/lower trunk wound with minor to moderate decay; leans north; slightly above average amount of deadwood	<b><i>Remove northerly stem</i></b> ; clean out crown of southerly stem
1997	Blue Oak	( <i>Quercus douglasii</i> )		8	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1998	Blue Oak	( <i>Quercus douglasii</i> )		20	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
1999	Blue Oak	( <i>Quercus douglasii</i> )		15	18	Poor	Poor	Poor to fair	Dormant	Poor	Fair	15	Callusing basal/lower trunk cavity, southwest side, to 4' above grade; significant decay; above average amount of deadwood	<b><i>Recommend removal due to noted defects</i></b>
2000	Blue Oak	( <i>Quercus douglasii</i> )		14	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided northeast; above average amount of deadwood	Clean out crown
2001	Blue Oak	( <i>Quercus douglasii</i> )		17	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2002	Blue Oak	( <i>Quercus douglasii</i> )		18	22	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2003	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
2004	Blue Oak	( <i>Quercus douglasii</i> )		19	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans southeast; scaffold failures in canopy; above average amount of deadwood	Clean out crown
2005	Blue Oak	( <i>Quercus douglasii</i> )		17	29	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans south; callusing trunk wound 10' above grade, north side; some interior decay; above average amount of deadwood	<b><i>Perform aerial inspection to further assess structural integrity of canopy and potential for hazard; provide further recommendations following aerial inspection</i></b>
2006	Blue Oak	( <i>Quercus douglasii</i> )		9	12	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2007	Blue Oak	( <i>Quercus douglasii</i> )		16	28	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans south; above average amount of deadwood	Clean out crown
2008	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2009	Blue Oak	( <i>Quercus douglasii</i> )		16	27	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
2010	Blue Oak	( <i>Quercus douglasii</i> )		18	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2011	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2012	Blue Oak	( <i>Quercus douglasii</i> )		9	26	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided southeast; above average amount of deadwood	Clean out crown
2013	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Fair	Dormant	Fair	Fair		Leans northeast; slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
2014	Blue Oak	( <i>Quercus douglasii</i> )		19	27	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal wounds/cavities with minor decay, various locations; inherently weak primary crotch; forks 3' to 5' above grade with included bark; above average amount of deadwood	<i>None at this time; longevity and structural integrity are questionable; MAY CREATE HAZARD IN A DEVELOPED ENVIRONMENT</i>
2015	Blue Oak	( <i>Quercus douglasii</i> )		7	17	Poor to fair	Poor	Poor to fair	Dormant	Poor to fair	Fair	7	Callusing lower trunk wound, southeast side, with moderate decay to 2' above grade; leans northwest; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
2016	Blue Oak	( <i>Quercus douglasii</i> )		18	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2017	Blue Oak	( <i>Quercus douglasii</i> )	9, 13	22	28	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
2018	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2019	Blue Oak	( <i>Quercus douglasii</i> )	6, 10	16	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2020	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2021	Blue Oak	( <i>Quercus douglasii</i> )		12	24	Poor	Poor	Poor to fair	Dormant	Poor	Fair	12	Callusing basal/lower trunk wounds to 7' above grade, north side, with significant decay; leans north	<i>Recommend removal due to noted defects</i>
2022	Blue Oak	( <i>Quercus douglasii</i> )		14	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2023	Blue Oak	( <i>Quercus douglasii</i> )		10	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2024	Blue Oak	( <i>Quercus douglasii</i> )		15	28	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, north side, to 2.5' above grade with moderate decay; slightly above average amount of deadwood	<i>None at this time; longevity and structural integrity are questionable; MAY CREATE HAZARD IN A DEVELOPED ENVIRONMENT</i>
2025	Blue Oak	( <i>Quercus douglasii</i> )		30	31	Fair	Poor	Poor	Dormant	Poor	Fair	30	Sounding indicates interior hollowing in lower trunk likely from old scaffold failure, west side, 14' above grade with large cavity; one-sided east; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
2026	Blue Oak	( <i>Quercus douglasii</i> )		10	21	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southeast; above average amount of deadwood	Clean out crown
2027	Blue Oak	( <i>Quercus douglasii</i> )		14	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2028	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided southwest; slightly above average amount of deadwood	Clean out crown
2029	Blue Oak	( <i>Quercus douglasii</i> )		12	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2030	Blue Oak	( <i>Quercus douglasii</i> )		18	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2031	Blue Oak	( <i>Quercus douglasii</i> )		9	16	Poor	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wounds with moderate decay, various locations; leans southwest; above average amount of deadwood	<i>None at this time; longevity and structural integrity are questionable</i>
2032	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Poor	Poor	Poor to fair	Dormant	Poor	Fair	9	Callusing basal/lower trunk wounds to 3.5' above grade with significant decay; leans southwest; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
2033	Blue Oak	( <i>Quercus douglasii</i> )		11	20	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, north side; no obvious decay at this time	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
2034	Blue Oak	( <i>Quercus douglasii</i> )		15	28	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
2035	Blue Oak	( <i>Quercus douglasii</i> )		36	34	Poor	Poor	Poor to fair	Dormant	Poor	Fair	36	Callusing basal/trunk wound, southwest side, with active bee hive; suspect cavity; trunk cavity, northeast side; old limb shed 7' above grade with interior hollowing; additional cavity, southeast side, 20' above grade with interior hollowing where majority of scaffolds attach	<i>Recommend removal due to noted defects</i>
2036	Blue Oak	( <i>Quercus douglasii</i> )		13	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2037	Blue Oak	( <i>Quercus douglasii</i> )		21	26	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2038	Blue Oak	( <i>Quercus douglasii</i> )		13	22	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, southwest side, to 2' above grade with moderate decay; one-sided northeast; above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
2039	Blue Oak	( <i>Quercus douglasii</i> )		31	33	Poor to fair	Poor	Poor to fair	Dormant	Poor	Fair	31	Exposed roots from erosion; some evidence of callused formation around root collar; open trunk cavity 14' above grade, southwest side; sounding indicates cavity extends into lower trunk; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
2040	Blue Oak	( <i>Quercus douglasii</i> )		12	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2041	Blue Oak	( <i>Quercus douglasii</i> )		10	14	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
2042	Blue Oak	( <i>Quercus douglasii</i> )		9	25	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; above average amount of deadwood	Clean out crown
2043	Blue Oak	( <i>Quercus douglasii</i> )		12	26	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided west; slightly above average amount of deadwood	Clean out crown



CARPENTER RANCH, LP  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
2044	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Poor	Poor	Poor to fair	Dormant	Poor	Fair	16	Callusing lower trunk wound, grade to 4' above grade, with significant hollowing; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
2045	Blue Oak	( <i>Quercus douglasii</i> )		19	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2046	Blue Oak	( <i>Quercus douglasii</i> )	9, 10	19	13	Poor	Poor	Poor to fair	Dormant	Poor	Fair	19	Callusing basal/lower trunk wounds, various locations, with moderate decay; additional wounds on scaffolds with decay evident; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
2047	Blue Oak	( <i>Quercus douglasii</i> )		18	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2048	Blue Oak	( <i>Quercus douglasii</i> )		34	30	Fair	Poor	Poor to fair	Dormant	Poor	Fair	34	Measured 2' above grade; forks 4.5' to 5' above grade; northerly stem has significant wounding with decay and grows horizontal to grade with hollowing likely extending into lower trunk	<i>Recommend removal due to noted defects</i>
2049	Blue Oak	( <i>Quercus douglasii</i> )		21	26	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2050	Blue Oak	( <i>Quercus douglasii</i> )		23	24	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided west; above average amount of deadwood	Clean out crown
2051	Blue Oak	( <i>Quercus douglasii</i> )		13	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2052	Blue Oak	( <i>Quercus douglasii</i> )	7, 14	21	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2053	Blue Oak	( <i>Quercus douglasii</i> )		14	23	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
2054	Blue Oak	( <i>Quercus douglasii</i> )		20	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2055	Blue Oak	( <i>Quercus douglasii</i> )		16	30	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
2056	Blue Oak	( <i>Quercus douglasii</i> )		19	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2057	Blue Oak	( <i>Quercus douglasii</i> )		29	43	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2058	Blue Oak	( <i>Quercus douglasii</i> )		13	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2059	Blue Oak	( <i>Quercus douglasii</i> )	7, 9	16	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2060	Blue Oak	( <i>Quercus douglasii</i> )		20	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2061	Blue Oak	( <i>Quercus douglasii</i> )		14	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2062	Blue Oak	( <i>Quercus douglasii</i> )		17	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2063	Blue Oak	( <i>Quercus douglasii</i> )		19	24	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
2064	Blue Oak	( <i>Quercus douglasii</i> )		21	28	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Inherently weak primary crotch with included bark; leans southwest; slightly above average amount of deadwood	Clean out crown; evaluate for installation of single direct pick cable system to help support primary crotch
2065	Blue Oak	( <i>Quercus douglasii</i> )		8	12	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2066	Blue Oak	( <i>Quercus douglasii</i> )		18	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2067	Blue Oak	( <i>Quercus douglasii</i> )		22	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2068	Blue Oak	( <i>Quercus douglasii</i> )	10, 22	32	30	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided east; above average amount of deadwood	Clean out crown
2069	Blue Oak	( <i>Quercus douglasii</i> )		13	24	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided north; slightly above average amount of deadwood	Clean out crown
2070	Blue Oak	( <i>Quercus douglasii</i> )		7	7	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2071	Blue Oak	( <i>Quercus douglasii</i> )		11	26	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided southeast; above average amount of deadwood	Clean out crown
2072	Blue Oak	( <i>Quercus douglasii</i> )		14	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2073	Blue Oak	( <i>Quercus douglasii</i> )		25	32	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2074	Blue Oak	( <i>Quercus douglasii</i> )		25	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2075	Blue Oak	( <i>Quercus douglasii</i> )		20	26	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans west; above average amount of deadwood	Clean out crown
2076	Blue Oak	( <i>Quercus douglasii</i> )		20	24	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2077	Blue Oak	( <i>Quercus douglasii</i> )		23	30	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2078	Blue Oak	( <i>Quercus douglasii</i> )		24	28	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2079	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2080	Interior Live Oak	( <i>Quercus wislizenii</i> )		26	22	Poor	Poor	Poor	Poor	Poor	Poor	26	Callusing basal/lower trunk wounds, various locations; minor to moderate decay; leans east; additional wounding and scaffold failures/dieback with decay into central stems; large deadwood; sparse foliage	<i>Recommend removal due to noted defects</i>
2081	Blue Oak	( <i>Quercus douglasii</i> )		18	29	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans southeast; above average amount of deadwood	Clean out crown
2082	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2083	Blue Oak	( <i>Quercus douglasii</i> )		31	33	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2084	Blue Oak	( <i>Quercus douglasii</i> )		25	30	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Minor mistletoe infestation; above average amount of deadwood	Clean out crown

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						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
2085	Blue Oak	( <i>Quercus douglasii</i> )		18	30	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided north; above average amount of deadwood	Clean out crown
2086	Blue Oak	( <i>Quercus douglasii</i> )		7	9	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided northwest; slightly above average amount of deadwood	Clean out crown
2087	Blue Oak	( <i>Quercus douglasii</i> )		21	27	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2088	Blue Oak	( <i>Quercus douglasii</i> )		27	30	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided south; slightly above average amount of deadwood	Clean out crown
2089	Blue Oak	( <i>Quercus douglasii</i> )		24	30	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2090	Blue Oak	( <i>Quercus douglasii</i> )		27	33	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2091	Blue Oak	( <i>Quercus douglasii</i> )		25	30	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided northeast; slightly above average amount of deadwood	Clean out crown
2092	Blue Oak	( <i>Quercus douglasii</i> )		17	30	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided northwest; slightly above average amount of deadwood	Clean out crown
2093	Blue Oak	( <i>Quercus douglasii</i> )		16	34	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
2094	Blue Oak	( <i>Quercus douglasii</i> )		13	28	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided west; growing horizontal 11' above grade; above average amount of deadwood	Clean out crown
2095	Blue Oak	( <i>Quercus douglasii</i> )		15	27	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided west; above average amount of deadwood	Clean out crown
2096	Blue Oak	( <i>Quercus douglasii</i> )		19	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2097	Blue Oak	( <i>Quercus douglasii</i> )		23	29	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans southwest; slightly above average amount of deadwood	Clean out crown
2098	Blue Oak	( <i>Quercus douglasii</i> )		25	32	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2099	Blue Oak	( <i>Quercus douglasii</i> )		22	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2100	Valley Oak	( <i>Quercus lobata</i> )		26	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2101	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided west; slightly above average amount of deadwood	Clean out crown
2102	Blue Oak	( <i>Quercus douglasii</i> )		23	26	Fair	Poor	Poor to fair	Dormant	Poor	Fair		Callusing lower trunk wounds, north and south sides; possible interior decay; above average amount of deadwood	<b><i>None at this time; longevity and structural integrity are questionable</i></b>
2103	Blue Oak	( <i>Quercus douglasii</i> )		15	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2104	Blue Oak	( <i>Quercus douglasii</i> )		21	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2105	Blue Oak	( <i>Quercus douglasii</i> )		26	29	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 3' above grade; above average amount of deadwood	Clean out crown
2106	Blue Oak	( <i>Quercus douglasii</i> )		20	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2107	Blue Oak	( <i>Quercus douglasii</i> )		12	19	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
2108	Blue Oak	( <i>Quercus douglasii</i> )		25	32	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2109	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2110	Blue Oak	( <i>Quercus douglasii</i> )		23	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2111	Blue Oak	( <i>Quercus douglasii</i> )		7	14	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, north side; minor decay; leans west; slightly above average amount of deadwood	Clean out crown; <b><i>recommend annual inspection by an ISA Certified Arborist</i></b>
2112	Blue Oak	( <i>Quercus douglasii</i> )		19	27	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided southeast; above average amount of deadwood	Clean out crown
2113	Blue Oak	( <i>Quercus douglasii</i> )		15	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2114	Blue Oak	( <i>Quercus douglasii</i> )		17	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2115	Blue Oak	( <i>Quercus douglasii</i> )		26	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2116	Blue Oak	( <i>Quercus douglasii</i> )		26	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2117	Blue Oak	( <i>Quercus douglasii</i> )		26	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2118	Blue Oak	( <i>Quercus douglasii</i> )		13	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans northwest; slightly above average amount of deadwood	Clean out crown
2119	Blue Oak	( <i>Quercus douglasii</i> )		13	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2120	Blue Oak	( <i>Quercus douglasii</i> )		10	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppress; leans north; slightly above average amount of deadwood	Clean out crown
2121	Blue Oak	( <i>Quercus douglasii</i> )	9, 9, 10	28	26	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2122	Blue Oak	( <i>Quercus douglasii</i> )		16	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2123	Blue Oak	( <i>Quercus douglasii</i> )		6	13	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
2124	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2125	Blue Oak	( <i>Quercus douglasii</i> )		18	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2126	Blue Oak	( <i>Quercus douglasii</i> )	14, 14	28	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2127	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Suppressed; one-sided west; slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
2128	Blue Oak	( <i>Quercus douglasii</i> )		17	26	Fair	Poor	Poor	Dormant	Poor	Fair	17	Callusing trunk wound 7' to 13' above grade; main stem dead; extensive interior decay; west-tending lateral remains	<b>Recommend removal due to noted defects</b>
2129	Blue Oak	( <i>Quercus douglasii</i> )		23	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2130	Blue Oak	( <i>Quercus douglasii</i> )		7	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2131	Blue Oak	( <i>Quercus douglasii</i> )		14	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2132	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2133	Blue Oak	( <i>Quercus douglasii</i> )		26	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2134	Blue Oak	( <i>Quercus douglasii</i> )		10	21	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
2135	Blue Oak	( <i>Quercus douglasii</i> )		16	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2136	Blue Oak	( <i>Quercus douglasii</i> )		10	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2137	Blue Oak	( <i>Quercus douglasii</i> )		12	24	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
2138	Blue Oak	( <i>Quercus douglasii</i> )		18	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2139	Blue Oak	( <i>Quercus douglasii</i> )		16	24	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2140	Blue Oak	( <i>Quercus douglasii</i> )		22	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2141	Blue Oak	( <i>Quercus douglasii</i> )		17	24	Poor to fair	Poor	Poor to fair	Dormant	Poor	Fair	17	Callusing basal/lower trunk wound, southwest side, to 3' above grade; moderate to significant interior decay; additional large deadwood with nesting cavities	<b>Recommend removal due to noted defects</b>
2142	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 2' above grade, forks 4' to 5' above grade; leans west; slightly above average amount of deadwood	Clean out crown
2143	Blue Oak	( <i>Quercus douglasii</i> )	12, 14	26	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2144	Blue Oak	( <i>Quercus douglasii</i> )		22	30	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2145	Blue Oak	( <i>Quercus douglasii</i> )		22	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2146	Blue Oak	( <i>Quercus douglasii</i> )	8, 11, 12, 13	44	28	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair	44	Forks 2' to 4' above grade with old wounds through primary and secondary crotches; moderate decay; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2147	Blue Oak	( <i>Quercus douglasii</i> )		15	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2148	Blue Oak	( <i>Quercus douglasii</i> )		21	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2149	Blue Oak	( <i>Quercus douglasii</i> )		22	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2150	Blue Oak	( <i>Quercus douglasii</i> )		15	27	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans southwest; above average amount of deadwood	Clean out crown
2151	Blue Oak	( <i>Quercus douglasii</i> )		16	22	Fair	Fair	Poor	Dormant	Poor to fair	Poor to fair		Excessive amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
2152	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2153	Blue Oak	( <i>Quercus douglasii</i> )		13	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2154	Blue Oak	( <i>Quercus douglasii</i> )		14	27	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
2155	Blue Oak	( <i>Quercus douglasii</i> )		11	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2156	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2157	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2158	Blue Oak	( <i>Quercus douglasii</i> )		14	26	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
2159	Blue Oak	( <i>Quercus douglasii</i> )		12	21	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided west; slightly above average amount of deadwood	Clean out crown
2160	Blue Oak	( <i>Quercus douglasii</i> )		13	22	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
2161	Blue Oak	( <i>Quercus douglasii</i> )		17	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2162	Blue Oak	( <i>Quercus douglasii</i> )		24	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2163	Blue Oak	( <i>Quercus douglasii</i> )		15	24	Fair	Fair	Poor to fair	Dormant	Poor to fair	Poor to fair		Excessive amount of deadwood; poor bud formation	<b>None at this time; re-evaluate in Spring</b>
2164	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2165	Blue Oak	( <i>Quercus douglasii</i> )		12	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2166	Blue Oak	( <i>Quercus douglasii</i> )		12	19	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2167	Blue Oak	( <i>Quercus douglasii</i> )		17	24	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair	17	Southerly co-dominant leader has several callusing injuries with interior decay	<b>Recommend removal due to noted defects</b>
2168	Blue Oak	( <i>Quercus douglasii</i> )		13	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2169	Blue Oak	( <i>Quercus douglasii</i> )		30	32	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2170	Blue Oak	( <i>Quercus douglasii</i> )		45	38	Fair	Poor	Poor	Dormant	Poor	Fair	45	Callusing trunk wound 3' to 10' above grade; significant interior decay; entire upright portion of tree arises at top of decay column and leans toward north	<b>Recommend removal due to noted defects</b>
2171	Blue Oak	( <i>Quercus douglasii</i> )		20	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2172	Blue Oak	( <i>Quercus douglasii</i> )		24	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
2173	Blue Oak	( <i>Quercus douglasii</i> )		21	26	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
2174	Blue Oak	( <i>Quercus douglasii</i> )		17	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2175	Blue Oak	( <i>Quercus douglasii</i> )		14	29	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans northeast; above average amount of deadwood	Clean out crown
2176	Interior Live Oak	( <i>Quercus wislizenii</i> )		13	31	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Suppressed; grows nearly horizontal toward northeast; slightly above average amount of deadwood	Clean out crown
2177	Blue Oak	( <i>Quercus douglasii</i> )		24	29	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
2178	Blue Oak	( <i>Quercus douglasii</i> )		12	26	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
2179	Blue Oak	( <i>Quercus douglasii</i> )		19	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2180	Blue Oak	( <i>Quercus douglasii</i> )		22	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2181	Blue Oak	( <i>Quercus douglasii</i> )		10	23	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
2182	Blue Oak	( <i>Quercus douglasii</i> )		11	28	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided southeast; above average amount of deadwood	Clean out crown
2183	Blue Oak	( <i>Quercus douglasii</i> )		22	26	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2184	Blue Oak	( <i>Quercus douglasii</i> )		21	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2185	Blue Oak	( <i>Quercus douglasii</i> )		23	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2186	Blue Oak	( <i>Quercus douglasii</i> )		17	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2187	Blue Oak	( <i>Quercus douglasii</i> )		11	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2188	Blue Oak	( <i>Quercus douglasii</i> )	13, 20	33	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2189	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2190	Blue Oak	( <i>Quercus douglasii</i> )	14, 14	28	31	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided south; slightly above average amount of deadwood	Clean out crown
2191	Blue Oak	( <i>Quercus douglasii</i> )		23	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2192	Blue Oak	( <i>Quercus douglasii</i> )		19	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2193	Blue Oak	( <i>Quercus douglasii</i> )		11	26	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; leans west; slightly above average amount of deadwood	Clean out crown
2194	Blue Oak	( <i>Quercus douglasii</i> )		18	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2195	Blue Oak	( <i>Quercus douglasii</i> )		18	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2196	Valley Oak	( <i>Quercus lobata</i> )		24	28	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2197	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2198	Blue Oak	( <i>Quercus douglasii</i> )		21	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2199	Blue Oak	( <i>Quercus douglasii</i> )		17	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2200	Blue Oak	( <i>Quercus douglasii</i> )		15	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2201	Blue Oak	( <i>Quercus douglasii</i> )		33	35	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Measured 3' above grade; originally grew as co-dominants; grafted to 6' above grade; slightly above average amount of deadwood	Clean out crown; evaluate for installation of rotary cable system
2202	Blue Oak	( <i>Quercus douglasii</i> )		21	28	Poor	Poor	Poor to fair	Dormant	Poor	Fair	21	Callusing lower trunk wound to 4' above grade; moderate interior decay; one-sided northeast; slightly above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2203	Blue Oak	( <i>Quercus douglasii</i> )		14	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2204	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2205	Blue Oak	( <i>Quercus douglasii</i> )	12, 18	30	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2206	Blue Oak	( <i>Quercus douglasii</i> )		15	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2207	Blue Oak	( <i>Quercus douglasii</i> )		10	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2208	Blue Oak	( <i>Quercus douglasii</i> )		19	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2209	Blue Oak	( <i>Quercus douglasii</i> )		26	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2210	Blue Oak	( <i>Quercus douglasii</i> )		14	28	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided south; slightly above average amount of deadwood	Clean out crown
2211	Blue Oak	( <i>Quercus douglasii</i> )		16	30	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided north; slightly above average amount of deadwood	Clean out crown
2212	Blue Oak	( <i>Quercus douglasii</i> )		23	32	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly north; slightly above average amount of deadwood	Clean out crown
2213	Blue Oak	( <i>Quercus douglasii</i> )		17	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2214	Blue Oak	( <i>Quercus douglasii</i> )		30	36	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2215	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2216	Blue Oak	( <i>Quercus douglasii</i> )		22	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2217	Blue Oak	( <i>Quercus douglasii</i> )		15	26	Fair	Fair	Poor to fair	Dormant	Fair	Poor to fair		Poor bud formation; above average amount of deadwood	<b>None at this time; re-evaluate in Spring</b>

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
2218	Blue Oak	( <i>Quercus douglasii</i> )		12	20	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal/trunk wounds with minor decay, various locations; leans slightly west; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
2219	Blue Oak	( <i>Quercus douglasii</i> )		15	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2220	Blue Oak	( <i>Quercus douglasii</i> )		19	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2221	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2222	Blue Oak	( <i>Quercus douglasii</i> )		22	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2223	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2224	Blue Oak	( <i>Quercus douglasii</i> )		17	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2225	Blue Oak	( <i>Quercus douglasii</i> )		23	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2226	Blue Oak	( <i>Quercus douglasii</i> )		11	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2227	Blue Oak	( <i>Quercus douglasii</i> )		21	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2228	Blue Oak	( <i>Quercus douglasii</i> )	18, 19	37	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2229	Blue Oak	( <i>Quercus douglasii</i> )		10	21	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; grows horizontal toward west; slightly above average amount of deadwood	Clean out crown
2230	Blue Oak	( <i>Quercus douglasii</i> )		20	28	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
2231	Blue Oak	( <i>Quercus douglasii</i> )		18	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2232	Blue Oak	( <i>Quercus douglasii</i> )		16	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2233	Blue Oak	( <i>Quercus douglasii</i> )		13	22	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
2234	Blue Oak	( <i>Quercus douglasii</i> )		13	29	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided south; slightly above average amount of deadwood	Clean out crown
2235	Blue Oak	( <i>Quercus douglasii</i> )		20	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2236	Blue Oak	( <i>Quercus douglasii</i> )	9, 10	19	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2237	Blue Oak	( <i>Quercus douglasii</i> )		13	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2238	Blue Oak	( <i>Quercus douglasii</i> )		15	28	Fair	Poor	Poor	Dormant	Poor	Fair	15	Lower trunk wound 3' to 7' above grade; significant interior decay encompasses over 50% of trunk; leans south; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2239	Blue Oak	( <i>Quercus douglasii</i> )		15	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2240	Blue Oak	( <i>Quercus douglasii</i> )		19	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2241	Blue Oak	( <i>Quercus douglasii</i> )		9	7	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2242	Blue Oak	( <i>Quercus douglasii</i> )		9	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2243	Blue Oak	( <i>Quercus douglasii</i> )		11	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2244	Blue Oak	( <i>Quercus douglasii</i> )		12	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2245	Blue Oak	( <i>Quercus douglasii</i> )		10	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2246	Blue Oak	( <i>Quercus douglasii</i> )		13	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2247	Blue Oak	( <i>Quercus douglasii</i> )		12	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2248	Blue Oak	( <i>Quercus douglasii</i> )		9	13	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2249	Blue Oak	( <i>Quercus douglasii</i> )		10	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2250	Blue Oak	( <i>Quercus douglasii</i> )		9	20	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, north side, to 3' above grade; minor to moderate interior decay; leans east; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
2251	Blue Oak	( <i>Quercus douglasii</i> )		11	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2252	Blue Oak	( <i>Quercus douglasii</i> )		10	19	Poor	Poor	Poor to fair	Dormant	Poor	Fair	10	Callusing basal/lower trunk wound to 3' above grade; moderate decay; leans north; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2253	Blue Oak	( <i>Quercus douglasii</i> )		15	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2254	Blue Oak	( <i>Quercus douglasii</i> )		26	33	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2255	Blue Oak	( <i>Quercus douglasii</i> )		15	24	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided east; slightly above average amount of deadwood	Clean out crown
2256	Blue Oak	( <i>Quercus douglasii</i> )		18	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2257	Blue Oak	( <i>Quercus douglasii</i> )		13	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2258	Blue Oak	( <i>Quercus douglasii</i> )		15	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2259	Blue Oak	( <i>Quercus douglasii</i> )		24	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2260	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Poor to fair	Poor	Poor to fair	Dormant	Poor	Fair	16	Callusing basal/lower trunk cavities, west side; moderate decay; leans west; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2261	Blue Oak	( <i>Quercus douglasii</i> )		34	35	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2262	Blue Oak	( <i>Quercus douglasii</i> )	12, 14	26	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
2263	Blue Oak	( <i>Quercus douglasii</i> )	21, 25	46	48	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Southerly stem leans south with abrupt bend 10' above grade; growing horizontal 8' to 9' above grade for its length; above average amount of deadwood	Clean out crown; install a post-brace; <b>recommend annual inspection by an ISA Certified Arborist</b>
2264	Blue Oak	( <i>Quercus douglasii</i> )		33	40	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	<b>Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection</b>
2265	Blue Oak	( <i>Quercus douglasii</i> )		25	40	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans northwest; above average amount of deadwood	<b>Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection</b>
2266	Blue Oak	( <i>Quercus douglasii</i> )		22	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2267	Blue Oak	( <i>Quercus douglasii</i> )		7	13	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided west; slightly above average amount of deadwood	Clean out crown
2268	Blue Oak	( <i>Quercus douglasii</i> )		20	24	Poor	Poor	Fair	Dormant	Poor	Fair		Callusing basal/lower trunk wound, north side, to 18-inches above grade; some decay noted; additional suspicious areas on south side; above average amount of deadwood	<b>Perform root collar excavation to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation/inspection</b>
2269	Blue Oak	( <i>Quercus douglasii</i> )		18	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2270	Blue Oak	( <i>Quercus douglasii</i> )		19	27	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided east; above average amount of deadwood	Clean out crown
2271	Blue Oak	( <i>Quercus douglasii</i> )		14	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2272	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2273	Blue Oak	( <i>Quercus douglasii</i> )		20	25	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2274	Blue Oak	( <i>Quercus douglasii</i> )		24	24	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 2' above grade; forks at 4.5' above grade; above average amount of deadwood	Clean out crown
2275	Blue Oak	( <i>Quercus douglasii</i> )		11	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2276	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Poor	Poor	Poor to fair	Dormant	Poor	Fair	9	Callusing basal/lower trunk cavity to 1' above grade, southeast side; one-sided east; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2277	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly west; slightly above average amount of deadwood	Clean out crown
2278	Blue Oak	( <i>Quercus douglasii</i> )		11	18	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2279	Blue Oak	( <i>Quercus douglasii</i> )		11	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans northwest; above average amount of deadwood	Clean out crown
2280	Blue Oak	( <i>Quercus douglasii</i> )		19	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2281	Blue Oak	( <i>Quercus douglasii</i> )		13	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2282	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2283	Blue Oak	( <i>Quercus douglasii</i> )		17	26	Fair	Poor	Poor to fair	Dormant	Poor	Fair	17	Callusing lower trunk cavity to 6' above grade with moderate interior decay; additional callusing wounds on scaffolding branches; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2284	Blue Oak	( <i>Quercus douglasii</i> )		15	22	Fair	Poor	Poor to fair	Dormant	Poor	Fair	15	Callusing lower trunk cavity grade to 6' above grade with moderate interior decay; trunk bends just above cavity toward east; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2285	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Poor	Poor to fair	Dormant	Poor to fair	Fair	14	Callusing lower trunk wound to 18-inches above grade with moderate decay; leans south; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2286	Blue Oak	( <i>Quercus douglasii</i> )		12	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2287	Blue Oak	( <i>Quercus douglasii</i> )		9	18	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans south; above average amount of deadwood	Clean out crown
2288	Blue Oak	( <i>Quercus douglasii</i> )		19	28	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
2289	Blue Oak	( <i>Quercus douglasii</i> )		15	24	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; above average amount of deadwood	Clean out crown
2290	Blue Oak	( <i>Quercus douglasii</i> )		19	26	Fair	Poor	Poor to fair	Dormant	Poor	Fair	19	Callusing lower trunk cavity with active bee hive; moderate to significant decay to 2' above grade; leans north; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2291	Blue Oak	( <i>Quercus douglasii</i> )		21	33	Fair	Fair	Fair	Dormant	Fair	Fair		Leans northwest; above average amount of deadwood	Clean out crown
2292	Blue Oak	( <i>Quercus douglasii</i> )		29	31	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2293	Blue Oak	( <i>Quercus douglasii</i> )		33	34	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2294	Blue Oak	( <i>Quercus douglasii</i> )		12	26	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided south; above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
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TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
2295	Blue Oak	( <i>Quercus douglasii</i> )		11	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided southeast; slightly above average amount of deadwood	Clean out crown
2296	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided west; above average amount of deadwood	Clean out crown
2297	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2298	Blue Oak	( <i>Quercus douglasii</i> )		9	21	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
2299	Blue Oak	( <i>Quercus douglasii</i> )		11	31	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
2300	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2301	Blue Oak	( <i>Quercus douglasii</i> )		25	30	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided east; above average amount of deadwood	Clean out crown
2302	Blue Oak	( <i>Quercus douglasii</i> )		19	23	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
2303	Blue Oak	( <i>Quercus douglasii</i> )	13, 13	26	24	Fair	Fair	Fair	Dormant	Fair	Fair		Forks at grade; slightly above average amount of deadwood	Clean out crown
2304	Blue Oak	( <i>Quercus douglasii</i> )		15	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2305	Interior Live Oak	( <i>Quercus wislizenii</i> )		12	14	Fair	Poor	Poor to fair	Fair	Poor	Fair	12	Main stem dead/failed 10' above grade; other large dead scaffolds, some with decay into parent stems	<b>Recommend removal due to noted defects</b>
2306	Blue Oak	( <i>Quercus douglasii</i> )		26	33	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2307	Blue Oak	( <i>Quercus douglasii</i> )		22	30	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided northeast; slightly above average amount of deadwood	Clean out crown
2308	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided west; slightly above average amount of deadwood	Clean out crown
2309	Blue Oak	( <i>Quercus douglasii</i> )		22	31	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly north; above average amount of deadwood	Clean out crown
2310	Blue Oak	( <i>Quercus douglasii</i> )		19	29	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided west; slightly above average amount of deadwood	Clean out crown
2311	Blue Oak	( <i>Quercus douglasii</i> )		9	16	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Trunk bends 6' above grade toward south; slightly above average amount of deadwood	Clean out crown
2312	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided west; slightly above average amount of deadwood	Clean out crown
2313	Blue Oak	( <i>Quercus douglasii</i> )	10, 10	20	22	Fair	Fair	Fair	Dormant	Fair	Fair		Leans northwest; slightly above average amount of deadwood	Clean out crown
2314	Blue Oak	( <i>Quercus douglasii</i> )		15	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2315	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2316	Blue Oak	( <i>Quercus douglasii</i> )		22	26	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2317	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Fair	Poor	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2318	Blue Oak	( <i>Quercus douglasii</i> )		7	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2319	Blue Oak	( <i>Quercus douglasii</i> )		8	17	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
2320	Blue Oak	( <i>Quercus douglasii</i> )	10, 17	27	26	Fair	Fair	Fair	Dormant	Fair	Fair		Forks at grade; above average amount of deadwood	Clean out crown
2321	Blue Oak	( <i>Quercus douglasii</i> )		14	26	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
2322	Blue Oak	( <i>Quercus douglasii</i> )	10, 15	25	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2323	Blue Oak	( <i>Quercus douglasii</i> )		9	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2324	Blue Oak	( <i>Quercus douglasii</i> )		9	13	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2325	Blue Oak	( <i>Quercus douglasii</i> )		14	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2326	Blue Oak	( <i>Quercus douglasii</i> )		8	7	Poor to fair	Poor to fair	Poor	Dormant	Poor	Fair		Callusing basal/trunk wound, northwest side; no obvious decay at this time; main stem dead 5' above grade with decay into center; two west-tending laterals remain	<b>None at this time</b>
2327	Blue Oak	( <i>Quercus douglasii</i> )	14, 16	30	26	Fair	Poor	Poor	Dormant	Poor	Fair	30	Inherently weak primary and secondary crotches with callusing wounds/interior decay; additional defects to scaffold limbs in upper canopy with moderate decay	<b>Recommend removal due to noted defects</b>
2328	Blue Oak	( <i>Quercus douglasii</i> )		21	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2329	Valley Oak	( <i>Quercus lobata</i> )		19	18	Fair	Poor	Poor	Dormant	Poor	Fair	19	Callusing trunk wounds with moderate interior decay, various locations; several scaffold failures with resulting decay into parent stems; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2330	Blue Oak	( <i>Quercus douglasii</i> )		13	19	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
2331	Blue Oak	( <i>Quercus douglasii</i> )		11	22	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
2332	Blue Oak	( <i>Quercus douglasii</i> )		23	28	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2333	Blue Oak	( <i>Quercus douglasii</i> )		20	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2334	Blue Oak	( <i>Quercus douglasii</i> )		24	30	Fair	Fair	Poor to fair	Dormant	Poor to fair	Poor to fair		Poor bud formation; above average amount of deadwood; sprout growth on large wood	<b>None at this time; re-evaluate in Spring</b>

