

3.4 BIOLOGICAL RESOURCES

This section addresses biological resources known or with potential to occur in the SOIA Area and areas that may be affected by potential future off-site improvements needed to support potential development within the SOIA Area. The analysis includes a description of the existing environmental conditions at the time the Notice of Preparation (NOP) was issued in March 2016, the methods used for assessment, the impacts associated with implementing the proposed project, and mitigation measures proposed to reduce potentially significant impacts. This section also includes a brief overview of the federal, State, and local laws and regulations pertaining to biological resources in Sacramento County and the city of Elk Grove.

The biological resource information presented in this section is based on review of available background reports; previous studies conducted on or near the SOIA Area; biological resource databases, including the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB), and the California Native Plant Society (CNPS) Inventory; aerial photography interpretation; the Sacramento County General Plan and General Plan EIR (Sacramento County 2011, Sacramento County 2010); the City of Elk Grove General Plan, General Plan Background Reports, and General Plan EIR (City of Elk Grove 2015, City of Elk Grove 2003a, City of Elk Grove 2003b); the draft South Sacramento Habitat Conservation Plan (Sacramento County 2012); the previous 7,000-acre SOI Amendment EIR that included, in part, the proposed SOIA Area (LAFCo 2013), and a reconnaissance-level site survey conducted by AECOM biologists on March 2, 2016.

3.4.1 ENVIRONMENTAL SETTING

The 1,156-acre SOIA Area is located in southern Sacramento County within the Great Central Valley Region of the California Floristic Province. It is within the Sacramento River watershed. The Cosumnes River is approximately 1.3 miles to the southeast and its tributary, Deer Creek, is 1 mile to the east. The Sacramento-San Joaquin Delta begins approximately six miles southwest of the SOIA Area.

The site is relatively flat, with an elevation range of roughly 30 to 50 feet above mean sea level, sloping generally to the southwest. The SOIA Area is comprised of agricultural land consisting of approximately 626 acres of irrigated grass hayfields, 380 acres of vineyards, 79 acres of fallow field, and 47 acres of alfalfa. The site also contains two acres of irrigation ditches and two acres of canals. Irrigation water is supplied to vineyards and hayfields from a two-acre pond in the easternmost parcel of the SOIA Area near West Stockton Boulevard. There are 16 acres of developed land in the SOIA Area that contains a residence, parking areas, a wine tasting room and winery operations buildings, a barn, and other buildings.

Exhibit 3.4-1 shows the habitat types present in the SOIA Area.

The surrounding areas are characterized primarily by agricultural land with urban development to the northeast and State Route 99 (SR 99) along the eastern boundary.

Stone Lakes National Wildlife Refuge is located approximately three miles west of the SOIA Area. The refuge consists of two large permanent lakes in a network of vernal pool grassland, seasonally flooded agricultural lands, and managed wetlands that provide feeding and resting habitat for thousands of migrating birds along the Pacific Flyway, as well as habitat for several special-status plant and animal species.

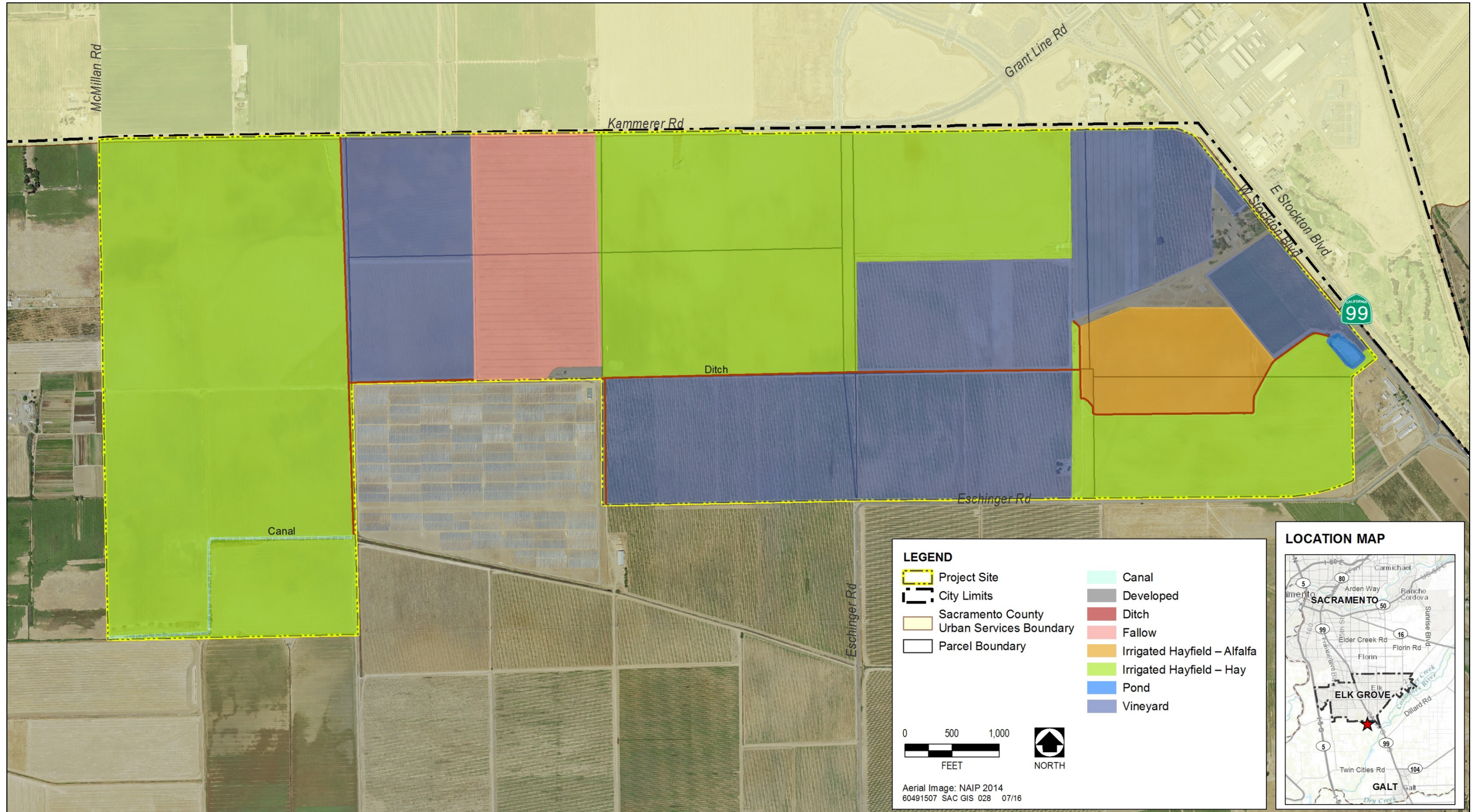
VEGETATION

Vegetation in the SOIA Area is comprised almost exclusively of cultivated crops and has been farmed for over 50 years. Native biodiversity within agricultural lands is predictably low because cropland is generally managed with the goal of producing monotypic vegetation. Current crops cultivated in the SOIA Area consist of irrigated grass and alfalfa hayfields and vineyards. At the time of the reconnaissance survey in March 2016, there were also two fields that were fallow and characterized by sparse cover of immature weedy grasses and forbs. The irrigated grass hayfields are planted with Italian rye grass (*Festuca perennis*) and oats (*Avena* sp.) and also support occasional weeds, including wild radish (*Raphanus sativus*), field mustard (*Brassica rapa*), dove's foot geranium (*Geranium molle*), and hairy vetch (*Vicia villosa*) and very few native forbs, such as common fiddleneck (*Amsinckia intermedia*) and miner's lettuce (*Claytonia perfoliata*). The alfalfa hayfields are composed of a monoculture of cultivated alfalfa (*Medicago stiva*). Other weeds commonly found along the edges of the cultivated hayfields and along dirt farm roads include foxtail barely (*Hordeum murinum*), rattail fescue (*Festuca myuros*), bur clover (*Medicago polymorpha*), and common sowthistle (*Sonchus oleraceus*).

Vineyards are composed of rows of planted grapes climbing wire trellises. Between the rows of grapes, weedy annual species grow, including red maids (*Calandrinia menziesii*), annual bluegrass (*Poa annua*), shepherd's purse (*Capsella bursa-patoris*), and filaree (*Erodium* spp.).

The canal traversing the southwestern corner of the SOIA Area contains patches of cattail (*Typha* sp.), hardstem bulrush (*Schoenoplectus acutus*), and common rush (*Juncus effusus*) in the channel, and the banks support a suite of invasive species often found along ditches in the area including poison hemlock (*Conium maculatum*), curly dock (*Rumex crispus*), bristly ox-tongue (*Helminthotheca echioides*), and charlock mustard (*Sinapis arvensis*). The connecting ditch running north to south contains the same species as the canal, but also supports widely scattered narrowleaf willow (*Salix exigua*) shrubs within the ordinary high water line and small stands of Himalayan blackberry (*Rubus armeniacus*) on the banks. There are also planted native saltbush (*Atriplex* sp.), live oak (*Quercus wislizeni*), coyote brush (*Baccharis pilularis*), ceanothus (*Ceanothus* sp.), and manzanita (*Manzanita* sp.) at the top of bank. The native shrubs appear to be planted at the top of bank to create a screen between the SOIA Area property and the solar farm to the east of the ditch, but most of the planted shrubs are not surviving. The smaller irrigation ditches running along the perimeters of the vineyards are characterized primarily by weedy upland and facultative vegetation, such as rippgut brome (*Bromus diandrus*), bristly ox-tongue, Bermuda grass (*Cynodon dactylon*), mustards (*Brassica* spp.), and dallisgrass (*Paspalum dilatatum*). Vegetation on the banks of the on-site pond consists of Bermuda grass and other annual grasses, with patches of Himalayan blackberry and curly dock and tall flatsedge (*Cyperus eragrostis*) at the water's edge.

Trees are confined to the eastern portion in the SOIA Area around the developed winery and residential facilities. Most of the trees are ornamental, consisting of various fruit trees, walnut hybrids (*Juglans* L.), olive (*Olea europaea*), deodor cedar (*Cedrus deodora*), and small, planted coast redwood trees (*Sequoia sempervirens*). There are five valley oak (*Quercus lobata*), trees on the site and some large eucalyptus (*Eucalyptus* spp.) trees directly east of the SOIA Area along West Stockton Boulevard. There are large eucalyptus, coast redwood, and valley oak trees on the parcel west of the SOIA Area. There is one large willow (*Salix* sp.) in the irrigation ditch at the mouth of the pond.



Source: AECOM 2016

Exhibit 3.4-1

Habitat Map

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WILDLIFE

In general, the SOIA Area provides low value habitat for most wildlife species because of an overall lack of native vegetation and natural communities, and a high level of disturbance from agricultural activities and vineyard operations. The wildlife species most likely to use the SOIA Area are primarily common species that are adapted to highly disturbed, ruderal, or agricultural environments, such as mourning dove (*Zenaida macroura*), American crow (*Corvus brachyrhynchos*), mockingbird (*Mimus polyglottos*), house sparrow (*Passer domesticus*), and raccoon (*Procyon lotor*). Agricultural fields, however, provide high-value foraging opportunities for a number of raptor species. Alfalfa, disked fields, fallow fields, and grain and hay crops tend to support large rodent populations and therefore provide good foraging habitat for Swainson's hawk (*Buteo swainsoni*), white-tailed kite (*Elanus leucurus*), northern harrier (*Circus cyaneus*), and more common raptors, such as American kestrel (*Falco sparverius*), great horned owl (*Bubo virginianus*), and red-tailed hawk (*Buteo jamaicensis*). A limited number of trees and shrubs around the vineyard facilities and along the canal, pond, and ditches provide nesting opportunities for raptors and other birds. Ground squirrel burrows observed in the SOIA Area provide suitable habitat for burrowing owl (*Athene cunicularia*).

The pond, canal, and ditches are known or expected to provide habitat for a number of common wildlife species including red-winged blackbird (*Agelaius phoeniceus*), mallard (*Anas platyrhynchos*), great blue heron (*Ardea herodias*), great egret (*Ardea alba*), American bullfrog (*Rana catesbeiana*), and Pacific chorus frog (*Pseudacris sierra*). In addition, the canal and larger ditches may support giant garter snake (*Thamnophis gigas*) or provide dispersal habitat for this species.

Wildlife species that were observed on the site during the reconnaissance survey are noted in Table 3.4-1.

Table 3.4-1. Wildlife Species Observed, or whose sign was Observed, During the March 2016 Field Reconnaissance Survey	
Scientific Name	Common Name
Amphibians	
<i>Rana catesbeiana</i>	American bullfrog
Birds	
<i>Agelaius phoeniceus</i>	Red-winged blackbird
<i>Anas platyrhynchos</i>	Mallard
<i>Anthus rubescens</i>	American pipit
<i>Branta canadensis</i>	Canada goose
<i>Buteo jamaicensis</i>	Red-tailed hawk
<i>Cathartes aura</i>	Turkey vulture
<i>Circus cyaneus</i>	Northern harrier
<i>Colaptes auratus</i>	Northern flicker
<i>Corvus brachyrhynchos</i>	American crow
<i>Elanus leucurus</i>	White-tailed kite
<i>Falco sparverius</i>	American kestrel
<i>Grus canadensis</i>	Sandhill crane
<i>Haemorhous mexicanus</i>	House finch
<i>Lanius ludovicianus</i>	Loggerhead shrike
<i>Melospiza melodia</i>	Song sparrow
<i>Passer domesticus</i>	House sparrow
<i>Sayornis nigricans</i>	Black phoebe

Table 3.4-1. Wildlife Species Observed, or whose sign was Observed, During the March 2016 Field Reconnaissance Survey	
Scientific Name	Common Name
<i>Sturnus vulgaris</i>	European starling
<i>Troglodytes aedon</i>	House wren
<i>Turdus migratorius</i>	American robin
<i>Tyrannus verticalis</i>	Western kingbird
<i>Zenaida macroura</i>	Mourning dove
<i>Zonotrichia leucophrys</i>	White-crowned sparrow
Mammals	
<i>Canis latrans</i>	Coyote
<i>Lepus californicus</i>	Black-tailed jackrabbit
<i>Microtus californicus</i>	California vole
<i>Spermophilus beecheyi</i>	California ground squirrel
<i>Sylvilagus audubonii</i>	Desert cottontail
<i>Thomomys bottae</i>	Botta's pocket gopher
Source: AECOM 2016	

SENSITIVE BIOLOGICAL RESOURCES

Sensitive biological resources addressed in this section include those that are afforded consideration or protection under the California Environmental Quality Act (CEQA), California Fish and Game Code, California Endangered Species Act (CESA), Federal Endangered Species Act (ESA), Clean Water Act (CWA), and the Porter-Cologne Water Quality Control Act (Porter-Cologne Act).

Special-Status Species

Special-status species include plants and animals in the following categories:

- ▶ species officially listed by the State of California or the federal government as endangered, threatened, or rare;
- ▶ candidates for state or Federal listing as endangered or threatened;
- ▶ taxa (i.e., taxonomic categories or groups) that meet the criteria for listing, even if not currently included on any list, as described in California Code of Regulations (CCR) Section 15380 of the CEQA Guidelines;
- ▶ species identified by the California Department of Fish and Wildlife (CDFW) as species of special concern;
- ▶ species listed as fully protected under the California Fish and Game Code;
- ▶ species afforded protection under local or regional planning documents; and
- ▶ taxa considered by CDFW to be “rare, threatened, or endangered in California” and assigned a California Rare Plant Rank (CRPR) of 1A, 1B, 2A, or 2B.

The CDFW system includes six rarity and endangerment ranks for categorizing plant species of concern, which are summarized as follows:

- ▶ CRPR 1A – Plants presumed to be extinct in California;
- ▶ CRPR 1B – Plants that are rare, threatened, or endangered in California and elsewhere;
- ▶ CRPR 2A – Plants presumed to be extinct in California, but more common elsewhere;
- ▶ CRPR 2B – Plants that are rare, threatened, or endangered in California, but more common elsewhere;
- ▶ CRPR 3 – Plants about which more information is needed (a review list); and
- ▶ CRPR 4 – Plants of limited distribution (a watch list).

All plants with a CRPR are considered “special plants” by CDFW. The term “special plants” is a broad term used by CDFW to refer to all of the plant taxa inventoried in CDFW’s CNDDDB, regardless of their legal or protection status. Plants ranked as CRPR 1A, 1B, 2A, and 2B may qualify as endangered, rare, or threatened species within the definition of CEQA Guidelines Section 15380. CDFW recommends that CRPR 1 and 2 species be addressed within the context of CEQA analyses and documentation. In general, CRPR 3 and 4 species do not meet the definition of endangered, rare, or threatened pursuant to CEQA Guidelines Section 15380; however, these species may be evaluated by the lead agency on a case-by-case basis to determine significance criteria under CEQA.

The term “California species of special concern” is applied by CDFW to animals not listed under the federal ESA or CESA, but that are nonetheless declining at a rate that could result in listing, or that historically occurred in low numbers, or have limited ranges, and known threats to their persistence currently exist. “Fully protected” was the first state classification used to identify and protect animal species that are rare or facing possible extinction. Most of these species were subsequently listed as threatened or endangered under CESA or ESA. The remaining fully protected species that are not officially listed under CESA or ESA are still legally protected under California Fish and Game Code, as described below in the “Regulatory Framework” section, and qualify as endangered, rare, or threatened species within the definition of CEQA Guidelines Section 15380.

A list of special-status species that could potentially occur SOIA Area or vicinity, provided suitable habitat conditions were present, was developed through review of available background reports; previous studies conducted in or near the SOIA Area; an official list obtained from the U.S. Fish and Wildlife Service Information, Planning, and Conservation System (IPaC); and CNDDDB and CNPS Inventory records of previously documented occurrences of special-status species in the Bruceville, Clay, Elk Grove, Florin, Galt, Lockeford, Lodi North, Sloughhouse, and Thornton U.S. Geological Survey 7.5-minute quadrangles. Exhibit 3.4-2 shows the locations of special-status species occurrences recorded in the CNDDDB that are within 5 miles of the SOIA Area.

Special-Status Plants

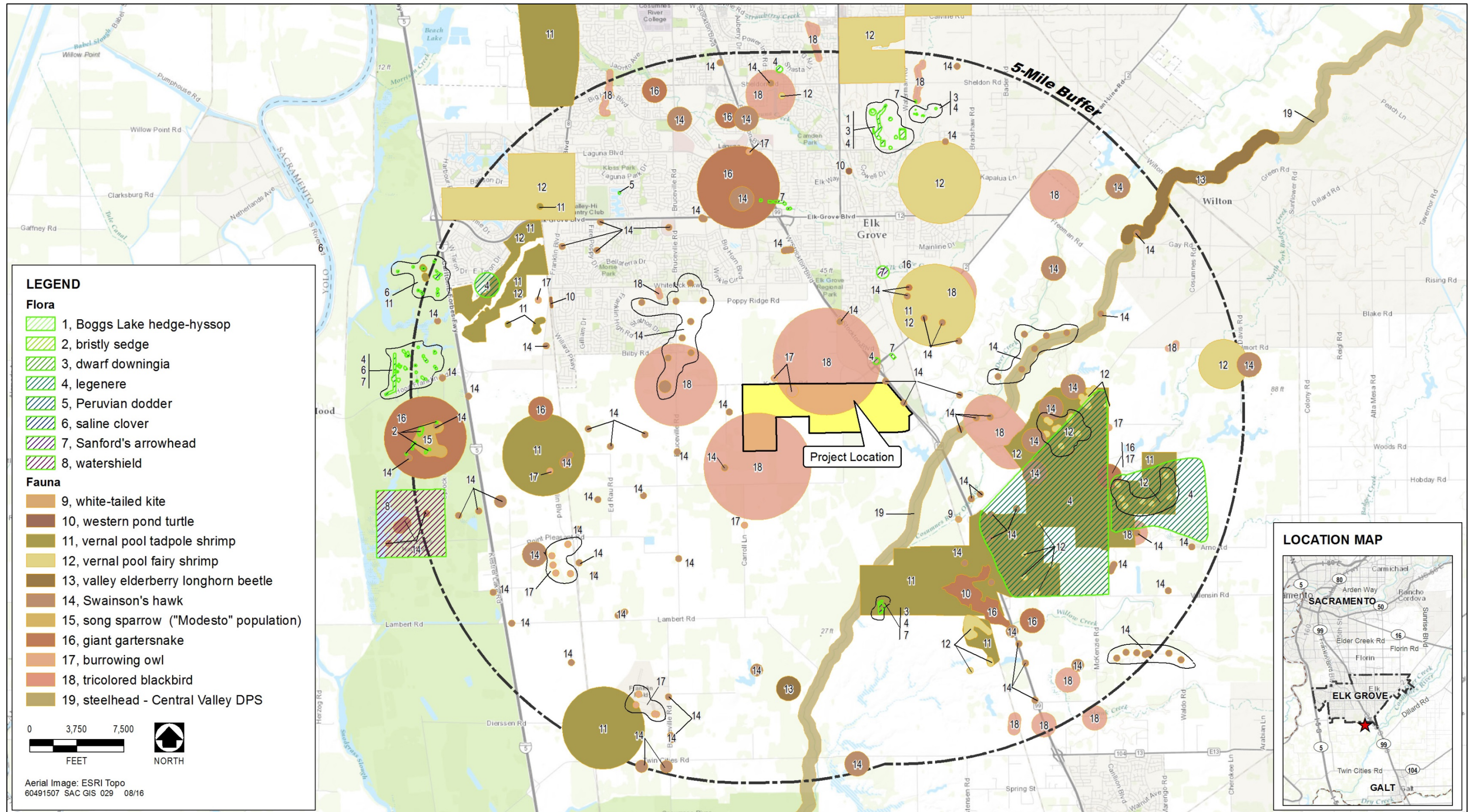
Based on the database searches and literature review, 21 special-status plant species have been documented or reported to occur in the general vicinity of the SOIA Area. The potential for each of these species to occur SOIA Area was evaluated based on specific habitat requirements, geographic distribution, and elevation range, as described in Table 3.4-2, which also provides the regulatory status, habitat, elevation range, and blooming period for each species. No special-status plant surveys have been conducted on the site, but virtually the entire SOIA Area has been altered by human activities and is subject to ongoing vegetation management and surface soil manipulation. These activities, which include plowing, mowing, grading, and herbicide use, preclude the establishment of natural plant communities on the majority of the site. The only exceptions are in the canal and larger ditches where a limited amount of emergent marsh and riparian vegetation has established. Therefore, only special-status plants associated with ditches and canals or disturbed freshwater marsh habitats have potential to

occur in the SOIA Area. As indicated in Table 3.4-2, the one special-status plant species that has the potential to occur on the site is Sanford's arrowhead.

Species	Status ¹			Habitat and Blooming Period	Potential for Occurrence
	USFWS	CDFG	CRPR		
Watershield <i>Brasenia schreberi</i>	–	–	2.1	Freshwater marshes and swamps; 0 to 7,000 feet elevation; blooms June–September.	Unlikely to occur; the pond, canal, and irrigation ditches do not provide suitable habitat conditions for this species. The only documented occurrence in Sacramento County is a 1976 record from the Stone Lakes National Wildlife Refuge west of I-5.
Bristly sedge <i>Carex comosa</i>	–	–	2.1	Lake margin marshes; -15 to 3,300 feet elevation; blooms May–September.	Unlikely to occur; the on-site pond does not provide suitable habitat conditions for this species. The only known occurrences in Sacramento County are from the Stone Lakes National Wildlife Refuge west of I-5.
Succulent owl's clover <i>Castilleja campestris</i> ssp. <i>succulent</i>	T	E	1B.2	Vernal pools; often in acidic conditions; 80 to 2,500 feet elevation; blooms April–May.	Unlikely to occur; there are no vernal pools or other seasonal wetlands in the SOIA Area that provide suitable habitat for this species. Species not known from Sacramento County.
Bolander's water hemlock <i>Cicuta maculata</i> var. <i>bolanderi</i>	–	–	2.1	Freshwater and brackish marshes, mostly along banks of tidal creeks; 0 to 650 feet elevation; blooms July–September.	Unlikely to occur; the pond, canal, and irrigation ditches do not provide suitable habitat conditions for this species. Furthermore, the species is known only from coastal and Delta waterways west of I-5.
Peruvian dodder <i>Cuscuta obtusiflora</i> var. <i>glandulosa</i>	–	–	2.2	Freshwater marshes and swamps; 50 to 1,000 feet elevation; blooms July–October.	Unlikely to occur; the storage reservoir, basins, and irrigation ditches do not provide suitable habitat conditions for this species. Furthermore, there is only one reported occurrence from Sacramento County and it is an unconfirmed record from the Elk Grove area. Nearest confirmed occurrence is from Merced County.
Dwarf downingia <i>Downingia pusilla</i>	–	–	2.2	Vernal pools or other seasonal wetlands in annual grasslands; below 1,500 feet elevation; blooms March–May.	Unlikely to occur; there are no vernal pools or other seasonal wetlands in the SOIA Area that provide suitable habitat for this species.
Bogg's Lake hedge hyssop <i>Gratiola heterosepala</i>	–	E	1B.2	Lake margin marshes and swamps, vernal pools, and other seasonal wetlands, primarily in clay soils; 30 to 8,000 feet elevation; blooms April–August.	Unlikely to occur; the on-site pond does not provide suitable habitat conditions for this species and there are no vernal pools or other seasonal wetlands in the SOIA Area.

Species	Status ¹			Habitat and Blooming Period	Potential for Occurrence
	USFWS	CDFG	CRPR		
Woolly rose-mallow <i>Hibiscus lasiocarpus</i>	–	–	1B.2	Margins of freshwater marshes, wet riverbanks, and on low, peat islands in sloughs of the Delta; 0 to 400 feet elevation; blooms June–September.	Unlikely to occur; the pond, canal, and irrigation ditches do not provide suitable habitat conditions for this species.
Northern California black walnut <i>Juglans hindsii</i>	–	–	1B	Riparian scrub, woodland, and forest.	Unlikely to occur; no suitable habitat is present. Although this species is widely cultivated in California as rootstock for English walnut, there are only three native populations still present. This species is widely naturalized in cismontane woodland habitat, which is not present in the SOIA Area.
Delta tule pea <i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	–	–	1B	Freshwater and brackish marshes, usually along the edges. Found in the San Joaquin delta region at 0 to 15 feet elevation; blooms May–September.	Unlikely to occur; the pond, canal, and irrigation ditches do not provide suitable habitat conditions for this species and the species is known only from lower elevations in Delta waterways.
Greene’s legenera <i>Legenera limosa</i>	–	–	1B.1	Relatively deep and wet vernal pools (Witham 2006:39); below 3,000 feet elevation; blooms April–June.	Unlikely to occur; there are no vernal pools or other seasonal wetlands in the SOIA Area that provide suitable habitat for this species.
Heckard’s peppergrass <i>Lepidium latipes</i> var. <i>latipes</i>				Alkaline flats in valley and foothill grassland; 6 to 656 foot elevation. Bloom: March–May	Unlikely to occur; there is no suitable habitat for this species.
Mason’s lilaopsis <i>Lilaeopsis masonii</i>	–	R	1B.1	Flooded tidal zones on mud-banks and flats along erosional creek-banks, sloughs, and rivers with freshwater marsh, brackish marsh, or riparian scrub influenced by saline water; 0 to 35 feet elevation; blooms April–November.	Unlikely to occur; the pond, canal, and irrigation ditches do not provide suitable habitat conditions for this species, which is known only from tidally influenced waterways.
Delta mudwort <i>Limosella australis</i>	–	–	2.1	Intertidal mudflats in freshwater and brackish marshes and riparian scrub; 0 to 10 feet elevation; blooms May–August.	Unlikely to occur; the pond, canal, and irrigation ditches do not provide suitable habitat conditions for this species, which is known only from lower elevations in tidally influenced Delta waterways.
Slender Orcutt grass <i>Orcuttia tenuis</i>	T	E	1B.1	Vernal pools; 100 to 5,800 feet elevation; blooms May–October.	Unlikely to occur; there are no vernal pools or other seasonal wetlands in the SOIA Area that provide suitable habitat for this species.
Sacramento Orcutt grass <i>Orcuttia viscida</i>	E	E	1B.1	Vernal pools; 95 to 325 feet elevation; blooms April–July.	Unlikely to occur; there are no vernal pools or other seasonal wetlands in the SOIA Area that provide suitable habitat for this species.