CARPENTER RANCH, LP  
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						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
2335	Blue Oak	( <i>Quercus douglasii</i> )		21	26	Fair	Poor	Poor to fair	Dormant	Poor	Fair	21	Suppressed; one-sided southwest; callusing lower trunk cavity, south side, with moderate decay; slightly above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2336	Blue Oak	( <i>Quercus douglasii</i> )		13	28	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided south; above average amount of deadwood	Clean out crown
2337	Blue Oak	( <i>Quercus douglasii</i> )	12, 20	32	18	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2338	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2339	Blue Oak	( <i>Quercus douglasii</i> )		24	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2340	Blue Oak	( <i>Quercus douglasii</i> )		16	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2341	Blue Oak	( <i>Quercus douglasii</i> )	8, 14	22	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2342	Blue Oak	( <i>Quercus douglasii</i> )		21	28	Fair	Fair	Poor	Dormant	Poor to fair	Fair		Cavities notes; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
2343	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 2' above grade; above average amount of deadwood	Clean out crown
2344	Blue Oak	( <i>Quercus douglasii</i> )		10	24	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans northeast; slightly above average amount of deadwood	Clean out crown
2345	Blue Oak	( <i>Quercus douglasii</i> )	9, 13	22	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2346	Blue Oak	( <i>Quercus douglasii</i> )		8	19	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair	8	Callusing lower trunk cavity, north side; moderate decay; leans north; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2347	Blue Oak	( <i>Quercus douglasii</i> )		12	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2348	Blue Oak	( <i>Quercus douglasii</i> )		7	15	Poor	Poor	Poor to fair	Dormant	Poor	Fair		Callusing basal/lower trunk wound/cavity to 4' above grade with significant decay; leans northwest; above average amount of deadwood	Clean out crown
2349	Blue Oak	( <i>Quercus douglasii</i> )		18	29	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2350	Blue Oak	( <i>Quercus douglasii</i> )	8, 9	17	24	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided east; above average amount of deadwood	Clean out crown
2351	Blue Oak	( <i>Quercus douglasii</i> )		13	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2352	Blue Oak	( <i>Quercus douglasii</i> )		12	20	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair	12	Callusing trunk wounds, southwest side, 6' above grade at point of old limb dieback; moderate to significant decay into interior; remaining stem leans north; slightly above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2353	Blue Oak	( <i>Quercus douglasii</i> )		13	26	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
2354	Blue Oak	( <i>Quercus douglasii</i> )		9	14	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair	9	Callusing basal/lower trunk cavity, southwest side; moderate decay; slightly above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2355	Blue Oak	( <i>Quercus douglasii</i> )		8	17	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
2356	Blue Oak	( <i>Quercus douglasii</i> )		7	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2357	Blue Oak	( <i>Quercus douglasii</i> )		9	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2358	Blue Oak	( <i>Quercus douglasii</i> )		9	19	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southeast; slightly above average amount of deadwood	Clean out crown
2359	Blue Oak	( <i>Quercus douglasii</i> )		8	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided southwest; slightly above average amount of deadwood	Clean out crown
2360	Blue Oak	( <i>Quercus douglasii</i> )		10	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2361	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound/cavity, northeast side; minor decay; leans north; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
2362	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Poor	Poor to fair	Dormant	Poor	Fair		Callusing basal/lower trunk wound to 2.5' above grade; moderate decay; slightly above average amount of deadwood	<b>None at this time; longevity and structural integrity are questionable; MAY CREATE HAZARD IN A DEVELOPED ENVIRONMENT</b>
2363	Blue Oak	( <i>Quercus douglasii</i> )		9	18	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
2364	Blue Oak	( <i>Quercus douglasii</i> )		7	15	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing lower trunk wound/cavity, southeast side; minor decay; leans north; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
2365	Blue Oak	( <i>Quercus douglasii</i> )		10	21	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
2366	Blue Oak	( <i>Quercus douglasii</i> )		10	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2367	Blue Oak	( <i>Quercus douglasii</i> )		13	22	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided east; slightly above average amount of deadwood	Clean out crown
2368	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2369	Blue Oak	( <i>Quercus douglasii</i> )		6	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2370	Blue Oak	( <i>Quercus douglasii</i> )		7	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2371	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2372	Blue Oak	( <i>Quercus douglasii</i> )		6	16	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
2373	Blue Oak	( <i>Quercus douglasii</i> )		7	19	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans northeast; bends north; slightly above average amount of deadwood	Clean out crown
2374	Blue Oak	( <i>Quercus douglasii</i> )		10	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2375	Blue Oak	( <i>Quercus douglasii</i> )		9	13	Fair	Fair	Poor to fair	Dormant	Poor to fair	Poor to fair		Poor bud formation; above average amount of deadwood; sprouts on main trunk	<i>None at this time; re-evaluate in Spring</i>
2376	Blue Oak	( <i>Quercus douglasii</i> )		10	22	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
2377	Blue Oak	( <i>Quercus douglasii</i> )		7	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2378	Blue Oak	( <i>Quercus douglasii</i> )		14	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2379	Blue Oak	( <i>Quercus douglasii</i> )		16	30	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; above average amount of deadwood	Clean out crown
2380	Blue Oak	( <i>Quercus douglasii</i> )		19	24	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2381	Blue Oak	( <i>Quercus douglasii</i> )		19	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2382	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2383	Blue Oak	( <i>Quercus douglasii</i> )		12	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2384	Blue Oak	( <i>Quercus douglasii</i> )		9	28	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
2385	Blue Oak	( <i>Quercus douglasii</i> )		7	15	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
2386	Blue Oak	( <i>Quercus douglasii</i> )		11	23	Poor	Poor	Poor to fair	Dormant	Poor	Fair	11	Callusing basal/lower trunk wound/cavity to 4.5' above grade with moderate decay; leans southeast; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
2387	Blue Oak	( <i>Quercus douglasii</i> )		7	13	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southeast; slightly above average amount of deadwood	Clean out crown
2388	Blue Oak	( <i>Quercus douglasii</i> )		8	18	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided west; slightly above average amount of deadwood	Clean out crown
2389	Blue Oak	( <i>Quercus douglasii</i> )		7	21	Fair	Fair	Fair	Dormant	Fair	Fair		Leans northeast; slightly above average amount of deadwood	Clean out crown
2390	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2391	Blue Oak	( <i>Quercus douglasii</i> )		13	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2392	Blue Oak	( <i>Quercus douglasii</i> )		9	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2393	Blue Oak	( <i>Quercus douglasii</i> )		7	10	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2394	Blue Oak	( <i>Quercus douglasii</i> )		7	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2395	Blue Oak	( <i>Quercus douglasii</i> )		8	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2396	Blue Oak	( <i>Quercus douglasii</i> )		12	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided northwest; slightly above average amount of deadwood	Clean out crown
2397	Blue Oak	( <i>Quercus douglasii</i> )		15	28	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 2' above grade; leans east; slightly above average amount of deadwood	Clean out crown
2398	Blue Oak	( <i>Quercus douglasii</i> )		17	22	Poor	Poor	Poor	Dormant	Poor	Fair	17	Callusing basal/lower trunk cavity to 2' above grade with significant decay; leans east	<i>Recommend removal due to noted defects</i>
2399	Blue Oak	( <i>Quercus douglasii</i> )		17	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2400	Blue Oak	( <i>Quercus douglasii</i> )	10, 11	21	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2401	Blue Oak	( <i>Quercus douglasii</i> )		8	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2402	Blue Oak	( <i>Quercus douglasii</i> )		12	22	Poor	Poor	Poor to fair	Dormant	Poor	Fair	12	Callusing basal/lower trunk wound/cavity to 12' above grade; moderate decay; leans east	<i>Recommend removal due to noted defects</i>
2403	Blue Oak	( <i>Quercus douglasii</i> )		10	19	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
2404	Blue Oak	( <i>Quercus douglasii</i> )		6	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2405	Blue Oak	( <i>Quercus douglasii</i> )		9	11	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Poor to fair		Leans north; large deadwood; poor bud formation; some sprouts on larger wood	<i>None at this time; re-evaluate in Spring</i>
2406	Blue Oak	( <i>Quercus douglasii</i> )		20	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2407	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Lower trunk leans south then bends east; slightly above average amount of deadwood	Clean out crown
2408	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Poor	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2409	Blue Oak	( <i>Quercus douglasii</i> )	10, 11	21	29	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans southeast; above average amount of deadwood	Clean out crown
2410	Blue Oak	( <i>Quercus douglasii</i> )		11	22	Poor	Poor	Poor to fair	Dormant	Poor	Fair		Callusing basal/lower trunk cavity 2' above grade; moderate decay; leans southwest; above average amount of deadwood	Clean out crown
2411	Blue Oak	( <i>Quercus douglasii</i> )		14	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2412	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2413	Blue Oak	( <i>Quercus douglasii</i> )		8	10	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2414	Blue Oak	( <i>Quercus douglasii</i> )		10	13	Fair	Fair	Poor to fair	Dormant	Poor to fair	Poor to fair		Poor bud formation; above average amount of deadwood; sprout growth on large wood	<i>None at this time; re-evaluate in Spring</i>
2415	Blue Oak	( <i>Quercus douglasii</i> )		19	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2416	Blue Oak	( <i>Quercus douglasii</i> )		13	23	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
2417	Blue Oak	( <i>Quercus douglasii</i> )		11	24	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
2418	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing formation, north side, against rock; slightly above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
2419	Blue Oak	( <i>Quercus douglasii</i> )		9	11	Fair	Fair	Poor to fair	Dormant	Poor to fair	Poor to fair		Above average amount of deadwood	Clean out crown
2420	Blue Oak	( <i>Quercus douglasii</i> )		13	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2421	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Poor	Poor	Poor	Dormant	Poor	Fair	10	Callusing basal/lower trunk cavity to 1.5' above grade; moderate decay; leans north; large deadwood	<i>Recommend removal due to noted defects</i>
2422	Blue Oak	( <i>Quercus douglasii</i> )		10	21	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans south; bends west; slightly above average amount of deadwood	Clean out crown
2423	Blue Oak	( <i>Quercus douglasii</i> )		17	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2424	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2425	Blue Oak	( <i>Quercus douglasii</i> )		12	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
2426	Blue Oak	( <i>Quercus douglasii</i> )		12	21	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans southwest; large deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
2427	Blue Oak	( <i>Quercus douglasii</i> )	12, 19	31	32	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2428	Blue Oak	( <i>Quercus douglasii</i> )		19	26	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
2429	Blue Oak	( <i>Quercus douglasii</i> )		24	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2430	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2431	Blue Oak	( <i>Quercus douglasii</i> )		23	30	Poor	Poor	Poor to fair	Dormant	Poor	Fair		Callusing basal/lower trunk wound/cavity to 3' above grade, southwest side; significant decay; leans northeast; above average amount of deadwood	Clean out crown
2432	Blue Oak	( <i>Quercus douglasii</i> )		15	29	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly toward north; above average amount of deadwood	Clean out crown
2433	Blue Oak	( <i>Quercus douglasii</i> )		27	35	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2434	Blue Oak	( <i>Quercus douglasii</i> )		28	30	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 2' above grade; above average amount of deadwood	Clean out crown
2435	Blue Oak	( <i>Quercus douglasii</i> )	13, 17	30	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2436	Blue Oak	( <i>Quercus douglasii</i> )		24	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2437	Blue Oak	( <i>Quercus douglasii</i> )		20	26	Fair	Fair	Poor	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2438	Blue Oak	( <i>Quercus douglasii</i> )	9, 10	19	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2439	Blue Oak	( <i>Quercus douglasii</i> )		11	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2440	Blue Oak	( <i>Quercus douglasii</i> )		8	22	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided south; above average amount of deadwood	Clean out crown
2441	Blue Oak	( <i>Quercus douglasii</i> )		21	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2442	Blue Oak	( <i>Quercus douglasii</i> )	9, 9	18	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2443	Blue Oak	( <i>Quercus douglasii</i> )		17	28	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly north; above average amount of deadwood	Clean out crown
2444	Blue Oak	( <i>Quercus douglasii</i> )	8, 8	16	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2445	Blue Oak	( <i>Quercus douglasii</i> )		18	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2446	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2447	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Fair	Poor	Dormant	Poor	Fair	15	Two main scaffolds have moderate to significant defects 20' above grade; westerly stem broken; easterly stem has large cavity	<i>Recommend removal due to noted defects</i>
2448	Blue Oak	( <i>Quercus douglasii</i> )		17	25	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
2449	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2450	Blue Oak	( <i>Quercus douglasii</i> )		8	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2451	Blue Oak	( <i>Quercus douglasii</i> )	11, 11	22	20	Fair	Fair	Fair	Dormant	Fair	Fair		Forks 3' above grade; above average amount of deadwood	Clean out crown
2452	Blue Oak	( <i>Quercus douglasii</i> )		8	19	Poor	Poor	Poor	Dormant	Poor	Fair	8	Callusing basal/lower trunk cavity to 3' above grade, east side; moderate to significant decay; leans northwest; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
2453	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Poor	Poor	Poor to fair	Dormant	Poor	Fair	15	Callusing basal/lower trunk cavity to 6' above grade, east side; significant decay; leans west; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
2454	Blue Oak	( <i>Quercus douglasii</i> )		12	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2455	Blue Oak	( <i>Quercus douglasii</i> )		19	32	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2456	Blue Oak	( <i>Quercus douglasii</i> )	8, 9	17	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
2457	Blue Oak	( <i>Quercus douglasii</i> )		14	22	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans northeast; above average amount of deadwood	Clean out crown
2458	Blue Oak	( <i>Quercus douglasii</i> )		14	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2459	Blue Oak	( <i>Quercus douglasii</i> )		15	24	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Nesting cavity, north side, 5.5' above grade; some interior hollowing; one-sided west; above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
2460	Blue Oak	( <i>Quercus douglasii</i> )		21	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2461	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2462	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2463	Blue Oak	( <i>Quercus douglasii</i> )		19	28	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly south; above average amount of deadwood	Clean out crown
2464	Blue Oak	( <i>Quercus douglasii</i> )		12	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2465	Blue Oak	( <i>Quercus douglasii</i> )		12	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2466	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2467	Blue Oak	( <i>Quercus douglasii</i> )	7, 7	14	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2468	Blue Oak	( <i>Quercus douglasii</i> )	7, 13	20	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2469	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2470	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2471	Blue Oak	( <i>Quercus douglasii</i> )		12	19	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2472	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2473	Blue Oak	( <i>Quercus douglasii</i> )	9, 10	19	18	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided southwest; slightly above average amount of deadwood	Clean out crown
2474	Blue Oak	( <i>Quercus douglasii</i> )		22	23	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 2' above grade; forks 4' to 5' above grade; slightly above average amount of deadwood	Clean out crown
2475	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2476	Blue Oak	( <i>Quercus douglasii</i> )		26	32	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2477	Blue Oak	( <i>Quercus douglasii</i> )		17	22	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Nesting cavities 8' above grade, easterly fork of main trunk; slightly above average amount of deadwood	<i>Perform aerial inspection to further assess structural integrity of canopy and potential for hazard; provide further recommendations following aerial inspection</i>
2478	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
2479	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2480	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans south; above average amount of deadwood	Clean out crown
2481	Blue Oak	( <i>Quercus douglasii</i> )		9	18	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
2482	Blue Oak	( <i>Quercus douglasii</i> )		22	27	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, south side, to 1.5' above grade; possible interior decay; slightly above average amount of deadwood	<i>Perform root collar excavation and cavity inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and cavity inspection</i>
2483	Blue Oak	( <i>Quercus douglasii</i> )		20	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2484	Blue Oak	( <i>Quercus douglasii</i> )		12	23	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
2485	Blue Oak	( <i>Quercus douglasii</i> )	14, 20	34	25	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal wound/cavity, west side, to 8-inches above grade; some interior decay; obvious nesting cavities in large scaffolds	<i>Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection</i>
2486	Blue Oak	( <i>Quercus douglasii</i> )		6	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2487	Blue Oak	( <i>Quercus douglasii</i> )		19	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2488	Blue Oak	( <i>Quercus douglasii</i> )		18	26	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
2489	Blue Oak	( <i>Quercus douglasii</i> )		22	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2490	Blue Oak	( <i>Quercus douglasii</i> )		13	25	Fair	Fair	Poor	Dormant	Poor to fair	Fair		Above average amount of deadwood	Clean out crown
2491	Blue Oak	( <i>Quercus douglasii</i> )		13	21	Fair	Poor	Poor to fair	Dormant	Poor	Fair	13	Callusing lower trunk wound/cavity to 3' above grade with interior hollowing; leans north; excessive amount of deadwood	<i>Recommend removal due to noted defects</i>
2492	Blue Oak	( <i>Quercus douglasii</i> )		18	27	Fair	Fair	Poor	Dormant	Poor to fair	Fair		Above average amount of deadwood	Clean out crown
2493	Blue Oak	( <i>Quercus douglasii</i> )		10	11	Poor	Poor	Poor	Dormant	Poor	Poor to fair	10	Callusing basal/lower trunk cavity to 1.5' above grade; moderate interior decay; excessive amount of deadwood; poor bud formation; sprout growth on large wood	<i>Recommend removal due to noted defects</i>
2494	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2495	Blue Oak	( <i>Quercus douglasii</i> )		23	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
2496	Blue Oak	( <i>Quercus douglasii</i> )	12, 12	24	23	Fair	Poor	Poor to fair	Dormant	Poor	Fair	24	Forks 1.5' above grade; callusing lower trunk wound through primary crotch with exposed wood; minor decay; evidence of stress fracture	<b>Recommend removal due to noted defects</b>
2497	Blue Oak	( <i>Quercus douglasii</i> )		15	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2498	Blue Oak	( <i>Quercus douglasii</i> )		18	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2499	Blue Oak	( <i>Quercus douglasii</i> )	7, 12	19	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair	19	Callusing trunk wound, north side, to 8' above grade; minor to moderate decay; excessive amount of deadwood	<b>Recommend removal due to noted defects</b>
2500	Blue Oak	( <i>Quercus douglasii</i> )		17	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2501	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2502	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Nesting cavity, east side, 6' above grade; interior hollowing; one-sided west; above average amount of deadwood	<b>Perform aerial inspection to further assess structural integrity of canopy and potential for hazard; provide further recommendations following aerial inspection</b>
2503	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2504	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2505	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing trunk wound, north side, 4.5' above grade; some interior hollowing; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
2506	Blue Oak	( <i>Quercus douglasii</i> )		13	22	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
2507	Blue Oak	( <i>Quercus douglasii</i> )	9, 11	20	24	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Nesting cavities	Clean out crown
2508	Blue Oak	( <i>Quercus douglasii</i> )		7	11	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
2509	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Poor	Poor	Fair	Dormant	Poor	Fair	15	Callusing basal/lower trunk wound/cavity to 3' above grade; moderate decay; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2510	Blue Oak	( <i>Quercus douglasii</i> )		10	20	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
2511	Blue Oak	( <i>Quercus douglasii</i> )		17	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2512	Blue Oak	( <i>Quercus douglasii</i> )		12	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2513	Blue Oak	( <i>Quercus douglasii</i> )		11	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2514	Blue Oak	( <i>Quercus douglasii</i> )		18	23	Fair	Fair	Poor	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2515	Blue Oak	( <i>Quercus douglasii</i> )	10, 10	20	20	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Forks at grade; grafts 3' above grade; slightly above average amount of deadwood	Clean out crown
2516	Blue Oak	( <i>Quercus douglasii</i> )		25	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2517	Blue Oak	( <i>Quercus douglasii</i> )		18	21	Fair	Fair	Fair	Dormant	Fair	Fair		Callusing seam, west side; no obvious decay at this time; slightly above average amount of deadwood	Clean out crown
2518	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; above average amount of deadwood	Clean out crown
2519	Blue Oak	( <i>Quercus douglasii</i> )		17	23	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wounds; no obvious decay at this time; several areas of exfoliated bark; large deadwood and several failures in upper canopy; one-sided west	<b>None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT</b>
2520	Blue Oak	( <i>Quercus douglasii</i> )		27	30	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2521	Blue Oak	( <i>Quercus douglasii</i> )		12	24	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; above average amount of deadwood	Clean out crown
2522	Blue Oak	( <i>Quercus douglasii</i> )		11	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2523	Blue Oak	( <i>Quercus douglasii</i> )		15	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2524	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Poor to fair	Fair	Dormant	Fair	Fair		Callusing lower trunk seam; possible interior decay; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
2525	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2526	Blue Oak	( <i>Quercus douglasii</i> )	11, 13	24	23	Fair	Poor	Fair	Dormant	Poor	Fair	24	Callusing lower trunk cavity with significant interior hollowing; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2527	Blue Oak	( <i>Quercus douglasii</i> )		13	22	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
2528	Blue Oak	( <i>Quercus douglasii</i> )		7	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2529	Blue Oak	( <i>Quercus douglasii</i> )		15	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2530	Blue Oak	( <i>Quercus douglasii</i> )		13	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2531	Blue Oak	( <i>Quercus douglasii</i> )		17	28	Fair	Fair	Fair	Dormant	Fair	Fair		Leans northwest; slightly above average amount of deadwood	Clean out crown
2532	Blue Oak	( <i>Quercus douglasii</i> )		7	16	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
2533	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2534	Blue Oak	( <i>Quercus douglasii</i> )		14	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2535	Blue Oak	( <i>Quercus douglasii</i> )		20	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
2536	Blue Oak	( <i>Quercus douglasii</i> )		14	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2537	Blue Oak	( <i>Quercus douglasii</i> )		15	26	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2538	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2539	Blue Oak	( <i>Quercus douglasii</i> )		11	20	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided north; above average amount of deadwood	Clean out crown
2540	Blue Oak	( <i>Quercus douglasii</i> )	11, 17	28	26	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
2541	Blue Oak	( <i>Quercus douglasii</i> )		17	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2542	Blue Oak	( <i>Quercus douglasii</i> )		13	20	Fair	Fair	Fair	Dormant	Fair	Fair		Callusing wound, south side; no obvious decay at this time; slightly above average amount of deadwood	Clean out crown
2543	Blue Oak	( <i>Quercus douglasii</i> )		23	28	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2544	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Poor	Fair	Dormant	Poor	Fair	7	Callusing lower trunk cavity, east side, 3' to 4' above grade with significant decay	<b>Recommend removal due to noted defects</b>
2545	Blue Oak	( <i>Quercus douglasii</i> )		18	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2546	Blue Oak	( <i>Quercus douglasii</i> )		10	17	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
2547	Blue Oak	( <i>Quercus douglasii</i> )		8	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2548	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2549	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2550	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2551	Blue Oak	( <i>Quercus douglasii</i> )		13	23	Poor	Poor	Poor	Dormant	Poor	Fair	13	Callusing basal/lower trunk wounds/cavities to 18-inches above grade on east side and 5' above grade on west side; leans northwest; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2552	Blue Oak	( <i>Quercus douglasii</i> )		22	23	Poor	Poor	Poor	Dormant	Poor	Fair	22	Callusing trunk cavities, various locations; most pronounced on south side; significant interior decay and hollowing	<b>Recommend removal due to noted defects</b>
2553	Blue Oak	( <i>Quercus douglasii</i> )		8	16	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
2554	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Poor to fair	Poor	Fair	Dormant	Poor	Fair	16	Callusing lower trunk wounds encompassing approximately 50% of lower trunk to 6' above grade; some decay	<b>Recommend removal due to noted defects</b>
2555	Blue Oak	( <i>Quercus douglasii</i> )		11	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2556	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
2557	Blue Oak	( <i>Quercus douglasii</i> )		19	24	Fair	Poor	Poor	Dormant	Poor	Fair	19	Callusing lower trunk wounds with moderate to significant decay; leans west	<b>Recommend removal due to noted defects</b>
2558	Blue Oak	( <i>Quercus douglasii</i> )		19	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2559	Blue Oak	( <i>Quercus douglasii</i> )		23	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2560	Blue Oak	( <i>Quercus douglasii</i> )		26	31	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly south; above average amount of deadwood	Clean out crown
2561	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided west; above average amount of deadwood	Clean out crown
2562	Blue Oak	( <i>Quercus douglasii</i> )		23	29	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2563	Blue Oak	( <i>Quercus douglasii</i> )		10	6	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; limited lateral growth	Clean out crown
2564	Blue Oak	( <i>Quercus douglasii</i> )		26	30	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided east; above average amount of deadwood	Clean out crown
2565	Blue Oak	( <i>Quercus douglasii</i> )		9	18	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
2566	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2567	Blue Oak	( <i>Quercus douglasii</i> )	9, 22	31	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2568	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2569	Blue Oak	( <i>Quercus douglasii</i> )		19	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2570	Blue Oak	( <i>Quercus douglasii</i> )		16	24	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 3' above grade; forks at 5' above grade; slightly above average amount of deadwood	Clean out crown
2571	Blue Oak	( <i>Quercus douglasii</i> )		12	23	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
2572	Blue Oak	( <i>Quercus douglasii</i> )		17	24	Fair	Poor	Fair	Dormant	Poor	Fair	17	Callusing trunk wound, southeast side, 7' to 8' above grade with significant interior decay just below primary crotch; leans southwest; slightly above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2573	Blue Oak	( <i>Quercus douglasii</i> )		8	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2574	Blue Oak	( <i>Quercus douglasii</i> )		12	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2575	Blue Oak	( <i>Quercus douglasii</i> )		21	23	Poor to fair	Fair	Poor to fair	Dormant	Poor to fair	Poor to fair		Basal/trunk cavity, north side, below ground level; appears to be rodent burrow; above average amount of deadwood; poor bud formation; sprout growth on larger wood	<b>None at this time; re-evaluate in Spring</b>
2576	Blue Oak	( <i>Quercus douglasii</i> )	11, 12	23	22	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Forks 3.5' above grade; easterly stem broken 10' above grade; remaining stem tends to be one-sided west; slightly above average amount of deadwood	<b>None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT</b>



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
2577	Blue Oak	( <i>Quercus douglasii</i> )	7, 12	19	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2578	Blue Oak	( <i>Quercus douglasii</i> )		13	23	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
2579	Blue Oak	( <i>Quercus douglasii</i> )		17	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2580	Blue Oak	( <i>Quercus douglasii</i> )		20	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2581	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Poor	Poor	Fair	Dormant	Poor	Fair	10	Callusing basal/lower trunk wounds, north and south sides, most significant on southwest, to 4.5' above grade with moderate decay; leans north	<b>Recommend removal due to noted defects</b>
2582	Blue Oak	( <i>Quercus douglasii</i> )		9	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2583	Blue Oak	( <i>Quercus douglasii</i> )	16, 19	35	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2584	Blue Oak	( <i>Quercus douglasii</i> )		22	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2585	Blue Oak	( <i>Quercus douglasii</i> )		7	13	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
2586	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2587	Blue Oak	( <i>Quercus douglasii</i> )	11, 15	26	27	Poor	Poor	Poor to fair	Dormant	Poor	Fair	26	Callusing basal/lower trunk cavity, west side, to 1' above grade; significant decay and active bee hive; leans east; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2588	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
2589	Blue Oak	( <i>Quercus douglasii</i> )		7	7	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2590	Blue Oak	( <i>Quercus douglasii</i> )		20	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2591	Blue Oak	( <i>Quercus douglasii</i> )		17	29	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided southwest; slightly above average amount of deadwood	Clean out crown
2592	Blue Oak	( <i>Quercus douglasii</i> )		20	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2593	Blue Oak	( <i>Quercus douglasii</i> )		24	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2594	Blue Oak	( <i>Quercus douglasii</i> )		20	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2595	Blue Oak	( <i>Quercus douglasii</i> )		18	23	Fair	Fair	Poor	Dormant	Poor to fair	Fair		Above average amount of deadwood	Clean out crown
2596	Blue Oak	( <i>Quercus douglasii</i> )		23	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2597	Blue Oak	( <i>Quercus douglasii</i> )		21	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2598	Blue Oak	( <i>Quercus douglasii</i> )		20	27	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2599	Blue Oak	( <i>Quercus douglasii</i> )		14	23	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; above average amount of deadwood	Clean out crown
2600	Blue Oak	( <i>Quercus douglasii</i> )		16	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2601	Blue Oak	( <i>Quercus douglasii</i> )		17	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2602	Blue Oak	( <i>Quercus douglasii</i> )		10	8	Poor	Poor	Poor	Dormant	Poor	Fair	10	Callusing basal/lower trunk wound/cavity, southeast and northwest sides; moderate decay; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2603	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2604	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2605	Blue Oak	( <i>Quercus douglasii</i> )		13	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2606	Blue Oak	( <i>Quercus douglasii</i> )		14	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2607	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2608	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
2609	Blue Oak	( <i>Quercus douglasii</i> )		19	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2610	Blue Oak	( <i>Quercus douglasii</i> )		9	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2611	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
2612	Blue Oak	( <i>Quercus douglasii</i> )		15	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2613	Blue Oak	( <i>Quercus douglasii</i> )		13	23	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
2614	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing trunk wound, southwest side; old limb dieback; minor interior decay; one-sided north; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
2615	Blue Oak	( <i>Quercus douglasii</i> )		19	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2616	Blue Oak	( <i>Quercus douglasii</i> )		17	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2617	Blue Oak	( <i>Quercus douglasii</i> )		17	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2618	Blue Oak	( <i>Quercus douglasii</i> )		13	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2619	Blue Oak	( <i>Quercus douglasii</i> )		17	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2620	Blue Oak	( <i>Quercus douglasii</i> )		17	24	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Abnormal basal swelling likely due to old fire damage	<b>Perform root collar excavation to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation</b>