Table 3.4-2 Special-Status Plant Species Known or Reported and Potential for Occurrence in the SOIA Area					
Species	Status ¹			Habitat and Blooming Period	Potential for Occurrence
	USFWS	CDFG	CRPR		
Sanford's arrowhead <i>Sagittaria sanfordii</i>	–	–	1B.2	Shallow freshwater marshes and swamps; below 2,200 feet elevation; blooms May–October.	Could occur; the on-site canal provides marginally suitable habitat for this species.
Marsh skullcap <i>Scutellaria galericulata</i>	–	–	2.2	Freshwater marshes and swamps, meadows and seeps; 0 to 7,000 feet elevation; blooms June–September.	Unlikely to occur; the pond, canal, and irrigation ditches do not provide suitable habitat conditions for this species. The only records of this species in Sacramento County are from the Snodgrass slough area northeast of Walnut Grove.
Side-flowering skullcap <i>Scutellaria lateriflora</i>	–	–	2.2	Freshwater marshes and swamps, meadows and seeps; 0 to 7,000 feet elevation; blooms June–September.	Unlikely to occur; the pond, canal, and irrigation ditches do not provide suitable habitat conditions for this species. The only records of this species in Sacramento County are an 1892 record from Bouldin Island and a current record from Delta Meadows River Park. There are no known occurrences east of I-5.
Suisun Marsh aster <i>Symphotrichum lentum</i>	–	–	1B.2	Brackish and freshwater marshes along the banks of sloughs and other waterways; 0–10 feet elevation; blooms May–November.	Unlikely to occur; the pond, canal, and irrigation ditches do not provide suitable habitat conditions for this species and the species is generally known from lower elevations in Delta waterways.
Saline clover <i>Trifolium hydrophilum</i>	–	–	1B.2	Salt marshes and in alkaline soils in moist valley and foothill grasslands and vernal pools; 0 to 1,000 feet elevation; blooms April–June.	Unlikely to occur; suitable habitat is not present in the SOIA Area.
<p>Notes: USFWS = U.S. Fish and Wildlife Service; CDFG = California Department of Fish and Game; CRPR = California Rare Plant Rank; CNDDB = California Natural Diversity Database; ESA = Federal Endangered Species Act; CESA = California Endangered Species Act</p> <p>¹ Legal Status Definitions</p> <p>U.S. Fish and Wildlife Service: E Endangered (legally protected) T Threatened (legally protected)</p> <p>California Department of Fish and Game: E Endangered (legally protected)</p> <p>California Rare Plant Ranks: 1B Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA) 2 Plant species considered rare or endangered in California but more common elsewhere (protected under CEQA, but not legally protected under ESA or CESA)</p> <p>CRPR Extensions: .1 Seriously endangered in California (>80% of occurrences are threatened and/or high degree and immediacy of threat) .2 Fairly endangered in California (20 to 80% of occurrences are threatened)</p> <p>Sources: CNDDB 2016; CNPS 2016; data compiled by AECOM in 2016</p>					



Source: CDFW CNDDDB July 2016

Exhibit 3.4-2

CNDDB Occurrences within 5 Miles

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Special-Status Wildlife

Based on the database searches and literature review, 28 special-status wildlife species, not counting fish, have been documented or reported to occur in the SOIA Area or nearby within Sacramento, San Joaquin, or Yolo counties. These species are listed below in Table 3.4-3, along with their status, habitat, and potential to occur in the SOIA Area.

There are no special-status fish species that are known to occur in the SOIA Area. Two fish species listed as threatened under the ESA, Delta smelt (*Hypomesus transpacificus*) and steelhead (*Oncorhynchus mykiss*), are identified on the USFWS official list of species that could be affected by projects in the SOIA Area. However, there are no waterways in the SOIA Area that could support steelhead or other special-status fish species. No critical habitat for special-status species is found in the SOIA Area. The nearest designated critical habitat (Delta smelt critical habitat) is located three miles southwest of the SOIA Area (USFWS 2016). Critical habitat for vernal pool tadpole shrimp is located approximately seven miles east of the SOIA Area.

Species	Listing Status ¹		Habitat	Potential for Occurrence ²
	Federal	State		
Invertebrates				
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	T	–	Elderberry shrubs below 3,000 feet in elevation, typically in riparian habitats.	Unlikely to occur; no elderberry shrubs are present in the SOIA Area.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	T	–	Vernal pools and other seasonal wetlands in valley and foothill grasslands.	Unlikely to occur; there are no vernal pools or other seasonal wetlands in the SOIA Area that provide suitable habitat for this species.
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>	E	–	Vernal pools and other seasonal wetlands in valley and foothill grasslands.	Unlikely to occur; there are no vernal pools or other seasonal wetlands in the SOIA Area that provide suitable habitat for this species.
Amphibians and Reptiles				
Western pond turtle <i>Emys marmorata</i>	–	SC	Forage in ponds, marshes, slow-moving streams, sloughs, and irrigation/drainage ditches; nest in nearby uplands with low, sparse vegetation.	Could occur; marginally suitable habitat is present in the on-site canals and pond and the species has been documented at Stone Lakes and connected ditches within approximately 3 miles of the SOIA Area.
Foothill yellow-legged frog <i>Rana boylei</i>		SC	Shallow, perennial streams with rocky, cobble-sized substrate. Tadpoles require permanent water for a minimum of 15 weeks to complete metamorphosis.	Unlikely to occur; no suitable habitat present in the SOIA Area.
Western spadefoot <i>Spea hammondi</i>	–	SC	Vernal pools and other seasonal ponds with a minimum 3-week inundation period in valley and foothill grasslands.	Unlikely to occur; there are no vernal pools or other seasonal wetlands in the SOIA Area that provide suitable breeding habitat for this species.

Species	Listing Status ¹		Habitat	Potential for Occurrence ²
	Federal	State		
Giant garter snake <i>Thamnophis gigas</i>	T	T	Slow-moving streams, sloughs, ponds, marshes, inundated floodplains, rice fields, and irrigation/drainage ditches on the Central Valley floor with mud bottoms, earthen banks, emergent vegetation, abundant small aquatic prey and absence or low numbers of large predatory fish. Also require upland refugia not subject to flooding during the snake's inactive season.	Could occur; marginally suitable habitat is present in the canals and ditches and the species has been documented immediately north of the SOIA Area in the Lent Ranch development area. Although individuals could be encountered on site, the site is not suitable to support breeding populations due to lack of upland refugia, periodic vegetation removal, and unreliability of water during the active season. Within the SOIA Area, the canal is deeply entrenched with very steep banks, but GGS could use this waterway for dispersal.
California tiger salamander <i>Ambystoma californiense</i>	T	T	Vernal pools and seasonal wetlands with a minimum 10-week inundation period and surrounding uplands, primarily grasslands, with burrows and other belowground refugia (e.g., rock or soil crevices).	Unlikely to occur; there are no vernal pools or other seasonal wetlands in the SOIA Area that provide suitable habitat for this species. The nearest known occurrences are from the vicinity of Clay along State Highway 104 and a 1914 record from the city of Galt that is believed to be extirpated.
Birds				
Tricolored blackbird <i>Agelaius tricolor</i> (nesting colony)	–	C	Forages in agricultural lands and grasslands; nests in marshes, riparian scrub, and other areas that support cattails or dense thickets of shrubs or herbs. Requires open water and protected nesting substrate, such as flooded, spiny, or thorny vegetation (Schuford and Gardali 2008: 439).	Unlikely to nest; the agricultural fields provide foraging habitat, but no suitable nesting habitat is present. There is a 1981 record of 100 birds nesting in blackberry bushes near the intersection of Kammerer Road and Bruceville Road approximately 1 mile west of the SOIA Area. This nesting colony may still be extant, as suitable habitat still exists at that location and the immediate area has not yet been developed. Several other nesting records from the city of Elk Grove exist, but are or may be extirpated (removed) because they occur in areas that have been developed and recent surveys have not detected any tricolored blackbirds at these locations.
Grasshopper sparrow <i>Ammodramus savannarum</i> (nesting)	–	SSC	Forages and nests in dense grasslands; favors a mix of native grasses, forbs, and scattered shrubs. Nests in depressions on the ground at the bases of grass clumps. Prefers large tracts of habitat.	Unlikely to nest; habitat is marginal for this species because native grasses and scattered shrubs are absent and the grasses are harvested for hay. The nearest nesting records are from the Cosumnes River Preserve.

Species	Listing Status ¹		Habitat	Potential for Occurrence ²
	Federal	State		
Burrowing owl <i>Athene cunicularia</i> (burrow sites)	–	SC	Nests and forages in grasslands, agricultural lands, open shrublands, and open woodlands with existing ground squirrel burrows or friable soils. Suitable burrow sites consist of short, herbaceous vegetation with only sparse cover of shrubs or taller herbs (Schuford and Gardali 2008: 221)	Likely to occur; ground squirrel burrows that provide suitable habitat for this species were observed at the edges of fields in the western portion of the site. This species has been documented at several locations within 5 miles of the SOIA Area, including a 2004 record just north of Kammerer Road along a canal berm and a 2010 record from the eastern edge of the SOIA Area. No burrowing owls were observed during the reconnaissance survey, but burrows were observed in the area where the owls were observed in 2010.
Swainson's hawk <i>Buteo swainsoni</i> (nesting)	–	T	Forages in grasslands and agricultural lands; nests in riparian and isolated trees.	Likely to occur; numerous nesting records are known in the vicinity of the project site and the SOIA Area provides high-quality foraging habitat on parcels that are not planted in vineyards. A limited number of potentially suitable nest trees are present in the eastern portion of the site, primarily around the vineyard operation buildings. There are numerous documented nest sites in the project vicinity, including a nest that was active as recently as 2009 on the adjacent parcel to the west, and nests reported active in 2001; one along the eastern boundary of the SOIA Area and one directly north of the SOIA Area boundary.
Mountain plover <i>Charadrius montanus</i> (wintering)	–	SSC	Forages in short grasslands and plowed agricultural fields where vegetation is sparse and trees are absent.	Unlikely to occur; the SOIA Area is outside of this species' currently known wintering range, which, in Sacramento County, is restricted to areas west of Elk Grove in the Sacramento-San Joaquin River Delta west of I-5.
Northern harrier <i>Circus cyaneus</i> (nesting)	–	SC	Nests and forages in grasslands, agricultural fields, and marshes. Nests on the ground within patches of dense, often tall, vegetation in undisturbed areas (MacWhirter and Bildstein 1996).	Known to occur; this species was observed foraging over the SOIA Area during the reconnaissance survey and is routinely observed in the project vicinity by AECOM biologists. The SOIA Area provides suitable foraging habitat and uncultivated areas may be suitable for nesting.

Table 3.4-3. Special-Status Wildlife Known or Reported and Potential to Occur in the SOIA Area

Species	Listing Status ¹		Habitat	Potential for Occurrence ²
	Federal	State		
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i> (nesting)	T	E	Nests in large blocks of deciduous riparian thickets or forests with dense, low-level or understory foliage adjacent to slow-moving watercourses, backwaters along broad, lower floodplains of larger river systems. Willow and cottonwood are almost always a component of the vegetation. In the Sacramento Valley, also utilizes adjacent walnut orchards.	Unlikely to occur; there is no suitable habitat for this species in the SOIA Area.
White-tailed kite <i>Elanus leucurus</i> (nesting)	–	FP	Forages in grasslands and agricultural fields; nests in riparian zones, oak woodlands, and isolated trees.	Known to occur; suitable foraging habitat is present and large trees near the vineyard entrance and west of the site provide potential nest sites. This species was observed foraging over the SOIA Area during the reconnaissance survey and is routinely observed in the project vicinity by AECOM biologists. Nesting potential on-site is low due to the limited number of suitable nest trees and their proximity to the vineyard tasting room and parking area.
Lesser sandhill crane <i>Grus canadensis Canadensis</i> (wintering)	–	SC	Annual and perennial grassland habitats, moist croplands with rice or corn stubble, and open, emergent wetlands.	Likely to occur; winters in the nearby area between Elk Grove and Galt. The SOIA Area provides suitable winter foraging habitat and sandhill cranes were observed (and heard) flying over the site during the reconnaissance survey. Does not breed in California.
Greater sandhill crane <i>Grus canadensis tabida</i> (nesting and wintering)	–	T FP	Annual and perennial grassland habitats, moist croplands with rice or corn stubble, and open, emergent wetlands. Typically nests in mounds of wetland plants or hummocks in remote portions of extensive wetlands. Sometimes nests in grass-lined depressions on dry sites.	Likely to occur; the SOIA Area provides suitable winter foraging habitat and sandhill cranes were observed (and heard) flying over the site during the reconnaissance survey. Does not breed in California.
Least bittern <i>Ixobrychus exilis</i> (nesting)	–	SSC	Nests in freshwater and brackish marshes with tall, dense emergent vegetation with clumps of woody plants over deep water.	Unlikely to occur; there is no suitable nesting habitat in the SOIA Area.
Loggerhead shrike <i>Lanius ludovicianus</i> (nesting)	–	SSC	Forages and nests in grasslands, shrublands, and open woodlands. Nests in trees and shrubs.	Likely to occur; sign of this species (impaled frogs) was observed on barbed-wire fence in the SOIA Area during the reconnaissance survey and there are a limited number of trees and shrubs that provide potential nest sites.