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
2621	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2622	Blue Oak	( <i>Quercus douglasii</i> )		8	9	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans northwest; above average amount of deadwood	Clean out crown
2623	Blue Oak	( <i>Quercus douglasii</i> )		17	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2624	Blue Oak	( <i>Quercus douglasii</i> )		9	26	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
2625	Blue Oak	( <i>Quercus douglasii</i> )		11	22	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; above average amount of deadwood	Clean out crown
2626	Blue Oak	( <i>Quercus douglasii</i> )		10	22	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
2627	Blue Oak	( <i>Quercus douglasii</i> )		12	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided northeast; above average amount of deadwood	Clean out crown
2628	Blue Oak	( <i>Quercus douglasii</i> )		8	18	Poor	Poor to fair	Poor to fair	Dormant	Poor	Fair	8	Callusing basal/lower trunk cavity, southwest side; moderate decay; leans north; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2629	Blue Oak	( <i>Quercus douglasii</i> )		9	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2630	Blue Oak	( <i>Quercus douglasii</i> )		6	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2631	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2632	Blue Oak	( <i>Quercus douglasii</i> )		13	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans north; above average amount of deadwood	Clean out crown
2633	Blue Oak	( <i>Quercus douglasii</i> )		14	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided east; above average amount of deadwood	Clean out crown
2634	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2635	Blue Oak	( <i>Quercus douglasii</i> )		12	27	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided southeast; above average amount of deadwood	Clean out crown
2636	Blue Oak	( <i>Quercus douglasii</i> )		6	8	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Main stem broke 7' above grade; slightly above average amount of deadwood	Clean out crown
2637	Blue Oak	( <i>Quercus douglasii</i> )		14	24	Fair	Fair	Fair	Dormant	Fair	Fair		Leans northeast; slightly above average amount of deadwood	Clean out crown
2638	Blue Oak	( <i>Quercus douglasii</i> )		15	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2639	Blue Oak	( <i>Quercus douglasii</i> )		11	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2640	Blue Oak	( <i>Quercus douglasii</i> )		22	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2641	Blue Oak	( <i>Quercus douglasii</i> )		17	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2642	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2643	Blue Oak	( <i>Quercus douglasii</i> )		12	19	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2644	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Basal cavity, south side, at ground level; minor decay; leans south; above average amount of deadwood	<b>None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT</b>
2645	Blue Oak	( <i>Quercus douglasii</i> )		11	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2646	Blue Oak	( <i>Quercus douglasii</i> )	14, 15	29	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2647	Blue Oak	( <i>Quercus douglasii</i> )		9	11	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2648	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2649	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2650	Blue Oak	( <i>Quercus douglasii</i> )		14	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2651	Blue Oak	( <i>Quercus douglasii</i> )		14	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2652	Blue Oak	( <i>Quercus douglasii</i> )		17	26	Poor	Poor	Poor to fair	Dormant	Poor	Fair	17	Callusing basal/lower trunk wound/cavity, southeast side; moderate decay; leans southeast; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2653	Blue Oak	( <i>Quercus douglasii</i> )		14	23	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
2654	Blue Oak	( <i>Quercus douglasii</i> )		10	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2655	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Poor to fair	11	Callusing basal/lower trunk wound, southeast and southwest sides; minor to moderate decay; above average amount of deadwood; poor bud formation; sprout growth on large wood	<b>Recommend removal due to noted defects</b>
2656	Blue Oak	( <i>Quercus douglasii</i> )		7	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2657	Blue Oak	( <i>Quercus douglasii</i> )		9	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2658	Blue Oak	( <i>Quercus douglasii</i> )		10	19	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2659	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2660	Blue Oak	( <i>Quercus douglasii</i> )		12	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2661	Blue Oak	( <i>Quercus douglasii</i> )		14	24	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided northwest; above average amount of deadwood	Clean out crown
2662	Blue Oak	( <i>Quercus douglasii</i> )		26	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2663	Blue Oak	( <i>Quercus douglasii</i> )		14	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2664	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2665	Blue Oak	( <i>Quercus douglasii</i> )		14	16	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Secondary stem dead, west side; above average amount of deadwood	Clean out crown
2666	Blue Oak	( <i>Quercus douglasii</i> )	10, 11	21	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
2667	Blue Oak	( <i>Quercus douglasii</i> )		13	20	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2668	Blue Oak	( <i>Quercus douglasii</i> )		16	20	Poor	Poor	Poor to fair	Dormant	Poor	Fair	16	Callusing basal/lower trunk cavity to 5' above grade, south side; significant decay; leans east; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2669	Blue Oak	( <i>Quercus douglasii</i> )		15	22	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided southeast; above average amount of deadwood	Clean out crown
2670	Blue Oak	( <i>Quercus douglasii</i> )		15	24	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2671	Blue Oak	( <i>Quercus douglasii</i> )		10	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2672	Blue Oak	( <i>Quercus douglasii</i> )		13	22	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans northeast; above average amount of deadwood	Clean out crown
2673	Blue Oak	( <i>Quercus douglasii</i> )		11	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided northeast; slightly above average amount of deadwood	Clean out crown
2674	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2675	Blue Oak	( <i>Quercus douglasii</i> )		17	19	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Nesting cavities	Clean out crown
2676	Blue Oak	( <i>Quercus douglasii</i> )		11	25	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
2677	Blue Oak	( <i>Quercus douglasii</i> )		12	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2678	Blue Oak	( <i>Quercus douglasii</i> )		18	23	Poor	Poor	Poor	Dormant	Poor	Fair	18	Callusing basal/lower trunk wounds, various locations; significant decay; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2679	Blue Oak	( <i>Quercus douglasii</i> )		17	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2680	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2681	Blue Oak	( <i>Quercus douglasii</i> )		29	32	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2682	Blue Oak	( <i>Quercus douglasii</i> )		18	23	Poor	Poor	Poor	Dormant	Poor	Fair	18	Callusing basal/lower trunk wound, south side, with moderate decay to 6' above grade; leans south; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2683	Blue Oak	( <i>Quercus douglasii</i> )		18	29	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; above average amount of deadwood	Clean out crown
2684	Blue Oak	( <i>Quercus douglasii</i> )		24	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2685	Blue Oak	( <i>Quercus douglasii</i> )		11	22	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; above average amount of deadwood	Clean out crown
2686	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2687	Blue Oak	( <i>Quercus douglasii</i> )		8	17	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; above average amount of deadwood	Clean out crown
2688	Blue Oak	( <i>Quercus douglasii</i> )		13	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2689	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2690	Blue Oak	( <i>Quercus douglasii</i> )		11	22	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2691	Blue Oak	( <i>Quercus douglasii</i> )		17	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2692	Blue Oak	( <i>Quercus douglasii</i> )		19	25	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
2693	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2694	Blue Oak	( <i>Quercus douglasii</i> )		8	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
2695	Blue Oak	( <i>Quercus douglasii</i> )		13	20	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2696	Blue Oak	( <i>Quercus douglasii</i> )		22	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2697	Blue Oak	( <i>Quercus douglasii</i> )		25	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2698	Blue Oak	( <i>Quercus douglasii</i> )		13	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2699	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2700	Blue Oak	( <i>Quercus douglasii</i> )		14	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2701	Blue Oak	( <i>Quercus douglasii</i> )		11	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2702	Blue Oak	( <i>Quercus douglasii</i> )		7	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2703	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Fair	Fair	Dormant	Fair	Fair		Girdling wire, lower trunk; slightly above average amount of deadwood	Cut wire at trunk; clean out crown
2704	Blue Oak	( <i>Quercus douglasii</i> )		8	11	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2705	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2706	Blue Oak	( <i>Quercus douglasii</i> )		11	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2707	Blue Oak	( <i>Quercus douglasii</i> )		14	22	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
2708	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, southwest side; minor decay; bird nesting cavity, east side; trunk hollowing 6' above grade; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
2709	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2710	Blue Oak	( <i>Quercus douglasii</i> )		17	23	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
2711	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2712	Blue Oak	( <i>Quercus douglasii</i> )		20	24	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2713	Blue Oak	( <i>Quercus douglasii</i> )		11	20	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southeast; slightly above average amount of deadwood	Clean out crown



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
2714	Blue Oak	( <i>Quercus douglasii</i> )		10	17	Poor	Poor	Poor to fair	Dormant	Poor	Fair	10	Callusing basal/lower trunk cavity, north side; moderate decay; leans south; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
2715	Blue Oak	( <i>Quercus douglasii</i> )		16	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2716	Blue Oak	( <i>Quercus douglasii</i> )		21	25	Poor	Poor	Poor to fair	Dormant	Poor	Fair	21	Callusing lower trunk wound, west side; moderate interior decay; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
2717	Blue Oak	( <i>Quercus douglasii</i> )		14	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2718	Blue Oak	( <i>Quercus douglasii</i> )		16	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2719	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Poor to fair	Fair	Dormant	Poor	Fair	14	Callusing lower trunk cavity, northeast side; moderate decay; leans north; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
2720	Blue Oak	( <i>Quercus douglasii</i> )		17	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2721	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southeast; above average amount of deadwood	Clean out crown
2722	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2723	Blue Oak	( <i>Quercus douglasii</i> )		21	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2724	Blue Oak	( <i>Quercus douglasii</i> )		18	21	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Measured 2' above grade; forks 4.5' to 5' above grade; callusing trunk wound, north side; some decay; above average amount of deadwood	<i>None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT</i>
2725	Blue Oak	( <i>Quercus douglasii</i> )		20	26	Poor	Poor	Poor to fair	Dormant	Poor	Fair	20	Callusing basal/lower trunk cavity, southeast side, to 2' above grade; moderate interior decay; leans west; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
2726	Blue Oak	( <i>Quercus douglasii</i> )		14	16	Poor	Poor	Poor	Dormant	Poor	Poor to fair	14	Callusing basal/lower trunk wound/cavity to 3' above grade; moderate decay; above average amount of deadwood; poor bud formation	<i>Recommend removal due to noted defects</i>
2727	Blue Oak	( <i>Quercus douglasii</i> )		17	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2728	Blue Oak	( <i>Quercus douglasii</i> )		13	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2729	Blue Oak	( <i>Quercus douglasii</i> )		22	26	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2730	Blue Oak	( <i>Quercus douglasii</i> )	10, 11	21	19	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2731	Blue Oak	( <i>Quercus douglasii</i> )		11	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2732	Blue Oak	( <i>Quercus douglasii</i> )		17	21	Fair	Fair	Fair	Dormant	Fair	Fair		Nesting cavity, east side, 6' above grade	<i>Perform aerial inspection to further assess structural integrity of canopy and potential for hazard; provide further recommendations following aerial inspection</i>
2733	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Poor bud formation; above average amount of deadwood	<i>None at this time; re-evaluate in Spring</i>
2734	Blue Oak	( <i>Quercus douglasii</i> )		7	12	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
2735	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2736	Blue Oak	( <i>Quercus douglasii</i> )		19	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2737	Blue Oak	( <i>Quercus douglasii</i> )		14	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2738	Blue Oak	( <i>Quercus douglasii</i> )		16	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2739	Blue Oak	( <i>Quercus douglasii</i> )		18	20	Fair	Fair	Poor	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2740	Blue Oak	( <i>Quercus douglasii</i> )		17	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair	17	Callusing wound within primary crotch 6' above grade, south side; probable decay; bark deformation on larger stems; additional wounding; above average amount of deadwood; poor bud formation	<i>Recommend removal due to noted defects</i>
2741	Blue Oak	( <i>Quercus douglasii</i> )		16	20	Fair	Poor	Poor	Dormant	Poor	Fair	16	Bends northeast; southerly large scaffold is dead; one cavity potentially extending into main trunk	<i>Recommend removal due to noted defects</i>
2742	Blue Oak	( <i>Quercus douglasii</i> )		19	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2743	Blue Oak	( <i>Quercus douglasii</i> )	9, 10	19	17	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided north; above average amount of deadwood	Clean out crown
2744	Blue Oak	( <i>Quercus douglasii</i> )		16	22	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Above average amount of deadwood	Clean out crown
2745	Blue Oak	( <i>Quercus douglasii</i> )	7, 8	15	12	Poor	Poor	Poor to fair	Dormant	Poor	Fair		Callusing basal cavity, south side, to 1' above grade with moderate decay; above average amount of deadwood	<i>None at this time; longevity and integrity of this tree are questionable</i>
2746	Blue Oak	( <i>Quercus douglasii</i> )	8, 9	17	12	Fair	Poor	Poor to fair	Dormant	Poor	Fair		Callusing lower trunk wound, northwest side; moderate decay; above average amount of deadwood	<i>None at this time; longevity and integrity of this tree are questionable</i>
2747	Blue Oak	( <i>Quercus douglasii</i> )		13	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2748	Blue Oak	( <i>Quercus douglasii</i> )		10	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2749	Blue Oak	( <i>Quercus douglasii</i> )	7, 9	16	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2750	Blue Oak	( <i>Quercus douglasii</i> )		9	11	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2751	Blue Oak	( <i>Quercus douglasii</i> )		14	18	Fair	Fair	Poor	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2752	Blue Oak	( <i>Quercus douglasii</i> )		9	11	Fair	Fair	Poor	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
2753	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2754	Blue Oak	( <i>Quercus douglasii</i> )		14	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2755	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2756	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2757	Blue Oak	( <i>Quercus douglasii</i> )		7	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2758	Blue Oak	( <i>Quercus douglasii</i> )		13	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2759	Blue Oak	( <i>Quercus douglasii</i> )		11	19	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
2760	Blue Oak	( <i>Quercus douglasii</i> )	10, 13	23	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2761	Blue Oak	( <i>Quercus douglasii</i> )		15	20	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, west side; no obvious decay at this time; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
2762	Blue Oak	( <i>Quercus douglasii</i> )		11	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2763	Blue Oak	( <i>Quercus douglasii</i> )		13	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2764	Blue Oak	( <i>Quercus douglasii</i> )		11	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2765	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2766	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2767	Blue Oak	( <i>Quercus douglasii</i> )		12	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2768	Blue Oak	( <i>Quercus douglasii</i> )		10	17	Fair	Fair	Fair	Dormant	Fair	Fair		Leans northeast; slightly above average amount of deadwood	Clean out crown
2769	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2770	Blue Oak	( <i>Quercus douglasii</i> )		8	14	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans west; above average amount of deadwood	Clean out crown
2771	Blue Oak	( <i>Quercus douglasii</i> )		13	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2772	Blue Oak	( <i>Quercus douglasii</i> )		13	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2773	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
2774	Blue Oak	( <i>Quercus douglasii</i> )		8	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2775	Blue Oak	( <i>Quercus douglasii</i> )	9, 10	19	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2776	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2777	Blue Oak	( <i>Quercus douglasii</i> )		14	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2778	Blue Oak	( <i>Quercus douglasii</i> )		13	18	Poor	Poor	Poor	Dormant	Poor	Fair	13	Callusing basal/lower trunk cavity, north side; moderate decay; leans southwest; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2779	Blue Oak	( <i>Quercus douglasii</i> )		7	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2780	Blue Oak	( <i>Quercus douglasii</i> )		13	15	Poor	Poor	Fair	Dormant	Poor	Fair	13	Callusing basal/lower trunk cavity, southeast side, to 3' above grade; moderate decay; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2781	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2782	Blue Oak	( <i>Quercus douglasii</i> )		13	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2783	Blue Oak	( <i>Quercus douglasii</i> )		14	17	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk cavity, southeast side; minor decay; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
2784	Blue Oak	( <i>Quercus douglasii</i> )		9	11	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2785	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
2786	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Poor	Poor	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, east side; no obvious decay at this time; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
2787	Blue Oak	( <i>Quercus douglasii</i> )		6	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2788	Blue Oak	( <i>Quercus douglasii</i> )		11	13	Fair	Fair	Poor	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2789	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2790	Blue Oak	( <i>Quercus douglasii</i> )	5, 5	10	7	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2791	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2792	Blue Oak	( <i>Quercus douglasii</i> )	8, 9	17	14	Poor	Poor	Poor to fair	Dormant	Poor	Fair	17	Callusing basal/lower trunk wound/cavity, southeast side; moderate decay; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2793	Blue Oak	( <i>Quercus douglasii</i> )		9	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2794	Blue Oak	( <i>Quercus douglasii</i> )		8	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2795	Blue Oak	( <i>Quercus douglasii</i> )		11	15	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing lower trunk wound, east side; no obvious decay at this time; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
2796	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Poor	Poor	Poor to fair	Dormant	Poor	Fair	11	Callusing basal/lower trunk cavity to 3' above grade; moderate interior decay and hollowing; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2797	Blue Oak	( <i>Quercus douglasii</i> )		9	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2798	Blue Oak	( <i>Quercus douglasii</i> )		8	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2799	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2800	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2801	Blue Oak	( <i>Quercus douglasii</i> )		14	18	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2802	Blue Oak	( <i>Quercus douglasii</i> )	10, 12	22	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2803	Blue Oak	( <i>Quercus douglasii</i> )	17, 23	40	36	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Weak primary crotch; slightly above average amount of deadwood	Clean out crown; consider use of cable system to help support primary crotch; <b>recommend annual inspection by an ISA Certified Arborist</b>
2804	Blue Oak	( <i>Quercus douglasii</i> )		14	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2805	Blue Oak	( <i>Quercus douglasii</i> )		26	40	Fair	Fair	Poor to fair	Dormant	Fair	Poor to fair		Excessive sprout growth on large branches; above average amount of deadwood; sparse bud formation	<b>None at this time; re-evaluate in Spring</b>
2806	Blue Oak	( <i>Quercus douglasii</i> )		14	25	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2807	Blue Oak	( <i>Quercus douglasii</i> )		15	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2808	Blue Oak	( <i>Quercus douglasii</i> )		17	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2809	Blue Oak	( <i>Quercus douglasii</i> )		22	28	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2810	Blue Oak	( <i>Quercus douglasii</i> )		17	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2811	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2812	Blue Oak	( <i>Quercus douglasii</i> )		13	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2813	Blue Oak	( <i>Quercus douglasii</i> )		10	13	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2814	Blue Oak	( <i>Quercus douglasii</i> )		7	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2815	Blue Oak	( <i>Quercus douglasii</i> )	9, 16	25	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2816	Blue Oak	( <i>Quercus douglasii</i> )		8	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2817	Blue Oak	( <i>Quercus douglasii</i> )		8	10	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2818	Blue Oak	( <i>Quercus douglasii</i> )		8	20	Fair	Fair	Fair	Dormant	Fair	Fair		Trunk leans southeast	Clean out crown
2819	Blue Oak	( <i>Quercus douglasii</i> )		10	22	Fair	Fair	Fair	Dormant	Fair	Fair		Trunk bends northwest	Clean out crown
2820	Blue Oak	( <i>Quercus douglasii</i> )		21	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2821	Blue Oak	( <i>Quercus douglasii</i> )		8	16	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Trunk bends south; suppressed; above average amount of deadwood	Clean out crown
2822	Blue Oak	( <i>Quercus douglasii</i> )		14	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2823	Blue Oak	( <i>Quercus douglasii</i> )		21	34	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2824	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Trunk leans slightly south; above average amount of deadwood	Clean out crown
2825	Blue Oak	( <i>Quercus douglasii</i> )		16	27	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2826	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2827	Blue Oak	( <i>Quercus douglasii</i> )		16	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2828	Blue Oak	( <i>Quercus douglasii</i> )		11	14	Fair	Fair	Fair	Dormant	Fair	Fair		Trunk leans slightly southwest	Clean out crown
2829	Blue Oak	( <i>Quercus douglasii</i> )	12, 13	25	20	Fair	Poor	Poor	Dormant	Poor	Poor	25	Callusing trunk wounds from 8' to approximately 20' above grade, various locations, with moderate to significant internal decay; excessive amount of deadwood; very sparse bud formation	<b>Recommend removal due to noted defects</b>
2830	Blue Oak	( <i>Quercus douglasii</i> )		23	34	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2831	Blue Oak	( <i>Quercus douglasii</i> )		15	20	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2832	Blue Oak	( <i>Quercus douglasii</i> )	10, 10, 13	33	22	Fair	Poor	Fair	Dormant	Poor	Fair	33	Callusing lower trunk cavities from 1' to 4' above grade, primarily within primary crotch, with moderate to significant interior decay and hollowing	<b>Recommend removal due to noted defects</b>
2833	Blue Oak	( <i>Quercus douglasii</i> )		12	20	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2834	Blue Oak	( <i>Quercus douglasii</i> )	11, 11	22	29	Fair	Fair	Fair	Dormant	Fair	Fair		Trunks lean southeast	Clean out crown
2835	Blue Oak	( <i>Quercus douglasii</i> )	8, 11	19	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2836	Blue Oak	( <i>Quercus douglasii</i> )	10, 12	22	22	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2837	Blue Oak	( <i>Quercus douglasii</i> )	11, 11, 12	34	35	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2838	Blue Oak	( <i>Quercus douglasii</i> )		12	30	Fair	Fair	Fair	Dormant	Fair	Fair		Trunk leans northeast; slightly above average amount of deadwood	Clean out crown



CARPENTER RANCH, LP  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
2839	Blue Oak	( <i>Quercus douglasii</i> )		10	18	Fair	Fair	Fair	Dormant	Fair	Fair		Trunk leans slightly south	Clean out crown
2840	Blue Oak	( <i>Quercus douglasii</i> )		10	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2841	Blue Oak	( <i>Quercus douglasii</i> )		11	19	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2842	Blue Oak	( <i>Quercus douglasii</i> )		19	25	Fair	Fair	Fair	Dormant	Fair	Fair		Measured at 3' above grade; forks at 6' above grade	Clean out crown
2843	Blue Oak	( <i>Quercus douglasii</i> )		24	27	Fair	Fair	Fair	Dormant	Fair	Fair		Measured at 3' above grade; forks at 6' above grade	Clean out crown
2844	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Fair	Fair	Dormant	Fair	Fair		Trunk leans north; slightly above average amount of deadwood	Clean out crown
2845	Blue Oak	( <i>Quercus douglasii</i> )		23	34	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2846	Blue Oak	( <i>Quercus douglasii</i> )		13	19	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2847	Blue Oak	( <i>Quercus douglasii</i> )	12, 13	25	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2848	Blue Oak	( <i>Quercus douglasii</i> )		11	13	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2849	Blue Oak	( <i>Quercus douglasii</i> )	10, 12	22	20	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2850	Blue Oak	( <i>Quercus douglasii</i> )		11	22	Fair	Fair	Fair	Dormant	Fair	Fair		Trunk leans slightly west	Clean out crown
2851	Blue Oak	( <i>Quercus douglasii</i> )		11	27	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Trunk leans south; callusing trunk wound, north side, 4' above grade; minor interior decay	Clean out crown
2852	Blue Oak	( <i>Quercus douglasii</i> )		22	20	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Measured at 3' above grade; forks at approximately 5' and 6' above grade; callusing trunk wounds, various locations; minor interior decay; above average amount of deadwood	Clean out crown
2853	Blue Oak	( <i>Quercus douglasii</i> )	9, 16	25	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Measured at 3' above grade; forks again at approximately 5' above grade; above average amount of deadwood	Clean out crown
2854	Blue Oak	( <i>Quercus douglasii</i> )		23	30	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2855	Blue Oak	( <i>Quercus douglasii</i> )		12	22	Fair	Poor	Poor to fair	Dormant	Poor	Fair	12	Callusing trunk wounds, various locations, from 1' to approximately 15' above grade; moderate to significant internal decay; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2856	Blue Oak	( <i>Quercus douglasii</i> )		12	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2857	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2858	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Fair	Dormant	Fair	Fair		Trunk leans slightly southwest	Clean out crown
2859	Blue Oak	( <i>Quercus douglasii</i> )		15	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2860	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2861	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2862	Blue Oak	( <i>Quercus douglasii</i> )		12	18	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2863	Blue Oak	( <i>Quercus douglasii</i> )		7	14	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Trunk bends slightly north; above average amount of deadwood	Clean out crown
2864	Blue Oak	( <i>Quercus douglasii</i> )		11	18	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2865	Blue Oak	( <i>Quercus douglasii</i> )		11	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2866	Blue Oak	( <i>Quercus douglasii</i> )		6	3	Fair	Poor	Poor	Dormant	Poor	Poor	6	Tree is dead approximately 8' to 10'	<b>Recommend removal due to noted defects</b>
2867	Blue Oak	( <i>Quercus douglasii</i> )		8	13	Fair	Fair	Fair	Dormant	Fair	Fair		Trunk leans slightly north; slightly above average amount of deadwood	Clean out crown
2868	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2869	Blue Oak	( <i>Quercus douglasii</i> )		21	24	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Minor mistletoe infestation; slightly above average amount of deadwood	Clean out crown
2870	Blue Oak	( <i>Quercus douglasii</i> )		8	12	Poor	Poor	Poor to fair	Dormant	Poor	Fair	8	Callusing basal/lower trunk wound/cavity to approximately 2' above grade; moderate to significant internal decay; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2871	Blue Oak	( <i>Quercus douglasii</i> )		9	16	Fair	Fair	Fair	Dormant	Fair	Fair		Trunk leans slightly southwest	Clean out crown
2872	Blue Oak	( <i>Quercus douglasii</i> )		12	15	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal wound, south side; minor to moderate interior decay; above average amount of deadwood	Clean out crown
2873	Blue Oak	( <i>Quercus douglasii</i> )		37	38	Fair	Poor	Poor to fair	Dormant	Poor	Fair	37	Callusing trunk wounds/cavities, various locations; largest wound/cavity on north side approximately 15' to 20' above grade with significant internal decay and hollowing extending into main stem	<b>Recommend removal due to noted defects</b>
2874	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing trunk cavity, south side, 1' above grade; moderate interior decay	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
2875	Blue Oak	( <i>Quercus douglasii</i> )		6	8	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown

CARPENTER RANCH, LP  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
2876	Blue Oak	( <i>Quercus douglasii</i> )	18, 19	37	28	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Weak primary crotch; callusing trunk wounds, various locations, with minor to moderate interior decay	Clean out crown; consider use of cable system to help support primary crotch; <b>recommend annual inspection by an ISA Certified Arborist</b>
2877	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2878	Blue Oak	( <i>Quercus douglasii</i> )		10	14	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2879	Blue Oak	( <i>Quercus douglasii</i> )		13	18	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2880	Blue Oak	( <i>Quercus douglasii</i> )		14	16	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2881	Blue Oak	( <i>Quercus douglasii</i> )		18	20	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2882	Blue Oak	( <i>Quercus douglasii</i> )		16	24	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2883	Blue Oak	( <i>Quercus douglasii</i> )		13	18	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2884	Blue Oak	( <i>Quercus douglasii</i> )		15	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2885	Blue Oak	( <i>Quercus douglasii</i> )		9	20	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Trunk leans/bends west, suppressed; above average amount of deadwood	Clean out crown
2886	Blue Oak	( <i>Quercus douglasii</i> )	12, 12	24	26	Fair	Poor	Poor to fair	Dormant	Poor	Fair		Southerly stem has callusing trunk wounds from 1' to 6' above grade with moderate to significant interior decay and evidence of wood boring insects; above average amount of deadwood	<b>Remove southerly stem;</b> clean out crown
2887	Blue Oak	( <i>Quercus douglasii</i> )		8	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2888	Blue Oak	( <i>Quercus douglasii</i> )		17	20	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Measured at 3' above grade; forks at approximately 5' above grade; callusing trunk wound, south side, from grade to approximately 2' above grade; minor interior decay	Clean out crown
2889	Blue Oak	( <i>Quercus douglasii</i> )		11	12	Poor	Poor	Poor to fair	Dormant	Poor	Poor to fair	11	Callusing basal/trunk wounds, east and west sides, to approximately 4' above grade; minor to moderate interior decay; above average amount of deadwood; sparse bud formation	<b>Recommend removal due to noted defects</b>
2890	Blue Oak	( <i>Quercus douglasii</i> )	11, 13	24	22	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Weak primary crotch	Clean out crown; consider use of cable system to help support primary crotch; <b>recommend annual inspection by an ISA Certified Arborist</b>
2891	Blue Oak	( <i>Quercus douglasii</i> )		8	14	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Trunk bends west, suppressed; above average amount of deadwood	Clean out crown
2892	Blue Oak	( <i>Quercus douglasii</i> )		19	28	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callused trunk wounds, various locations; minor interior decay suspected	Clean out crown
2893	Blue Oak	( <i>Quercus douglasii</i> )		29	32	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Measured at 3' above grade; forks at approximately 5' above grade; somewhat weak primary crotches; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
2894	Blue Oak	( <i>Quercus douglasii</i> )		25	33	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Measured at 3' above grade; forks at approximately 5' above grade; callused trunk wounds, southwest side, 1' to 3' above grade; minor interior decay suspected	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
2895	Blue Oak	( <i>Quercus douglasii</i> )	9, 13	22	25	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2896	Blue Oak	( <i>Quercus douglasii</i> )	14, 14	28	31	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2897	Blue Oak	( <i>Quercus douglasii</i> )		13	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2898	Blue Oak	( <i>Quercus douglasii</i> )		13	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2899	Blue Oak	( <i>Quercus douglasii</i> )	16, 18	34	26	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2900	Blue Oak	( <i>Quercus douglasii</i> )		16	18	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2901	Blue Oak	( <i>Quercus douglasii</i> )	10, 11	21	17	Poor	Poor	Fair	Dormant	Poor	Fair	21	Callusing basal/trunk wounds/cavities to 10' above grade, northeast side; significant interior decay and hollowing	<b>Recommend removal due to noted defects</b>
2902	Blue Oak	( <i>Quercus douglasii</i> )		10	11	Poor	Poor	Poor to fair	Dormant	Poor	Fair	10	Callusing basal/trunk wound/cavity, north side, to approximately 5' above grade; significant interior decay; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2903	Blue Oak	( <i>Quercus douglasii</i> )		14	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2904	Blue Oak	( <i>Quercus douglasii</i> )		8	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2905	Blue Oak	( <i>Quercus douglasii</i> )		6	15	Fair	Fair	Fair	Dormant	Fair	Fair		Trunk leans slightly east; slightly above average amount of deadwood	Clean out crown
2906	Blue Oak	( <i>Quercus douglasii</i> )	7, 8	15	14	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2907	Blue Oak	( <i>Quercus douglasii</i> )		12	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2908	Blue Oak	( <i>Quercus douglasii</i> )	8, 10, 10	28	20	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown



CARPENTER RANCH, LP  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
2909	Blue Oak	( <i>Quercus douglasii</i> )		13	15	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2910	Blue Oak	( <i>Quercus douglasii</i> )		16	17	Poor	Poor	Poor	Dormant	Poor	Poor to fair	16	Basal/trunk cavity to approximately 7' above grade spiraling from north toward south sides; significant interior decay and hollowing; excessive amount of deadwood; somewhat sparse bud formation	<b>Recommend removal due to noted defects</b>
2911	Blue Oak	( <i>Quercus douglasii</i> )		7	10	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing trunk wound/cavity, south side, from grade to 1' above grade; moderate interior decay; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
2912	Blue Oak	( <i>Quercus douglasii</i> )		14	14	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2913	Blue Oak	( <i>Quercus douglasii</i> )		16	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2914	Blue Oak	( <i>Quercus douglasii</i> )	11, 11	22	16	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2915	Blue Oak	( <i>Quercus douglasii</i> )		16	18	Fair	Fair	Fair	Dormant	Fair	Fair		Measured at 3' above grade; forks at approximately 5' above grade; slightly above average amount of deadwood	Clean out crown
2916	Blue Oak	( <i>Quercus douglasii</i> )		8	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2917	Blue Oak	( <i>Quercus douglasii</i> )		13	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2918	Blue Oak	( <i>Quercus douglasii</i> )		8	12	Poor	Poor	Poor to fair	Dormant	Poor	Fair	8	Callusing basal/trunk cavities, primarily on south side, to approximately 3' above grade; significant interior decay and hollowing	<b>Recommend removal due to noted defects</b>
2919	Blue Oak	( <i>Quercus douglasii</i> )		13	18	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callused trunk wound, east side, from grade to approximately 2' above grade; minor interior decay suspected	Clean out crown
2920	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk cavity, south side, to approximately 1.5' above grade; minor to moderate interior decay	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
2921	Blue Oak	( <i>Quercus douglasii</i> )		14	15	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2922	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2923	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2924	Blue Oak	( <i>Quercus douglasii</i> )		13	18	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing lower trunk wound, south side, 1' to 3' above grade; minor to moderate interior decay; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
2925	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Trunk leans south; above average amount of deadwood	Clean out crown
2926	Blue Oak	( <i>Quercus douglasii</i> )		7	16	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Trunk leans west; callusing basal/lower trunk wound, south side, to 0.5' above grade; minor to moderate interior decay and hollowing; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
2927	Blue Oak	( <i>Quercus douglasii</i> )		8	12	Fair	Fair	Poor to fair	Dormant	Fair	Poor to fair		Somewhat sparse bud formation; above average amount of deadwood	<b>None at this time; re-evaluate in Spring</b>
2928	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callused trunk wounds, west and north sides, from grade to 5' above grade; above average amount of deadwood	Clean out crown
2929	Blue Oak	( <i>Quercus douglasii</i> )		12	18	Poor	Poor	Poor to fair	Dormant	Poor	Fair	12	Callusing basal/trunk cavity, north side, to approximately 2' above grade; moderate interior decay and hollowing; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2930	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2931	Blue Oak	( <i>Quercus douglasii</i> )		7	7	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2932	Blue Oak	( <i>Quercus douglasii</i> )		10	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2933	Blue Oak	( <i>Quercus douglasii</i> )		13	14	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callused trunk wound, north side, from grade to 4' above grade; minor interior decay suspected; above average amount of deadwood	Clean out crown
2934	Blue Oak	( <i>Quercus douglasii</i> )		21	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2935	Blue Oak	( <i>Quercus douglasii</i> )		16	24	Poor to fair	Poor	Poor to fair	Dormant	Poor	Fair	16	Callusing basal/trunk cavity, southeast side, extending approximately 1' into main stem; significant interior decay and hollowing; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2936	Blue Oak	( <i>Quercus douglasii</i> )		14	18	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2937	Blue Oak	( <i>Quercus douglasii</i> )		12	19	Fair	Poor	Fair	Dormant	Poor	Fair	12	Trunk cavity, east side, 7' to 10' above grade; significant interior decay and hollowing	<b>Recommend removal due to noted defects</b>
2938	Blue Oak	( <i>Quercus douglasii</i> )		9	16	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2939	Blue Oak	( <i>Quercus douglasii</i> )		10	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (Inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
2940	Blue Oak	( <i>Quercus douglasii</i> )		10	13	Poor to fair	Poor	Fair	Dormant	Poor	Fair	10	Callusing basal/lower trunk cavity, southeast side, to 1' above grade; moderate to significant interior decay and hollowing; additional trunk wound, southeast side, at 4' above grade; minor to moderate interior decay	<i>Recommend removal due to noted defects</i>
2941	Blue Oak	( <i>Quercus douglasii</i> )		7	16	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Trunk bends southeast; somewhat suppressed; above average amount of deadwood	Clean out crown
2942	Blue Oak	( <i>Quercus douglasii</i> )		15	20	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal/trunk wound, north side, to 1.5' above grade; minor to moderate interior decay	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
2943	Blue Oak	( <i>Quercus douglasii</i> )		11	18	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Trunk leans slightly southwest; above average amount of deadwood	Clean out crown
2944	Blue Oak	( <i>Quercus douglasii</i> )		14	18	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2945	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2946	Blue Oak	( <i>Quercus douglasii</i> )		17	22	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2947	Blue Oak	( <i>Quercus douglasii</i> )		16	17	Poor	Poor	Poor to fair	Dormant	Poor	Fair	16	Callusing basal/trunk wound, east side, to 2' above grade; moderate to significant internal decay; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
2948	Blue Oak	( <i>Quercus douglasii</i> )	7, 8	15	15	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
2949	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Poor	Poor	Fair	Dormant	Poor	Fair	16	Callusing basal/trunk wounds/cavities to approximately 6' above grade, primarily on west side; moderate to significant internal decay	<i>Recommend removal due to noted defects</i>
2950	Blue Oak	( <i>Quercus douglasii</i> )		24	27	Fair	Poor	Poor to fair	Dormant	Poor	Fair	24	Callusing trunk wounds, various locations, from grade to approximately 15' above grade where two nesting cavities are present indicating hollowing in main stem; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
2951	Blue Oak	( <i>Quercus douglasii</i> )		31	35	Poor	Poor	Poor	Dormant	Poor	Fair	31	Callusing basal/lower trunk wounds, various locations; moderate decay; main stem failed 6' to 10' above grade with significant decay extending below point of attachment for 10-inch and 18-inch laterals	<i>Recommend removal due to noted defects</i>
2952	Blue Oak	( <i>Quercus douglasii</i> )		16	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2953	Blue Oak	( <i>Quercus douglasii</i> )		13	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2954	Blue Oak	( <i>Quercus douglasii</i> )		16	16	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing scaffold limb wounds, various locations; decay reaching into central stem 5' above grade, south side; above average amount of deadwood	<i>None at this time; longevity and integrity of this tree are questionable</i>
2955	Blue Oak	( <i>Quercus douglasii</i> )		19	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair	19	Inherently weak primary crotch with included bark and evidence of old stress fracture; callusing wound, southerly scaffold, extending into primary crotch	<i>Recommend removal due to noted defects</i>
2956	Blue Oak	( <i>Quercus douglasii</i> )		15	20	Poor	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal wound, southwest side; minor decay; leans east; above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
2957	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2958	Blue Oak	( <i>Quercus douglasii</i> )	8, 10	18	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2959	Blue Oak	( <i>Quercus douglasii</i> )		13	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2960	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2961	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Minor mistletoe infestation; above average amount of deadwood	Clean out crown
2962	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2963	Blue Oak	( <i>Quercus douglasii</i> )		11	14	Poor	Poor	Poor to fair	Dormant	Poor	Fair	11	Callusing basal/lower trunk wound, west side, to 4' above grade; moderate decay; leans south; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
2964	Blue Oak	( <i>Quercus douglasii</i> )		8	8	Poor	Poor	Poor to fair	Dormant	Poor	Fair	8	Callusing basal/lower trunk wound, west side, to 4' above grade; moderate decay; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
2965	Blue Oak	( <i>Quercus douglasii</i> )		16	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2966	Blue Oak	( <i>Quercus douglasii</i> )	11, 14	25	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2967	Blue Oak	( <i>Quercus douglasii</i> )	9, 10	19	20	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2968	Blue Oak	( <i>Quercus douglasii</i> )		20	16	Poor to fair	Poor	Poor to fair	Dormant	Poor	Fair		Main stem failed 6' above grade; hollowing throughout remaining trunk; two laterals remain	<i>None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT</i>