Species	Listing Status ¹		Habitat	Potential for Occurrence ²
	Federal	State		
Song sparrow – “Modesto” population (<i>Melospiza melodia</i>) (year round)	–	SSC	Nests and forages primarily in emergent marsh, riparian scrub, and early successional riparian forest habitats in the north-central portion of the Central Valley; infrequently in mature riparian forest and sparsely vegetated ditches and levees. Forages primarily on exposed ground or in leaf litter.	Could occur; the larger ditches and canal provide marginally suitable habitat with low potential to support song sparrow nesting. Song sparrow was observed foraging over in the SOIA Area during the reconnaissance survey. There is one CNDDDB record of this species in the nine-quadrant search area from Stone Lakes National Wildlife Refuge.
Bank swallow <i>Riparia riparia</i> (nesting)	–	T	Nests in colonies in unvegetated vertical banks with fine-textured, sandy soils, typically next to streams, rivers, or lakes, occasionally in gravel quarries or other eroding bluffs. Forages in a variety of habitats near nests.	Unlikely to occur; there is no suitable habitat present for this species. The nearest known occurrence is on the Cosumnes River over 13 miles from the SOIA Area.
Yellow warbler <i>Setophaga petechia</i> (nesting)	–	SC	Nests and forages in riparian communities, preferably with willow, cottonwood, aspen, sycamore, or alder.	Unlikely to occur, no woody riparian plant communities present. The only CNDDDB record of this species in the region is a 1995 breeding occurrence along the Mokelumne River near Lockeford.
Yellow-headed blackbird <i>Xanthocephalus xanthocephalus</i> (nesting)	–	SC	Nests in freshwater emergent wetlands with dense vegetation, deep water, and an abundance of large insects, typically on the edges of lakes, reservoirs, or large ponds.	Unlikely to occur; no substantial enough marsh vegetation present for nesting. The nearest documented occurrence is an 1899 record from near Freeport approximately 8 miles northwest of the SOIA Area.
Mammals				
Western red bat <i>Lasiurus blossevilli</i>	–	SSC	Roosts primarily in dense tree foliage, especially in cottonwood, sycamore, and other riparian trees or orchards (Pierson et al. 2004). Prefers habitat edges and mosaics with trees that are protected from above and open below and open areas for foraging, including grasslands, shrublands, and open woodlands.	Unlikely to occur; no suitable habitat is present.
Riparian brush rabbit <i>Sylvilagus bachmani riparius</i>	E	E	Riparian areas with dense thickets of rose, willow, and blackberry.	Unlikely to occur; there is no suitable habitat for this species in the SOIA Area and this species is known only from the San Joaquin River. The single CNDDDB record of this species is from an artificial breeding program at the White Slough Wildlife Area.

Table 3.4-3. Special-Status Wildlife Known or Reported and Potential to Occur in the SOIA Area														
Species	Listing Status ¹		Habitat	Potential for Occurrence ²										
	Federal	State												
American badger <i>Taxidea taxus</i>	–	SC	Drier open shrub, forest, and herbaceous habitats with friable soils. Needs open, uncultivated land.	Unlikely to occur; although badgers could occasionally forage on the site, regular agricultural disturbance in the SOIA Area make it generally unsuitable for this species to den and the soils are not particularly friable on large portions of the site. There is only one record of this species in the nine quads containing and surrounding the SOIA Area and that is a 1938 collection from near Stone Lakes Wildlife Refuge and the Sacramento River west of I-5.										
<p>Note: CNDDDB = California Natural Diversity Database; GGS = giant garter snake; SOIA = Sphere of Influence Amendment; USFWS = U.S. Fish and Wildlife Service</p> <p>¹ Legal Status Definitions</p> <table> <tr> <td>Federal:</td> <td>State:</td> </tr> <tr> <td>E Endangered (legally protected)</td> <td>FP Fully protected (legally protected)</td> </tr> <tr> <td>T Threatened (legally protected)</td> <td>SC Species of special concern (no formal protection other than CEQA consideration)</td> </tr> <tr> <td></td> <td>T Threatened (legally protected)</td> </tr> <tr> <td></td> <td>C Candidate for listing under CESA (legally protected)</td> </tr> </table> <p>² Potential for Occurrence Definitions</p> <p>Unlikely to occur: Species is unlikely to be present in the SOIA Area due to poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.</p> <p>Could occur: Suitable habitat is available in the SOIA Area; however, there are little to no other indicators that the species might be present.</p> <p>Known to occur: The species, or evidence of its presence, was observed in the SOIA Area during reconnaissance surveys, or was reported by others.</p> <p>Source: CNDDDB 2016; Sacramento County General Plan EIR 2010; Shuford and Gardali 2008; California Wildlife Habitat Relationships (CWHR) 1988-1990 + updates; data compiled by AECOM in 2016</p>					Federal:	State:	E Endangered (legally protected)	FP Fully protected (legally protected)	T Threatened (legally protected)	SC Species of special concern (no formal protection other than CEQA consideration)		T Threatened (legally protected)		C Candidate for listing under CESA (legally protected)
Federal:	State:													
E Endangered (legally protected)	FP Fully protected (legally protected)													
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	T Threatened (legally protected)													
	C Candidate for listing under CESA (legally protected)													

Sensitive Habitats

Sensitive habitats include those that are of special concern to resource agencies or are afforded specific consideration through 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 Framework” below. Sensitive natural habitat 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.

Sensitive Natural Communities

CDFW maintains a list of plant communities that are native to California. Within that list, CDFW identifies special-status natural communities (or sensitive natural communities), which they define as communities that are of limited distribution statewide or within a county or region and often vulnerable to environmental effects of projects (CDFW 2015: xii). These communities may or may not contain special-status species or their habitat. Many wetland and riparian plant communities are included on CDFW’s list of special-status plant communities. There are no riparian communities or other sensitive natural communities present in the SOIA Area; however, the pond, canal, and segments of the larger ditches provide potential habitat for wildlife species and are therefore

subject to regulation under Section 1602 of the California Fish and Game Code and are considered sensitive habitats.

Waters of the United States and Waters of the State

There are approximately two acres of irrigation ditches, two acres of canal and two acres of pond in the SOIA Area. The pond is an old SR 99 borrow pit modified as a storm/irrigation runoff holding facility that is fully maintained and provides irrigation to the vineyards and hayfields. The ditches are highly maintained agricultural ditches that generally follow field boundaries. The canal is distinguished from the ditches by being wider and deeper (20 feet wide and deeply incised), originating from off-site, and conveying water for longer duration than the ditches. The ditches range from very shallow, almost swale-like ditches that are about one foot wide, to large irrigation ditches that are about six feet wide and four feet deep. One segment of ditch running north to south along the boundary between the SOIA Area and the adjacent solar farm is approximately 18 feet wide and 4 feet wide at bank full width.

The canal and ditches, and pond may be subject to U.S. Army Corps of Engineers jurisdiction under Section 404 of the CWA due to ultimate connectivity to the Sacramento-San Joaquin River Delta via South Stone Lake thence Snodgrass Slough; however, a jurisdictional determination has not been completed for the SOIA Area. Waters that do not meet the criteria to qualify as waters of the United States and are disclaimed by the USACE would still be considered waters of the state subject to regulation by the Central Valley Regional Water Quality Control Board (RWQCB) under California's Porter-Cologne Act.

3.4.2 REGULATORY FRAMEWORK

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

Federal Endangered Species Act

Pursuant to the ESA (16 U.S.C. Section 1531 et seq.), U.S. Fish and Wildlife Service (USFWS) has regulatory authority over species listed or proposed for listing as endangered or threatened. USFWS and the National Marine Fisheries Service have authority over projects that may result in take of a species listed as threatened or endangered under ESA (i.e., a federally listed species). In general, persons subject to ESA (including private parties) are prohibited from "taking" endangered or threatened fish and wildlife species on private property, and from "taking" endangered or threatened plants in areas under federal jurisdiction or in violation of state law.

Under Section 9 of the ESA, the definition of "take" is to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." USFWS has also interpreted the definition of "harm" to include significant habitat modification that could result in take.

The take prohibition of ESA Section 9 applies only to listed species of fish and wildlife. Section 9(a)(2)(B) describes federal protection for endangered plants. In general, ESA does not protect listed plants located on nonfederal land (i.e., areas not under federal jurisdiction), unless such species are already protected by State law.

Section 7 of the ESA outlines procedures for federal interagency cooperation to protect and conserve federally listed species and designated critical habitat. Critical habitat identifies specific areas that have the physical and biological features 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 destroying or adversely modifying designated critical habitat.

For projects where federal action is not involved and take of a listed species may occur, a project proponent may seek an incidental take permit under section 10(a) of the ESA. Section 10(a) of ESA allows USFWS to permit the incidental take of listed species if such take is accompanied by a habitat conservation plan that ensures minimization and mitigation of impacts associated with the take.

Section 404 of the Clean Water Act

Section 404 of the federal CWA requires a project applicant to obtain a permit from USACE before engaging in any activity that involves any discharge of dredged or fill material into waters of the United States, including wetlands. Fill material is material placed in waters of the United States where the material has the effect of replacing any portion of a water of the United States with dry land, or changing the bottom elevation of any portion of a water of the United States. Waters of the United States include navigable waters of the United States; interstate waters; all other waters where the use, degradation, or destruction of the waters could affect interstate or foreign commerce; tributaries to any of these waters, and wetlands adjacent to these waters. 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 that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Potentially jurisdictional wetlands must meet three wetland delineation criteria: hydrophytic vegetation, hydric soil types, and wetland hydrology. Wetlands that meet the delineation criteria may be jurisdictional under Section 404 of CWA pending USACE and U.S. Environmental Protection Agency (EPA) review.

As part of the review of a project, USACE must ensure compliance with applicable federal laws, including EPA's Section 404(b)(1) Guidelines. USACE regulations require that impacts to waters of the United States are avoided and minimized to the maximum extent practicable, and that unavoidable impacts are compensated (33 Code of Federal Regulations [CFR] 320.4[r]).

In 2008, USACE and EPA issued regulations governing compensatory mitigation for activities authorized by permits issued by USACE (33 CFR 332). The rule establishes a preference for the use of mitigation banks because they provide established wetland habitats that have already met success criteria thereby reducing some of the risks and uncertainties associated with compensatory mitigation involving creation of new wetlands that cannot yet demonstrate functionality at the time of project implementation. The rule also establishes a preference for providing compensatory mitigation within the affected watershed. Ideally, compensatory mitigation would take place at a mitigation bank within the same watershed as the waters to be replaced. If mitigation banks are not available within the affected watershed, then compensatory mitigation involving creation or restoration within the affected watershed may be preferable to using a mitigation bank outside the affected watershed.

Section 401 Water Quality Certification

Under Section 401 of the CWA, an applicant for a Section 404 permit must obtain a certificate from the appropriate State agency stating that the intended dredging or filling activity is consistent with the State's water quality standards and criteria. In California, the authority to grant water quality certification is delegated by the State Water Resources Control Board to the nine RWQCBs.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 U.S.C. Section 703, *et seq.*), first enacted in 1918, provides for protection of international migratory birds and authorizes the Secretary of the Interior to regulate the taking of migratory birds. The MBTA provides that it shall be unlawful, except as permitted by regulations, to pursue, take, or kill any migratory bird, or any part, nest, or egg of any such bird. This prohibition includes both direct and indirect acts, although harassment and habitat modification are not included unless they result in direct loss of birds, nests, or eggs. The current list of species protected by the MBTA can be found in Title 50 of the CFR, Section 10.13 (50 CFR 10.13). The list includes nearly all birds native to the United States.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

California Endangered Species Act

CESA (California Fish and Game Code Section 2050, *et seq.*) directs State agencies not to approve projects that would jeopardize the continued existence of an endangered or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of a species. Furthermore, CESA states that reasonable and prudent alternatives shall be developed by CDFW, together with the project proponent and any state lead agency, consistent with conserving the species, while at the same time maintaining the project purpose to the greatest extent possible. Under CESA, project-related impacts of the authorized take must be minimized and fully mitigated, and adequate funding to implement those mitigation measures and monitor compliance with and the effectiveness of the measures must be ensured. Standard CESA issuance requirements can include land acquisition, permanent protection and management, and/or funding in perpetuity of compensatory lands.

A “take” of a species, under CESA, is defined as an activity that would directly or indirectly kill an individual of a species. The CESA definition of take does not include “harm” or “harass” as is included in the federal act. As a result, the threshold for a take under CESA may be higher than under ESA because habitat modification is not necessarily considered take under CESA. The take of State-listed species incidental to otherwise lawful activities requires a permit, pursuant to Section 2081(b) of CESA. The State has the authority to issue an incidental take permit under California Fish and Game Code Section 2081, or to coordinate with USFWS during the Section 10(a) process to make the federal permit consistent with CESA.

As under federal law, listed plants have considerably less protection than fish and wildlife under California State law. The California Native Plant Protection Act (California Fish and Game Code Section 19000 *et seq.*) allows landowners to take listed plant species from, among other places, a canal, lateral ditch, building site, or road, or other right-of-way, provided that the owner first notifies CDFW and gives the agency at least 10 days to retrieve (and presumably replant) the plants before they are plowed under or otherwise destroyed.

Section 1602 of the California Fish and Game Code

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by CDFW under Section 1602 of the California Fish and Game Code. Under Section 1602, it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by CDFW, or use any material from the streambeds, without first notifying CDFW of such activity and obtaining a final agreement authorizing such activity.

“Stream” is defined as a body of water that flows at least periodically or intermittently through a bed or channel having banks and that supports fish or other aquatic life. CDFW’s jurisdiction within altered or artificial waterways is based on the value of those waterways to fish and wildlife. A CDFW streambed alteration agreement must be obtained for any project that would result in an impact on a river, stream, or lake.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Act (California Water Code Section 13000, *et seq.*) requires that each of the state’s nine RWQCBs prepare and periodically update basin plans for water quality control. Each basin plan sets forth water quality standards for surface water and groundwater and actions to control nonpoint and point sources of pollution to achieve and maintain these standards. Basin plans offer an opportunity to protect wetlands through the establishment of water quality objectives. The RWQCB’s jurisdiction includes federally protected waters, as well as areas that meet the definition of “waters of the state.” Waters of the state is defined as any surface water or groundwater, including saline waters, within the boundaries of the state. The RWQCB has the discretion to take jurisdiction over areas not federally regulated under Section 401 provided they meet the definition of waters of the state. Mitigation requiring no net loss of wetlands functions and values of waters of the state is typically required by the RWQCB.

California Fish and Game Code – Fully Protected Species

Four sections of the California Fish and Game Code (Fish and Game Code Sections 3511, 4700, 5050, and 5515) list 37 fully protected species. These statutes prohibit take or possession at any time of fully protected species. CDFW is unable to authorize incidental take of fully protected species when activities are proposed in areas inhabited by those species. CDFW has informed nonfederal agencies and private parties that they must avoid take of any fully protected species in carrying out projects.

California Fish and Game Code – Protection of Bird Nests and Raptors

Section 3503 of the 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 of the California Fish and Game Code states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders Falconiformes and Strigiformes), including their nests or eggs. Typical violations include destruction of active nests as a result of tree removal and failure of nesting attempts, resulting in loss of eggs and/or young. These violations can be caused by disturbance of nesting pairs by nearby human activity.

REGIONAL AND LOCAL PLANS, POLICIES, REGULATIONS, AND ORDINANCES

Elk Grove General Plan

The Conservation Element of the Elk Grove General Plan (2015) outlines policies and actions aimed at reducing development impacts on native and nonnative habitats, plants, and animals. The Parks, Trails, and Open Space Element ensures that the City’s desires and/or needs for parks, recreation, and open space are recognized and addressed. The following General Plan policies may be relevant to future projects that could be developed in the future within the proposed SOIA Area.

- ▶ **CAQ-8:** Large trees (both native and nonnative) are an important aesthetic (and, in some cases, biological) resource. Trees that function as an important part of the City’s or neighborhood’s aesthetic character or

natural habitat should be retained to the extent possible during the development of new structures, roadways (public and private, including roadway widening), parks, drainage channels, and other uses and structures.

- If trees cannot be preserved onsite, offsite mitigation or payment of in-lieu fee may be required by the City. Where possible, trees planted for mitigation should be located in the same watershed as the trees that were removed.
- Trees that cannot be protected shall be replaced either onsite or offsite as required by the City.
- **CAQ-8-Action 1** When reviewing native or non-native trees for preservation, considering the following criteria: Aesthetic value; Biological value; Shade; Water quality benefits; Runoff reduction; Air quality (pollutant reduction); Health of the tree(s); Suitability for preservation in place; Safety hazards posed by the tree(s);
- **CAQ-8-Action 2** Develop a list of trees which shall be considered generally exempt from preservation. These may include trees, which pose a threat to public safety, to native trees, or to natural habitat.
- **CAQ-8-Action 3** Develop a list of trees which may be used when providing replacement trees for the loss of native and non-native trees.
- **CAQ-8-Action 4** Implement the City's Tree Preservation Ordinance.
- **CAQ-8-Action 5** Amend the City's Tree Preservation Ordinance to conform with the policies of this General Plan and to expand protection to non-native trees.
- **CAQ-8-Action 6** Develop a list of trees that should not be planted due to their invasive nature (that is, their ability to escape cultivation or to dominate natural areas) and provide this information to the public and the development community.
- **CAQ-8-Action 7** Retain the services of a qualified arborist(s) under contract to the City to provide information to decision-makers and staff on the suitability of trees for preservation.
- **CAQ-8-Action 8** Consider the use of revised standard roadway cross-sections which do not require the removal of trees in order to provide additional roadway capacity.
- ▶ **CAQ-9:** Wetlands, vernal pools, marshland and riparian (streamside) areas are considered important resources. Impacts to these resources shall be avoided unless shown to be technically infeasible. The City shall seek to ensure that no net loss of wetland areas occurs, which may be accomplished by avoidance, revegetation, and restoration onsite or creation of riparian habitat corridors.
 - **CAQ-9-Action 1** As part of the development review process, ensure that all potentially affected wetland areas are identified, and provide mitigation to ensure that no net loss occurs. Mitigation should occur within the same watershed as the impact, where feasible.
 - **CAQ-9-Action 2** Coordinate with the California Department of Fish and Game and the U.S. Fish and Wildlife Service in the review of development projects.

- ▶ **CAQ-10:** Consider the adoption of habitat conservation plans for rare, threatened, or endangered species.
 - **CAQ-10-Action 1** As appropriate, work with the County of Sacramento and other agencies on a Habitat Conservation Plan or other mechanism to implement this policy.

- ▶ **CAQ-11:** The City shall seek to preserve areas, where feasible, where special-status plant and animal species and critical habitat areas are known to be present or potentially occur, based on City biological resource mapping and data provided in the General Plan EIR or other technical material, and may be adversely affected by public or private development projects. Where preservation is not possible, appropriate mitigation shall be included in the public or private project. “Special-status” species are generally defined as species considered to be rare, threatened, or endangered, or otherwise protected under local, state, and/or federal policies, regulations, or laws.
 - **CAQ-11 Action 1** The City shall require a biological resources evaluation for private and public development projects in areas identified to contain or possibly contain special-status plant and animal species based on City biological resource mapping and data provided in the General Plan EIR or other technical material. The biological resources evaluation shall determine the presence/absence of these special-status plant and animal species on the site. The surveys associated with the evaluation shall be conducted during the appropriate seasons for proper identification of the species. Such evaluation will consider the potential for significant impact on special-status plant and animal species, and will identify feasible mitigation measures to mitigate such impacts to the satisfaction of the City and appropriate governmental agencies (e.g., U.S. Fish and Wildlife Service, California Department of Fish and Game and U.S. Army Corps of Engineers) where necessary (e.g., species listed under the State and/or Federal Endangered Species Act). Mitigation measures may include, but are not limited to, the following:
 - For special-status plant species: On- or off-site preservation of existing populations from direct and indirect impacts, seed and soil collection or plant transplant that ensures that the plant population is maintained.
 - For special-status animal species: avoidance of the species and its habitat as well as the potential provision of habitat buffers, avoidance of the species during nesting or breeding seasons, replacement or restoration of habitat on- or off-site, relocation of the species to another suitable habitat area, payment of mitigation credit fees.
 - Participation in a habitat conservation plan.

- ▶ **CAQ-17:** The City recognizes the value of naturally vegetated stream corridors, commensurate with flood control and public acceptance, to assist in removal of pollutants, provide native and endangered species habitat and provide community amenities.

- ▶ **PTO-15:** The City views open space lands of all types as important resource which should be preserved in the region, and supports the establishment of multipurpose open space areas to address a variety of needs, including, but not limited to:
 - Maintenance of agricultural uses;
 - Wildlife habitat

- Recreational open space
- Aesthetic benefits
- Flood control

To the extent possible, lands protected in accordance with this policy should be in proximity to Elk Grove, to facilitate use of these areas by Elk Grove residents, assist in mitigation of habitat loss within the city, and provide an open space resource close to the urbanized areas of Elk Grove.

- **PTO-15-Action 1** Consider the establishment of a citywide fee and/or assessment system which would provide funding for the purchase of open space land or easements and the maintenance of these areas.
- ▶ **PTO-18:** To the extent possible, retain natural drainage courses in all cases where preservation of natural drainage is physically feasible and consistent with the need to provide flood protection.

Elk Grove Municipal Code

Title 16, “Swainson’s Hawk” Chapter 16.130, “Swainson’s Hawk Impact Mitigation Fees”

The City of Elk Grove recognizes that the continued expansion of urban uses into agricultural lands will, absent mitigation, result in a significant reduction of Swainson’s hawk foraging habitat. The City has determined that the most effective means of mitigating such loss of foraging habitat is the direct preservation, in perpetuity, of equally suitable foraging habitat on an acre-per-acre ratio. Pursuant to this chapter, preservation should occur prior to the onset of development activities that cause the impact (i.e., land clearing and grading) and project proponents should be responsible for locating and acquiring appropriate land or legal instruments (such as conservation easements) that will ensure its preservation as Swainson’s hawk foraging habitat in perpetuity. Because it may be infeasible to acquire easements of for less than 40 acres, proponents of projects less than 40 acres have the option to mitigate impacts to Swainson’s hawk foraging habitat through payment of an impact mitigation fee that will provide funds to acquire available land with suitable Swainson’s hawk foraging habitat values.

Title 19, “Trees,” Chapter 19.12, “Tree Preservation and Protection”

The City of Elk Grove prioritizes the preservation of existing trees and the historic and aesthetic character of the community, as described in the City General Plan. The City’s tree ordinance contains provisions to preserve existing trees through the development review process and a process for tree replacement where preservation is not reasonably possible. The City considers trees with a diameter at breast height (dbh) of 6 inches or greater, or multi-trunked trees with a combined dbh of 6 inches or greater, of the following species as trees of local importance (Section 19.12.040): coast live oak (*Quercus agrifolia*), valley oak (*Q. lobata*), blue oak (*Q. douglasii*), interior live oak (*Q. wislizenii*), oracle oak (*Q. X moreha*), California sycamore (*Platanus racemosa*), and California black walnut (*Juglans hindsii*). For future development projects, tree removal would be addressed as part of the project application (Section 19.12.090).

The tree ordinance requires that mitigation for tree loss be provided at a ratio of 1 new inch dbh of tree for each inch dbh lost (1:1 ratio), unless alternative mitigation is approved by the City. An applicant for future development would be required to prepare a tree mitigation plan if any trees would be removed. Mitigation options (Section 19.12.160) could include on-site or off-site replacement, payment of an in-lieu fee, preservation of existing trees, or on-site or off-site relocation.

Proposed South Sacramento Habitat Conservation Plan

The SOIA is located within the proposed South Sacramento Habitat Conservation Plan (SSHCP) area and Sacramento County is a plan partner. The City of Elk Grove is no longer a participant in the SSHCP planning process.

The SSHCP is intended to provide a streamlined process for incidental take authorization under both the federal Endangered Species Act and the California Endangered Species Act, permitting under Section 404 of the Clean Water Act and quality certification under Section 401 of the Clean Water Act, and lake and streambed alteration agreements under Section 1602 of the Fish and Game Code. The SSHCP would provide strategies to conserve habitat for special-status plant and wildlife species that are covered under the plan. If adopted, it would serve as a multi-species, multi-habitat conservation plan addressing the biological impacts of future urban development within the Urban Services Boundary (USB) in the southern portion of the county.

The emphasis of the SSHCP is to secure large, interconnected blocks of habitat that focus on protecting intact subwatersheds, while minimizing edge effects and maximizing heterogeneity. Habitat losses within the USB would be offset primarily through the establishment of large preserves outside the USB, but core and satellite preserves may be established within the USB. As currently conceived, land developers that convert habitat within the USB would pay a defined per-acre fee to mitigate impacts. These fees would be used to protect, restore, maintain, and monitor habitat.

The process for developing the SSHCP was initiated in 1992. The SSHCP is currently undergoing environmental review and, according to the SSHCP website, the plan is anticipated to be adopted in the summer of 2017. At this time, the SSHCP is still being developed and details of the proposed plan are not available.

3.4.3 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

METHODOLOGY

The project does not include development proposals or any land use changes; therefore, the environmental analysis is based on a potential land use scenario that anticipates, conservatively, full development of the proposed SOIA Area. Potential impacts on biological resources resulting from implementation of the proposed project were determined by mapping and quantifying common and sensitive habitats (i.e., aquatic habitats), and evaluating potential effects to common and special-status species that could result from loss of these habitats and other potential direct and indirect effects. For purposes of the biological resources analysis, it is assumed that all existing habitat in the SOIA Area could eventually be converted to developed land uses as a result of approval of the SOIA. Potential impacts associated with possible future off-site improvement areas are characterized very generally since there is no annexation, land use change, development, or infrastructure associated with the project and since the location of nonexistent off-site improvement areas is unknown.

THRESHOLDS OF SIGNIFICANCE

The thresholds for determining the significance of impacts for this analysis are based on the environmental checklist in Appendix G of the State CEQA Guidelines. The project would result in a significant impact related to biological resources if it would do any of the following:

- ▶ Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW 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 CDFW;
- ▶ Have a substantial adverse effect on Federally protected waters of the United States, including wetlands, as defined by Section 404 of the CWA through direct removal, filling, hydrological interruption, or other means;
- ▶ Interfere substantially with the movement of any native resident or migratory 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, natural community conservation plan, or other approved local, regional, or state habitat conservation plan; or
- ▶ Substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or substantially reduce the number or restrict the range of an endangered, rare, or threatened species.

ISSUES NOT DISCUSSED FURTHER

- ▶ **Wildlife nursery sites or migratory routes:** No native wildlife nursery sites or established migratory routes have been identified in the SOIA Area. According to the California Essential Habitat Connectivity Project, the SOIA Area is not located within a Natural Landscape Block or Essential Habitat Connectivity area (Spencer *et al.* 2010). Project development would not interfere substantially with the movement of any native resident or migratory wildlife species because the SOIA Area does not currently provide an important connection between any areas of natural habitat that would otherwise be isolated. Therefore, project implementation would not have an impact on wildlife movement or nursery sites.