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
2969	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2970	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided south; above average amount of deadwood	Clean out crown
2971	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2972	Blue Oak	( <i>Quercus douglasii</i> )	6, 9	15	12	Poor	Poor	Poor	Dormant	Poor	Poor	15	Callusing basal/lower trunk wound, southwest side, to 1.5' above grade; moderate decay; above average amount of deadwood; poor bud formation	<b>Recommend removal due to noted defects</b>
2973	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Poor	Poor to fair	Fair	Dormant	Poor	Fair	15	Callusing basal/lower trunk wounds, various locations; moderate decay; leans west; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2974	Blue Oak	( <i>Quercus douglasii</i> )		15	22	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing lower trunk wound, southwest side, 2' above grade; minor interior decay; one-sided east; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
2975	Blue Oak	( <i>Quercus douglasii</i> )	10, 16	26	24	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, west side, to 3' above grade; minor decay; above average amount of deadwood	<b>None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT</b>
2976	Blue Oak	( <i>Quercus douglasii</i> )		13	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2977	Blue Oak	( <i>Quercus douglasii</i> )		18	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2978	Blue Oak	( <i>Quercus douglasii</i> )		21	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2979	Blue Oak	( <i>Quercus douglasii</i> )		19	30	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided north; slightly above average amount of deadwood	Clean out crown
2980	Blue Oak	( <i>Quercus douglasii</i> )		10	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2981	Blue Oak	( <i>Quercus douglasii</i> )		14	18	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Large dead scaffolds with callusing wounds at points of attachment; some interior decay into main trunk; slightly above average amount of deadwood	<b>Perform further analysis of decay pockets ; clean out crown</b>
2982	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2983	Blue Oak	( <i>Quercus douglasii</i> )	9, 10	19	27	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided south; above average amount of deadwood	Clean out crown
2984	Blue Oak	( <i>Quercus douglasii</i> )		14	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2985	Blue Oak	( <i>Quercus douglasii</i> )		7	5	Poor	Poor	Poor	Dormant	Poor	Fair	7	Callusing basal/lower trunk wound, west side, to 1' above grade; moderate decay; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2986	Blue Oak	( <i>Quercus douglasii</i> )		16	24	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
2987	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
2988	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2989	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2990	Blue Oak	( <i>Quercus douglasii</i> )		13	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2991	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided west; above average amount of deadwood	Clean out crown
2992	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2993	Blue Oak	( <i>Quercus douglasii</i> )		14	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2994	Blue Oak	( <i>Quercus douglasii</i> )	11, 12	23	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2995	Blue Oak	( <i>Quercus douglasii</i> )		9	16	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
2996	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Poor	Poor	Poor to fair	Dormant	Poor	Fair	16	Callusing basal/lower trunk wounds, various locations; minor to moderate decay; one-sided east; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
2997	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; above average amount of deadwood	Clean out crown
2998	Blue Oak	( <i>Quercus douglasii</i> )	9, 17	26	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
2999	Blue Oak	( <i>Quercus douglasii</i> )		18	23	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wounds, east side; no obvious decay at this time; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
3000	Blue Oak	( <i>Quercus douglasii</i> )		19	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3001	Blue Oak	( <i>Quercus douglasii</i> )		13	15	Poor	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal wound/cavity, west side, to 6 inches above grade; some interior hollowing; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
3002	Blue Oak	( <i>Quercus douglasii</i> )		10	19	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3003	Blue Oak	( <i>Quercus douglasii</i> )		16	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3004	Blue Oak	( <i>Quercus douglasii</i> )		21	28	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Leans southeast; slightly above average amount of deadwood	Clean out crown
3005	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3006	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
3007	Blue Oak	( <i>Quercus douglasii</i> )		16	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
3008	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3009	Blue Oak	( <i>Quercus douglasii</i> )		9	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans northwest; slightly above average amount of deadwood	Clean out crown
3010	Blue Oak	( <i>Quercus douglasii</i> )		7	11	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided northwest; slightly above average amount of deadwood	Clean out crown
3011	Blue Oak	( <i>Quercus douglasii</i> )		17	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3012	Blue Oak	( <i>Quercus douglasii</i> )		8	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3013	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
3014	Blue Oak	( <i>Quercus douglasii</i> )		12	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3015	Blue Oak	( <i>Quercus douglasii</i> )		16	24	Poor	Poor	Poor to fair	Dormant	Poor	Fair	16	Callusing basal/lower trunk wounds to 6' above grade, west side; significant decay; leans east; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3016	Blue Oak	( <i>Quercus douglasii</i> )		18	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3017	Blue Oak	( <i>Quercus douglasii</i> )		19	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3018	Blue Oak	( <i>Quercus douglasii</i> )		28	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3019	Blue Oak	( <i>Quercus douglasii</i> )		15	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3020	Blue Oak	( <i>Quercus douglasii</i> )		17	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3021	Blue Oak	( <i>Quercus douglasii</i> )		13	24	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3022	Blue Oak	( <i>Quercus douglasii</i> )		19	29	Poor	Poor	Fair	Dormant	Poor	Fair		Callusing basal/lower trunk wound, west side, to 3.5' above grade; minor decay	<b>None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT</b>
3023	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3024	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Poor	Poor	Poor to fair	Dormant	Poor	Fair	11	Callusing basal/lower trunk wound/cavity to 9' above grade with significant decay; leans west; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3025	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3026	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3027	Blue Oak	( <i>Quercus douglasii</i> )		21	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3028	Blue Oak	( <i>Quercus douglasii</i> )		13	27	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided southeast; slightly above average amount of deadwood	Clean out crown
3029	Blue Oak	( <i>Quercus douglasii</i> )		18	23	Fair	Poor	Poor to fair	Dormant	Poor	Fair	18	Inherently weak primary crotch with fracture from 3' to 8' above grade with 6 inches of separation; lower trunk callusing; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3030	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3031	Blue Oak	( <i>Quercus douglasii</i> )		15	26	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3032	Blue Oak	( <i>Quercus douglasii</i> )		16	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3033	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, northwest side; minor decay; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
3034	Blue Oak	( <i>Quercus douglasii</i> )		16	26	Poor	Poor to fair	Poor to fair	Dormant	Poor	Fair	16	Callusing basal/lower trunk wound/cavity, west side; moderate decay; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3035	Blue Oak	( <i>Quercus douglasii</i> )		32	33	Poor	Poor	Poor to fair	Dormant	Poor	Fair	32	Callusing basal/lower trunk wound/cavity, east side, to 1' above grade with moderate decay; several scaffold failures in upper canopy	<b>Recommend removal due to noted defects</b>
3036	Blue Oak	( <i>Quercus douglasii</i> )		16	28	Fair	Poor	Poor to fair	Dormant	Poor	Fair	16	Callusing lower trunk wound/cavity to 4' above grade with moderate decay; leans northwest; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3037	Blue Oak	( <i>Quercus douglasii</i> )		20	27	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3038	Blue Oak	( <i>Quercus douglasii</i> )		21	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3039	Blue Oak	( <i>Quercus douglasii</i> )		21	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3040	Blue Oak	( <i>Quercus douglasii</i> )		17	24	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3041	Blue Oak	( <i>Quercus douglasii</i> )		19	27	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3042	Blue Oak	( <i>Quercus douglasii</i> )		23	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3043	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Poor to fair	Dormant	Fair	Poor to fair		Sprout growth on large wood; above average amount of deadwood	<b>None at this time; re-evaluate in Spring</b>
3044	Blue Oak	( <i>Quercus douglasii</i> )		17	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
3045	Blue Oak	( <i>Quercus douglasii</i> )	8, 13	21	23	Poor	Poor	Poor to fair	Dormant	Poor	Fair	21	Callusing basal/lower trunk wound/cavity to 6' above grade with significant decay	<b>Recommend removal due to noted defects</b>
3046	Blue Oak	( <i>Quercus douglasii</i> )	12, 16	28	24	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing lower trunk cavity, southwest side; minor interior decay; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
3047	Blue Oak	( <i>Quercus douglasii</i> )		15	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3048	Blue Oak	( <i>Quercus douglasii</i> )		11	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3049	Blue Oak	( <i>Quercus douglasii</i> )		16	26	Fair	Fair	Poor to fair	Dormant	Fair	Poor to fair		Poor bud formation; above average amount of deadwood	<b>None at this time; re-evaluate in Spring</b>
3050	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3051	Blue Oak	( <i>Quercus douglasii</i> )		22	28	Fair	Poor	Poor to fair	Dormant	Poor	Fair	22	Callusing lower trunk cavity, south side, 3' to 7' above grade with significant decay extending through trunk to west side; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3052	Blue Oak	( <i>Quercus douglasii</i> )		19	28	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3053	Blue Oak	( <i>Quercus douglasii</i> )		12	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3054	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3055	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3056	Blue Oak	( <i>Quercus douglasii</i> )		19	28	Poor	Poor	Poor to fair	Dormant	Poor	Fair	19	Callusing basal/lower trunk wounds, various locations, with what appears to be two layers of callus over possibly significant interior decay; leans south; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3057	Blue Oak	( <i>Quercus douglasii</i> )	14, 15	29	30	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3058	Blue Oak	( <i>Quercus douglasii</i> )		26	30	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3059	Blue Oak	( <i>Quercus douglasii</i> )		9	10	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3060	Blue Oak	( <i>Quercus douglasii</i> )		18	27	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal wound, southwest side; no obvious decay at this time; one-sided north; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
3061	Blue Oak	( <i>Quercus douglasii</i> )		31	36	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal trunk wound/cavity, southwest side; minor decay; nesting cavities; above average amount of deadwood	<b>Perform root collar excavation and aerial inspection to further assess structural stability and potential for hazard; provide further recommendations following root collar excavation and aerial inspection</b>
3062	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3063	Blue Oak	( <i>Quercus douglasii</i> )		19	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3064	Blue Oak	( <i>Quercus douglasii</i> )		15	26	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3065	Blue Oak	( <i>Quercus douglasii</i> )	16, 20	36	30	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3066	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided east; above average amount of deadwood	Clean out crown
3067	Blue Oak	( <i>Quercus douglasii</i> )		12	26	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
3068	Blue Oak	( <i>Quercus douglasii</i> )		12	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3069	Blue Oak	( <i>Quercus douglasii</i> )	7, 7	14	8	Poor	Poor	Poor	Dormant	Poor	Fair	14	Old callusing trunk cavity, east side, with significant decay to 8' above grade	<b>Recommend removal due to noted defects</b>
3070	Blue Oak	( <i>Quercus douglasii</i> )		11	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3071	Blue Oak	( <i>Quercus douglasii</i> )		13	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3072	Blue Oak	( <i>Quercus douglasii</i> )		13	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3073	Blue Oak	( <i>Quercus douglasii</i> )		19	31	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3074	Blue Oak	( <i>Quercus douglasii</i> )		17	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3075	Blue Oak	( <i>Quercus douglasii</i> )		11	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3076	Blue Oak	( <i>Quercus douglasii</i> )	11, 11	22	24	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3077	Blue Oak	( <i>Quercus douglasii</i> )	11, 11	22	19	Poor	Poor	Poor to fair	Dormant	Poor	Fair	22	Callusing basal/lower trunk wounds, various locations, with significant decay; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3078	Blue Oak	( <i>Quercus douglasii</i> )		17	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3079	Blue Oak	( <i>Quercus douglasii</i> )		17	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3080	Blue Oak	( <i>Quercus douglasii</i> )		16	18	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3081	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3082	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3083	Blue Oak	( <i>Quercus douglasii</i> )		23	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3084	Blue Oak	( <i>Quercus douglasii</i> )	9, 14, 14	37	28	Fair	Fair	Fair	Dormant	Fair	Fair		Forks at grade; above average amount of deadwood	Clean out crown
3085	Blue Oak	( <i>Quercus douglasii</i> )		19	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3086	Blue Oak	( <i>Quercus douglasii</i> )		17	23	Fair	Fair	Fair	Dormant	Fair	Fair	-	Slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
3087	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southeast; slightly above average amount of deadwood	Clean out crown
3088	Blue Oak	( <i>Quercus douglasii</i> )		15	28	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
3089	Blue Oak	( <i>Quercus douglasii</i> )		10	27	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided northwest; slightly above average amount of deadwood	Clean out crown
3090	Blue Oak	( <i>Quercus douglasii</i> )		7	13	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided west; slightly above average amount of deadwood	Clean out crown
3091	Blue Oak	( <i>Quercus douglasii</i> )		12	25	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
3092	Blue Oak	( <i>Quercus douglasii</i> )		13	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3093	Blue Oak	( <i>Quercus douglasii</i> )		14	24	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing lower trunk wound, northeast side; minor interior decay; leans northwest; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
3094	Blue Oak	( <i>Quercus douglasii</i> )		15	24	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3095	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3096	Blue Oak	( <i>Quercus douglasii</i> )		17	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair	17	Callused lower trunk wounds, various locations; callusing wound/cavity, southerly scaffold, 8' to 10' above grade with moderate decay	<b>Recommend removal due to noted defects</b>
3097	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3098	Blue Oak	( <i>Quercus douglasii</i> )		30	32	Fair	Poor	Poor to fair	Dormant	Poor	Fair	30	Callusing lower trunk cavity 4' to 8' above grade with significant decay; leans southwest; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3099	Blue Oak	( <i>Quercus douglasii</i> )		13	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3100	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
3101	Blue Oak	( <i>Quercus douglasii</i> )	9, 10	19	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3102	Blue Oak	( <i>Quercus douglasii</i> )		9	10	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3103	Blue Oak	( <i>Quercus douglasii</i> )		14	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3104	Blue Oak	( <i>Quercus douglasii</i> )	12, 12	24	22	Poor	Poor	Poor	Dormant	Poor	Fair	24	Callusing basal/lower trunk wounds/cavities, various locations; southerly stem grows at angle toward south; above average amount of deadwood; poor bud formation	<b>Recommend removal due to noted defects</b>
3105	Blue Oak	( <i>Quercus douglasii</i> )		16	26	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3106	Blue Oak	( <i>Quercus douglasii</i> )		15	27	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3107	Blue Oak	( <i>Quercus douglasii</i> )		12	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3108	Blue Oak	( <i>Quercus douglasii</i> )		11	24	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided north; above average amount of deadwood	Clean out crown
3109	Blue Oak	( <i>Quercus douglasii</i> )		12	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3110	Blue Oak	( <i>Quercus douglasii</i> )		14	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3111	Blue Oak	( <i>Quercus douglasii</i> )	10, 10	20	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3112	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
3113	Blue Oak	( <i>Quercus douglasii</i> )		17	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3114	Blue Oak	( <i>Quercus douglasii</i> )	10, 15	25	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3115	Blue Oak	( <i>Quercus douglasii</i> )		17	25	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3116	Blue Oak	( <i>Quercus douglasii</i> )		13	23	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 3' above grade; above average amount of deadwood	Clean out crown
3117	Blue Oak	( <i>Quercus douglasii</i> )		11	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3118	Blue Oak	( <i>Quercus douglasii</i> )		13	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3119	Blue Oak	( <i>Quercus douglasii</i> )	11, 13	24	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3120	Blue Oak	( <i>Quercus douglasii</i> )		13	22	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided northeast; above average amount of deadwood	Clean out crown
3121	Blue Oak	( <i>Quercus douglasii</i> )		7	6	Fair	Poor	Poor	Dormant	Poor	Fair	7	Callusing lower trunk cavity, northwest side, to 3' above grade; significant decay; leans northeast; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3122	Blue Oak	( <i>Quercus douglasii</i> )		22	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3123	Blue Oak	( <i>Quercus douglasii</i> )		26	30	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southeast; above average amount of deadwood	Clean out crown
3124	Blue Oak	( <i>Quercus douglasii</i> )		13	29	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
3125	Blue Oak	( <i>Quercus douglasii</i> )		18	28	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
3126	Blue Oak	( <i>Quercus douglasii</i> )		19	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
3127	Blue Oak	( <i>Quercus douglasii</i> )		15	22	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk cavity, south side, with minor to moderate decay; above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
3128	Blue Oak	( <i>Quercus douglasii</i> )		22	29	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3129	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3130	Blue Oak	( <i>Quercus douglasii</i> )		9	23	Fair	Fair	Fair	Dormant	Fair	Fair		Leans northeast; above average amount of deadwood	Clean out crown
3131	Blue Oak	( <i>Quercus douglasii</i> )		10	20	Poor	Poor	Poor to fair	Dormant	Poor	Fair		Callusing basal/lower trunk cavity, southwest side; moderate decay; above average amount of deadwood	<i>None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT</i>
3132	Blue Oak	( <i>Quercus douglasii</i> )		8	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3133	Blue Oak	( <i>Quercus douglasii</i> )		17	26	Fair	Poor	Poor	Dormant	Poor	Fair	17	Callusing basal/lower trunk wound/cavities to 11' above grade with significant interior hollowing; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
3134	Blue Oak	( <i>Quercus douglasii</i> )		21	28	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 2' above grade; above average amount of deadwood	Clean out crown
3135	Blue Oak	( <i>Quercus douglasii</i> )		33	33	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3136	Blue Oak	( <i>Quercus douglasii</i> )		28	35	Fair	Poor	Poor to fair	Dormant	Poor	Fair		Inherently weak primary crotch with callusing stress fracture through center at 7' above grade; above average amount of deadwood	<i>Perform aerial inspection of primary crotch to access feasibility of installation of cable system and/or through bolts to help support weak crotch structure; provide further recommendations following aerial inspection</i>
3137	Blue Oak	( <i>Quercus douglasii</i> )		21	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3138	Blue Oak	( <i>Quercus douglasii</i> )		17	22	Poor	Poor	Poor to fair	Dormant	Poor	Fair	17	Callusing basal/lower/middle trunk wounds/cavities, various locations, with significant decay to 18' above grade; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
3139	Blue Oak	( <i>Quercus douglasii</i> )		21	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3140	Blue Oak	( <i>Quercus douglasii</i> )		24	30	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
3141	Blue Oak	( <i>Quercus douglasii</i> )		32	35	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Measured 3' above grade; forks 4' to 5' above grade; previously two trees which have now grafted to 5'; slightly above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
3142	Blue Oak	( <i>Quercus douglasii</i> )		23	32	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3143	Blue Oak	( <i>Quercus douglasii</i> )		22	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3144	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3145	Blue Oak	( <i>Quercus douglasii</i> )		22	27	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3146	Interior Live Oak	( <i>Quercus wislizenii</i> )	13, 18, 27	58	33	Poor	Poor	Poor	Fair	Poor	Fair	58	Callusing basal/lower trunk wounds/cavities, various locations, with significant decay; several large stem failures; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
3147	Blue Oak	( <i>Quercus douglasii</i> )		18	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3148	Blue Oak	( <i>Quercus douglasii</i> )		18	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3149	Blue Oak	( <i>Quercus douglasii</i> )		22	27	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3150	Blue Oak	( <i>Quercus douglasii</i> )		6	8	Poor	Poor	Poor to fair	Dormant	Poor	Fair	6	Callusing basal cavity to 2' above grade, east side; significant decay; leans southeast; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
3151	Blue Oak	( <i>Quercus douglasii</i> )		17	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3152	Blue Oak	( <i>Quercus douglasii</i> )		26	30	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Inherently weak primary crotch with included bark and evidence of callusing stress fracture; leans west; above average amount of deadwood	Clean out crown; evaluate for installation of a rotary cable system and/or through bolts to help support weak primary crotch
3153	Blue Oak	( <i>Quercus douglasii</i> )		32	35	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3154	Blue Oak	( <i>Quercus douglasii</i> )		33	35	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 2' above grade; forks at 3' and 5' above grade; above average amount of deadwood	Clean out crown
3155	Blue Oak	( <i>Quercus douglasii</i> )		20	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3156	Blue Oak	( <i>Quercus douglasii</i> )		31	30	Fair	Fair	Fair	Dormant	Fair	Fair		Measured at 2' above grade; forks at 3' and 5' above grade	Clean out crown
3157	Blue Oak	( <i>Quercus douglasii</i> )		30	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3158	Blue Oak	( <i>Quercus douglasii</i> )		19	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3159	Blue Oak	( <i>Quercus douglasii</i> )		31	33	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3160	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3161	Blue Oak	( <i>Quercus douglasii</i> )		8	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3162	Blue Oak	( <i>Quercus douglasii</i> )		8	14	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southeast; slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
3163	Blue Oak	( <i>Quercus douglasii</i> )		30	35	Fair	Fair	Fair	Dormant	Fair	Fair		Measured at 3' above grade; forks at 5' to 6' above grade; slightly above average amount of deadwood	Clean out crown
3164	Blue Oak	( <i>Quercus douglasii</i> )		19	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3165	Blue Oak	( <i>Quercus douglasii</i> )		26	27	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 2' above grade; forks at 4' and 5' above grade; slightly above average amount of deadwood	Clean out crown
3166	Blue Oak	( <i>Quercus douglasii</i> )		20	26	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3167	Blue Oak	( <i>Quercus douglasii</i> )		17	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3168	Blue Oak	( <i>Quercus douglasii</i> )		23	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3169	Blue Oak	( <i>Quercus douglasii</i> )		16	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3170	Blue Oak	( <i>Quercus douglasii</i> )	15, 20	35	32	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3171	Blue Oak	( <i>Quercus douglasii</i> )		17	25	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided south; slightly above average amount of deadwood	Clean out crown
3172	Blue Oak	( <i>Quercus douglasii</i> )		25	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3173	Blue Oak	( <i>Quercus douglasii</i> )		19	26	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3174	Blue Oak	( <i>Quercus douglasii</i> )		10	23	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
3175	Blue Oak	( <i>Quercus douglasii</i> )		11	30	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
3176	Blue Oak	( <i>Quercus douglasii</i> )		16	32	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Measured 2' above grade; leans southwest; above average amount of deadwood	Clean out crown
3177	Blue Oak	( <i>Quercus douglasii</i> )		15	28	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
3178	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3179	Blue Oak	( <i>Quercus douglasii</i> )		11	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3180	Blue Oak	( <i>Quercus douglasii</i> )		9	29	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided east; above average amount of deadwood	Clean out crown
3181	Blue Oak	( <i>Quercus douglasii</i> )	13, 16	29	30	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided west; above average amount of deadwood	Clean out crown
3182	Blue Oak	( <i>Quercus douglasii</i> )		13	28	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3183	Blue Oak	( <i>Quercus douglasii</i> )	12, 16	28	29	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3184	Blue Oak	( <i>Quercus douglasii</i> )		22	30	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3185	Blue Oak	( <i>Quercus douglasii</i> )		7	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3186	Blue Oak	( <i>Quercus douglasii</i> )		18	30	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided west; above average amount of deadwood	Clean out crown
3187	Blue Oak	( <i>Quercus douglasii</i> )	13, 14	27	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3188	Blue Oak	( <i>Quercus douglasii</i> )	15, 16	31	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3189	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3190	Blue Oak	( <i>Quercus douglasii</i> )		26	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3191	Blue Oak	( <i>Quercus douglasii</i> )		20	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3192	Blue Oak	( <i>Quercus douglasii</i> )		17	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3193	Blue Oak	( <i>Quercus douglasii</i> )		13	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3194	Blue Oak	( <i>Quercus douglasii</i> )		12	25	Fair	Fair	Fair	Dormant	Fair	Fair		Suppressed; leans east; slightly above average amount of deadwood	Clean out crown
3195	Blue Oak	( <i>Quercus douglasii</i> )	8, 19	27	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3196	Blue Oak	( <i>Quercus douglasii</i> )		11	22	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided southeast; slightly above average amount of deadwood	Clean out crown
3197	Blue Oak	( <i>Quercus douglasii</i> )		18	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3198	Blue Oak	( <i>Quercus douglasii</i> )		11	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3199	Blue Oak	( <i>Quercus douglasii</i> )		27	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3200	Blue Oak	( <i>Quercus douglasii</i> )		20	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3201	Blue Oak	( <i>Quercus douglasii</i> )		11	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3202	Blue Oak	( <i>Quercus douglasii</i> )		17	24	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3203	Blue Oak	( <i>Quercus douglasii</i> )	11, 12	23	24	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
3204	Blue Oak	( <i>Quercus douglasii</i> )		27	31	Poor	Poor	Fair	Dormant	Poor	Fair		Callusing basal/lower trunk wound, west side; minor to moderate decay; leans east; above average amount of deadwood	<b><i>None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT</i></b>
3205	Blue Oak	( <i>Quercus douglasii</i> )		28	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3206	Blue Oak	( <i>Quercus douglasii</i> )		21	28	Fair	Poor to fair	Poor	Dormant	Poor	Fair	21	Several scaffold limbs with wounding and significant decay	<b><i>Recommend removal due to noted defects</i></b>



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
3207	Blue Oak	( <i>Quercus douglasii</i> )		12	4	Poor	Poor	Poor	Dormant	Poor	Fair	12	Callusing basal/lower trunk wound/cavity to 9' above grade where main stem has failed; significant decay	<b>Recommend removal due to noted defects</b>
3208	Blue Oak	( <i>Quercus douglasii</i> )		18	20	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
3209	Blue Oak	( <i>Quercus douglasii</i> )		24	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3210	Interior Live Oak	( <i>Quercus wislizenii</i> )		11	19	Fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair		Suppressed; leans northeast; slightly sparse foliage	Clean out crown
3211	Blue Oak	( <i>Quercus douglasii</i> )		27	33	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3212	Blue Oak	( <i>Quercus douglasii</i> )		14	25	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk cavity, west side, to 6 inches above grade; minor decay; leans south; slightly above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
3213	Blue Oak	( <i>Quercus douglasii</i> )		19	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3214	Blue Oak	( <i>Quercus douglasii</i> )		12	28	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
3215	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Poor	Poor	Poor to fair	Dormant	Poor	Fair	12	Callusing basal/lower trunk wound to 8' above grade; moderate decay; leans northeast; slightly above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3216	Blue Oak	( <i>Quercus douglasii</i> )	5, 6	11	13	Fair	Fair	Fair	Dormant	Fair	Fair		Leans northeast; slightly above average amount of deadwood	Clean out crown
3217	Blue Oak	( <i>Quercus douglasii</i> )		7	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3218	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
3219	Blue Oak	( <i>Quercus douglasii</i> )		15	24	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3220	Blue Oak	( <i>Quercus douglasii</i> )		11	24	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3221	Blue Oak	( <i>Quercus douglasii</i> )		14	28	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans south; above average amount of deadwood	Clean out crown
3222	Blue Oak	( <i>Quercus douglasii</i> )		8	22	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3223	Blue Oak	( <i>Quercus douglasii</i> )		20	31	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided west; above average amount of deadwood	Clean out crown
3224	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Poor to fair		One-sided north; poor bud formation; above average amount of deadwood	<b>None at this time; re-evaluate in Spring</b>
3225	Blue Oak	( <i>Quercus douglasii</i> )		8	10	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Poor to fair		Leans north; poor bud formation; above average amount of deadwood	<b>None at this time; re-evaluate in Spring</b>
3226	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3227	Blue Oak	( <i>Quercus douglasii</i> )		14	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans northwest; callusing trunk wound, east side, 4' above grade; stub from dead limb with some interior decay; above average amount of deadwood	Clean out crown
3228	Blue Oak	( <i>Quercus douglasii</i> )		20	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3229	Blue Oak	( <i>Quercus douglasii</i> )		13	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3230	Blue Oak	( <i>Quercus douglasii</i> )		11	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3231	Blue Oak	( <i>Quercus douglasii</i> )		8	9	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3232	Blue Oak	( <i>Quercus douglasii</i> )		23	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3233	Blue Oak	( <i>Quercus douglasii</i> )		9	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3234	Blue Oak	( <i>Quercus douglasii</i> )		18	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3235	Blue Oak	( <i>Quercus douglasii</i> )		11	20	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided east; above average amount of deadwood	Clean out crown
3236	Blue Oak	( <i>Quercus douglasii</i> )	17, 19	36	26	Fair	Poor	Poor to fair	Dormant	Poor	Fair	36	Callusing wounds through primary crotch; moderate decay; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3237	Blue Oak	( <i>Quercus douglasii</i> )		6	13	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided south; above average amount of deadwood	Clean out crown
3238	Blue Oak	( <i>Quercus douglasii</i> )		14	26	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3239	Blue Oak	( <i>Quercus douglasii</i> )		10	21	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
3240	Blue Oak	( <i>Quercus douglasii</i> )		10	20	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
3241	Blue Oak	( <i>Quercus douglasii</i> )		17	23	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 2' above grade; above average amount of deadwood	Clean out crown
3242	Blue Oak	( <i>Quercus douglasii</i> )		23	25	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 2' above grade; forks to 5' above grade; above average amount of deadwood	Clean out crown
3243	Blue Oak	( <i>Quercus douglasii</i> )		11	21	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3244	Blue Oak	( <i>Quercus douglasii</i> )	9, 11	20	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3245	Blue Oak	( <i>Quercus douglasii</i> )		20	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing trunk wound, east side, 6' above grade; moderate interior decay; slightly above average amount of deadwood	<b>None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT</b>
3246	Blue Oak	( <i>Quercus douglasii</i> )		7	15	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
3247	Blue Oak	( <i>Quercus douglasii</i> )		13	20	Fair	Fair	Poor	Dormant	Poor	Fair		Large deadwood; sprout growth on scaffolds	<b>None at this time; re-evaluate in Spring</b>

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
3248	Blue Oak	( <i>Quercus douglasii</i> )		21	26	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided west; slightly above average amount of deadwood	Clean out crown
3249	Blue Oak	( <i>Quercus douglasii</i> )		12	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3250	Blue Oak	( <i>Quercus douglasii</i> )		10	18	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
3251	Blue Oak	( <i>Quercus douglasii</i> )		13	18	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3252	Blue Oak	( <i>Quercus douglasii</i> )		9	11	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3253	Blue Oak	( <i>Quercus douglasii</i> )		18	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3254	Blue Oak	( <i>Quercus douglasii</i> )		9	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3255	Blue Oak	( <i>Quercus douglasii</i> )		10	18	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided southeast; slightly above average amount of deadwood	Clean out crown
3256	Blue Oak	( <i>Quercus douglasii</i> )		20	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3257	Blue Oak	( <i>Quercus douglasii</i> )		12	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
3258	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided south; slightly above average amount of deadwood	Clean out crown
3259	Blue Oak	( <i>Quercus douglasii</i> )		13	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3260	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3261	Blue Oak	( <i>Quercus douglasii</i> )		16	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3262	Blue Oak	( <i>Quercus douglasii</i> )		17	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3263	Blue Oak	( <i>Quercus douglasii</i> )		36	33	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3264	Blue Oak	( <i>Quercus douglasii</i> )		11	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3265	Blue Oak	( <i>Quercus douglasii</i> )		20	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3266	Blue Oak	( <i>Quercus douglasii</i> )		17	30	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
3267	Blue Oak	( <i>Quercus douglasii</i> )		26	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3268	Blue Oak	( <i>Quercus douglasii</i> )		25	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3269	Blue Oak	( <i>Quercus douglasii</i> )		23	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3270	Blue Oak	( <i>Quercus douglasii</i> )	11, 12	23	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3271	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3272	Blue Oak	( <i>Quercus douglasii</i> )		16	20	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3273	Blue Oak	( <i>Quercus douglasii</i> )		14	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3274	Blue Oak	( <i>Quercus douglasii</i> )		6	6	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3275	Blue Oak	( <i>Quercus douglasii</i> )		11	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3276	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3277	Blue Oak	( <i>Quercus douglasii</i> )	13, 14	27	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3278	Blue Oak	( <i>Quercus douglasii</i> )	8, 9, 10	27	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3279	Blue Oak	( <i>Quercus douglasii</i> )		8	12	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
3280	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3281	Blue Oak	( <i>Quercus douglasii</i> )		14	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3282	Blue Oak	( <i>Quercus douglasii</i> )	10, 11	21	19	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3283	Blue Oak	( <i>Quercus douglasii</i> )		9	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3284	Blue Oak	( <i>Quercus douglasii</i> )		14	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3285	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3286	Blue Oak	( <i>Quercus douglasii</i> )		15	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3287	Blue Oak	( <i>Quercus douglasii</i> )		22	22	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Measured at 3' above grade; above average amount of deadwood	Clean out crown
3288	Blue Oak	( <i>Quercus douglasii</i> )		12	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3289	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly west	Clean out crown
3290	Blue Oak	( <i>Quercus douglasii</i> )	9, 10, 13	32	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3291	Blue Oak	( <i>Quercus douglasii</i> )		10	18	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
3292	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Poor	Dormant	Poor to fair	Poor		Excessive amount of deadwood; poor bud formation	<b><i>None at this time; re-evaluate in Spring</i></b>
3293	Blue Oak	( <i>Quercus douglasii</i> )		7	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3294	Blue Oak	( <i>Quercus douglasii</i> )	5, 7	12	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3295	Blue Oak	( <i>Quercus douglasii</i> )	5, 5	10	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3296	Blue Oak	( <i>Quercus douglasii</i> )		12	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3297	Interior Live Oak	( <i>Quercus wislizenii</i> )	5, 7	12	9	Poor to fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair		Callusing basal/lower trunk wounds, various locations, with minor to moderate decay; above average amount of deadwood; sparse foliage	<b><i>None at this time; longevity and integrity of this tree are questionable</i></b>