IMPACT ANALYSIS

IMPACT 3.4-1 **Special-status plants.** *The pond, canal, and some of the ditches in the SOIA Area provide marginally suitable habitat for the special-status plant species Sanford's arrowhead. This species could potentially be present and if there is future development of the SOIA Area, this could be lost through habitat removal. This impact is considered **potentially significant**.*

As previously stated, the proposed SOIA does not include development or land use change. However, land use assumptions were developed for this analysis in order to illustrate the types of environmental effects that could result from possible future development in the SOIA Area. If the proposed SOIA Area is proposed for development in the future, such development could result in removal of approximately four acres of human-made ditches, canal, and pond that have low potential to support the special-status plant species Sanford's arrowhead. This potential is considered low because habitat in the on-site aquatic features is heavily disturbed due to

managed hydrology, periodic channel dredging, and vegetation management. However, Sanford's arrowhead is known to occur in artificial and disturbed waterways and stock ponds in the region. Therefore, the possibility of this species being found on the site cannot be dismissed. Loss of aquatic habitat from the SOIA Area could result in direct mortality of this special-status plant if it is present.

In addition, off-site improvements such as roads, sewer lines, drainage facilities, and water lines could also be required if future development were to occur in the SOIA Area. While some of the off-site improvements may occur within existing rights-of-way that do not provide suitable habitat for special-status plants, other off-site improvements may occur in areas that contain habitat (e.g., freshwater marsh and vernal pools) for other special-status plant species known to occur in the region, as listed in Table 3.4-2. Therefore, possible future off-site improvements could result in mortality of Sanford's arrowhead and other special-status plant species if they are present in off-site improvement areas associated with possible future development in the SOIA Area. Loss of special-status plants is considered a **potentially significant** impact.

Mitigation Measures

Mitigation Measure 3.4-1: Conduct Special-status Plant Surveys; Implement Compensatory Mitigation for Special-status Plants

At the time of submittal of any application to annex territory within the SOIA Area, the City of Elk Grove shall require all discretionary projects to implement the following measures to mitigate the potential loss of special-status plant species:

- Retain a qualified botanist to conduct protocol-level preconstruction special-status plant surveys for potentially occurring species for each future proposed project. All plant species encountered on the project site shall be identified to the taxonomic level necessary to determine species status. The surveys shall be conducted no more than 5 years prior and no later than the blooming period immediately preceding the approval of a grading or improvement plan or any ground disturbing activities, including grubbing or clearing.
- Notify CDFW, as required by the California Native Plant Protection Act, if any special-status plants are found on the project site. Notify the USFWS if any plant species listed under the Endangered Species Act are found.
- Develop a mitigation and monitoring plan to compensate for the loss of special-status plant species found during preconstruction surveys, if any. The mitigation and monitoring plan shall be submitted to CDFW or USFWS, as appropriate depending on species status, for review and comment. The City shall consult with these entities, as appropriate depending on species status, before approval of the plan to determine the appropriate mitigation measures for impacts on any special-status plant population. Mitigation measures may include preserving and enhancing existing on-site populations, creation of off-site populations on project mitigation sites through seed collection or transplantation, and/or preserving occupied habitat off-site in sufficient quantities to offset loss of occupied habitat or individuals
- If transplantation is part of the mitigation plan, the plan shall include a description and map of mitigation sites, details on the methods to be used, including collection, storage, propagation, receptor

site preparation, installation, long-term protection and management, monitoring and reporting requirements, remedial action responsibilities should the initial effort fail to meet long-term monitoring requirements, and sources of funding to purchase, manage, and preserve the sites. The following performance standards shall be applied:

- The extent of occupied area and the flower density in compensatory reestablished populations shall be equal to or greater than the affected occupied habitat and shall be self-producing.
- Reestablished populations shall be considered self-producing when:
 - plants re-establish annually for a minimum of 5 years with no human intervention, such as supplemental seeding; and
 - re-established habitats contain an occupied area and flower density comparable to existing occupied habitat areas in similar habitat types.
- If off-site mitigation includes dedication of conservation easements, purchase of mitigation credits, or other off-site conservation measures, the details of these measures shall be included in the mitigation plan, including information on responsible parties for long-term management, conservation easement holders, long-term management requirements, and other details, as appropriate to target the preservation of long term viable populations.

Significance after Mitigation

If development occurs in the proposed SOIA under the City of Elk Grove’s jurisdiction that requires discretionary action, the City will be required to make General Plan consistency findings, including consistency with Policy CAQ-11 and CAQ-11 Action 1, which suggest that the City will assess special-status plant species occurrences and seek to preserve or mitigate impacts to such species. In addition, implementation of Mitigation Measure 3.4-1 would reduce impacts on potentially-occurring special-status plant species because future project applicants would be required to identify special-status plant populations and provide compensation for the loss of special-status plants through establishment of new populations, conservation easements, or other appropriate measures. With enforcement of the above mitigation, future development in the SOIA Area and off-site improvements would be designed to minimize potential impacts. The impact is **less than significant with mitigation**.

IMPACT 3.4-2 *Special-status raptors and other nesting raptors. If there is future development of the SOIA Area, this would result in eventual conversion from agricultural land uses in the SOIA Area to urban land uses. This would result in loss of suitable nesting and foraging habitat for special-status raptors (Swainson’s hawk, white-tailed kite, northern harrier, and burrowing owl) and common raptors protected under California Fish and Game Code and the MBTA. Construction of future projects resulting from the SOIA could disturb active nests on or near the SOIA Area and off-site improvement areas, potentially resulting in nest abandonment by the adults and mortality of chicks and eggs. This impact is considered **significant**.*

Converting land in the SOIA Area from agricultural to urban land uses would result in removal of approximately 1,150 acres of cropland that provides suitable foraging habitat for Swainson’s hawk, white-tailed kite, and northern harrier. Although some of the SOIA Area is currently planted in vineyards that are not considered suitable foraging habitat for Swainson’s hawk, the entire SOIA Area is currently zoned AG-80 and is therefore

assumed to provide 100 percent foraging habitat value according to the Sacramento County Department of Environmental Review and Assessment. Following the ultimate conversion of the SOIA Area to urban uses, SOIA Area would retain zero foraging habitat value.

Trees that provide suitable nest sites for Swainson's hawk, white-tailed kite, and common raptors would also be removed and northern harrier could nest on the ground or in cattail and bulrush patches in the canal and ditches. Ground squirrel burrows that provide potentially suitable nesting and cover habitat for burrowing owl were also observed during the reconnaissance survey. Swainson's hawk is listed as threatened under CESA, white-tailed kite is a fully protected species, and northern harrier and burrowing owl are California species of special concern. White-tailed kite and northern harrier were observed foraging over the SOIA Area during the biological reconnaissance surveys conducted in March 2016 and burrowing owls were observed in the SOIA Area in 2010 (CNDDB 2016).

In addition, possible future off-site improvements to roads, sewer lines, drainage facilities, and water lines could result in additional losses of suitable nesting and foraging habitat for raptors in the vicinity of the SOIA Area.

All raptors and their active nests, including common species, are protected under Section 3503.5 of the California Fish and Game Code. Common raptors that could nest on or near the SOIA Area include red-tailed hawk and American kestrel and these species were observed foraging in the SOIA Area during reconnaissance surveys.

Vegetation removal, grading, and other construction activities associated with land use conversion could result in mortality of individuals and nest abandonment. If trees are to be removed during the raptor breeding season (March–August), mortality of eggs and chicks of tree nesting raptors could result if an active nest were present. In addition, future development activities could disturb active nests near construction areas, potentially resulting in nest abandonment by the adults and mortality of chicks and eggs. Ground disturbance or vegetation removal during the breeding season could result in loss of active northern harrier nests.

Burrowing owls need burrows at all times to survive, and displacing individuals from their burrows can result in indirect impacts such as predation, increased energetic costs, increased stress, and risks associated with having to find and compete for burrows, all of which can lead to take or reduced reproduction.

Swainson's hawks generally nest within two miles of suitable foraging habitat, which consists of alfalfa, disked fields, fallow fields, dry-land pasture, beets, tomatoes, irrigated pasture, grains, other row crops, and uncultivated grasslands (Estep 1989, Estep pers. comm. 2007, Estep 2009). There are 78 nesting Swainson's hawk records within 5 miles of the SOIA Area and the loss of 750 acres of foraging habitat from the SOIA Area, and potentially more acreage at off-site improvement areas, could affect nesting success, survival rates, and availability of prey for the local population, or result in displacement of nesting pairs of Swainson's hawk, white-tailed kite, and northern harrier. Therefore, the loss of foraging habitat resulting from eventual development of the SOIA Area and off-site improvement areas is considered a **potentially significant** impact.

Construction activities in the SOIA Area could result in direct destruction of an active Swainson's hawk, white-tailed kite, northern harrier, burrowing owl, or common raptor nests or disturb nesting raptors located on or near the SOIA Area and off-site improvement areas, resulting in nest abandonment by adult birds and abandonment of chicks and eggs, causing mortality. Direct and indirect impacts on active raptor nests or burrows are considered **potentially significant**.

Mitigation Measures

Mitigation Measure 3.4-2a: Avoid Direct Loss of Swainson's Hawk and Other Raptors

At the time of submittal of any application to annex territory within the SOIA Area, the City of Elk Grove shall require all discretionary projects to implement the following measures to mitigate the potential loss of nesting Swainson's hawks and other nesting raptors:

- Tree and vegetation removal shall be completed during the nonbreeding season for raptors (September 1–February 31).
- To avoid, minimize, and mitigate potential impacts on Swainson's hawk and other raptors (not including burrowing owl) nesting on or adjacent to the SOIA Area or possible off-site improvement areas, retain a qualified biologist to conduct preconstruction surveys and identify active nests on and within 0.5 mile of the project site for construction activities conducted during the breeding season (March 1–August 31). The surveys shall be conducted before the approval of grading and/or improvement plans (as applicable) and no less than 14 days and no more than 30 days before the beginning of construction. Guidelines provided in *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in the Central Valley* (Swainson's Hawk Technical Advisory Committee 2000) shall be followed for surveys for Swainson's hawk. If no nests are found, no further mitigation will be required.
- Impacts on nesting Swainson's hawks and other raptors shall be avoided by establishing appropriate buffers around active nest sites identified during preconstruction raptor surveys. No project activity shall commence within the buffer areas until a qualified biologist has determined, in coordination with CDFW, the young have fledged, the nest is no longer active, or reducing the buffer would not result in nest abandonment. CDFW guidelines recommend implementation of 0.25- or 0.5-mile-wide buffers for Swainson's hawk nests, but the size of the buffer may be decreased if a qualified biologist and the City, in consultation with CDFW, determine that such an adjustment would not be likely to adversely affect the nest.
- The appropriate no-disturbance buffer for other raptor nests (i.e., species other than Swainson's hawk) shall be determined by a qualified biologist based on site-specific conditions, the species of nesting bird, nature of the project activity, visibility of the disturbance from the nest site, and other relevant circumstances.
- Monitoring of all active raptor nests by a qualified biologist during construction activities will be required if the activity has potential to adversely affect the nest. If construction activities cause the nesting bird to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the no-disturbance buffer shall be increased until the agitated behavior ceases. The exclusionary buffer will remain in place until the chicks have fledged or as otherwise determined appropriate by a qualified biologist.

Mitigation Measure 3.4-2b: Avoid Loss of Burrowing Owl

At the time of submittal of any application to annex territory within the SOIA Area, the City of Elk Grove shall require all discretionary projects to implement the following measures to mitigate the potential loss of burrowing owl:

- To avoid, minimize, and mitigate potential impacts on burrowing owl, applicants for each future project shall retain a qualified biologist to conduct focused breeding and nonbreeding season surveys for burrowing owls in areas of suitable habitat on and within 1,500 feet of the project site. Surveys will be conducted prior to the start of construction activities for each project and in accordance with Appendix D of CDFW's Staff Report on Burrowing Owl Mitigation (2012).
- If no occupied burrows are found, a letter report documenting the survey methods and results will be submitted to the City and CDFW and no further mitigation will be required.
- If an active burrow is found during the nonbreeding season (September 1 through January 31), owls will be relocated to suitable habitat outside of the project area using passive or active methodologies developed in consultation with CDFW and may include active relocation to preserve areas if approved by CDFW and the preserve managers. No burrowing owls will be excluded from occupied burrows until a burrowing owl exclusion and relocation plan is developed by the project applicant and approved by CDFW.
- If an active burrow is found during the breeding season (February 1 through August 31), occupied burrows will not be disturbed and will be provided with a 150- to 1,500-foot protective buffer unless a qualified biologist verifies through noninvasive means that either: (1) the birds have not begun egg laying, or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. The size of the buffer will depend on the time of year and level of disturbance, as outlined in the CDFW Staff Report (2012, pg 9). Once the fledglings are capable of independent survival, the owls will be relocated to suitable habitat outside the project area in accordance with a burrowing owl exclusion and relocation plan developed in consultation with CDFW and the burrow will be destroyed to prevent owls from reoccupying it. No burrowing owls will be excluded from occupied burrows until a burrowing owl exclusion and relocation plan is approved by CDFW. Following owl exclusion and burrow demolition, the site shall be monitored by a qualified biologist to ensure burrowing owls do not recolonize the site prior to construction.
- If active burrowing owl nests are found on the project site and these nest sites are lost as a result of implementing the project, the project applicant shall mitigate the loss through preservation of other known nest sites in Sacramento County, at a minimum ratio of 1:1. The applicant shall develop a mitigation and monitoring plan for the compensatory mitigation areas.
- The mitigation and monitoring plan will include detailed information on the habitats present within the preservation areas, the long-term management and monitoring of these habitats, legal protection for the preservation areas (e.g., conservation easement, declaration of restrictions), and funding mechanism information (e.g., endowment). All burrowing owl mitigation lands shall be preserved in perpetuity and incompatible land uses shall be prohibited in habitat conservation areas.

- The project applicants shall transfer said burrowing owl mitigation land, through either conservation easement or fee title, to a third-party, nonprofit conservation organization (Conservation Operator), with the City and CDFW named as third-party beneficiaries. The Conservation Operator shall be a qualified conservation easement land manager that manages land as its primary function. Additionally, the Conservation Operator shall be a tax-exempt nonprofit conservation organization that meets the criteria of Civil Code Section 815.3(a) and shall be selected or approved by the City, after consultation with CDFW. The City, after consultation with CDFW and the Conservation Operator, shall approve the content and form of the conservation easement. The City, CDFW, and the Conservation Operator shall each have the power to enforce the terms of the conservation easement. The Conservation Operator shall monitor the easement in perpetuity to ensure compliance with the terms of the easement.

Mitigation Measure 3.4-2c: Prepare and Implement a Swainson's Hawk Foraging Habitat Mitigation Plan

At the time of submittal of any application to annex territory within the SOIA Area, the City of Elk Grove shall require all discretionary projects to implement the following measures to mitigate the potential loss of Swainson's hawk foraging habitat:

- Before the approval of grading and improvement plans or before any ground-disturbing activities, whichever occurs first, preserve suitable Swainson's hawk foraging habitat to ensure 1:1 mitigation for Swainson's hawk foraging habitat value lost as a result of the project. Because the SOIA Area is currently zoned Ag-80, it is deemed to provide 100 percent foraging habitat value and the entire acreage must therefore be compensated at a 1:1 ratio. Loss of foraging habitat resulting from possible future off-site improvements shall be compensated by preserving suitable Swainson's hawk foraging habitat to ensure 1:1 replacement of habitat value, based on zoning of the affected land, lost as a result of the project. The suitability of preservation habitat shall be determined by the City after consultation with CDFW and a qualified biologist and shall be located within the geographical foraging area of the local nesting population as determined acceptable to CDFW.
- Before approval of such proposed mitigation, the City shall consult with CDFW regarding the appropriateness of the mitigation. If mitigation is accomplished through conservation easement, then such an easement shall ensure the continued management of the land to maintain Swainson's hawk foraging values, including but not limited to ongoing agricultural uses and the maintenance of all existing water rights associated with the land. The conservation easement shall be recordable and shall prohibit any activity that substantially impairs or diminishes the land's capacity as suitable Swainson's hawk foraging habitat.
- The project applicants shall transfer said Swainson's hawk mitigation land, through either conservation easement or fee title, to a third-party, nonprofit conservation organization (Conservation Operator), with the City and CDFW named as third-party beneficiaries. The Conservation Operator shall be a qualified conservation easement land manager that manages land as its primary function. Additionally, the Conservation Operator shall be a tax-exempt nonprofit conservation organization that meets the criteria of Civil Code Section 815.3(a) and shall be selected or approved by the City, after consultation with CDFW. The City, after consultation with CDFW and the Conservation Operator, shall approve the content and form of the conservation easement. The City, CDFW, and the

Conservation Operator shall each have the power to enforce the terms of the conservation easement. The Conservation Operator shall monitor the easement in perpetuity to assure compliance with the terms of the easement.

- The project applicants, after consultation with the City, CDFW, and the Conservation Operator, shall establish an endowment or some other financial mechanism that is sufficient to fund in perpetuity the operation, maintenance, management, and enforcement of the conservation easement. If an endowment is used, either the endowment funds shall be submitted to the City to be distributed to an appropriate third-party nonprofit conservation agency, or they shall be submitted directly to the third-party nonprofit conservation agency in exchange for an agreement to manage and maintain the lands in perpetuity. The Conservation Operator shall not sell, lease, or transfer any interest of any conservation easement or mitigation land it acquires without prior written approval of the City and CDFW.
- If the Conservation Operator ceases to exist, the duty to hold, administer, manage, maintain, and enforce the interest shall be transferred to another entity acceptable to the City and CDFW. The City shall ensure that mitigation habitat is properly established and is functioning as habitat by conducting regular monitoring of the mitigation site(s) for the first 10 years after establishment of the easement.
- For development projects of less than 40 acres, project proponents may mitigate for the loss of Swainson's hawk foraging habitat through payment of an impact mitigation fee that will provide funds to acquire available land with suitable Swainson's hawk foraging habitat values as determined by the City in consultation with CDFW.

Significance after Mitigation

If development occurs in the proposed SOIA under the City of Elk Grove's jurisdiction that requires discretionary action, the City will be required to make General Plan consistency findings, including consistency with Policy CAQ-11 and CAQ-11 Action 1, which suggest that the City will assess special-status wildlife species occurrences and seek to preserve or mitigate impacts to such species and their habitats.

In addition, implementing Mitigation Measures 3.4-2a, 3.4-2b, and 3.4-2c would reduce significant impacts on white-tailed kite, northern harrier, burrowing owl, and other raptors because it would ensure that these species are not disturbed during nesting so that project construction would not result in nest abandonment and loss of eggs or young. These measures would also ensure that Swainson's hawk foraging habitat and burrowing owl habitat would be preserved at a 1:1 ratio of habitat lost. Preservation of Swainson's hawk foraging habitat would also benefit white-tailed kite and northern harrier and reduce the potential indirect effect of foraging habitat loss on these species.

However, even with mitigation measures such as those outlined above, the impact on Swainson's hawk may not be reduced to a less-than-significant level because there has already been rapid and widespread loss of foraging habitat for this species in the region and the local area supports one of the highest breeding concentrations of this species. There is a finite amount of land available within the foraging range of the local nesting population and even with preservation of foraging habitat to compensate for losses that would occur in the SOIA Area; there would still be an overall net loss of foraging habitat available to the local nesting population. This net loss would undoubtedly result in reduced reproductive success and displacement of nesting pairs thereby contributing to the

decline of Swainson's hawk populations in the region. There is no additional feasible mitigation available that would avoid this impact. The impact on Swainson's hawk would remain **significant and unavoidable**.

With enforcement of the above mitigation measure, future development in the SOIA Area and off-site improvements would be designed to minimize potential impacts. With regard to the other species addressed in the mitigation above, the impact is considered **less than significant with mitigation**.

IMPACT 3.4-3 *Loggerhead shrike, Modesto song sparrow, and common nesting birds. Conversion from agricultural to urban land uses would result in loss and disturbance of potential nesting habitat for loggerhead shrike, Modesto song sparrow, and common birds protected under the MBTA. If there is future development within the SOIA Area and associated off-site improvement areas, construction could disturb active nests on or near the construction area, potentially resulting in nest abandonment by the adults and mortality of chicks and eggs. This impact is considered potentially significant.*

Converting land in the SOIA Area from agricultural to urban land uses would result in removal and disturbance of stands of cattail and bulrush, blackberry brambles, and isolated trees and shrubs that provide potential nesting habitat for loggerhead shrike, Modesto song sparrow, and other nesting birds. Evidence of loggerhead shrike (frogs impaled on barbed wire fence) was observed on the site and song sparrow was observed foraging on-site, though it is unknown if it was Modesto song sparrow or another subspecies. In addition, possible future off-site improvements to roads, sewer lines, drainage facilities, and water lines could result in additional losses of suitable nesting habitat in the vicinity of the SOIA Area. Since it is unknown where nonexistent off-site improvements would occur, it is possible that such improvements could affect nesting habitat for other special-status bird species such as tricolored blackbird, grasshopper sparrow, and least bittern. Removal or disturbance of potentially suitable habitat during construction in the SOIA Area and off-site improvement areas could result in nest abandonment and loss of eggs or young if an active loggerhead shrike, Modesto song sparrow, or other special-status bird nest were to be present during ground-disturbing activities.

Vegetation removal and ground disturbances associated with project implementation could result in direct destruction of active nests of common birds protected under the MBTA or California Fish and Game Code. Project construction could also result in indirect disturbance of breeding birds causing nest abandonment by the adults and mortality of chicks and eggs. Loss of nests of common bird species (those not meeting the definition of special-status as provided above) would not be a significant impact under CEQA because it would not result in a substantial effect on their populations locally or regionally; however, destruction of bird nests is a violation of the MBTA and Section 3503 of the California Fish and Game Code and mitigation to avoid the loss of active nests of these species is required for compliance with these regulations.

Nesting habitat for loggerhead shrike is very limited in the SOIA Area because there are very few shrubs present. Habitat is very marginal for Modesto song sparrow because this species typically nests in dense emergent marsh vegetation or riparian scrub habitats. Nonetheless, it is possible that a pair of Modesto song sparrows could nest in the sparse cattail or bulrush patches found in the canal and ditches on-site. Loss of an individual Modesto song sparrow nest would not significantly affect local population numbers of this species because the largest concentration of the population nests in large marsh or riparian habitats along larger streams, rivers, sloughs and other permanent water bodies. However, possible future off-site improvements could result in loss of larger numbers of nests of Modesto song sparrow and other special-status bird nests and this loss would be a **potentially significant** impact. Loss of an active loggerhead shrike nest would be a **potentially significant** impact because

this species is a solitary nester that needs larger territories per pair (10 to 40 acres) and it is unknown how many pairs are nesting in the Elk Grove area (Zeiner and Laudenslayer 1990). There are no CNDDDB records of this species in the nine quadrangles containing and surrounding the SOIA Area suggesting there may be a very limited number of them nesting in this area.

Mitigation Measures

Mitigation Measure 3.4-3: Avoid Direct Loss of Loggerhead Shrike and Protected Bird Nests

At the time of submittal of any application to annex territory within the SOIA Area, the City of Elk Grove shall require future project applicants to implement the following measures to mitigate the potential loss of protected bird nests:

- To the extent feasible, vegetation removal, grading, and other ground disturbing activities will be carried out during the nonbreeding season for protected bird species in this region (generally September 1–January 31).
- For any project activity that would occur during the nesting season (February 1–August 31), the project applicant shall conduct a preconstruction survey. The preconstruction survey shall be conducted by a qualified biologist before any activity occurring within 500 feet of suitable nesting habitat for any protected bird species. The survey shall be conducted within 14 days before project activity begins.
- If an active nest of loggerhead shrike, song sparrow, other special-status bird species, or common bird species protected by the Migratory Bird Treaty Act or California Fish and Game Code is found, the qualified biologist shall establish a buffer around the nest. No construction activity shall commence within the buffer area until a qualified biologist confirms that the nest is no longer active. The size of the buffer shall be determined in consultation with CDFW. Buffer size is anticipated to range from 50 to 500 feet, depending on the species of bird, nature of the project activity, the extent of existing disturbance in the area, and other relevant circumstances, as determined by a qualified biologist in consultation with CDFW.
- Monitoring of all protected nests by a qualified biologist during construction activities will be required if the activity has potential to adversely affect the nest. If construction activities cause the nesting bird to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the no-disturbance buffer shall be increased until the agitated behavior ceases. The exclusionary buffer will remain in place until the chicks have fledged or as otherwise determined by a qualified biologist.

Significance after Mitigation

If development occurs in the proposed SOIA under the City of Elk Grove’s jurisdiction that requires discretionary action, the City will be required to make General Plan consistency findings, including consistency with Policy CAQ-11 and CAQ-11 Action 1, which suggest that the City will assess special-status wildlife species occurrences and seek to preserve or mitigate impacts to such species and their habitats.

In addition, Mitigation Measure 3.4-3 would reduce potentially significant impacts on loggerhead shrike and song sparrow because it would ensure these birds are not disturbed during nesting so that project construction would not result in nest abandonment and loss of eggs or young. The impact is **less than significant with mitigation**.

IMPACT **Sandhill crane winter foraging habitat.** *Conversion from agricultural to urban land uses would result in loss and disturbance of potential winter foraging habitat for sandhill cranes. This impact is considered potentially significant.*

3.4-4

Converting land in the SOIA Area from agricultural to urban land uses would result in removal of approximately 750 acres of cropland (hayfields and fallow fields) that provides potential winter foraging habitat for federally listed greater sandhill crane, as well as California species of special concern, lesser sandhill crane. Sandhill cranes were observed flying over the SOIA Area and heard calling nearby during the reconnaissance survey conducted in March 2016. It is unknown if they were greater or lesser sandhill cranes since both subspecies winter in the Sacramento Valley. For greater sandhill crane, the two most important wintering sites in California are in the Sacramento-San Joaquin Delta (Delta) at Woodbridge Ecological Reserve, Staten Island, and the Cosumnes River Floodplain, and the Butte Sink area north of Sutter Buttes (Littlefield and Ivy 2000, Small 1994). Because the SOIA Area is within the foraging zone of one of the greater sandhill cranes most important wintering sites, this loss of foraging habitat could affect food availability for the local wintering population, thereby reducing the number of birds that can be supported. Therefore, the loss of foraging habitat from the SOIA Area would be a **potentially significant** impact.

Mitigation Measures

Mitigation Measure 3.4-4: Prepare and Implement a Sandhill Crane Foraging Habitat Mitigation Plan

At the time of submittal of any application to annex territory within the SOIA Area, the City of Elk Grove shall require future project applicants to implement the following measures to mitigate the potential loss of greater sandhill crane foraging habitat:

- Before the approval of grading and improvement plans or before any ground-disturbing activities, whichever occurs first, preserve suitable sandhill crane foraging habitat to ensure 1:1 mitigation for foraging habitat lost as a result of the project. The suitability of preservation habitat shall be determined by the City after consultation with CDFW and a qualified biologist and shall be located within five miles of the Cosumnes River Floodplain wintering population site.
- Before approval of such proposed mitigation, the City shall consult with CDFW regarding the appropriateness of the mitigation. If mitigation is accomplished through conservation easement, then such an easement shall ensure the continued management of the land to maintain sandhill crane foraging values, including but not limited to ongoing agricultural uses and the maintenance of all existing water rights associated with the land. The conservation easement shall be recordable and shall prohibit any activity that substantially impairs or diminishes the land's capacity as suitable sandhill crane foraging habitat.
- The project applicants shall transfer said sandhill crane mitigation land, through either conservation easement or fee title, to a third-party, nonprofit conservation organization (Conservation Operator), with the City and CDFW named as third-party beneficiaries. The Conservation Operator shall be a

qualified conservation easement land manager that manages land as its primary function. Additionally, the Conservation Operator shall be a tax-exempt nonprofit conservation organization that meets the criteria of Civil Code Section 815.3(a) and shall be selected or approved by the City, after consultation with CDFW. The City, after consultation with CDFW and the Conservation Operator, shall approve the content and form of the conservation easement. The City, CDFW, and the Conservation Operator shall each have the power to enforce the terms of the conservation easement. The Conservation Operator shall monitor the easement in perpetuity to assure compliance with the terms of the easement.