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
3298	Blue Oak	( <i>Quercus douglasii</i> )		16	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3299	Blue Oak	( <i>Quercus douglasii</i> )		10	12	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair	10	Lower trunk bark deformities resulting from bacterial canker infection; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3300	Blue Oak	( <i>Quercus douglasii</i> )		17	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3301	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3302	Blue Oak	( <i>Quercus douglasii</i> )		21	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3303	Blue Oak	( <i>Quercus douglasii</i> )		14	16	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
3304	Blue Oak	( <i>Quercus douglasii</i> )		9	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3305	Blue Oak	( <i>Quercus douglasii</i> )		9	8	Poor	Poor	Poor to fair	Dormant	Poor	Fair	9	Callusing basal/lower trunk wound/cavity to 4.5' above grade with significant decay; leans east; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3306	Blue Oak	( <i>Quercus douglasii</i> )		9	8	Fair	Fair	Poor	Dormant	Poor to fair	Poor		Excessive amount of deadwood; poor bud formation	<b>None at this time; re-evaluate in Spring</b>
3307	Blue Oak	( <i>Quercus douglasii</i> )		11	13	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3308	Blue Oak	( <i>Quercus douglasii</i> )		11	13	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3309	Blue Oak	( <i>Quercus douglasii</i> )		12	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3310	Blue Oak	( <i>Quercus douglasii</i> )		16	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3311	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3312	Blue Oak	( <i>Quercus douglasii</i> )		16	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3313	Blue Oak	( <i>Quercus douglasii</i> )		10	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3314	Blue Oak	( <i>Quercus douglasii</i> )		15	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Inherently weak primary crotch with included bark and callusing stress fracture; above average amount of deadwood	Clean out crown; evaluate for installation of a single direct pick cable system and/or through bolts to help support weak primary crotch
3315	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3316	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
3317	Blue Oak	( <i>Quercus douglasii</i> )		7	6	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3318	Blue Oak	( <i>Quercus douglasii</i> )	7, 7	14	10	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3319	Blue Oak	( <i>Quercus douglasii</i> )	6, 8	14	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3320	Blue Oak	( <i>Quercus douglasii</i> )		13	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3321	Blue Oak	( <i>Quercus douglasii</i> )		10	12	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided southwest; slightly above average amount of deadwood	Clean out crown
3322	Blue Oak	( <i>Quercus douglasii</i> )	6, 9	15	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3323	Blue Oak	( <i>Quercus douglasii</i> )	14, 14	28	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3324	Interior Live Oak	( <i>Quercus wislizenii</i> )	8, 8	16	14	Poor to fair	Poor to fair	Poor	Poor to fair	Poor to fair	Poor to fair	16	Westerly stem dead from 7' above grade; easterly stem has above average amount of deadwood and sparse foliage	<b>Recommend removal due to noted defects</b>
3325	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3326	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3327	Blue Oak	( <i>Quercus douglasii</i> )		17	21	Fair	Fair	Poor	Dormant	Poor to fair	Poor to fair		Excessive amount of deadwood; minor mistletoe infestation; poor bud formation	<b>None at this time; re-evaluate in Spring</b>
3328	Blue Oak	( <i>Quercus douglasii</i> )	8, 8	16	11	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3329	Interior Live Oak	( <i>Quercus wislizenii</i> )	7, 7, 7	21	13	Fair	Fair	Fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
3330	Blue Oak	( <i>Quercus douglasii</i> )		8	9	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3331	Interior Live Oak	( <i>Quercus wislizenii</i> )	5, 6, 7	18	11	Poor	Poor to fair	Poor to fair	Poor to fair	Poor	Poor to fair	18	Callusing basal/lower trunk wound with minor decay, west side, where approximately one-half of tree has failed; weak crotches; above average amount of deadwood; sparse foliage	<b>Recommend removal due to noted defects</b>
3332	Blue Oak	( <i>Quercus douglasii</i> )		7	10	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3333	Blue Oak	( <i>Quercus douglasii</i> )	8, 12	20	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3334	Blue Oak	( <i>Quercus douglasii</i> )	8, 8, 11, 12	39	22	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3335	Blue Oak	( <i>Quercus douglasii</i> )	12, 12	24	20	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Inherently weak primary crotch with included bark; above average amount of deadwood	Clean out crown
3336	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3337	Interior Live Oak	( <i>Quercus wislizenii</i> )	6, 6	12	12	Fair	Fair	Fair	Fair	Fair	Fair		Slightly sparse foliage; slightly above average amount of deadwood	Clean out crown
3338	Blue Oak	( <i>Quercus douglasii</i> )	7, 8	15	13	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3339	Blue Oak	( <i>Quercus douglasii</i> )	7, 11	18	21	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound/cavity; minor decay; smaller stem leans south; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
3340	Blue Oak	( <i>Quercus douglasii</i> )		8	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
3341	Blue Oak	( <i>Quercus douglasii</i> )	7, 11	18	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3342	Blue Oak	( <i>Quercus douglasii</i> )	11, 13	24	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3343	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3344	Blue Oak	( <i>Quercus douglasii</i> )	8, 8	16	13	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3345	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3346	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Poor	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3347	Interior Live Oak	( <i>Quercus wislizenii</i> )		6	7	Fair	Poor to fair	Poor	Poor	Poor	Poor	6	Defects noted in scaffolds; above average amount of deadwood; sparse foliage	<b>Recommend removal due to noted defects</b>
3348	Blue Oak	( <i>Quercus douglasii</i> )	7, 8, 8	23	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3349	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3350	Blue Oak	( <i>Quercus douglasii</i> )		9	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3351	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3352	Blue Oak	( <i>Quercus douglasii</i> )		13	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3353	Blue Oak	( <i>Quercus douglasii</i> )		12	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3354	Blue Oak	( <i>Quercus douglasii</i> )	7, 11	18	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3355	Blue Oak	( <i>Quercus douglasii</i> )		13	16	Fair	Fair	Poor to fair	Dormant	Fair	Poor to fair		Moderate mistletoe infestation; above average amount of deadwood	Clean out crown
3356	Interior Live Oak	( <i>Quercus wislizenii</i> )		9	17	Fair	Poor	Poor	Poor	Poor	Poor	9	Only one live stem remains; six stems now dead	<b>Recommend removal due to noted defects</b>
3357	Interior Live Oak	( <i>Quercus wislizenii</i> )	5, 5, 7	17	13	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3358	Blue Oak	( <i>Quercus douglasii</i> )		9	13	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3359	Interior Live Oak	( <i>Quercus wislizenii</i> )		7	15	Fair	Fair	Fair	Fair	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
3360	Interior Live Oak	( <i>Quercus wislizenii</i> )		7	15	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3361	Blue Oak	( <i>Quercus douglasii</i> )		7	11	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Moderate mistletoe infestation; above average amount of deadwood	Clean out crown
3362	Blue Oak	( <i>Quercus douglasii</i> )		8	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3363	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3364	Blue Oak	( <i>Quercus douglasii</i> )	12, 13	25	25	Fair	Fair	Poor	Dormant	Poor to fair	Poor to fair		Moderate to substantial mistletoe infestation; above average amount of deadwood; poor bud formation	<b>None at this time; re-evaluate in Spring</b>
3365	Blue Oak	( <i>Quercus douglasii</i> )		10	21	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans northwest; slightly above average amount of deadwood	Clean out crown
3366	Blue Oak	( <i>Quercus douglasii</i> )		9	14	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3367	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3368	Blue Oak	( <i>Quercus douglasii</i> )		9	16	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Embedded barbed wire in lower trunk; above average amount of deadwood	Cut wire at trunk; clean out crown
3369	Blue Oak	( <i>Quercus douglasii</i> )		6	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3370	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3371	Blue Oak	( <i>Quercus douglasii</i> )		7	7	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3372	Blue Oak	( <i>Quercus douglasii</i> )	7, 9	16	18	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3373	Blue Oak	( <i>Quercus douglasii</i> )		8	11	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3374	Blue Oak	( <i>Quercus douglasii</i> )	5, 6	11	10	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3375	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3376	Blue Oak	( <i>Quercus douglasii</i> )		6	9	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3377	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3378	Blue Oak	( <i>Quercus douglasii</i> )		11	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3379	Blue Oak	( <i>Quercus douglasii</i> )		9	13	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3380	Blue Oak	( <i>Quercus douglasii</i> )		10	17	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided west; slightly above average amount of deadwood	Clean out crown
3381	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3382	Blue Oak	( <i>Quercus douglasii</i> )		6	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3383	Blue Oak	( <i>Quercus douglasii</i> )	5, 8	13	10	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3384	Blue Oak	( <i>Quercus douglasii</i> )		11	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3385	Blue Oak	( <i>Quercus douglasii</i> )	8, 8	16	13	Fair	Fair	Poor	Dormant	Poor to fair	Fair		Above average amount of deadwood	Clean out crown
3386	Blue Oak	( <i>Quercus douglasii</i> )		9	12	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor	Fair	9	Callusing basal/lower trunk wound, west side, to 2' above grade with moderate decay; excessive amount of large deadwood	<b>Recommend removal due to noted defects</b>
3387	Blue Oak	( <i>Quercus douglasii</i> )		8	13	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3388	Blue Oak	( <i>Quercus douglasii</i> )		8	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
3389	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3390	Blue Oak	( <i>Quercus douglasii</i> )	10, 12	22	24	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3391	Blue Oak	( <i>Quercus douglasii</i> )	9, 12	21	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3392	Blue Oak	( <i>Quercus douglasii</i> )		9	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3393	Blue Oak	( <i>Quercus douglasii</i> )		6	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3394	Blue Oak	( <i>Quercus douglasii</i> )	9, 13	22	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3395	Blue Oak	( <i>Quercus douglasii</i> )		6	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3396	Interior Live Oak	( <i>Quercus wislizenii</i> )	4, 4, 4	12	8	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3397	Blue Oak	( <i>Quercus douglasii</i> )	11, 12	23	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3398	Blue Oak	( <i>Quercus douglasii</i> )		9	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3399	Blue Oak	( <i>Quercus douglasii</i> )	7, 8, 10	25	12	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Small callusing cavity, south side; some interior decay; slightly above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
3400	Blue Oak	( <i>Quercus douglasii</i> )	5, 7, 7	19	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3401	Blue Oak	( <i>Quercus douglasii</i> )	10, 13	23	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3402	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3403	Blue Oak	( <i>Quercus douglasii</i> )		8	9	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3404	Blue Oak	( <i>Quercus douglasii</i> )		7	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3405	Blue Oak	( <i>Quercus douglasii</i> )	7, 9	16	13	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Embedded barbed wire in lower trunk; above average amount of deadwood	Cut wire at trunk; clean out crown
3406	Blue Oak	( <i>Quercus douglasii</i> )	7, 7, 7, 7	28	16	Poor	Poor	Poor	Dormant	Poor	Poor to fair	28	Callusing basal/lower trunk wound/cavity, north side, with significant interior decay; defects noted on other stems; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
3407	Blue Oak	( <i>Quercus douglasii</i> )		7	14	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Grows at angle toward south no more than 6' above grade; above average amount of deadwood	Clean out crown
3408	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
3409	Interior Live Oak	( <i>Quercus wislizenii</i> )	9, 11	20	20	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
3410	Blue Oak	( <i>Quercus douglasii</i> )	5, 5, 5, 6	21	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3411	Blue Oak	( <i>Quercus douglasii</i> )		6	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3412	Blue Oak	( <i>Quercus douglasii</i> )		13	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3413	Blue Oak	( <i>Quercus douglasii</i> )		12	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3414	Blue Oak	( <i>Quercus douglasii</i> )	10, 13	23	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3415	Blue Oak	( <i>Quercus douglasii</i> )		10	6	Fair	Poor to fair	Poor to fair	Dormant	Poor	Fair		Forks 10' above grade; both stems dead 3' above that point; no lateral scaffolds	<i>None at this time; longevity and integrity of this tree are questionable</i>
3416	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided south; slightly above average amount of deadwood	Clean out crown
3417	Blue Oak	( <i>Quercus douglasii</i> )		9	8	Fair	Fair	Poor	Dormant	Poor to fair	Fair		Above average amount of deadwood	Clean out crown
3418	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3419	Blue Oak	( <i>Quercus douglasii</i> )	4, 5, 7	16	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3420	Blue Oak	( <i>Quercus douglasii</i> )		8	18	Poor	Poor to fair	Poor to fair	Dormant	Poor	Fair	8	Callusing basal/lower trunk wounds, various locations, with minor to moderate decay; one-sided west; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
3421	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3422	Blue Oak	( <i>Quercus douglasii</i> )		16	17	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 3' above grade; forks 4' to 5' above grade; above average amount of deadwood	Clean out crown
3423	Blue Oak	( <i>Quercus douglasii</i> )		21	25	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3424	Blue Oak	( <i>Quercus douglasii</i> )		7	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3425	Blue Oak	( <i>Quercus douglasii</i> )	8, 9	17	18	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3426	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3427	Blue Oak	( <i>Quercus douglasii</i> )	8, 9	17	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3428	Blue Oak	( <i>Quercus douglasii</i> )	7, 7	14	9	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3429	Blue Oak	( <i>Quercus douglasii</i> )	9, 10	19	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3430	Blue Oak	( <i>Quercus douglasii</i> )	8, 10	18	20	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
3431	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Poor	Dormant	Poor to fair	Fair		Above average amount of deadwood	Clean out crown
3432	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3433	Blue Oak	( <i>Quercus douglasii</i> )		7	13	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3434	Blue Oak	( <i>Quercus douglasii</i> )		6	9	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3435	Blue Oak	( <i>Quercus douglasii</i> )	6, 7	13	12	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
3436	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3437	Blue Oak	( <i>Quercus douglasii</i> )	10, 10	20	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3438	Blue Oak	( <i>Quercus douglasii</i> )		9	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3439	Blue Oak	( <i>Quercus douglasii</i> )	6, 6	12	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3440	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3441	Blue Oak	( <i>Quercus douglasii</i> )		8	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3442	Blue Oak	( <i>Quercus douglasii</i> )		6	13	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3443	Blue Oak	( <i>Quercus douglasii</i> )		6	12	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
3444	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3445	Blue Oak	( <i>Quercus douglasii</i> )		8	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3446	Blue Oak	( <i>Quercus douglasii</i> )		8	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3447	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3448	Blue Oak	( <i>Quercus douglasii</i> )		6	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3449	Blue Oak	( <i>Quercus douglasii</i> )		8	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3450	Blue Oak	( <i>Quercus douglasii</i> )		7	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3451	Blue Oak	( <i>Quercus douglasii</i> )		9	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3452	Blue Oak	( <i>Quercus douglasii</i> )	8, 11	19	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3453	Interior Live Oak	( <i>Quercus wislizenii</i> )		9	15	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided east; slightly above average amount of deadwood	Clean out crown
3454	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3455	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
3456	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided north; slightly above average amount of deadwood	Clean out crown
3457	Blue Oak	( <i>Quercus douglasii</i> )		6	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3458	Interior Live Oak	( <i>Quercus wislizenii</i> )	5, 7, 9	21	23	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Forks at grade; leans southwest; above average amount of deadwood	Clean out crown
3459	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3460	Blue Oak	( <i>Quercus douglasii</i> )		7	10	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3461	Interior Live Oak	( <i>Quercus wislizenii</i> )		9	12	Fair	Fair	Poor to fair	Poor to fair	Fair	Poor to fair		Sparse foliage; above average amount of deadwood	<i>None at this time; re-evaluate in Spring</i>
3462	Interior Live Oak	( <i>Quercus wislizenii</i> )	6, 6	12	13	Poor to fair	Poor to fair	Poor to fair	Fair	Poor to fair	Poor to fair		Callusing basal wound, easterly stem, at point of contact with adjacent dead Blue Oak; above average amount of deadwood; minor mistletoe infestation; sparse foliage	<i>None at this time; longevity and integrity of this tree are questionable</i>
3463	Interior Live Oak	( <i>Quercus wislizenii</i> )		7	11	Fair	Fair	Fair	Fair	Fair	Fair		Slightly sparse foliage; slightly above average amount of deadwood	Clean out crown
3464	Blue Oak	( <i>Quercus douglasii</i> )		16	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3465	Interior Live Oak	( <i>Quercus wislizenii</i> )	5, 6, 8	19	20	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3466	Blue Oak	( <i>Quercus douglasii</i> )	8, 14	22	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3467	Blue Oak	( <i>Quercus douglasii</i> )	8, 8, 9	25	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3468	Blue Oak	( <i>Quercus douglasii</i> )		16	17	Fair	Poor	Poor to fair	Dormant	Poor	Fair		Callusing lower trunk wound, southwest side, 3.5' above grade with interior decay; appears existing stem is a sprout from old stump	<i>None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT</i>
3469	Blue Oak	( <i>Quercus douglasii</i> )	15, 16	31	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3470	Blue Oak	( <i>Quercus douglasii</i> )	8, 8	16	20	Fair	Fair	Fair	Dormant	Fair	Fair		Leans northeast; slightly above average amount of deadwood	Clean out crown
3471	Blue Oak	( <i>Quercus douglasii</i> )		14	18	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
3472	Blue Oak	( <i>Quercus douglasii</i> )	8, 8	16	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3473	Blue Oak	( <i>Quercus douglasii</i> )		10	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3474	Blue Oak	( <i>Quercus douglasii</i> )		8	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3475	Interior Live Oak	( <i>Quercus wislizenii</i> )	5, 5	10	16	Fair	Fair	Fair	Fair	Fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
3476	Blue Oak	( <i>Quercus douglasii</i> )	16, 18	34	26	Fair	Fair	Poor to fair	Dormant	Fair	Poor to fair		Poor bud formation; above average amount of deadwood	<i>None at this time; re-evaluate in Spring</i>
3477	Interior Live Oak	( <i>Quercus wislizenii</i> )		7	15	Fair	Fair	Fair	Fair	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
3478	Blue Oak	( <i>Quercus douglasii</i> )		7	11	Fair	Fair	Poor	Dormant	Poor to fair	Fair		Above average amount of deadwood	Clean out crown
3479	Blue Oak	( <i>Quercus douglasii</i> )	12, 18	30	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wounds, both stems in various locations; minor decay; above average amount of deadwood	Clean out crown; <i>recommend annual inspection by an ISA Certified Arborist</i>
3480	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Poor	Dormant	Poor to fair	Poor to fair	13	Excessive amount of deadwood; poor bud formation; profuse sprout growth on trunk and large wood	<i>Recommend removal due to noted defects</i>
3481	Blue Oak	( <i>Quercus douglasii</i> )	9, 9	18	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
3482	Interior Live Oak	<i>(Quercus wislizenii)</i>	6, 7, 7	20	16	Poor	Poor	Poor	Poor to fair	Poor	Fair	20	Tree grew as a stump sprout with callusing basal/lower trunk wounds/cavities, north side; moderate decay; other defects noted in large stems; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3483	Interior Live Oak	<i>(Quercus wislizenii)</i>		6	12	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Leans south; slightly sparse foliage; above average amount of deadwood	Clean out crown
3484	Blue Oak	<i>(Quercus douglasii)</i>	9, 19	28	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3485	Interior Live Oak	<i>(Quercus wislizenii)</i>	6, 6	12	17	Fair	Fair	Fair	Fair	Fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
3486	Blue Oak	<i>(Quercus douglasii)</i>		16	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3487	Blue Oak	<i>(Quercus douglasii)</i>		7	14	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
3488	Interior Live Oak	<i>(Quercus wislizenii)</i>	5, 6	11	17	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
3489	Blue Oak	<i>(Quercus douglasii)</i>	8, 9	17	19	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3490	Interior Live Oak	<i>(Quercus wislizenii)</i>		6	10	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3491	Blue Oak	<i>(Quercus douglasii)</i>		7	15	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3492	Blue Oak	<i>(Quercus douglasii)</i>	5, 5, 6	16	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3493	Valley Oak	<i>(Quercus lobata)</i>		7	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3494	Blue Oak	<i>(Quercus douglasii)</i>	8, 13	21	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3495	Interior Live Oak	<i>(Quercus wislizenii)</i>		11	23	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3496	Blue Oak	<i>(Quercus douglasii)</i>		18	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3497	Blue Oak	<i>(Quercus douglasii)</i>		7	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3498	Interior Live Oak	<i>(Quercus wislizenii)</i>	8, 8	16	25	Fair	Fair	Fair	Fair	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
3499	Blue Oak	<i>(Quercus douglasii)</i>		19	27	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3500	Blue Oak	<i>(Quercus douglasii)</i>		6	11	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; above average amount of deadwood	Clean out crown
3501	Interior Live Oak	<i>(Quercus wislizenii)</i>	6, 8	14	22	Fair	Fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair		Leans northwest; above average amount of deadwood; sparse foliage	<b>None at this time; longevity and integrity of this tree are questionable</b>
3502	Interior Live Oak	<i>(Quercus wislizenii)</i>		6	21	Fair	Fair	Fair	Fair	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
3503	Blue Oak	<i>(Quercus douglasii)</i>		7	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3504	Interior Live Oak	<i>(Quercus wislizenii)</i>	7, 8	15	22	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
3505	Blue Oak	<i>(Quercus douglasii)</i>		14	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3506	Blue Oak	<i>(Quercus douglasii)</i>		8	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3507	Blue Oak	<i>(Quercus douglasii)</i>	8, 10	18	20	Fair	Poor	Poor to fair	Dormant	Poor	Fair	18	Callusing trunk wound with significant bark exfoliation through center of primary crotch; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3508	Blue Oak	<i>(Quercus douglasii)</i>		12	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3509	Blue Oak	<i>(Quercus douglasii)</i>		10	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3510	Blue Oak	<i>(Quercus douglasii)</i>		7	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3511	Blue Oak	<i>(Quercus douglasii)</i>	8, 9	17	15	Poor	Poor	Poor to fair	Dormant	Poor	Fair	17	Callusing basal/lower trunk wounds, various locations, to 1' above grade; moderate decay; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3512	Blue Oak	<i>(Quercus douglasii)</i>		6	8	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3513	Blue Oak	<i>(Quercus douglasii)</i>		9	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3514	Blue Oak	<i>(Quercus douglasii)</i>		13	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3515	Blue Oak	<i>(Quercus douglasii)</i>		15	21	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southeast; slightly above average amount of deadwood	Clean out crown
3516	Blue Oak	<i>(Quercus douglasii)</i>		11	18	Fair	Fair	Fair	Dormant	Fair	Fair		Girdling barbed wire, lower trunk; slightly above average amount of deadwood	Cut wire at trunk; clean out crown
3517	Blue Oak	<i>(Quercus douglasii)</i>		17	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3518	Blue Oak	<i>(Quercus douglasii)</i>		6	6	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3519	Blue Oak	<i>(Quercus douglasii)</i>		10	19	Fair	Fair	Fair	Dormant	Fair	Fair		Barbed wire wrapped around lower trunk; leans west; slightly above average amount of deadwood	Cut wire at trunk; clean out crown
3520	Blue Oak	<i>(Quercus douglasii)</i>	8, 9	17	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3521	Blue Oak	<i>(Quercus douglasii)</i>		8	13	Fair	Poor	Poor to fair	Dormant	Poor	Fair	8	Callusing basal/lower trunk wound/cavity 3' to 5' above grade with significant decay; leans northwest; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3522	Blue Oak	<i>(Quercus douglasii)</i>		11	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3523	Blue Oak	<i>(Quercus douglasii)</i>		15	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
3524	Blue Oak	( <i>Quercus douglasii</i> )		15	27	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3525	Blue Oak	( <i>Quercus douglasii</i> )		6	15	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southeast; slightly above average amount of deadwood	Clean out crown
3526	Blue Oak	( <i>Quercus douglasii</i> )	7, 8	15	28	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided southeast; slightly above average amount of deadwood	Clean out crown
3527	Blue Oak	( <i>Quercus douglasii</i> )	5, 9	14	22	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
3528	Blue Oak	( <i>Quercus douglasii</i> )		9	20	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
3529	Blue Oak	( <i>Quercus douglasii</i> )		12	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3530	Blue Oak	( <i>Quercus douglasii</i> )		14	25	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
3531	Interior Live Oak	( <i>Quercus wislizenii</i> )		11	21	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3532	Blue Oak	( <i>Quercus douglasii</i> )		15	30	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
3533	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3534	Blue Oak	( <i>Quercus douglasii</i> )		9	24	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
3535	Blue Oak	( <i>Quercus douglasii</i> )		11	27	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided west; slightly above average amount of deadwood	Clean out crown
3536	Blue Oak	( <i>Quercus douglasii</i> )		11	24	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
3537	Blue Oak	( <i>Quercus douglasii</i> )		14	26	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
3538	Blue Oak	( <i>Quercus douglasii</i> )		16	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3539	Blue Oak	( <i>Quercus douglasii</i> )		16	24	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3540	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
3541	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3542	Blue Oak	( <i>Quercus douglasii</i> )		10	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3543	Blue Oak	( <i>Quercus douglasii</i> )		13	16	Fair	Fair	Poor to fair	Dormant	Fair	Poor to fair		Poor bud formation; above average amount of deadwood	<b><i>None at this time; re-evaluate in Spring</i></b>
3544	Blue Oak	( <i>Quercus douglasii</i> )		14	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3545	Blue Oak	( <i>Quercus douglasii</i> )		6	15	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Trunk leans south; make abrupt upright bend 3' from base; slightly above average amount of deadwood	Clean out crown
3546	Blue Oak	( <i>Quercus douglasii</i> )		9	21	Fair	Fair	Fair	Dormant	Fair	Fair		Leans northwest; slightly above average amount of deadwood	Clean out crown
3547	Blue Oak	( <i>Quercus douglasii</i> )		8	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3548	Blue Oak	( <i>Quercus douglasii</i> )		6	13	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
3549	Interior Live Oak	( <i>Quercus wislizenii</i> )	8, 11	19	23	Fair	Fair	Poor to fair	Poor to fair	Fair	Poor to fair		Sparse foliage; above average amount of deadwood	Clean out crown
3550	Blue Oak	( <i>Quercus douglasii</i> )		17	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3551	Blue Oak	( <i>Quercus douglasii</i> )		19	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3552	Interior Live Oak	( <i>Quercus wislizenii</i> )		10	22	Fair	Fair	Fair	Fair	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3553	Blue Oak	( <i>Quercus douglasii</i> )	14, 15	29	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3554	Interior Live Oak	( <i>Quercus wislizenii</i> )		6	13	Poor to fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair	6	Callusing basal/lower trunk wounds with moderate decay, various locations; leans east; above average amount of deadwood	<b><i>Recommend removal due to noted defects</i></b>
3555	Blue Oak	( <i>Quercus douglasii</i> )		6	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3556	Interior Live Oak	( <i>Quercus wislizenii</i> )	8, 8, 9	25	21	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3557	Blue Oak	( <i>Quercus douglasii</i> )	11, 12	23	22	Poor	Poor	Poor	Dormant	Poor	Fair	23	Callusing lower trunk cavities with significant decay to 3.5' above grade; one stem grows at angle horizontal to grade toward west; other stem leans east	<b><i>Recommend removal due to noted defects</i></b>
3558	Blue Oak	( <i>Quercus douglasii</i> )	8, 11, 14	33	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3559	Blue Oak	( <i>Quercus douglasii</i> )	9, 11, 15	35	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3560	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3561	Blue Oak	( <i>Quercus douglasii</i> )		14	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3562	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3563	Interior Live Oak	( <i>Quercus wislizenii</i> )		13	15	Fair	Fair	Fair	Fair	Fair	Fair		Slightly sparse foliage; above average amount of deadwood	Clean out crown
3564	Blue Oak	( <i>Quercus douglasii</i> )		9	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3565	Blue Oak	( <i>Quercus douglasii</i> )		21	27	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3566	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3567	Blue Oak	( <i>Quercus douglasii</i> )		17	24	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 3' above grade; above average amount of deadwood	Clean out crown
3568	Blue Oak	( <i>Quercus douglasii</i> )		22	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3569	Blue Oak	( <i>Quercus douglasii</i> )	8, 11	19	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3570	Blue Oak	( <i>Quercus douglasii</i> )		17	22	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
3571	Blue Oak	( <i>Quercus douglasii</i> )	12, 14	26	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
3572	Blue Oak	( <i>Quercus douglasii</i> )		18	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3573	Blue Oak	( <i>Quercus douglasii</i> )		21	25	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 2' above grade; above average amount of deadwood	Clean out crown
3574	Blue Oak	( <i>Quercus douglasii</i> )	19, 25	44	32	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3575	Blue Oak	( <i>Quercus douglasii</i> )	8, 12	20	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3576	Interior Live Oak	( <i>Quercus wislizenii</i> )		6	8	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
3577	Blue Oak	( <i>Quercus douglasii</i> )		11	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans southeast; slightly above average amount of deadwood	Clean out crown
3578	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3579	Blue Oak	( <i>Quercus douglasii</i> )	11, 15	26	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3580	Blue Oak	( <i>Quercus douglasii</i> )	9, 13, 16	38	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3581	Blue Oak	( <i>Quercus douglasii</i> )		11	15	Fair	Poor	Poor to fair	Dormant	Poor	Fair	11	Main stem dead 9' above grade with decay into center; two laterals remain	<b>Recommend removal due to noted defects</b>
3582	Blue Oak	( <i>Quercus douglasii</i> )		8	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3583	Blue Oak	( <i>Quercus douglasii</i> )	9, 15	24	21	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3584	Blue Oak	( <i>Quercus douglasii</i> )		9	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3585	Blue Oak	( <i>Quercus douglasii</i> )	9, 10	19	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3586	Blue Oak	( <i>Quercus douglasii</i> )		19	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Poor to fair		Leans southwest; above average amount of deadwood; poor bud formation	<b>None at this time; re-evaluate in Spring</b>
3587	Blue Oak	( <i>Quercus douglasii</i> )		18	22	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3588	Blue Oak	( <i>Quercus douglasii</i> )		11	19	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3589	Interior Live Oak	( <i>Quercus wislizenii</i> )		6	8	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3590	Blue Oak	( <i>Quercus douglasii</i> )		17	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3591	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
3592	Blue Oak	( <i>Quercus douglasii</i> )	11, 11	22	27	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans southeast; above average amount of deadwood; poor bud formation	<b>None at this time; re-evaluate in Spring</b>
3593	Blue Oak	( <i>Quercus douglasii</i> )		9	23	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; above average amount of deadwood	Clean out crown
3594	Blue Oak	( <i>Quercus douglasii</i> )	9, 9	18	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing lower trunk wounds; old branch diebacks with minor interior decay; above average amount of deadwood; poor bud formation	<b>None at this time; re-evaluate in Spring</b>
3595	Blue Oak	( <i>Quercus douglasii</i> )		7	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3596	Blue Oak	( <i>Quercus douglasii</i> )	6, 6, 7, 10	29	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3597	Blue Oak	( <i>Quercus douglasii</i> )	9, 13	22	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3598	Blue Oak	( <i>Quercus douglasii</i> )	13, 15	28	29	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3599	Blue Oak	( <i>Quercus douglasii</i> )		19	31	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans east; above average amount of deadwood	Clean out crown
3600	Blue Oak	( <i>Quercus douglasii</i> )	8, 8, 9, 12	37	28	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Forks 6 inches to 1' above grade with hollowing through center of crotch; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
3601	Blue Oak	( <i>Quercus douglasii</i> )	11, 15, 16	42	26	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Tree grew as a stump sprout; forks 6-inches, 12-inches and 24-inches above grade with slight depression in center of primary crotch; above average amount of deadwood	Clean out crown; evaluate for installation of a rotary cable system
3602	Blue Oak	( <i>Quercus douglasii</i> )		12	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3603	Blue Oak	( <i>Quercus douglasii</i> )	9, 14, 16	39	28	Fair	Poor	Poor to fair	Dormant	Poor	Fair	39	Tree forks 2' to 3' above grade into three stems with inherently weak primary crotch/weak attachments; obvious stress fractures; old wounding to center of primary crotch with significant decay	<b>Recommend removal due to noted defects</b>
3604	Blue Oak	( <i>Quercus douglasii</i> )	11, 12	23	23	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3605	Blue Oak	( <i>Quercus douglasii</i> )	10, 12, 14	36	25	Fair	Poor	Poor to fair	Dormant	Poor	Fair	36	Forks 2' to 3' above grade into three stems with inherently weak primary crotch/attachments; old wounding through primary crotch with decaying hollowing; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3606	Interior Live Oak	( <i>Quercus wislizenii</i> )	8, 8	16	15	Poor	Poor	Poor to fair	Fair	Poor	Fair	16	Callusing basal/lower trunk wound, north side, where another co-dominant stem failed; approximately one-half of root crown/lower trunk is absent; one-sided south; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3607	Blue Oak	( <i>Quercus douglasii</i> )	18, 18	36	31	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3608	Blue Oak	( <i>Quercus douglasii</i> )		10	27	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown

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TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
3609	Blue Oak	( <i>Quercus douglasii</i> )	14, 16	30	27	Poor	Poor	Poor to fair	Dormant	Poor	Fair	30	Callusing basal/lower trunk wound/cavities with moderate decay; forks 3' above grade; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3610	Blue Oak	( <i>Quercus douglasii</i> )		14	19	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3611	Blue Oak	( <i>Quercus douglasii</i> )		7	16	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed, one-sided northeast; above average amount of deadwood	Clean out crown
3612	Blue Oak	( <i>Quercus douglasii</i> )		9	11	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3613	Blue Oak	( <i>Quercus douglasii</i> )	14, 16, 18	48	30	Poor to fair	Poor	Poor to fair	Dormant	Poor	Fair	48	Tree forks 1' to 2' above grade with inherently weak primary crotch with stress fractures and significant decay through center; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3614	Blue Oak	( <i>Quercus douglasii</i> )	12, 18	30	25	Fair	Fair	Fair	Dormant	Fair	Fair		Leans northeast; above average amount of deadwood	Clean out crown
3615	Blue Oak	( <i>Quercus douglasii</i> )	9, 10	19	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3616	Blue Oak	( <i>Quercus douglasii</i> )		14	23	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
3617	Blue Oak	( <i>Quercus douglasii</i> )		7	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3618	Blue Oak	( <i>Quercus douglasii</i> )		8	24	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3619	Blue Oak	( <i>Quercus douglasii</i> )		7	18	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided south; above average amount of deadwood	Clean out crown
3620	Blue Oak	( <i>Quercus douglasii</i> )	6, 7, 7	20	22	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided south; above average amount of deadwood	Clean out crown
3621	Blue Oak	( <i>Quercus douglasii</i> )		7	22	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided south; slightly above average amount of deadwood	Clean out crown
3622	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3623	Blue Oak	( <i>Quercus douglasii</i> )		14	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3624	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3625	Blue Oak	( <i>Quercus douglasii</i> )	9, 12	21	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3626	Blue Oak	( <i>Quercus douglasii</i> )		12	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3627	Blue Oak	( <i>Quercus douglasii</i> )		20	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3628	Blue Oak	( <i>Quercus douglasii</i> )		17	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided southwest; above average amount of deadwood	Clean out crown
3629	Blue Oak	( <i>Quercus douglasii</i> )		20	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3630	Blue Oak	( <i>Quercus douglasii</i> )		13	15	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided west; slightly above average amount of deadwood	Clean out crown
3631	Blue Oak	( <i>Quercus douglasii</i> )	7, 10	17	22	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Westerly stem has callusing lower trunk wound/cavity 2' above grade with minor decay; above average amount of deadwood	Clean out crown
3632	Blue Oak	( <i>Quercus douglasii</i> )		9	12	Poor	Poor	Poor	Dormant	Poor	Fair	9	Callusing basal/lower trunk wound/cavity to 4' above grade with significant decay; leans west; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3633	Blue Oak	( <i>Quercus douglasii</i> )		12	19	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3634	Blue Oak	( <i>Quercus douglasii</i> )		7	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3635	Blue Oak	( <i>Quercus douglasii</i> )		8	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3636	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3637	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 3' above grade; above average amount of deadwood	Clean out crown
3638	Blue Oak	( <i>Quercus douglasii</i> )		8	11	Fair	Fair	Poor	Dormant	Poor to fair	Fair		Above average amount of deadwood	Clean out crown
3639	Blue Oak	( <i>Quercus douglasii</i> )		12	13	Fair	Poor	Poor	Dormant	Poor	Poor		Northerly stem is dead 5' above grade; excessive amount of deadwood; poor bud formation	<b>None at this time; re-evaluate in Spring</b>
3640	Blue Oak	( <i>Quercus douglasii</i> )		10	12	Poor	Poor	Poor to fair	Dormant	Poor	Fair	10	Callusing basal/lower trunk wound, southeast side, with moderate decay; additional decaying areas from old limb diebacks; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3641	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3642	Blue Oak	( <i>Quercus douglasii</i> )		11	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3643	Blue Oak	( <i>Quercus douglasii</i> )		11	18	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3644	Blue Oak	( <i>Quercus douglasii</i> )	9, 12	21	19	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3645	Blue Oak	( <i>Quercus douglasii</i> )	9, 11	20	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3646	Blue Oak	( <i>Quercus douglasii</i> )	11, 13	24	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3647	Blue Oak	( <i>Quercus douglasii</i> )		9	10	Poor	Poor	Poor	Dormant	Poor	Poor to fair	9	Callusing basal/lower trunk wounds, various locations, with minor to moderate decay; above average amount of deadwood; poor bud formation	<b>Recommend removal due to noted defects</b>

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
3648	Blue Oak	( <i>Quercus douglasii</i> )		16	23	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
3649	Blue Oak	( <i>Quercus douglasii</i> )	10, 14	24	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3650	Blue Oak	( <i>Quercus douglasii</i> )	11, 12	23	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3651	Blue Oak	( <i>Quercus douglasii</i> )		9	11	Fair	Fair	Poor	Dormant	Fair	Poor to fair		Poor bud formation; above average amount of deadwood	<b><i>None at this time; re-evaluate in Spring</i></b>
3652	Blue Oak	( <i>Quercus douglasii</i> )		11	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3653	Blue Oak	( <i>Quercus douglasii</i> )		9	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3654	Blue Oak	( <i>Quercus douglasii</i> )		8	11	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3655	Blue Oak	( <i>Quercus douglasii</i> )		8	14	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
3656	Blue Oak	( <i>Quercus douglasii</i> )		8	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3657	Blue Oak	( <i>Quercus douglasii</i> )		11	21	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided west; slightly above average amount of deadwood	Clean out crown
3658	Blue Oak	( <i>Quercus douglasii</i> )	12, 15	27	19	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3659	Blue Oak	( <i>Quercus douglasii</i> )	4, 6	10	11	Poor	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing lower trunk wound/cavity with minor decay; leans south; above average amount of deadwood	Clean out crown; <b><i>recommend annual inspection by an ISA Certified Arborist</i></b>
3660	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3661	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3662	Blue Oak	( <i>Quercus douglasii</i> )		16	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3663	Blue Oak	( <i>Quercus douglasii</i> )		9	14	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3664	Blue Oak	( <i>Quercus douglasii</i> )		8	12	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
3665	Blue Oak	( <i>Quercus douglasii</i> )		12	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3666	Blue Oak	( <i>Quercus douglasii</i> )	6, 7, 8	21	13	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3667	Blue Oak	( <i>Quercus douglasii</i> )		13	16	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 3' above grade; above average amount of deadwood	Clean out crown
3668	Blue Oak	( <i>Quercus douglasii</i> )	8, 12	20	15	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound with moderate decay extending into primary crotch area; above average amount of deadwood	Clean out crown; <b><i>recommend annual inspection by an ISA Certified Arborist</i></b>
3669	Blue Oak	( <i>Quercus douglasii</i> )		11	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3670	Blue Oak	( <i>Quercus douglasii</i> )		11	19	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
3671	Blue Oak	( <i>Quercus douglasii</i> )		17	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3672	Blue Oak	( <i>Quercus douglasii</i> )		10	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3673	Blue Oak	( <i>Quercus douglasii</i> )		11	9	Fair	Poor to fair	Poor	Dormant	Poor to fair	Poor		Bacterial canker infection on middle and upper trunk with significant bark deformation; excessive amount of deadwood; poor bud formation	<b><i>None at this time; re-evaluate in Spring</i></b>
3674	Blue Oak	( <i>Quercus douglasii</i> )		8	7	Fair	Fair	Poor	Dormant	Poor to fair	Fair		Above average amount of deadwood	Clean out crown
3675	Blue Oak	( <i>Quercus douglasii</i> )		6	11	Poor	Poor	Poor to fair	Dormant	Poor	Fair	6	Callusing basal/lower trunk wound/cavity with moderate decay, west side; leans east; above average amount of deadwood	<b><i>Recommend removal due to noted defects</i></b>
3676	Interior Live Oak	( <i>Quercus wislizenii</i> )	6, 6	12	12	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
3677	Blue Oak	( <i>Quercus douglasii</i> )	8, 8	16	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3678	Blue Oak	( <i>Quercus douglasii</i> )	11, 14	25	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3679	Blue Oak	( <i>Quercus douglasii</i> )		17	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3680	Blue Oak	( <i>Quercus douglasii</i> )		6	8	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3681	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Fair	Poor to fair	Poor	Dormant	Poor	Poor		One-sided east; above average amount of deadwood; poor bud formation	<b><i>None at this time; re-evaluate in Spring</i></b>
3682	Interior Live Oak	( <i>Quercus wislizenii</i> )		7	14	Fair	Poor	Poor to fair	Poor to fair	Poor	Poor to fair		Callusing lower trunk wounds with minor decay and exfoliating bark at other locations; leans north; above average amount of deadwood; slightly sparse foliage	<b><i>None at this time; longevity and integrity of this tree are questionable</i></b>
3683	Blue Oak	( <i>Quercus douglasii</i> )		10	11	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3684	Blue Oak	( <i>Quercus douglasii</i> )	5, 6	11	6	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3685	Blue Oak	( <i>Quercus douglasii</i> )		7	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3686	Interior Live Oak	( <i>Quercus wislizenii</i> )		6	7	Fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair	Poor	6	Lower trunk defects with exfoliating bark, various locations; excessive amount of deadwood; sparse foliage	<b><i>Recommend removal due to noted defects</i></b>
3687	Blue Oak	( <i>Quercus douglasii</i> )		15	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3688	Interior Live Oak	( <i>Quercus wislizenii</i> )	6, 7	13	13	Fair	Fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair		One-sided south; above average amount of deadwood; sparse foliage	<b><i>None at this time; longevity and integrity of this tree are questionable</i></b>
3689	Blue Oak	( <i>Quercus douglasii</i> )		10	10	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3690	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3691	Blue Oak	( <i>Quercus douglasii</i> )		10	12	Fair	Fair	Poor	Dormant	Poor to fair	Fair		Above average amount of deadwood	Clean out crown



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
3692	Blue Oak	( <i>Quercus douglasii</i> )	8, 10	18	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3693	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3694	Blue Oak	( <i>Quercus douglasii</i> )		7	9	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3695	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3696	Blue Oak	( <i>Quercus douglasii</i> )	6, 8	14	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3697	Blue Oak	( <i>Quercus douglasii</i> )		7	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3698	Interior Live Oak	( <i>Quercus wislizenii</i> )		8	9	Fair	Poor	Poor	Poor	Poor	Poor	8	One-sided west; small callusing lower trunk wound, east side, 3' above grade; above average amount of deadwood; sparse foliage	<b>Recommend removal due to noted defects</b>
3699	Blue Oak	( <i>Quercus douglasii</i> )	8, 10, 12	30	22	Fair	Fair	Fair	Dormant	Fair	Fair		Smaller stem grows horizontal on grade for 3' then turns upright toward south	Clean out crown
3700	Interior Live Oak	( <i>Quercus wislizenii</i> )	4, 7	11	13	Poor to fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair	11	Callusing basal/lower trunk wound, west side; minor to moderate decay; leans east; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3701	Blue Oak	( <i>Quercus douglasii</i> )	9, 10	19	18	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3702	Blue Oak	( <i>Quercus douglasii</i> )		19	24	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3703	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3704	Blue Oak	( <i>Quercus douglasii</i> )		18	23	Fair	Poor	Poor to fair	Dormant	Poor	Fair		Measured 3' above grade; forks 4' to 5' above grade; old wounding through center of primary crotch with some minor decay; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
3705	Interior Live Oak	( <i>Quercus wislizenii</i> )	10, 11	21	20	Poor	Poor	Poor to fair	Poor to fair	Poor	Poor to fair	21	Tree forked into 5 stems at grade; three stems are dead; two remaining stems have weak attachments; excessive amount of deadwood; sparse foliage; twig dieback	<b>Recommend removal due to noted defects</b>
3706	Blue Oak	( <i>Quercus douglasii</i> )	7, 8	15	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3707	Blue Oak	( <i>Quercus douglasii</i> )	11, 13	24	19	Fair	Fair	Poor	Dormant	Poor to fair	Fair		Above average amount of deadwood	Clean out crown
3708	Blue Oak	( <i>Quercus douglasii</i> )		17	22	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided south; slightly above average amount of deadwood	Clean out crown
3709	Blue Oak	( <i>Quercus douglasii</i> )		27	30	Fair	Poor	Poor to fair	Dormant	Poor	Poor to fair		Callusing lower trunk wound, southwest side; no obvious decay at this time; large area of bark exfoliation; excessive amount of deadwood; sprout growth on large wood; poor bud formation	<b>None at this time; re-evaluate in Spring</b>
3710	Blue Oak	( <i>Quercus douglasii</i> )	7, 11	18	23	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair	18	Southerly buttress roots exposed in old mining pit; some decay evident; leans west; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3711	Interior Live Oak	( <i>Quercus wislizenii</i> )	5, 6, 6, 6, 7, 9, 11	50	30	Fair	Fair	Fair	Fair	Fair	Fair		Forks 1' to 1.5' above grade with some weak crotches; slightly above average amount of deadwood	Clean out crown; evaluate for installation of a cable system to help support weak crotches; <b>recommend annual inspection by an ISA Certified Arborist</b>
3712	Blue Oak	( <i>Quercus douglasii</i> )		8	19	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
3713	Blue Oak	( <i>Quercus douglasii</i> )	7, 7	14	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3714	Interior Live Oak	( <i>Quercus wislizenii</i> )		7	13	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Trunk bends 4.5' above grade toward west; slightly above average amount of deadwood	Clean out crown
3715	Blue Oak	( <i>Quercus douglasii</i> )		11	24	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3716	Blue Oak	( <i>Quercus douglasii</i> )		10	13	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3717	Blue Oak	( <i>Quercus douglasii</i> )		16	26	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Old callusing wound, southwest side, to 6' above grade; no obvious decay at this time; leans north; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
3718	Blue Oak	( <i>Quercus douglasii</i> )		18	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3719	Blue Oak	( <i>Quercus douglasii</i> )		9	18	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
3720	Interior Live Oak	( <i>Quercus wislizenii</i> )	5, 8	13	13	Fair	Fair	Poor to fair	Poor to fair	Fair	Poor to fair		Slightly sparse foliage; above average amount of deadwood	Clean out crown
3721	Blue Oak	( <i>Quercus douglasii</i> )		10	17	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3722	Blue Oak	( <i>Quercus douglasii</i> )		12	26	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
3723	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3724	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3725	Blue Oak	( <i>Quercus douglasii</i> )		22	26	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 2' above grade; forks 3' to 5' above grade; above average amount of deadwood	Clean out crown
3726	Blue Oak	( <i>Quercus douglasii</i> )	13, 13	26	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

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TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
3727	Blue Oak	( <i>Quercus douglasii</i> )	14, 20	34	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3728	Blue Oak	( <i>Quercus douglasii</i> )	15, 16	31	30	Fair	Poor	Fair	Dormant	Poor	Fair	31	Forks 2.5' above grade with old callusing wound through center of primary crotch with significant decay; westerly stem grows at angle toward west	<b>Recommend removal due to noted defects</b>
3729	Blue Oak	( <i>Quercus douglasii</i> )		21	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3730	Blue Oak	( <i>Quercus douglasii</i> )		22	26	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3731	Blue Oak	( <i>Quercus douglasii</i> )		21	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3732	Blue Oak	( <i>Quercus douglasii</i> )		22	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3733	Blue Oak	( <i>Quercus douglasii</i> )		18	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3734	Blue Oak	( <i>Quercus douglasii</i> )		25	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3735	Interior Live Oak	( <i>Quercus wislizenii</i> )	9, 14, 15	38	30	Fair	Poor	Poor	Poor	Poor	Poor	38	Forks 1' and 3' above grade with inherently weak crotches; other defect areas with moderate decay in various locations; excessive amount of deadwood; twig dieback; very sparse foliage	<b>Recommend removal due to noted defects</b>
3736	Blue Oak	( <i>Quercus douglasii</i> )	15, 17	32	25	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Suppressed; one-sided east; above average amount of deadwood	Clean out crown
3737	Blue Oak	( <i>Quercus douglasii</i> )		16	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3738	Blue Oak	( <i>Quercus douglasii</i> )	8, 15	23	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3739	Interior Live Oak	( <i>Quercus wislizenii</i> )		6	9	Fair	Fair	Poor	Poor	Poor to fair	Poor		Suppressed; one-sided south; above average amount of deadwood; sparse foliage	<b>None at this time; re-evaluate in Spring</b>
3740	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3741	Blue Oak	( <i>Quercus douglasii</i> )	11, 14	25	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3742	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3743	Interior Live Oak	( <i>Quercus wislizenii</i> )		10	14	Poor to fair	Poor	Poor to fair	Fair	Poor to fair	Fair		Callusing basal trunk wound, west side, with minor decay; leans south; above average amount of deadwood; growing adjacent to dead Blue Oak tree	<b>None at this time; longevity and integrity of this tree are questionable</b>
3744	Blue Oak	( <i>Quercus douglasii</i> )		8	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3745	Interior Live Oak	( <i>Quercus wislizenii</i> )	7, 8	15	15	Fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair		Leans south; callusing lower trunk wounds with minor decay; above average amount of deadwood; sparse foliage; minor to moderate mistletoe infestation	<b>None at this time; longevity and integrity of this tree are questionable</b>
3746	Blue Oak	( <i>Quercus douglasii</i> )		7	2	Fair	Poor	Poor	Dormant	Poor	Poor	7	Callusing wound, north side, 6' above grade; limb dieback; decay into main trunk; excessive amount of deadwood; poor bud formation	<b>Recommend removal due to noted defects</b>
3747	Blue Oak	( <i>Quercus douglasii</i> )	9, 11, 11	31	15	Fair	Fair	Poor	Dormant	Poor to fair	Fair		Above average amount of deadwood	Clean out crown
3748	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3749	Blue Oak	( <i>Quercus douglasii</i> )		8	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3750	Blue Oak	( <i>Quercus douglasii</i> )	6, 7	13	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3751	Blue Oak	( <i>Quercus douglasii</i> )	8, 8	16	14	Fair	Poor	Poor to fair	Dormant	Poor	Fair		Tree forks 3' above grade with old 1/2" wire rope cable embedded through primary crotch	<b>None at this time; longevity and integrity of this tree are questionable</b>
3752	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3753	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3754	Blue Oak	( <i>Quercus douglasii</i> )	8, 8, 9, 11	36	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Forks 2' above grade; above average amount of deadwood	Clean out crown
3755	Blue Oak	( <i>Quercus douglasii</i> )		8	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3756	Blue Oak	( <i>Quercus douglasii</i> )	9, 10	19	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3757	Interior Live Oak	( <i>Quercus wislizenii</i> )		12	9	Poor	Poor	Fair	Fair	Poor	Fair	12	Callusing basal/lower trunk cavity to 6' above grade with significant decay, west side; leans east	<b>Recommend removal due to noted defects</b>
3758	Blue Oak	( <i>Quercus douglasii</i> )		8	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3759	Blue Oak	( <i>Quercus douglasii</i> )	6, 6	12	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3760	Blue Oak	( <i>Quercus douglasii</i> )		16	20	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3761	Blue Oak	( <i>Quercus douglasii</i> )	16, 17	33	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3762	Blue Oak	( <i>Quercus douglasii</i> )	15, 15	30	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3763	Blue Oak	( <i>Quercus douglasii</i> )	9, 18	27	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3764	Blue Oak	( <i>Quercus douglasii</i> )	12, 15, 16	43	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3765	Blue Oak	( <i>Quercus douglasii</i> )		21	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

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TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
3766	Interior Live Oak	<i>(Quercus wislizenii)</i>		15	23	Poor to fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callusing wounds, various locations, around root crown; no obvious decay at this time; leans south; some old callusing lower trunk wounds at locations of limb dieback; slightly above average amount of deadwood	<i>None at this time; longevity and integrity of this tree are questionable; MAY POSE A HAZARD IN A DEVELOPED ENVIRONMENT</i>
3767	Blue Oak	<i>(Quercus douglasii)</i>		10	16	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
3768	Blue Oak	<i>(Quercus douglasii)</i>	9, 18	27	23	Fair	Poor	Fair	Dormant	Poor	Fair	27	Forks 2.5' above grade with inherently weak primary crotch with evidence of included bark; old callusing wound with moderate decay through center; slightly above average amount of deadwood	<i>Recommend removal due to noted defects</i>
3769	Blue Oak	<i>(Quercus douglasii)</i>		10	14	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
3770	Blue Oak	<i>(Quercus douglasii)</i>	16, 21	37	35	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3771	Blue Oak	<i>(Quercus douglasii)</i>	14, 14, 18	46	27	Poor	Poor	Poor to fair	Dormant	Poor	Fair	46	Callusing basal/lower trunk wounds, various locations, with moderate decay; several areas of exposed interior wood with stress fractures	<i>Recommend removal due to noted defects</i>
3772	Blue Oak	<i>(Quercus douglasii)</i>		23	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3773	Blue Oak	<i>(Quercus douglasii)</i>		16	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3774	Blue Oak	<i>(Quercus douglasii)</i>		14	19	Fair	Fair	Poor	Dormant	Poor to fair	Fair		Above average amount of deadwood	Clean out crown
3775	Blue Oak	<i>(Quercus douglasii)</i>		24	29	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3776	Blue Oak	<i>(Quercus douglasii)</i>	13, 15	28	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3777	Blue Oak	<i>(Quercus douglasii)</i>	8, 9, 9, 10	36	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3778	Interior Live Oak	<i>(Quercus wislizenii)</i>	6, 7	13	7	Poor	Poor	Poor	Poor to fair	Poor	Poor to fair	13	Callusing basal/lower trunk wounds with moderate decay, various locations; excessive amount of deadwood; sparse foliage	<i>Recommend removal due to noted defects</i>
3779	Blue Oak	<i>(Quercus douglasii)</i>		7	7	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3780	Blue Oak	<i>(Quercus douglasii)</i>		14	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3781	Blue Oak	<i>(Quercus douglasii)</i>	16, 16	32	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3782	Blue Oak	<i>(Quercus douglasii)</i>		20	25	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided west; slightly above average amount of deadwood	Clean out crown
3783	Blue Oak	<i>(Quercus douglasii)</i>	6, 8	14	15	Fair	Poor	Poor	Dormant	Poor	Fair	14	Old callusing wound through primary crotch with moderate decay; leans west; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
3784	Blue Oak	<i>(Quercus douglasii)</i>		6	6	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3785	Blue Oak	<i>(Quercus douglasii)</i>		7	9	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3786	Blue Oak	<i>(Quercus douglasii)</i>	12, 25	37	25	Poor	Poor	Poor to fair	Dormant	Poor	Fair	37	Callusing basal/lower trunk wound/cavity, east side, to 5' above grade with moderate decay; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
3787	Blue Oak	<i>(Quercus douglasii)</i>		26	26	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3788	Blue Oak	<i>(Quercus douglasii)</i>		16	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3789	Blue Oak	<i>(Quercus douglasii)</i>		17	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3790	Blue Oak	<i>(Quercus douglasii)</i>		13	12	Fair	Poor	Poor to fair	Dormant	Poor	Poor to fair	13	Callusing basal/lower trunk cavity to 5' above grade with significant interior decay; one-sided east; above average amount of deadwood; poor bud formation	<i>Recommend removal due to noted defects</i>
3791	Blue Oak	<i>(Quercus douglasii)</i>		16	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3792	Blue Oak	<i>(Quercus douglasii)</i>		14	16	Poor	Poor	Poor to fair	Dormant	Poor	Fair	14	Callusing basal/lower trunk cavity with significant interior decay to 1' above grade, south side; one-sided north; above average amount of deadwood	<i>Recommend removal due to noted defects</i>
3793	Blue Oak	<i>(Quercus douglasii)</i>		12	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3794	Blue Oak	<i>(Quercus douglasii)</i>		11	14	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3795	Blue Oak	<i>(Quercus douglasii)</i>		6	6	Fair	Poor	Poor to fair	Dormant	Poor	Fair		Callusing cavity 6' above grade into main stem where trunk died; south-tending lateral remains; above average amount of deadwood	<i>None at this time; longevity and integrity of this tree are questionable</i>
3796	Blue Oak	<i>(Quercus douglasii)</i>	7, 8	15	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3797	Blue Oak	<i>(Quercus douglasii)</i>		15	21	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided south; above average amount of deadwood	Clean out crown
3798	Blue Oak	<i>(Quercus douglasii)</i>		8	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3799	Blue Oak	<i>(Quercus douglasii)</i>		9	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3800	Blue Oak	<i>(Quercus douglasii)</i>	6, 7	13	8	Fair	Fair	Poor	Dormant	Poor to fair	Fair		Above average amount of deadwood	Clean out crown



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
3801	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Poor	Poor	Dormant	Poor	Poor	12	One-sided north; excessive amount of large deadwood; sprout growth on trunk and large scaffolds; poor bud formation	<b>Recommend removal due to noted defects</b>
3802	Blue Oak	( <i>Quercus douglasii</i> )		10	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3803	Blue Oak	( <i>Quercus douglasii</i> )	10, 10	20	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3804	Blue Oak	( <i>Quercus douglasii</i> )	9, 11	20	23	Fair	Poor	Poor	Dormant	Poor	Fair	20	Inherently weak primary crotch with callusing wound, moderate decay and stress fracture; leans north; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3805	Blue Oak	( <i>Quercus douglasii</i> )		11	20	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
3806	Blue Oak	( <i>Quercus douglasii</i> )		10	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3807	Blue Oak	( <i>Quercus douglasii</i> )		8	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3808	Blue Oak	( <i>Quercus douglasii</i> )		13	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3809	Blue Oak	( <i>Quercus douglasii</i> )		9	11	Fair	Fair	Fair	Dormant	Fair	Fair		Leans northwest; slightly above average amount of deadwood	Clean out crown
3810	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3811	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3812	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3813	Blue Oak	( <i>Quercus douglasii</i> )		11	15	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3814	Blue Oak	( <i>Quercus douglasii</i> )		8	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3815	Blue Oak	( <i>Quercus douglasii</i> )		9	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3816	Blue Oak	( <i>Quercus douglasii</i> )	5, 8	13	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3817	Blue Oak	( <i>Quercus douglasii</i> )		9	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3818	Blue Oak	( <i>Quercus douglasii</i> )		9	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3819	Blue Oak	( <i>Quercus douglasii</i> )		13	18	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 3' above grade; above average amount of deadwood	Clean out crown
3820	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3821	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3822	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Poor	Dormant	Poor to fair	Fair		Above average amount of deadwood	Clean out crown
3823	Blue Oak	( <i>Quercus douglasii</i> )		6	10	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3824	Blue Oak	( <i>Quercus douglasii</i> )		6	13	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wounds, various locations; no obvious decay at this time; leans northwest; slightly above average amount of deadwood	Clean out crown
3825	Blue Oak	( <i>Quercus douglasii</i> )		8	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3826	Blue Oak	( <i>Quercus douglasii</i> )	7, 9	16	23	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3827	Blue Oak	( <i>Quercus douglasii</i> )		10	4	Fair	Poor	Poor	Dormant	Poor	Fair	10	Failed 8' above grade; three small sprouts remain on lower trunk	<b>Recommend removal due to noted defects</b>
3828	Blue Oak	( <i>Quercus douglasii</i> )		6	11	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
3829	Blue Oak	( <i>Quercus douglasii</i> )		8	14	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3830	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3831	Blue Oak	( <i>Quercus douglasii</i> )		8	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3832	Blue Oak	( <i>Quercus douglasii</i> )		7	13	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
3833	Blue Oak	( <i>Quercus douglasii</i> )		6	5	Fair	Poor	Poor to fair	Dormant	Poor	Fair		Top dead/failed 10' above grade; few lateral branches remain	Clean out crown
3834	Blue Oak	( <i>Quercus douglasii</i> )		7	6	Fair	Poor	Poor to fair	Dormant	Poor to fair	Fair		Top dead/failed 14' above grade; above average amount of deadwood; few laterals remain	Clean out crown
3835	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3836	Blue Oak	( <i>Quercus douglasii</i> )	7, 8	15	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3837	Blue Oak	( <i>Quercus douglasii</i> )		13	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3838	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3839	Blue Oak	( <i>Quercus douglasii</i> )		13	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3840	Blue Oak	( <i>Quercus douglasii</i> )	9, 12	21	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3841	Blue Oak	( <i>Quercus douglasii</i> )	6, 9	15	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3842	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3843	Blue Oak	( <i>Quercus douglasii</i> )	9, 12	21	19	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 3' above grade; above average amount of deadwood	Clean out crown
3844	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
3845	Blue Oak	( <i>Quercus douglasii</i> )	5, 7	12	12	Poor	Poor	Poor	Dormant	Poor	Poor to fair	12	Callusing basal/lower trunk wound/cavity, northeast side; with moderate to significant decay; stress fractures through primary crotch; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3846	Blue Oak	( <i>Quercus douglasii</i> )		16	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3847	Blue Oak	( <i>Quercus douglasii</i> )		7	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3848	Blue Oak	( <i>Quercus douglasii</i> )	7, 9	16	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3849	Blue Oak	( <i>Quercus douglasii</i> )		22	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3850	Blue Oak	( <i>Quercus douglasii</i> )		20	26	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3851	Blue Oak	( <i>Quercus douglasii</i> )	11, 11	22	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3852	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3853	Blue Oak	( <i>Quercus douglasii</i> )	7, 10	17	19	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3854	Blue Oak	( <i>Quercus douglasii</i> )	6, 7	13	18	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3855	Blue Oak	( <i>Quercus douglasii</i> )		8	16	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3856	Blue Oak	( <i>Quercus douglasii</i> )		10	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3857	Blue Oak	( <i>Quercus douglasii</i> )		11	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3858	Blue Oak	( <i>Quercus douglasii</i> )		6	12	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans southwest; above average amount of deadwood	Clean out crown
3859	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided east; above average amount of deadwood	Clean out crown
3860	Blue Oak	( <i>Quercus douglasii</i> )	5, 6, 6	17	11	Poor	Poor to fair	Fair	Dormant	Poor	Fair	17	Callusing basal/lower trunk cavity, southeast side, to 1' above grade with significant decay	<b>Recommend removal due to noted defects</b>
3861	Blue Oak	( <i>Quercus douglasii</i> )	7, 7	14	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3862	Blue Oak	( <i>Quercus douglasii</i> )	8, 9, 9	26	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3863	Blue Oak	( <i>Quercus douglasii</i> )	10, 12	22	28	Poor	Poor	Poor to fair	Dormant	Poor	Fair	22	Callusing lower trunk wound, east side; moderate decay; fungal fruiting bodies present; inherently weak primary crotch with included bark; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3864	Blue Oak	( <i>Quercus douglasii</i> )	5, 8	13	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3865	Blue Oak	( <i>Quercus douglasii</i> )		8	14	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3866	Blue Oak	( <i>Quercus douglasii</i> )	10, 10	20	21	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3867	Blue Oak	( <i>Quercus douglasii</i> )		8	15	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
3868	Blue Oak	( <i>Quercus douglasii</i> )	11, 11	22	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3869	Blue Oak	( <i>Quercus douglasii</i> )		10	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3870	Blue Oak	( <i>Quercus douglasii</i> )	4, 6	10	7	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3871	Blue Oak	( <i>Quercus douglasii</i> )	7, 8, 11	26	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3872	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3873	Blue Oak	( <i>Quercus douglasii</i> )	5, 6	11	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3874	Blue Oak	( <i>Quercus douglasii</i> )	7, 10	17	17	Fair	Poor	Poor to fair	Dormant	Poor	Fair	17	Lower trunks girdled by heavy-gauged wire, severely embedded in bark and possibly wood; above average amount of deadwood; poor bud formation	<b>Recommend removal due to noted defects</b>
3875	Blue Oak	( <i>Quercus douglasii</i> )		9	20	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
3876	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3877	Blue Oak	( <i>Quercus douglasii</i> )		17	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3878	Blue Oak	( <i>Quercus douglasii</i> )		10	16	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
3879	Blue Oak	( <i>Quercus douglasii</i> )		7	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3880	Blue Oak	( <i>Quercus douglasii</i> )		8	10	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3881	Blue Oak	( <i>Quercus douglasii</i> )	6, 7	13	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3882	Blue Oak	( <i>Quercus douglasii</i> )		11	18	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3883	Blue Oak	( <i>Quercus douglasii</i> )		9	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3884	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3885	Blue Oak	( <i>Quercus douglasii</i> )	10, 10	20	19	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3886	Blue Oak	( <i>Quercus douglasii</i> )	12, 16	28	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3887	Blue Oak	( <i>Quercus douglasii</i> )		16	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3888	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3889	Blue Oak	( <i>Quercus douglasii</i> )		15	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3890	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown



CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
3891	Blue Oak	( <i>Quercus douglasii</i> )		7	12	Poor	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, east side, to 1' above grade; minor to moderate decay; leans northeast; above average amount of deadwood	Clean out crown; <b><i>recommend annual inspection by an ISA Certified Arborist</i></b>
3892	Blue Oak	( <i>Quercus douglasii</i> )		6	8	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southeast; above average amount of deadwood	Clean out crown
3893	Blue Oak	( <i>Quercus douglasii</i> )		17	22	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3894	Blue Oak	( <i>Quercus douglasii</i> )		12	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3895	Blue Oak	( <i>Quercus douglasii</i> )		14	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3896	Blue Oak	( <i>Quercus douglasii</i> )	10, 12	22	18	Fair	Fair	Fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3897	Blue Oak	( <i>Quercus douglasii</i> )		25	30	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3898	Blue Oak	( <i>Quercus douglasii</i> )		18	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3899	Blue Oak	( <i>Quercus douglasii</i> )		13	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3900	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southeast; slightly above average amount of deadwood	Clean out crown
3901	Blue Oak	( <i>Quercus douglasii</i> )		25	28	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 2' above grade; above average amount of deadwood	Clean out crown
3902	Blue Oak	( <i>Quercus douglasii</i> )		14	17	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3903	Blue Oak	( <i>Quercus douglasii</i> )		17	26	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3904	Blue Oak	( <i>Quercus douglasii</i> )		9	21	Poor	Poor	Poor to fair	Dormant	Poor	Fair	9	Callusing basal/lower trunk wound, north and northeast sides; moderate decay; leans southwest; above average amount of deadwood	<b><i>Recommend removal due to noted defects</i></b>
3905	Blue Oak	( <i>Quercus douglasii</i> )		11	18	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3906	Blue Oak	( <i>Quercus douglasii</i> )		15	22	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3907	Blue Oak	( <i>Quercus douglasii</i> )		18	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3908	Blue Oak	( <i>Quercus douglasii</i> )		9	18	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
3909	Blue Oak	( <i>Quercus douglasii</i> )	9, 13	22	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3910	Blue Oak	( <i>Quercus douglasii</i> )		17	19	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 3' above grade; forks 4' to 5' above grade; above average amount of deadwood	Clean out crown
3911	Blue Oak	( <i>Quercus douglasii</i> )		6	16	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
3912	Blue Oak	( <i>Quercus douglasii</i> )		16	18	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3913	Blue Oak	( <i>Quercus douglasii</i> )		9	14	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3914	Blue Oak	( <i>Quercus douglasii</i> )		7	9	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3915	Blue Oak	( <i>Quercus douglasii</i> )		12	13	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3916	Blue Oak	( <i>Quercus douglasii</i> )		14	18	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3917	Blue Oak	( <i>Quercus douglasii</i> )		17	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3918	Blue Oak	( <i>Quercus douglasii</i> )		10	12	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3919	Blue Oak	( <i>Quercus douglasii</i> )		8	11	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3920	Blue Oak	( <i>Quercus douglasii</i> )		14	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3921	Blue Oak	( <i>Quercus douglasii</i> )	8, 8	16	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3922	Blue Oak	( <i>Quercus douglasii</i> )		6	6	Poor	Poor	Poor to fair	Dormant	Poor	Fair	6	Callusing basal/lower trunk wound, northwest side; minor decay; excessive amount of deadwood; poor bud formation	<b><i>Recommend removal due to noted defects</i></b>
3923	Blue Oak	( <i>Quercus douglasii</i> )		10	11	Poor	Poor	Poor to fair	Dormant	Poor	Poor to fair	10	Callusing basal/lower trunk wound, north side, with minor to moderate decay to 1.5' above grade; above average amount of deadwood; poor bud formation	<b><i>Recommend removal due to noted defects</i></b>
3924	Blue Oak	( <i>Quercus douglasii</i> )		7	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3925	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3926	Blue Oak	( <i>Quercus douglasii</i> )		9	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3927	Blue Oak	( <i>Quercus douglasii</i> )		8	12	Fair	Fair	Fair	Dormant	Fair	Fair		Leans slightly toward west; above average amount of deadwood	Clean out crown
3928	Blue Oak	( <i>Quercus douglasii</i> )		8	8	Fair	Poor	Poor to fair	Dormant	Poor	Fair		Main stem dead/failed 13' above grade with minor interior decay	<b><i>None at this time; longevity and integrity of this tree are questionable</i></b>
3929	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, east side; no obvious decay at this time; trunk bends west; above average amount of deadwood	Clean out crown
3930	Blue Oak	( <i>Quercus douglasii</i> )		11	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3931	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3932	Blue Oak	( <i>Quercus douglasii</i> )		15	25	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3933	Blue Oak	( <i>Quercus douglasii</i> )		12	20	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided east; above average amount of deadwood	Clean out crown
3934	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
3935	Blue Oak	( <i>Quercus douglasii</i> )		19	22	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 3' above grade, forks approximately 5' above grade; above average amount of deadwood	Clean out crown
3936	Blue Oak	( <i>Quercus douglasii</i> )		8	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3937	Blue Oak	( <i>Quercus douglasii</i> )		23	26	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3938	Blue Oak	( <i>Quercus douglasii</i> )		9	12	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
3939	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3940	Blue Oak	( <i>Quercus douglasii</i> )		7	16	Poor	Poor	Poor to fair	Dormant	Poor	Fair	7	Callusing basal/lower trunk wound/cavity, east side, to 3' above grade; moderate decay; previous stem failure, south side; some decay into lower trunk; leans northeast; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3941	Blue Oak	( <i>Quercus douglasii</i> )		18	27	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3942	Blue Oak	( <i>Quercus douglasii</i> )		11	14	Fair	Fair	Fair	Dormant	Fair	Fair		Leans south; slightly above average amount of deadwood	Clean out crown
3943	Blue Oak	( <i>Quercus douglasii</i> )		8	13	Fair	Fair	Fair	Dormant	Fair	Fair		Leans west; slightly above average amount of deadwood	Clean out crown
3944	Blue Oak	( <i>Quercus douglasii</i> )		7	4	Fair	Poor	Poor	Dormant	Poor	Fair		Top failed/dead 12' above grade; above average amount of deadwood	Clean out crown
3945	Blue Oak	( <i>Quercus douglasii</i> )		7	10	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3946	Blue Oak	( <i>Quercus douglasii</i> )	10, 11	21	23	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing trunk wound, south side, smaller stem 4' above grade; some decay; this stem bends toward north growing horizontal to grade; remaining stem is upright; slightly above average amount of deadwood	Clean out crown
3947	Blue Oak	( <i>Quercus douglasii</i> )		15	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3948	Blue Oak	( <i>Quercus douglasii</i> )		10	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3949	Blue Oak	( <i>Quercus douglasii</i> )		11	13	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3950	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3951	Blue Oak	( <i>Quercus douglasii</i> )		19	26	Fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing wounds on several scaffolds; moderate decay; above average amount of deadwood	<b>Perform aerial inspection to further assess structural integrity of canopy and potential for hazard; provide further recommendations following aerial inspection</b>
3952	Blue Oak	( <i>Quercus douglasii</i> )		16	24	Fair	Fair	Fair	Dormant	Fair	Fair		One-sided southeast; slightly above average amount of deadwood	Clean out crown
3953	Blue Oak	( <i>Quercus douglasii</i> )	7, 8	15	16	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southwest; slightly above average amount of deadwood	Clean out crown
3954	Blue Oak	( <i>Quercus douglasii</i> )		11	17	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
3955	Blue Oak	( <i>Quercus douglasii</i> )		14	23	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, east side; no obvious decay at this time; leans northeast; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
3956	Blue Oak	( <i>Quercus douglasii</i> )		15	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3957	Blue Oak	( <i>Quercus douglasii</i> )	17, 19	36	35	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3958	Blue Oak	( <i>Quercus douglasii</i> )		20	24	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3959	Blue Oak	( <i>Quercus douglasii</i> )		22	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3960	Blue Oak	( <i>Quercus douglasii</i> )		18	22	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3961	Blue Oak	( <i>Quercus douglasii</i> )		6	7	Fair	Fair	Fair	Dormant	Fair	Fair		Leans north; slightly above average amount of deadwood	Clean out crown
3962	Blue Oak	( <i>Quercus douglasii</i> )		12	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3963	Blue Oak	( <i>Quercus douglasii</i> )	10, 12	22	24	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Forks 2.5' above grade; inherently weak primary crotch with included bark and evidence of old stress fracture; above average amount of deadwood	Clean out crown; evaluate for installation of single direct pick cable system to help support primary crotch
3964	Blue Oak	( <i>Quercus douglasii</i> )	10, 10	20	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3965	Blue Oak	( <i>Quercus douglasii</i> )		11	13	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 2' above grade; forks approximately 5' above grade; above average amount of deadwood	Clean out crown
3966	Blue Oak	( <i>Quercus douglasii</i> )		16	26	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
3967	Blue Oak	( <i>Quercus douglasii</i> )		11	12	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3968	Blue Oak	( <i>Quercus douglasii</i> )		9	11	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3969	Blue Oak	( <i>Quercus douglasii</i> )		10	24	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		One-sided west; above average amount of deadwood	Clean out crown
3970	Blue Oak	( <i>Quercus douglasii</i> )	8, 15	23	23	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3971	Blue Oak	( <i>Quercus douglasii</i> )		9	26	Fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Leans northwest; slightly above average amount of deadwood	Clean out crown

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Folsom South - Carpenter Ranch Project Site  
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**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
3972	Blue Oak	( <i>Quercus douglasii</i> )		18	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3973	Blue Oak	( <i>Quercus douglasii</i> )		12	20	Fair	Fair	Fair	Dormant	Fair	Fair		Leans southeast; slightly above average amount of deadwood	Clean out crown
3974	Blue Oak	( <i>Quercus douglasii</i> )		15	23	Fair	Fair	Fair	Dormant	Fair	Fair		Leans east; slightly above average amount of deadwood	Clean out crown
3975	Blue Oak	( <i>Quercus douglasii</i> )		18	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3976	Blue Oak	( <i>Quercus douglasii</i> )	7, 10	17	13	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3977	Blue Oak	( <i>Quercus douglasii</i> )		14	21	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of failures/deadwood	Clean out crown
3978	Interior Live Oak	( <i>Quercus wislizenii</i> )		10	16	Fair	Fair	Fair	Fair	Fair	Fair		Root collar comes in contact with Tree No. 3977; leans west; slightly above average amount of deadwood	Clean out crown
3979	Blue Oak	( <i>Quercus douglasii</i> )		11	10	Fair	Fair	Fair	Dormant	Fair	Fair		Measured 2' above grade; above average amount of deadwood	Clean out crown
3980	Blue Oak	( <i>Quercus douglasii</i> )		16	19	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Minor mistletoe infestation; above average amount of deadwood	Clean out crown
3981	Blue Oak	( <i>Quercus douglasii</i> )		27	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3982	Blue Oak	( <i>Quercus douglasii</i> )	8, 17	25	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3983	Blue Oak	( <i>Quercus douglasii</i> )		8	11	Fair	Poor	Poor	Dormant	Poor	Fair	8	Callusing lower trunk wound/cavity 2' to 4' above grade with significant decay; bends north; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3984	Blue Oak	( <i>Quercus douglasii</i> )		12	16	Poor	Poor	Poor to fair	Dormant	Poor to fair	Fair	12	Callusing basal/lower trunk wounds with moderate decay, various locations; above average amount of deadwood; additional wounding to scaffold limbs	<b>Recommend removal due to noted defects</b>
3985	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3986	Blue Oak	( <i>Quercus douglasii</i> )	6, 6	12	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3987	Blue Oak	( <i>Quercus douglasii</i> )	10, 13	23	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3988	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Poor	Poor	Poor to fair	Dormant	Poor	Fair	12	Callusing basal/lower trunk wound, south side, to 1.5' above grade; significant decay; other defects noted in middle trunk; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3989	Blue Oak	( <i>Quercus douglasii</i> )		9	15	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wounds, various locations; minor decay; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
3990	Blue Oak	( <i>Quercus douglasii</i> )	6, 10	16	19	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3991	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3992	Blue Oak	( <i>Quercus douglasii</i> )	9, 12	21	15	Poor	Poor	Poor	Dormant	Poor	Fair	21	Callusing basal/lower trunk wounds with cavities, south and west sides, to 6' above grade with significant decay; forks 1' above grade; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
3993	Blue Oak	( <i>Quercus douglasii</i> )	10, 13	23	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3994	Blue Oak	( <i>Quercus douglasii</i> )		10	12	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3995	Blue Oak	( <i>Quercus douglasii</i> )		7	6	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
3996	Blue Oak	( <i>Quercus douglasii</i> )		22	25	Poor to fair	Poor to fair	Poor to fair	Dormant	Poor to fair	Fair		Callused basal/lower trunk wound; possible interior decay suspected; above average amount of deadwood	<b>Perform root collar excavation and further trunk evaluation to assess structural stability and potential for hazard; provide further recommendations following root collar excavation and trunk inspection</b>
3997	Interior Live Oak	( <i>Quercus wislizenii</i> )	7, 9	16	13	Poor to fair	Poor	Poor	Fair	Poor	Fair	16	Callusing basal/lower trunk wounds with significant decay in various locations; large deadwood; some tip dieback	<b>Recommend removal due to noted defects</b>
3998	Blue Oak	( <i>Quercus douglasii</i> )	10, 13	23	16	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
3999	Blue Oak	( <i>Quercus douglasii</i> )	12, 17	29	28	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
4000	Interior Live Oak	( <i>Quercus wislizenii</i> )		7	15	Poor to fair	Poor	Poor	Poor	Poor	Poor	7	Suppressed; growing directly adjacent to Tree No. 3999; lower trunk wounds with bark exfoliation; minor to moderate decay; obvious wood rotting fungi; leans south; above average amount of deadwood; sparse foliage	<b>Recommend removal due to noted defects</b>
4001	Blue Oak	( <i>Quercus douglasii</i> )		10	12	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
4002	Blue Oak	( <i>Quercus douglasii</i> )		13	17	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
4003	Blue Oak	( <i>Quercus douglasii</i> )		23	24	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
4004	Blue Oak	( <i>Quercus douglasii</i> )		27	30	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
4005	Blue Oak	( <i>Quercus douglasii</i> )		23	27	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown



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TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
4006	Blue Oak	( <i>Quercus douglasii</i> )		15	5	Fair	Poor	Poor	Dormant	Poor	Poor	15	Measured at 3' above grade; forks at approximately 5' above grade; tree is dead above approximately 8'; both stems riddled with nesting cavities; very few branches remain with sparse bud formation	<b>Recommend removal due to noted defects</b>
4007	Blue Oak	( <i>Quercus douglasii</i> )		11	14	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
4008	Blue Oak	( <i>Quercus douglasii</i> )		13	15	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
4009	Blue Oak	( <i>Quercus douglasii</i> )		17	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
4010	Blue Oak	( <i>Quercus douglasii</i> )		23	30	Fair	Poor	Poor to fair	Dormant	Poor	Fair	23	Callusing trunk wounds, various locations, from 3' to approximately 15' above grade; moderate interior decay compromising various locations along trunk and primary crotch; above average amount of deadwood	<b>Recommend removal due to noted defects</b>
4011	Blue Oak	( <i>Quercus douglasii</i> )		16	21	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
4012	Interior Live Oak	( <i>Quercus wislizenii</i> )	11, 12	23	21	Fair	Fair	Fair	Fair	Fair	Fair		Measured at 3' above grade; forks again at 4' and 5' above grade; slightly above average amount of deadwood	Clean out crown
4013	Blue Oak	( <i>Quercus douglasii</i> )		6	16	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Trunk bends toward southwest; suppressed	Clean out crown
4014	Interior Live Oak	( <i>Quercus wislizenii</i> )	9, 14	23	22	Poor to fair	Fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair		Callusing basal wounds, east side, where root crown and lower trunk adjoin Tree No. 4015; above average amount of deadwood; somewhat sparse foliage	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
4015	Blue Oak	( <i>Quercus douglasii</i> )	9, 13	22	28	Poor to fair	Fair	Poor to fair	Dormant	Poor to fair	Fair		Callusing basal wound, west side, where root crown adjoins Tree No. 4014; trunks lean south and west; above average amount of deadwood	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
4016	Blue Oak	( <i>Quercus douglasii</i> )		17	23	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
4017	Blue Oak	( <i>Quercus douglasii</i> )		12	15	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
4018	Blue Oak	( <i>Quercus douglasii</i> )	11, 11	22	21	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Trunks forming callusing graft from 3' to 5' above grade	Clean out crown
4019	Blue Oak	( <i>Quercus douglasii</i> )		24	34	Fair	Fair	Fair	Dormant	Fair	Fair		Trunk leans slightly northwest; slightly above average amount of deadwood	Clean out crown
4020	Blue Oak	( <i>Quercus douglasii</i> )		26	33	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
4021	Blue Oak	( <i>Quercus douglasii</i> )		7	8	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
4022	Blue Oak	( <i>Quercus douglasii</i> )		9	13	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
4023	Interior Live Oak	( <i>Quercus wislizenii</i> )		25	32	Fair	Fair	Fair	Fair	Fair	Fair		Measured at 2' above grade; forks at approximately 3', 4' and 5' above grade	Clean out crown
4024	Valley Oak	( <i>Quercus lobata</i> )	21, 27	48	37	Fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Weak primary crotch	Clean out crown; evaluate for installation of cable system to help support primary crotch; <b>recommend annual inspection by an ISA Certified Arborist</b>
4025	Blue Oak	( <i>Quercus douglasii</i> )		25	33	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
4026	Interior Live Oak	( <i>Quercus wislizenii</i> )		23	28	Fair	Fair	Poor to fair	Fair	Fair	Fair		Measured at 3' above grade; forks at approximately 5' above grade; above average amount of deadwood	Clean out crown
4027	Blue Oak	( <i>Quercus douglasii</i> )		13	22	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
4028	Blue Oak	( <i>Quercus douglasii</i> )		9	10	Poor to fair	Poor to fair	Fair	Dormant	Poor to fair	Fair		Callusing basal/lower trunk wound, east side, to 1' above grade; minor to moderate internal decay	Clean out crown; <b>recommend annual inspection by an ISA Certified Arborist</b>
4029	Blue Oak	( <i>Quercus douglasii</i> )		18	20	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
4030	Blue Oak	( <i>Quercus douglasii</i> )		29	32	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
4031	Blue Oak	( <i>Quercus douglasii</i> )		21	23	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
4032	Interior Live Oak	( <i>Quercus wislizenii</i> )		10	12	Poor	Poor	Poor	Poor to fair	Poor	Poor to fair	10	Callusing basal/trunk wound/cavity, southwest side, to approximately 8' above grade; moderate to significant internal decay; excessive amount of deadwood; sparse foliage	<b>Recommend removal due to noted defects</b>
4033	Blue Oak	( <i>Quercus douglasii</i> )		17	23	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
4034	Blue Oak	( <i>Quercus douglasii</i> )		8	14	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
4035	Interior Live Oak	( <i>Quercus wislizenii</i> )	6, 7	13	20	Poor to fair	Poor	Fair	Fair	Poor	Fair	13	Callusing basal/trunk wounds, north side, to approximately 3' above grade; moderate interior decay with evidence of wood boring insects	<b>Recommend removal due to noted defects</b>
4036	Blue Oak	( <i>Quercus douglasii</i> )		12	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
4037	Blue Oak	( <i>Quercus douglasii</i> )		18	21	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
4038	Blue Oak	( <i>Quercus douglasii</i> )		18	22	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
4039	Blue Oak	( <i>Quercus douglasii</i> )		22	25	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
4040	Blue Oak	( <i>Quercus douglasii</i> )		24	25	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

CARPENTER RANCH, LP  
Folsom South - Carpenter Ranch Project Site  
County of Sacramento, California  
**INVENTORY SUMMARY**

TREE#	COMMON NAME	SPECIES	MULTI- STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						DEFECT REMOVALS (inches)	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
						ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
4041	Blue Oak	( <i>Quercus douglasii</i> )	12, 14	26	24	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
4042	Blue Oak	( <i>Quercus douglasii</i> )		22	24	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
4043	Blue Oak	( <i>Quercus douglasii</i> )		13	18	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
4044	Blue Oak	( <i>Quercus douglasii</i> )		15	17	Fair	Fair	Fair	Dormant	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
4045	Blue Oak	( <i>Quercus douglasii</i> )		14	18	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
4046	Valley Oak	( <i>Quercus lobata</i> )	15, 18	33	27	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
4047	Valley Oak	( <i>Quercus lobata</i> )		31	32	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Two recent 8" to 10" diameter limb failures, northern portion of crown	Clean out crown
4048	Blue Oak	( <i>Quercus douglasii</i> )		24	28	Fair	Fair	Poor to fair	Dormant	Fair	Fair		Above average amount of deadwood	Clean out crown
4049	Valley Oak	( <i>Quercus lobata</i> )		45	47	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
4050	Valley Oak	( <i>Quercus lobata</i> )		26	48	Fair	Fair	Fair	Dormant	Fair	Fair		Trunk leans south	Clean out crown
4051	Valley Oak	( <i>Quercus lobata</i> )		22	33	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
4052	Valley Oak	( <i>Quercus lobata</i> )		32	45	Fair	Fair	Fair	Dormant	Fair	Fair		Measured at 3' above grade; forks at approximately 5' above grade; trunks lean north and west	Clean out crown
4053	Valley Oak	( <i>Quercus lobata</i> )	8, 14	22	25	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
4054	Valley Oak	( <i>Quercus lobata</i> )	7, 12, 15	34	21	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown
4055	Blue Oak	( <i>Quercus douglasii</i> )		22	31	Fair	Fair	Fair	Dormant	Fair	Fair			Clean out crown

TOTAL INVENTORIED TREES = 4,055 Trees (62,302 aggregate diameter inches)
TOTAL ARBORIST-RECOMMENDED REMOVALS = 330 Trees (5,780 aggregate diameter inches)
PRECAUTIONARY TREES HIGHLIGHTED FOR REFERENCE

## **APPENDIX D23**

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Arborist Report for 14005 White Rock Road

# TREE TECHNOLOGY INC.



*Serving The Green Industry*

8609 Weyand Avenue, Sacramento, CA 95828 Office: (916) 386-1780 Fax: (916) 386-1483

Contractor's License # 653836

[www.treetechservices.com](http://www.treetechservices.com)

## ARBORIST REPORT

### LOCATION

14005 White Rock Rd

### PREPARED FOR

PDF Development Company

Paul Frank

PO Box 1341

Rancho Murieta, CA 95683

### PREPARED BY

Dave Heinrichs

Certified Arborist #WE-5019A

Tree Technology, Inc.

8609 Weyand Avenue

Sacramento, CA 95828

Office (916) 386-1780

Cell (916) 997-2873

July 15, 2003

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*July 15, 2003*

*Dear Mr. Frank,*

*The following is an Arborist's Field Report for trees at 14005 White Rock Road. The trees are tagged with numbers 164 – 192 and 1 – 62 for reference. Please feel free to give me a call if I can be of further help.*

*Thank you,*

*Dave Heinrichs  
Certified Arborist #WE-5019A  
Tree Technology, Inc.*



*14005 White Rock Rd.*

TREE #164 Blue Oak (*Quercus douglasii*)

D.B.H. : 40"  
Drip-line radius : 39'  
Root crown : fair  
Structure : fair; co-dominant @ 8'  
Foliage : fair  
Drip-line environment : natural grasses  
Recommendations : none at this time

TREE #165 Blue Oak (*Quercus douglasii*)

D.B.H. : 28"  
Drip-line radius : 33'  
Root crown : fair  
Structure : fair; primary limb attached @ 6' growing  
under canopy  
Foliage : fair  
Drip-line environment : natural grasses  
Recommendations : none at this time

TREE #166 Blue Oak (*Quercus douglasii*)

D.B.H. : 33"  
Drip-line radius : 36'  
Root crown : fair  
Structure : fair; co-dominant @ 6'  
Foliage : fair  
Drip-line environment : natural grasses  
Recommendations : none at this time

TREE #167 Blue Oak (*Quercus douglasii*)

D.B.H. : 17"  
Drip-line radius : 27'  
Root crown : fair  
Structure : fair - poor; growing out from under #166  
Foliage : fair - poor; above average secondary growth  
Drip-line environment : natural grasses  
Recommendations : none at this time

14005 White Rock Rd.

<u>TREE #168</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 34"
Drip-line radius	: 39'
Root crown	: fair
Structure	: fair – poor; 95% of canopy on South side
Foliage	: fair – poor; sparse
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #169</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 20"
Drip-line radius	: 30'
Root crown	: fair
Structure	: poor; co-dominant @ 6'; growing 90° West out from under #170
Foliage	: fair – poor; above average secondary growth
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #170</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 48"
Drip-line radius	: 39'
Root crown	: fair
Structure	: fair; co-dominant @ 5'
Foliage	: fair
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #171</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 24"
Drip-line radius	: 6'
Root crown	: fair
Structure	: poor; main-stem broken off @ 20'; no primary limbs
Foliage	: poor
Drip-line environment	: natural grasses
Recommendations	: remove

14005 White Rock Rd.

<u>TREE #172</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 35"
Drip-line radius	: 36'
Root crown	: fair
Structure	: fair – poor; co-dominant @ 5'; decay in both primaries @ 15'
Foliage	: fair – poor; sparse
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #173</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 20"
Drip-line radius	: 22'
Root crown	: fair – poor; rodent holes on West side
Structure	: poor; growing 90° out from under #172
Foliage	: fair – poor; sparse
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #174</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 36"
Drip-line radius	: 30'
Root crown	: fair
Structure	: fair – poor; co-dominant @ 2'
Foliage	: fair – poor; sparse
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #175</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 21"
Drip-line radius	: 20'
Root crown	: fair – poor; rodent holes in East side
Structure	: fair – poor; growing co-dominant with #174
Foliage	: fair
Drip-line environment	: natural grasses
Recommendations	: none at this time

*14005 White Rock Rd.*

<u>TREE #176</u>	<u>Blue Oak (<i>Quercus douglasii</i>)</u>
D.B.H.	: 34"
Drip-line radius	: 36'
Root crown	: fair – poor; rodent holes on East side
Structure	: fair; co-dominant @ 5'
Foliage	: fair
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #177</u>	<u>Blue Oak (<i>Quercus douglasii</i>)</u>
D.B.H.	: 28"
Drip-line radius	: 36'
Root crown	: fair
Structure	: fair
Foliage	: fair
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #178</u>	<u>Blue Oak (<i>Quercus douglasii</i>)</u>
D.B.H.	: 30"
Drip-line radius	: 30'
Root crown	: fair
Structure	: fair
Foliage	: fair
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #179</u>	<u>Blue Oak (<i>Quercus douglasii</i>)</u>
D.B.H.	: 12"
Drip-line radius	: 18'
Root crown	: fair – poor
Structure	: fair – poor; co-dominant in a stand
Foliage	: fair - poor
Drip-line environment	: natural grasses; on edge of seasonal creek
Recommendations	: none at this time

14005 White Rock Rd.

TREE #180 Blue Oak (Quercus douglasii)

D.B.H. : 15"  
Drip-line radius : 27'  
Root crown : fair  
Structure : fair - poor; co-dominant in a stand  
Foliage : fair - poor  
Drip-line environment : natural grasses; on edge of seasonal creek  
Recommendations : none at this time

TREE #181 Blue Oak (Quercus douglasii)

D.B.H. : 20"  
Drip-line radius : 24'  
Root crown : fair - poor  
Structure : fair - poor; co-dominant @ base and in a stand  
Foliage : fair - poor  
Drip-line environment : natural grasses; on edge of a seasonal creek  
Recommendations : none at this time

TREE #182 Blue Oak (Quercus douglasii)

D.B.H. : 22"  
Drip-line radius : 27'  
Root crown : fair - poor  
Structure : fair - poor; co-dominant @ 6' and in a stand  
Foliage : fair - poor  
Drip-line environment : natural grasses; on edge of seasonal creek  
Recommendations : none at this time

TREE #183 Live Oak (Quercus wislizenii)

D.B.H. : 12"  
Drip-line radius : 24'  
Root crown : fair - poor  
Structure : poor; die-back @ 10'; growing co-dominant in a stand  
Foliage : poor  
Drip-line environment : natural grasses  
Recommendations : remove

14005 White Rock Rd.

<u>TREE #184</u>	<u>Live Oak (Quercus wislizenii)</u>
D.B.H.	: 25"; co-dominant @ base
Drip-line radius	: 24'
Root crown	: fair - poor; touching #185
Structure	: poor; co-dominant @ base; cavity with extensive decay @ 4'; growing out from under #185
Foliage	: fair - poor
Drip-line environment	: natural grasses
Recommendations	: remove

<u>TREE #185</u>	<u>Live Oak (Quercus wislizenii)</u>
D.B.H.	: 28"
Drip-line radius	: 30'
Root crown	: fair - poor; touching #184
Structure	: fair - poor; co-dominant @ 8'; multiple cavities in main-stem @ 5 - 10'
Foliage	: fair - poor
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #186</u>	<u>Live Oak (Quercus wislizenii)</u>
D.B.H.	: 31"
Drip-line radius	: 30'
Root crown	: fair - poor
Structure	: fair
Foliage	: fair
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #187</u>	<u>Live Oak (Quercus wislizenii)</u>
D.B.H.	: 37"
Drip-line radius	: 36'
Root crown	: fair - poor; rodent holes present
Structure	: poor; cavities, decay and die-back @ 5 - 20'
Foliage	: fair
Drip-line environment	: natural grasses; on edge of seasonal creek
Recommendations	: remove

14005 White Rock Rd.

<u>TREE #188</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 15"
Drip-line radius	: 0
Root crown	: poor; exposed
Structure	: poor; main-stem broken @ 6' by large dead tree falling into it
Foliage	: poor
Drip-line environment	: natural grasses; on edge of seasonal creek
Recommendations	: remove
<u>TREE #189</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 16"
Drip-line radius	: 22'
Root crown	: fair - poor
Structure	: poor; co-dominant @ 6'; large dead tree has fallen into it and caused severe damage
Foliage	: poor
Drip-line environment	: natural grasses; on edge of seasonal creek
Recommendations	: remove
<u>TREE #190</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 23"
Drip-line radius	: 26'
Root crown	: fair
Structure	: fair - poor
Foliage	: fair - poor; sparse
Drip-line environment	: natural grasses; on edge of seasonal creek
Recommendations	: none at this time
<u>TREE #191</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 32"
Drip-line radius	: 30'
Root crown	: fair - poor
Structure	: fair - poor; co-dominant @ 6'
Foliage	: fair
Drip-line environment	: natural grasses; on edge of seasonal creek
Recommendations	: none at this time

14005 White Rock Rd.

<u>TREE #192</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 22"
Drip-line radius	: 30'
Root crown	: fair
Structure	: fair
Foliage	: fair - poor
Drip-line environment	: natural grasses; on edge of seasonal creek
Recommendations	: none at this time

<u>TREE #1</u>	<u>Valley Oak (Quercus lobata)</u>
D.B.H.	: 31"
Drip-line radius	: 33'
Root crown	: fair
Structure	: fair; co-dominant @ 10'
Foliage	: fair
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #2</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 28"
Drip-line radius	: 27'
Root crown	: fair
Structure	: fair
Foliage	: fair
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #3</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 36"
Drip-line radius	: 21'
Root crown	: fair - poor; rodent holes
Structure	: poor; extensive decay in main-stem @ 15 - 20'
Foliage	: fair - poor
Drip-line environment	: natural grasses
Recommendations	: remove



14005 White Rock Rd.

<u>TREE #4</u>	<u>Valley Oak (<i>Quercus lobata</i>)</u>
D.B.H.	: 46"
Drip-line radius	: 26'
Root crown	: fair – poor; rodent holes
Structure	: poor; main-stem broken off @ 20' with extensive decay
Foliage	: poor
Drip-line environment	: natural grasses
Recommendations	: remove

<u>TREE #5</u>	<u>Blue Oak (<i>Quercus douglasii</i>)</u>
D.B.H.	: 42"
Drip-line radius	: 27'
Root crown	: fair – poor; rodent holes
Structure	: fair
Foliage	: fair
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #6</u>	<u>Blue Oak (<i>Quercus douglasii</i>)</u>
D.B.H.	: 37"
Drip-line radius	: 27'
Root crown	: fair
Structure	: fair – poor; cavity in main-stem @ 20'; decay on primary limb @ 20'
Foliage	: fair - poor
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #7</u>	<u>Live Oak (<i>Quercus wislizenii</i>)</u>
D.B.H.	: 53"
Drip-line radius	: 45'
Root crown	: fair – poor; rodent holes
Structure	: fair - poor
Foliage	: fair
Drip-line environment	: natural grasses
Recommendations	: none at this time

14005 White Rock Rd.

<u>TREE #8</u>	<u>Live Oak (Quercus wislizenii)</u>
D.B.H.	: 25"
Drip-line radius	: 30'
Root crown	: poor; extensive decay
Structure	: poor; primary limbs growing along ground out of base
Foliage	: fair
Drip-line environment	: natural grasses
Recommendations	: remove

<u>TREE #9</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 37"
Drip-line radius	: 9'
Root crown	: poor; extensive decay
Structure	: poor; main-stem broken off @ 10'; extensive decay
Foliage	: poor
Drip-line environment	: natural grasses
Recommendations	: remove

<u>TREE #10</u>	<u>Locust (Robinia pseudoacacia)</u>
D.B.H.	: 32"
Drip-line radius	: 24'
Root crown	: poor; extensive decay
Structure	: poor; crown 90° East
Foliage	: fair
Drip-line environment	: natural grasses
Recommendations	: remove

<u>TREE #11</u>	<u>Locust (Robinia pseudoacacia)</u>
D.B.H.	: 16"
Drip-line radius	: 18'
Root crown	: poor; extensive decay
Structure	: poor; extensive decay in main-stem @ 1 - 10'
Foliage	: poor
Drip-line environment	: natural grasses
Recommendations	: remove

14005 White Rock Rd.

TREE #12 Locust (Robinia pseudoacacia)

D.B.H. : 12"  
Drip-line radius : 14'  
Root crown : poor; extensive decay  
Structure : poor  
Foliage : fair - poor  
Drip-line environment : natural grasses  
Recommendations : remove

TREE #13 Locust (Robinia pseudoacacia)

D.B.H. : 51"; multi-stemmed  
Drip-line radius : 24'  
Root crown : poor; decay  
Structure : poor; decay in main-stem @ union of primary limbs  
Foliage : fair - poor  
Drip-line environment : natural grasses  
Recommendations : remove

TREE #14 Locust (Robinia pseudoacacia)

D.B.H. : 52"  
Drip-line radius : 27'  
Root crown : poor; extensive decay  
Structure : poor; main-stem split @ 1 - 4'; extensive decay  
Foliage : poor  
Drip-line environment : natural grasses  
Recommendations : remove

TREE #15 Valley Oak (Quercus lobata)

D.B.H. : 53"  
Drip-line radius : 27'  
Root crown : fair  
Structure : poor; main-stem broken off @ 12'; extensive decay  
Foliage : fair - poor  
Drip-line environment : natural grasses  
Recommendations : remove

14005 White Rock Rd.

<u>TREE #16</u>	<u>Valley Oak (Quercus lobata)</u>
D.B.H.	: 46"
Drip-line radius	: 46'
Root crown	: fair
Structure	: poor; multiple cavities with decay throughout canopy where primary limbs have broken off
Foliage	: fair - poor
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #17</u>	<u>Valley Oak (Quercus lobata)</u>
D.B.H.	: 47"
Drip-line radius	: 27'
Root crown	: fair
Structure	: poor; main-stem broken off @ 12' with extensive decay
Foliage	: fair - poor
Drip-line environment	: natural grasses
Recommendations	: remove

<u>TREE #18</u>	<u>Locust (Robinia pseudoacacia)</u>
D.B.H.	: 14"
Drip-line radius	: 10'
Root crown	: fair - poor
Structure	: fair - poor; co-dominant @ 3'
Foliage	: fair - poor
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #19</u>	<u>Locust (Robinia pseudoacacia)</u>
D.B.H.	: 12"
Drip-line radius	: 18'
Root crown	: fair - poor
Structure	: poor; leaning 45° West; decay @ 7'
Foliage	: fair - poor
Drip-line environment	: natural grasses
Recommendations	: remove

14005 White Rock Rd.

TREE #20 Locust (*Robinia pseudoacacia*)

D.B.H. : 8"  
Drip-line radius : 12'  
Root crown : fair - poor  
Structure : fair  
Foliage : fair  
Drip-line environment : natural grasses  
Recommendations : none at this time

TREE #21 Live Oak (*Quercus wislizenii*)

D.B.H. : 38"  
Drip-line radius : 33'  
Root crown : fair - poor; rodent holes  
Structure : fair  
Foliage : fair - poor  
Drip-line environment : natural grasses  
Recommendations : none at this time

TREE #22 Blue Oak (*Quercus douglasii*)

D.B.H. : 38"  
Drip-line radius : 36'  
Root crown : poor; extensive decay  
Structure : poor; multiple primary limb failures with decay  
Foliage : poor  
Drip-line environment : natural grasses  
Recommendations : remove

TREE #23 Blue Oak (*Quercus douglasii*)

D.B.H. : 39"  
Drip-line radius : 27'  
Root crown : poor; decay present  
Structure : fair - poor  
Foliage : fair - poor  
Drip-line environment : natural grasses  
Recommendations : none at this time

14005 White Rock Rd.

TREE #24 Walnut (*Juglans californica*)

D.B.H. : 36"  
Drip-line radius : 18'  
Root crown : fair - poor  
Structure : fair  
Foliage : fair  
Drip-line environment : natural grasses  
Recommendations : none at this time

TREE #25 Blue Oak (*Quercus douglasii*)

D.B.H. : 47"  
Drip-line radius : 36'  
Root crown : fair  
Structure : fair; large broken primary @ 12'  
Foliage : fair - poor  
Drip-line environment : natural grasses  
Recommendations : none at this time

TREE #26 Blue Oak (*Quercus douglasii*)

D.B.H. : 36"  
Drip-line radius : 36'  
Root crown : fair  
Structure : fair - poor  
Foliage : fair - poor  
Drip-line environment : natural grasses  
Recommendations : none at this time

TREE #27 Blue Oak (*Quercus douglasii*)

D.B.H. : 49"  
Drip-line radius : 42'  
Root crown : fair  
Structure : fair - poor; multiple holes in primary deadwood  
from birds; broken primary @ 15'  
Foliage : poor; sparse  
Drip-line environment : natural grasses  
Recommendations : none at this time

*14005 White Rock Rd.*

TREE #28 Blue Oak (*Quercus douglasii*)

D.B.H. : 40"  
Drip-line radius : 36'  
Root crown : fair  
Structure : fair  
Foliage : fair  
Drip-line environment : natural grasses  
Recommendations : none at this time

TREE #29 Blue Oak (*Quercus douglasii*)

D.B.H. : 30"  
Drip-line radius : 26'  
Root crown : poor; decay  
Structure : poor; main-stem split down center  
Foliage : fair - poor  
Drip-line environment : natural grasses  
Recommendations : remove

TREE #30 Blue Oak (*Quercus douglasii*)

D.B.H. : 41"  
Drip-line radius : 39'  
Root crown : fair  
Structure : fair  
Foliage : fair  
Drip-line environment : natural grasses  
Recommendations : none at this time

TREE #31 Blue Oak (*Quercus douglasii*)

D.B.H. : 36"  
Drip-line radius : 27'  
Root crown : fair  
Structure : poor; main-stem broken @ 30'; all limbs  
on North West side broken off  
Foliage : fair - poor  
Drip-line environment : natural grasses  
Recommendations : remove

14005 White Rock Rd.

<u>TREE #32</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 43"
Drip-line radius	: 27'
Root crown	: poor; extensive decay
Structure	: poor; multiple primary failures with extensive decay
Foliage	: poor
Drip-line environment	: natural grasses
Recommendations	: remove

<u>TREE #33</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 37"
Drip-line radius	: 33'
Root crown	: poor; decay present
Structure	: fair; old wound with decay in main-stem @ 0-5'
Foliage	: fair
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #34</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 39'
Drip-line radius	: 30'
Root crown	: poor
Structure	: poor; main-stem broken off @ 10'
Foliage	: poor
Drip-line environment	: natural grasses
Recommendations	: remove

<u>TREE #35</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 31"
Drip-line radius	: 30'
Root crown	: fair - poor
Structure	: fair
Foliage	: fair - poor
Drip-line environment	: natural grasses
Recommendations	: none at this time



14005 White Rock Rd.

<u>TREE #36</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 36"
Drip-line radius	: 18'
Root crown	: poor; extensive decay
Structure	: poor; main-stem broken off @ 15'; extensive decay @ 0-3'
Foliage	: fair - poor
Drip-line environment	: natural grasses
Recommendations	: remove

<u>TREE #37</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 32"
Drip-line radius	: 30'
Root crown	: fair
Structure	: fair
Foliage	: fair
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #38</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 28"
Drip-line radius	: 32'
Root crown	: fair
Structure	: fair - poor
Foliage	: fair
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #39</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 12"
Drip-line radius	: 14'
Root crown	: fair - poor
Structure	: fair - poor
Foliage	: fair
Drip-line environment	: natural grasses
Recommendations	: none at this time

14005 White Rock Rd

<u>TREE #40</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 12"
Drip-line radius	: 21'
Root crown	: fair - poor
Structure	: poor
Foliage	: poor
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #41</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 12"
Drip-line radius	: 16'
Root crown	: fair
Structure	: poor
Foliage	: poor
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #42</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 20"
Drip-line radius	: 30'
Root crown	: fair - poor
Structure	: poor
Foliage	: fair - poor
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #43</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 24"
Drip-line radius	: 30'
Root crown	: fair
Structure	: fair
Foliage	: fair
Drip-line environment	: natural grasses
Recommendations	: none at this time

14005 White Rock Rd.

<u>TREE #44</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 24"
Drip-line radius	: 36'
Root crown	: fair
Structure	: fair - poor
Foliage	: fair - poor
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #45</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 19"
Drip-line radius	: 20'
Root crown	: fair
Structure	: fair
Foliage	: fair
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #46</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 19"
Drip-line radius	: 15'
Root crown	: poor; decay
Structure	: poor
Foliage	: poor
Drip-line environment	: natural grasses
Recommendations	: remove

<u>TREE #47</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 19"
Drip-line radius	: 30'
Root crown	: fair
Structure	: fair - poor
Foliage	: fair
Drip-line environment	: natural grasses
Recommendations	: none at this time

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<u>TREE #48</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 12"
Drip-line radius	: 16'
Root crown	: fair
Structure	: poor
Foliage	: fair - poor
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #49</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 24"
Drip-line radius	: 30'
Root crown	: fair
Structure	: fair
Foliage	: fair
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #50</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 26"
Drip-line radius	: 28'
Root crown	: fair
Structure	: fair
Foliage	: fair
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #51</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 24"
Drip-line radius	: 32'
Root crown	: fair
Structure	: fair - poor
Foliage	: fair
Drip-line environment	: natural grasses
Recommendations	: none at this time

14005 White Rock Rd.

<u>TREE #52</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 23"
Drip-line radius	: 12'
Root crown	: fair
Structure	: poor; main-stem broken off @ 12'
Foliage	: poor
Drip-line environment	: natural grasses
Recommendations	: remove
<u>TREE #53</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 14"
Drip-line radius	: 12'
Root crown	: fair
Structure	: poor; wound with decay in main-stem @ 5'
Foliage	: fair - poor
Drip-line environment	: natural grasses
Recommendations	: none at this time
<u>TREE #54</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 16"
Drip-line radius	: 20'
Root crown	: fair
Structure	: fair - poor
Foliage	: fair - poor
Drip-line environment	: natural grasses
Recommendations	: none at this time
<u>TREE #55</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 12"
Drip-line radius	: 14'
Root crown	: fair
Structure	: fair - poor
Foliage	: fair - poor
Drip-line environment	: natural grasses
Recommendations	: none at this time

14005 White Rock Rd.

<u>TREE #56</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 16"
Drip-line radius	: 24'
Root crown	: fair
Structure	: fair - poor
Foliage	: fair - poor
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #57</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 37"
Drip-line radius	: 32'
Root crown	: fair
Structure	: fair
Foliage	: fair
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #58</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 10"
Drip-line radius	: 9'
Root crown	: fair
Structure	: fair
Foliage	: fair
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #59</u>	<u>Blue Oak (Quercus douglasii)</u>
D.B.H.	: 12"
Drip-line radius	: 12'
Root crown	: fair
Structure	: fair
Foliage	: fair
Drip-line environment	: fair
Recommendations	: none at this time

*14005 White Rock Rd.*

<u>TREE #60</u>	<u>Blue Oak (<i>Quercus douglasii</i>)</u>
D.B.H.	: 20"
Drip-line radius	: 18'
Root crown	: fair
Structure	: fair
Foliage	: fair
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #61</u>	<u>Blue Oak (<i>Quercus douglasii</i>)</u>
D.B.H.	: 22"
Drip-line radius	: 19'
Root crown	: fair
Structure	: fair
Foliage	: fair
Drip-line environment	: natural grasses
Recommendations	: none at this time

<u>TREE #62</u>	<u>Blue Oak (<i>Quercus douglasii</i>)</u>
D.B.H.	: 28"
Drip-line radius	: 26'
Root crown	: fair
Structure	: fair
Foliage	: fair
Drip-line environment	: natural grasses
Recommendations	: none at this time

# TREE TECHNOLOGY INC.



*Serving The Green Industry*

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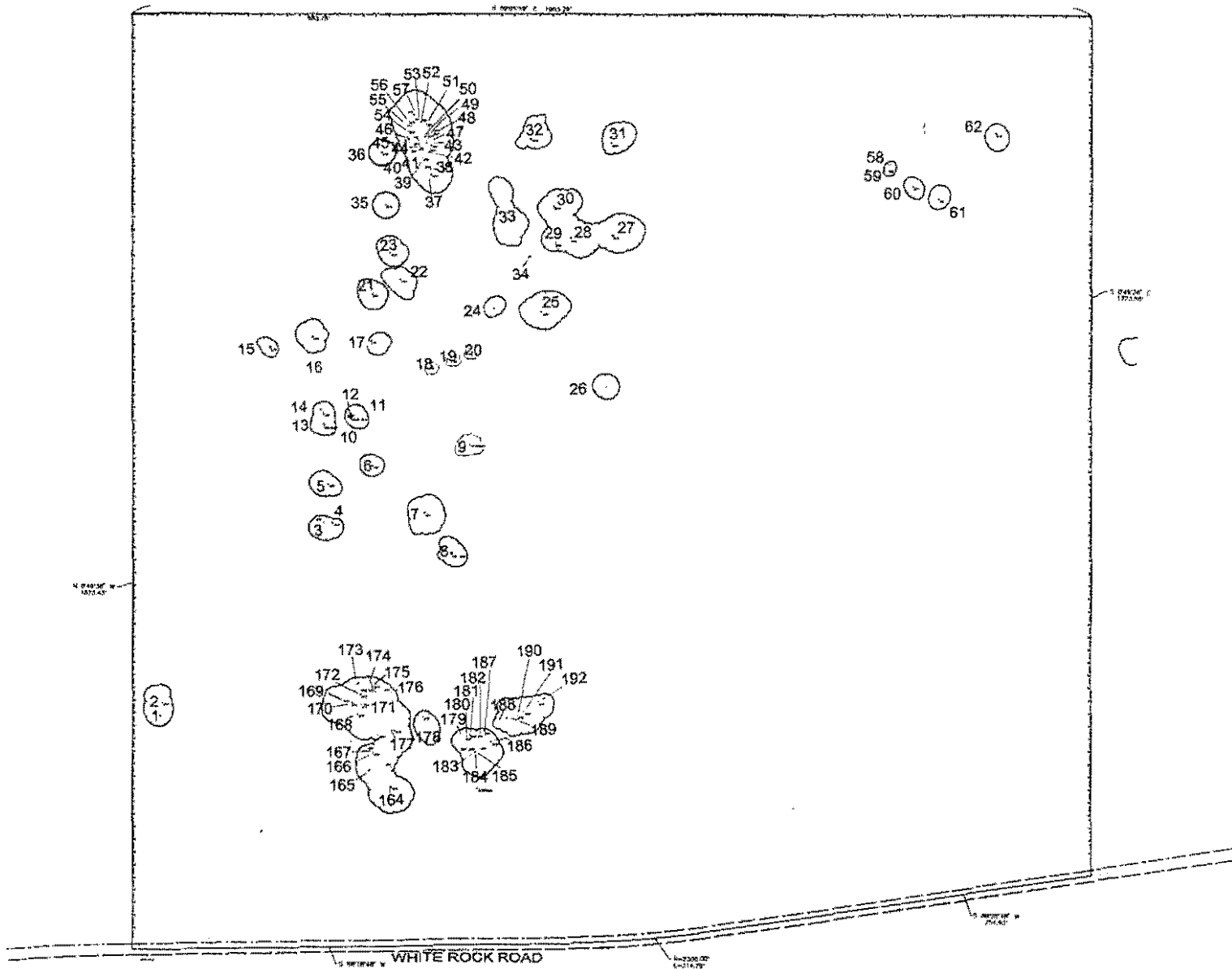
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*The proceeding report represents the opinion of it's author, and is not intended to predict the eventual relative health and success of the plants addressed herein. References to specific plants are based on general observations and should not be considered a definitive evaluation of plant health, structure, manifest growth rates, pathology or any other predictions implied or stated. All measured data are approximate unless otherwise specified, and scale utilized is that of the site plan's preparer.*

*The author of this report, Tree Technology, Inc., it's owners, subsidiaries and associates disclaim any responsibility for plant health and/or hazards which exist or otherwise develop in the future on the property located as follows:*

*14005 White Rock Rd.*





# **SACRAMENTO COUNTRY DAY SCHOOL - MASTER TREE PLAN** **SACRAMENTO, CALIFORNIA**

NOVEMBER 12, 2003  
 SACRAMENTO COUNTRY DAY SCHOOL

SCALE: 1"=80'-0"  
 LEARNING ENVIRONMENTS GROUP  
 WILLIAMS + PADDON, ARCHITECTS + PLANNERS

## **APPENDIX D24**

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Arborist Report for Sacramento Country Day School

**ARBORIST REPORT**

**LOCATION**

*Sacramento Country Day School*

**PREPARED FOR**

*Katz Kitpatrick Properties*

*Fred Katz*

*3300 Douglas Blvd.*

*Roseville, CA 95661*

**PREPARED BY**

*Jeff Ball*

*Certified Arborist #WE-7141A*

*Tree Technology, Inc.*

*8609 Weyand Avenue*

*Sacramento, CA 95828*

*Office (916) 386-1780*

*Cell (916) 997-1009*

*May 17, 2007*

*May 17, 2007*

*Dear Mr. Katz,*

*The following is an Arborist's Field Report for trees at Sacramento Country Day School. The trees are tagged with numbers for reference. Please feel free to give me a call if I can be of further help.*

*Thank you,*

*Jeff Ball  
Certified Arborist #WE-7141A  
Tree Technology, Inc.*

<b><u>TREE #15</u></b>	<b><u>Valley Oak (Quercus lobata)</u></b>
<i>D.B.H.</i>	: 53"
<i>Drip-line radius</i>	: 27'
<i>Root crown</i>	: fair
<i>Structure</i>	: poor; main-stem broken off @ 12'; extensive decay
<i>Foliage</i>	: fair – poor
<i>Drip-line environment</i>	: natural grasses
<i>Recommendations</i>	: remove
<b><u>TREE #16</u></b>	<b><u>Valley Oak (Quercus lobata)</u></b>
<i>D.B.H.</i>	: 46"
<i>Drip-line radius</i>	: 46'
<i>Root crown</i>	: fair
<i>Structure</i>	: poor; multiple cavities with decay throughout canopy where primary limbs have broken off
<i>Foliage</i>	: fair - poor
<i>Drip-line environment</i>	: natural grasses
<i>Recommendations</i>	: none at this time
<b><u>TREE #17</u></b>	<b><u>Valley Oak (Quercus lobata)</u></b>
<i>D.B.H.</i>	: 47"
<i>Drip-line radius</i>	: 27'
<i>Root crown</i>	: fair
<i>Structure</i>	: poor; main-stem broken off @ 12' with extensive decay
<i>Foliage</i>	: fair - poor
<i>Drip-line environment</i>	: natural grasses
<i>Recommendations</i>	: remove
<b><u>TREE #21</u></b>	<b><u>Live Oak (Quercus wislizenii)</u></b>
<i>D.B.H.</i>	: 38"
<i>Drip-line radius</i>	: 33'
<i>Root crown</i>	: fair – poor; rodent holes
<i>Structure</i>	: fair
<i>Foliage</i>	: fair - poor
<i>Drip-line environment</i>	: natural grasses
<i>Recommendations</i>	: none at this time

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***TREE #22*** ***Blue Oak (Quercus douglasii)***

***D.B.H.*** : 38"  
***Drip-line radius*** : 36'  
***Root crown*** : dead  
***Structure*** : dead  
***Foliage*** : dead  
***Drip-line environment*** : natural grasses  
***Recommendations*** : remove

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***TREE #23*** ***Blue Oak (Quercus douglasii)***

***D.B.H.*** : 39"  
***Drip-line radius*** : 27'  
***Root crown*** : poor; decay present  
***Structure*** : fair - poor  
***Foliage*** : fair - poor  
***Drip-line environment*** : natural grasses  
***Recommendations*** : none at this time

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***TREE #24*** ***Walnut (Juglans californica)***

***D.B.H.*** : 36"; multi-stemmed  
***Drip-line radius*** : 18'  
***Root crown*** : fair – poor  
***Structure*** : fair  
***Foliage*** : fair  
***Drip-line environment*** : natural grasses  
***Recommendations*** : none at this time

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***TREE #25*** ***Blue Oak (Quercus douglasii)***

***D.B.H.*** : 47"  
***Drip-line radius*** : 36'  
***Root crown*** : fair  
***Structure*** : fair; large broken primary @ 12'  
***Foliage*** : fair - poor  
***Drip-line environment*** : natural grasses  
***Recommendations*** : none at this time

<b><u>TREE #27</u></b>	<b><u>Blue Oak (<i>Quercus douglasii</i>)</u></b>
<i>D.B.H.</i>	: 49"
<i>Drip-line radius</i>	: 42'
<i>Root crown</i>	: fair
<i>Structure</i>	: fair – poor; multiple holes in primary deadwood from birds; broken primary @ 15'
<i>Foliage</i>	: poor; sparse
<i>Drip-line environment</i>	: natural grasses
<i>Recommendations</i>	: none at this time

<b><u>TREE #28</u></b>	<b><u>Blue Oak (<i>Quercus douglasii</i>)</u></b>
<i>D.B.H.</i>	: 40"
<i>Drip-line radius</i>	: 36'
<i>Root crown</i>	: fair
<i>Structure</i>	: fair
<i>Foliage</i>	: fair
<i>Drip-line environment</i>	: natural grasses
<i>Recommendations</i>	: none at this time

<b><u>TREE #29</u></b>	<b><u>Blue Oak (<i>Quercus douglasii</i>)</u></b>
<i>D.B.H.</i>	: 30"
<i>Drip-line radius</i>	: 26'
<i>Root crown</i>	: dead; uprooted
<i>Structure</i>	: dead; uprooted
<i>Foliage</i>	: dead; uprooted
<i>Drip-line environment</i>	: natural grasses
<i>Recommendations</i>	: remove

<b><u>TREE #30</u></b>	<b><u>Blue Oak (<i>Quercus douglasii</i>)</u></b>
<i>D.B.H.</i>	: 41"
<i>Drip-line radius</i>	: 39'
<i>Root crown</i>	: fair
<i>Structure</i>	: fair
<i>Foliage</i>	: fair
<i>Drip-line environment</i>	: natural grasses
<i>Recommendations</i>	: none at this time

<b><u>TREE #31</u></b>	<b><u>Blue Oak (<i>Quercus douglasii</i>)</u></b>
<b><i>D.B.H.</i></b>	<b><i>: 36"</i></b>
<b><i>Drip-line radius</i></b>	<b><i>: 27'</i></b>
<b><i>Root crown</i></b>	<b><i>: fair</i></b>
<b><i>Structure</i></b>	<b><i>: poor; main-stem broken @ 30'; all limbs on North West side broken off</i></b>
<b><i>Foliage</i></b>	<b><i>: fair – poor</i></b>
<b><i>Drip-line environment</i></b>	<b><i>: natural grasses</i></b>
<b><i>Recommendations</i></b>	<b><i>: remove</i></b>

<b><u>TREE #32</u></b>	<b><u>Blue Oak (<i>Quercus douglasii</i>)</u></b>
<b><i>D.B.H.</i></b>	<b><i>: 43"</i></b>
<b><i>Drip-line radius</i></b>	<b><i>: 27'</i></b>
<b><i>Root crown</i></b>	<b><i>: dead; uprooted</i></b>
<b><i>Structure</i></b>	<b><i>: dead; uprooted</i></b>
<b><i>Foliage</i></b>	<b><i>: dead; uprooted</i></b>
<b><i>Drip-line environment</i></b>	<b><i>: natural grasses</i></b>
<b><i>Recommendations</i></b>	<b><i>: remove</i></b>

<b><u>TREE #33</u></b>	<b><u>Blue Oak (<i>Quercus douglasii</i>)</u></b>
<b><i>D.B.H.</i></b>	<b><i>: 37"</i></b>
<b><i>Drip-line radius</i></b>	<b><i>: 33'</i></b>
<b><i>Root crown</i></b>	<b><i>: poor; decay present</i></b>
<b><i>Structure</i></b>	<b><i>: fair; old wound with decay in main-stem @ 0-5'</i></b>
<b><i>Foliage</i></b>	<b><i>: fair</i></b>
<b><i>Drip-line environment</i></b>	<b><i>: natural grasses</i></b>
<b><i>Recommendations</i></b>	<b><i>: none at this time</i></b>

<b><u>TREE #34</u></b>	<b><u>Blue Oak (<i>Quercus douglasii</i>)</u></b>
<b><i>D.B.H.</i></b>	<b><i>: 39'</i></b>
<b><i>Drip-line radius</i></b>	<b><i>: 30'</i></b>
<b><i>Root crown</i></b>	<b><i>: poor</i></b>
<b><i>Structure</i></b>	<b><i>: poor; main-stem broken off @ 10'</i></b>
<b><i>Foliage</i></b>	<b><i>: poor</i></b>
<b><i>Drip-line environment</i></b>	<b><i>: natural grasses</i></b>
<b><i>Recommendations</i></b>	<b><i>: remove</i></b>



<b><u>TREE #35</u></b>	<b><u>Blue Oak (<i>Quercus douglasii</i>)</u></b>
<i>D.B.H.</i>	: 31"
<i>Drip-line radius</i>	: 30'
<i>Root crown</i>	: fair - poor
<i>Structure</i>	: fair
<i>Foliage</i>	: fair - poor
<i>Drip-line environment</i>	: natural grasses
<i>Recommendations</i>	: signs of decay due to deformed, peeling, and discolored bark on north side of main-stem; recommend root crown excavation and resistograph test

<b><u>TREE #36</u></b>	<b><u>Blue Oak (<i>Quercus douglasii</i>)</u></b>
<i>D.B.H.</i>	: 36"
<i>Drip-line radius</i>	: 18'
<i>Root crown</i>	: poor; extensive decay
<i>Structure</i>	: poor; main-stem broken off @ 15'; extensive decay @ 0-3'
<i>Foliage</i>	: fair – poor
<i>Drip-line environment</i>	: natural grasses
<i>Recommendations</i>	: remove

<b><u>TREE #37</u></b>	<b><u>Blue Oak (<i>Quercus douglasii</i>)</u></b>
<i>D.B.H.</i>	: 32"
<i>Drip-line radius</i>	: 30'
<i>Root crown</i>	: fair
<i>Structure</i>	: fair
<i>Foliage</i>	: fair
<i>Drip-line environment</i>	: natural grasses
<i>Recommendations</i>	: none at this time

<b><u>TREE #38</u></b>	<b><u>Blue Oak (<i>Quercus douglasii</i>)</u></b>
<i>D.B.H.</i>	: 28"
<i>Drip-line radius</i>	: 32'
<i>Root crown</i>	: fair
<i>Structure</i>	: poor; main-stem broke off @ 6', decay will become extensive
<i>Foliage</i>	: fair
<i>Drip-line environment</i>	: natural grasses
<i>Recommendations</i>	: remove

**TREE #39** **Blue Oak (*Quercus douglasii*)**

**D.B.H.** : 14"  
**Drip-line radius** : 16'  
**Root crown** : fair - poor  
**Structure** : fair - poor  
**Foliage** : fair  
**Drip-line environment** : natural grasses  
**Recommendations** : none at this time

**TREE #40** **Blue Oak (*Quercus douglasii*)**

**D.B.H.** : 13"  
**Drip-line radius** : 22'  
**Root crown** : poor; extensive girdling and decay at base  
**Structure** : poor  
**Foliage** : poor  
**Drip-line environment** : natural grasses  
**Recommendations** : remove

**TREE #41** **Blue Oak (*Quercus douglasii*)**

**D.B.H.** : 13"  
**Drip-line radius** : 16'  
**Root crown** : fair  
**Structure** : poor  
**Foliage** : poor; tip dieback; extensive secondary growth  
**Drip-line environment** : natural grasses  
**Recommendations** : none at this time

**TREE #42** **Blue Oak (*Quercus douglasii*)**

**D.B.H.** : 20"  
**Drip-line radius** : 30'  
**Root crown** : poor; girdling  
**Structure** : poor  
**Foliage** : fair - poor  
**Drip-line environment** : natural grasses  
**Recommendations** : none at this time

<b><u>TREE #43</u></b>	<b><u>Blue Oak (<i>Quercus douglasii</i>)</u></b>
<i>D.B.H.</i>	: 24"
<i>Drip-line radius</i>	: 30'
<i>Root crown</i>	: fair
<i>Structure</i>	: fair
<i>Foliage</i>	: fair
<i>Drip-line environment</i>	: natural grasses
<i>Recommendations</i>	: none at this time

<b><u>TREE #44</u></b>	<b><u>Blue Oak (<i>Quercus douglasii</i>)</u></b>
<i>D.B.H.</i>	: 24"
<i>Drip-line radius</i>	: 36'
<i>Root crown</i>	: fair
<i>Structure</i>	: fair - poor
<i>Foliage</i>	: fair – poor
<i>Drip-line environment</i>	: natural grasses
<i>Recommendations</i>	: none at this time

<b><u>TREE #45</u></b>	<b><u>Blue Oak (<i>Quercus douglasii</i>)</u></b>
<i>D.B.H.</i>	: 19"
<i>Drip-line radius</i>	: 20'
<i>Root crown</i>	: fair
<i>Structure</i>	: fair
<i>Foliage</i>	: fair
<i>Drip-line environment</i>	: natural grasses
<i>Recommendations</i>	: none at this time

<b><u>TREE #46</u></b>	<b><u>Blue Oak (<i>Quercus douglasii</i>)</u></b>
<i>D.B.H.</i>	: 19"
<i>Drip-line radius</i>	: 15'
<i>Root crown</i>	: poor; decay
<i>Structure</i>	: poor
<i>Foliage</i>	: poor
<i>Drip-line environment</i>	: natural grasses
<i>Recommendations</i>	: remove

**TREE #47** **Blue Oak (*Quercus douglasii*)**

***D.B.H.*** : 19"  
***Drip-line radius*** : 30'  
***Root crown*** : fair  
***Structure*** : fair - poor  
***Foliage*** : fair  
***Drip-line environment*** : natural grasses  
***Recommendations*** : none at this time

**TREE #48** **Blue Oak (*Quercus douglasii*)**

***D.B.H.*** : 12"  
***Drip-line radius*** : 16'  
***Root crown*** : fair  
***Structure*** : poor; growing under #49  
***Foliage*** : fair - poor  
***Drip-line environment*** : natural grasses  
***Recommendations*** : none at this time

**TREE #49** **Blue Oak (*Quercus douglasii*)**

***D.B.H.*** : 24"  
***Drip-line radius*** : 30'  
***Root crown*** : fair  
***Structure*** : fair  
***Foliage*** : fair  
***Drip-line environment*** : natural grasses  
***Recommendations*** : none at this time

**TREE #50** **Blue Oak (*Quercus douglasii*)**

***D.B.H.*** : 26"  
***Drip-line radius*** : 28'  
***Root crown*** : fair  
***Structure*** : poor – previously topped  
***Foliage*** : fair  
***Drip-line environment*** : natural grasses  
***Recommendations*** : none at this time

**TREE #51** **Blue Oak (*Quercus douglasii*)**

***D.B.H.*** : 24"  
***Drip-line radius*** : 32'  
***Root crown*** : fair  
***Structure*** : fair – poor  
***Foliage*** : fair  
***Drip-line environment*** : natural grasses  
***Recommendations*** : none at this time

**TREE #52** **Blue Oak (*Quercus douglasii*)**

***D.B.H.*** : 23"  
***Drip-line radius*** : 12'  
***Root crown*** : fair  
***Structure*** : poor; main-stem broken off @ 12'  
***Foliage*** : poor  
***Drip-line environment*** : natural grasses  
***Recommendations*** : remove

**TREE #53** **Blue Oak (*Quercus douglasii*)**

***D.B.H.*** : 14"  
***Drip-line radius*** : 12'  
***Root crown*** : fair  
***Structure*** : poor; wound with decay in main-stem @ 5'  
***Foliage*** : fair - poor  
***Drip-line environment*** : natural grasses  
***Recommendations*** : none at this time

**TREE #54** **Blue Oak (*Quercus douglasii*)**

***D.B.H.*** : 16"  
***Drip-line radius*** : 20'  
***Root crown*** : fair  
***Structure*** : fair – poor  
***Foliage*** : fair - poor  
***Drip-line environment*** : natural grasses  
***Recommendations*** : none at this time

<b><i>TREE #55</i></b>	<b><i>Blue Oak (Quercus douglasii)</i></b>
<b><i>D.B.H.</i></b>	<b><i>: 12"</i></b>
<b><i>Drip-line radius</i></b>	<b><i>: 14'</i></b>
<b><i>Root crown</i></b>	<b><i>: fair</i></b>
<b><i>Structure</i></b>	<b><i>: poor</i></b>
<b><i>Foliage</i></b>	<b><i>: fair - poor</i></b>
<b><i>Drip-line environment</i></b>	<b><i>: natural grasses</i></b>
<b><i>Recommendations</i></b>	<b><i>: none at this time</i></b>

<b><i>TREE #56</i></b>	<b><i>Blue Oak (Quercus douglasii)</i></b>
<b><i>D.B.H.</i></b>	<b><i>: 16"</i></b>
<b><i>Drip-line radius</i></b>	<b><i>: 24'</i></b>
<b><i>Root crown</i></b>	<b><i>: fair</i></b>
<b><i>Structure</i></b>	<b><i>: poor</i></b>
<b><i>Foliage</i></b>	<b><i>: fair – poor</i></b>
<b><i>Drip-line environment</i></b>	<b><i>: natural grasses</i></b>
<b><i>Recommendations</i></b>	<b><i>: none at this time</i></b>

<b><i>TREE #57</i></b>	<b><i>Blue Oak (Quercus douglasii)</i></b>
<b><i>D.B.H.</i></b>	<b><i>: 37"</i></b>
<b><i>Drip-line radius</i></b>	<b><i>: 32'</i></b>
<b><i>Root crown</i></b>	<b><i>: fair</i></b>
<b><i>Structure</i></b>	<b><i>: poor; main-stem broke off @ 15'</i></b>
<b><i>Foliage</i></b>	<b><i>: fair</i></b>
<b><i>Drip-line environment</i></b>	<b><i>: natural grasses</i></b>
<b><i>Recommendations</i></b>	<b><i>: none at this time</i></b>

*The proceeding report represents the opinion of it's author, and is not intended to predict the eventual relative health and success of the plants addressed herein. References to specific plants are based on general observations and should not be considered a definitive evaluation of plant health, structure, manifest growth rates, pathology or any other predictions implied or stated. All measured data are approximate unless otherwise specified, and scale utilized is that of the site plan's preparer.*

*The author of this report, Tree Technology, Inc., it's owners, subsidiaries and associates disclaim any responsibility for plant health and/or hazards which exist or otherwise develop in the future on the property located as follows:*

*Sacramento Country Day School*

## **APPENDIX D25**

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Folsom SPA Bio Survey Status



April 13, 2009

Folsom SPA Bio Survey Status Report  
(Wet Season, Rare Plant, Elderberry, and other)

**Prairie City Road Business Park:**

- Early season and late season rare plant surveys were completed in spring 2008 (4/25/08, 4/30/08, and 6/4/08). No special-status plants were observed. USFWS frequently requests a second round of late season surveys; however, these have not been conducted and are not currently planned.
- Wet-season vernal pool branchiopod surveys are in progress. So far, vernal pool fairy shrimp has been found in 2 pools at PCRBP. Surveys have been halted within the watersheds containing the positive hits, but are continuing in pools outside of the "positive watersheds." Vernal pool tadpole shrimp has not been detected on-site, but California linderiella, a California species of concern, is present in many pools throughout the site. Survey dates so far: 12/22/08, 1/5/09, 1/19/09, 2/2/09, 2/16/09, 3/2/09, 3/16/09, and 3/30/09.
- An elderberry survey was conducted on 12/30/08. No elderberry shrubs were detected on-site.

**Folsom 560:**

- Early season and late season rare plant surveys were completed in spring 2008 (4/18/08, 4/25/08, and 6/17/08). No special-status plants were observed. USFWS frequently requests a second round of late season surveys; however, these have not been conducted and are not currently planned.
- Wet-season vernal pool branchiopod surveys are in progress. No federally-listed vernal pool branchiopods have been found on-site; however, numerous pools support California linderiella. Survey dates so far: 12/16/08, 12/31/08, 1/14/09, 1/28/09, 2/11/09, 2/25/09, 3/11/09, 3/25/09, and 4/7/09.
- An elderberry survey was conducted on 12/30/08. One elderberry shrub was found on-site and surveyed. No evidence of VELB presence was observed.

**Folsom 138:**

- Wet-season vernal pool branchiopod surveys are in progress. No vernal pool branchiopods have been detected on-site to-date.
- One burrowing owl was observed; however, formal burrowing owl surveys have not been conducted on-site.
- Rare plant surveys have not been conducted on-site.