- The project applicants, after consultation with the City, CDFW, and the Conservation Operator, shall establish an endowment or some other financial mechanism that is sufficient to fund in perpetuity the operation, maintenance, management, and enforcement of the conservation easement. If an endowment is used, either the endowment funds shall be submitted to the City to be distributed to an appropriate third-party nonprofit conservation agency, or they shall be submitted directly to the third-party nonprofit conservation agency in exchange for an agreement to manage and maintain the lands in perpetuity. The Conservation Operator shall not sell, lease, or transfer any interest of any conservation easement or mitigation land it acquires without prior written approval of the City and CDFW.
- If the Conservation Operator ceases to exist, the duty to hold, administer, manage, maintain, and enforce the interest shall be transferred to another entity acceptable to the City and CDFW. The City shall ensure that mitigation habitat is properly established and is functioning as habitat by conducting regular monitoring of the mitigation site(s) for the first 10 years after establishment of the easement.

Significance after Mitigation

If development occurs in the proposed SOIA under the City of Elk Grove's jurisdiction that requires discretionary action, the City will be required to make General Plan consistency findings, including consistency with Policy CAQ-11 and CAQ-11 Action 1, which suggest that the City will assess special-status wildlife species occurrences and seek to preserve or mitigate impacts to such species and their habitats.

In addition, implementing Mitigation Measures 3.4-4 would reduce significant indirect impact of foraging habitat loss on sandhill crane because it would ensure that foraging habitat would be preserved at a 1:1 ratio of habitat lost in the foraging range of the local wintering population. With enforcement of the above mitigation measure, future development in the SOIA Area and off-site improvements would be designed to minimize potential impacts. The impact is **less than significant with mitigation**.

IMPACT 3.4-5 *Western pond turtle. Converting the SOIA Area from agricultural to urban land uses could result in loss of agricultural ditches and canal that provide marginally suitable aquatic habitat for western pond turtle, a California species of special concern. Construction activities in the canal and some ditches could result in death of individual pond turtles if they are present. This impact is considered **potentially significant**.*

Habitat on in the SOIA Area is poor quality for western pond turtle because the pond, canal, and ditches lack vegetation, rocks, woody debris, or other potential basking substrate and therefore, are not expected to support large numbers of turtles. The irrigation ditches convey water only intermittently. Nonetheless, western pond

turtles have been documented near the SOIA Area and aquatic habitats in the SOIA Area could attract individual turtles from time to time. It is unlikely that turtles would nest in the SOIA Area due to the high level of disturbance from agricultural activities and vegetation management, and unsuitable upland cover types (crops; developed surfaces; tall, dense weeds). Regardless, individual turtles could be present in the pond, canal, or larger ditches when water is present and construction activities in this habitat could result in death of turtles. In addition, possible future off-site improvement areas could contain suitable aquatic and nesting habitat for western pond turtle and construction activities in these areas could result in destruction of nests with eggs or hatchlings and death of juveniles and adult turtles. This impact is **potentially significant**.

Mitigation Measures

Mitigation Measure 3.4-5: Avoid Take of Western Pond Turtles

At the time of submittal of any application to annex territory within the SOIA Area, the City of Elk Grove shall require future project applicants to implement the following measures to avoid the potential loss of western pond turtles:

- Off-site improvements shall be planned and designed to avoid aquatic habitats that could support western pond turtle to the extent that is technically feasible and appropriate. Avoidance shall be deemed technically feasible and appropriate if the habitat may be preserved on-site while still obtaining the project purpose and objectives and if the preserved habitat features (i.e., aquatic habitats) could reasonably be expected to continue to function as suitable habitat for western pond turtle following project implementation.
- A preconstruction survey for western pond turtle shall be conducted by a qualified biologist prior to work in suitable aquatic habitat. If no pond turtles are observed, no further mitigation is necessary.
- If pond turtles are observed, a qualified biologist, with approval from CDFW, shall relocate pond turtles from to the nearest area with suitable aquatic habitat that will not be disturbed by project-related construction activities.
- Construction within 500 feet of aquatic habitat known to support western pond turtles shall be conducted outside of the nesting season (March-August) unless a nesting survey conducted by a qualified biologist determines there are no active nests or hatchlings present in the proposed construction area.

Significance after Mitigation

If development occurs in the proposed SOIA under the City of Elk Grove's jurisdiction that requires discretionary action, the City will be required to make General Plan consistency findings, including consistency with Policy CAQ-11 and CAQ-11 Action 1, which suggest that the City will assess special-status wildlife species occurrences and seek to preserve or mitigate impacts to such species and their habitats.

In addition, implementing Mitigation Measure 3.4-5 would reduce potentially significant impacts on western pond turtle because it would ensure that western pond turtles are removed from the site so that project construction would not result in mortality of individuals. With enforcement of the above mitigation measure, future

development in the SOIA Area and off-site improvements would be designed to minimize potential impacts. The impact is **less than significant with mitigation**.

IMPACT 3.4-6 *Giant garter snake. Converting the SOIA Area from agricultural to urban land uses could result in loss of agricultural ditches and canal that provide potentially suitable dispersal habitat for giant garter snake. Construction activities in or within 200 feet of the canal and ditches could result in direct take of giant garter snake. This impact is considered **potentially significant**.*

Giant garter snake has been documented in the vicinity of the SOIA Area, and has been documented in drainages that are connected to the SOIA Area. The on-site canal and ditches provide potentially suitable dispersal habitat for giant garter snake. These waterways are only marginally suitable for giant garter snake because they do not provide a permanent water source during the snake's active season, they lack of suitable foraging habitat and escape cover, ongoing vegetation management activities, annual dredging of the irrigation ditches, and agricultural disturbance (i.e., disking, planting, harvesting). Many of the ditches on site are very narrow and shallow, contain no emergent vegetation, and convey water very sporadically for short duration. These types of ditches generally do not provide suitable habitat for giant garter snake and none of the ditches contain permanent water during the snake's active season, a requirement for breeding habitat. The canal is the largest, deepest waterway in the SOIA Area and contains water the longest; however, it is extremely incised within the SOIA Area with very steep banks, which lowers its value for giant garter snake because it does not provide opportunities for snakes to escape the channel and take refuge during its inactive season. Nonetheless, agricultural ditches and other waterways provide dispersal habitat for giant garter snake when water is present. Possible future off-site improvement areas could contain suitable aquatic breeding and dispersal habitat. Conversion of these habitats, as well as construction activities within 200 feet of suitable aquatic habitat, could result in mortality of individuals if they are present. This impact is **potentially significant**.

Mitigation Measures

Mitigation Measure 3.4-6: Implement Avoidance Measures, Secure Incidental Take Authorization for Federally Listed Giant Garter Snake and Implement all Conditions of the Take Authorization

At the time of submittal of any application to annex territory within the SOIA Area, the City of Elk Grove shall require all discretionary projects to implement the following measures to mitigate impacts on giant garter snake:

- Off-site improvements shall be planned and designed to avoid aquatic habitats that could support giant garter snake to the maximum extent it is if technically feasible and appropriate. Avoidance shall be deemed technically feasible and appropriate if the habitat may be preserved on-site while still obtaining the project purpose and objectives and if the preserved habitat features (i.e., aquatic habitats) could reasonably be expected to continue to function as suitable habitat for giant garter snake following project implementation.
- All construction activities within 200 feet of aquatic habitat suitable for giant garter snakes shall be conducted during the snake's active season of May 1 to October 1 so that snakes can move and avoid danger. For any construction outside of this period, USFWS will be consulted to determine whether

additional measures are necessary to avoid or minimize potential impacts during the inactive season and avoid take.

- In areas where irrigation ditches, or other potential giant garter snake habitats are being retained on the site:
 - A qualified biologist shall install temporary exclusion fencing around suitable upland habitat within 200 feet of aquatic habitat to prevent giant garter snakes from entering the work area during construction. The fencing shall be maintained for the duration of the construction activities;
 - Ground disturbance, spoils, and equipment storage and other project activities shall not be allowed within the fenced area; and
 - The water quality shall be maintained and construction runoff into wetland areas shall be limited through the use of hay bales, filter fences, vegetative buffer strips, or other accepted equivalents. However, no plastic, monofilament, jute, or similar matting to control erosion that could entangle snakes shall be placed in the project area.
- If wetlands, irrigation ditches, or other potential giant garter snake habitat would be filled, the aquatic habitats shall be dewatered at least 15 days before fill. Dewatering of aquatic habitat for construction purposes shall not occur between October 1 and April 15, with the exception of any areas within a cofferdam, unless authorized by USFWS. Any dewatered habitat must remain dry for at least 15 consecutive days after April 15 and before excavation or filling of the dewatered habitat.
- If the project involves any ground-disturbing activities in or within 200 feet of waterways that may support giant garter snake, the project proponent/s shall obtain incidental take authorization from the USFWS and CDFW pursuant to ESA and CESA, and shall abide by all conditions in the take authorization, including conservation and minimization measures, intended to be completed before on-site construction. Conservation and minimization measures are expected to include requirements for preparing supporting documentation describing methods to protect existing habitat during and after project construction, methods for determining impact ratios, a detailed monitoring plan, and reporting requirements. CDFW may issue a Consistency Determination under Section 2080.1 of CESA if the applicant(s) obtains take authorization from USFWS and submits the federal opinion take statement to the Director of Fish and Game. CDFW must determine that conditions specified in the Federal take authorization are consistent with CESA. If a Consistency Determination is not obtained, the applicants shall obtain a separate incidental take permit under Section 2081(b) of CESA.

Significance after Mitigation

If development occurs in the proposed SOIA under the City of Elk Grove's jurisdiction that requires discretionary action, the City will be required to make General Plan consistency findings, including consistency with Policy CAQ-11 and CAQ-11 Action 1, which suggest that the City will assess special-status wildlife species occurrences and seek to preserve or mitigate impacts to such species and their habitats.

In addition, successful implementation of Mitigation Measure 3.4-6 would reduce impacts on giant garter snake because it would ensure that take of giant garter snakes is avoided or minimized. With enforcement of the above mitigation measure, future development in the SOIA Area and off-site improvements would be designed to minimize potential impacts. The impact is **less than significant with mitigation**.

IMPACT 3.4-7 Federally protected waters of the United States. *Converting the SOIA Area from agricultural to urban land uses could result in permanent fill of waters of the United States subject to USACE jurisdiction under the CWA. This impact is considered **potentially significant**.*

Converting land in the SOIA Area from agricultural to urban land uses could result in removal (fill) of approximately 6 acres of potentially jurisdictional waters of the United States consisting of 2 acres of canal, 2 acres of ditches, and 2 acres of created pond. These waters may subject to federal protection under Section 404 of the CWA due to ultimate connectivity to the Sacramento-San Joaquin River Delta via South Stone Lake thence Snodgrass Slough; however, a jurisdictional determination has not been completed for the SOIA Area. Possible future off-site improvements could result in fill of other waters of the United States, including wetlands, if they are present in off-site improvement areas. Waters that do not meet the criteria to qualify as waters of the United States and are disclaimed by the USACE would still be considered waters of the state subject to regulation by the Central Valley RWQCB under California's Porter-Cologne Act.

In addition to direct impacts described above, downstream waters could be indirectly affected by creation of impervious surfaces and increased runoff from the SOIA Area. Potential indirect effects to downstream waters include reduction in water quality caused by urban runoff, erosion, and siltation, and increased flow volumes/altered hydrology. This impact is considered **potentially significant**.

Mitigation Measures

Mitigation Measure 3.4-7: Avoid, Minimize, or Compensate for Loss of Waters of the United States and Waters of the State

At the time of submittal of any application to annex territory within the SOIA Area, the City of Elk Grove shall require all discretionary projects to implement the following measures to mitigate the potential loss of waters:

- Conduct a delineation of waters of the United States according to methods established in the USACE wetlands delineation manual (Environmental Laboratories 1987) and Arid West Supplement (Environmental Laboratories 2008). The delineation shall map and quantify the acreage of all aquatic habitats in the SOIA Area and associated off-site improvement areas, and shall be submitted to USACE for verification and jurisdictional determination.
- Off-site improvements shall be planned and designed to avoid waters of the United States, including wetlands, and waters of the state to the maximum extent technically feasible and appropriate. Avoidance shall be deemed technically feasible and appropriate if the habitat may be preserved on-site while still obtaining the project purpose and objectives and if the preserved aquatic habitat could reasonably be expected to continue to provide the same habitat functions following project implementation.

- The project applicant for each project requiring fill of waters shall replace or restore on a “no-net-loss” basis the function of all wetlands and other waters that would be removed as a result of implementing the respective project. Wetland habitat will be restored or replaced at an acreage and location and by methods agreeable to USACE and the Central Valley RWQCB, depending on agency jurisdiction, and as determined during the Section 401 and Section 404 permitting processes.
- Mitigation methods may consist of establishment of aquatic resources in upland habitats where they did not exist previously, reestablishment (restoration) of natural historic functions to a former aquatic resource, enhancement of an existing aquatic resource to heighten, intensify, or improve aquatic resource functions, or a combination thereof. The compensatory mitigation may be accomplished through purchase of credits from a USACE-approved mitigation bank, payment into a USACE-approved in-lieu fee fund, or through permittee-responsible on-site or off-site establishment, reestablishment, or enhancement, depending on availability of mitigation credits.
- If applicable, project applicants shall obtain a USACE Section 404 Individual Permit and Central Valley RWQCB Section 401 water quality certification before any groundbreaking activity within 50 feet of waters or discharge of fill or dredge material into any water of the United States or state.
- The project applicant shall have a qualified biologist prepare a wetland mitigation plan to describe how the loss of aquatic functions for each project will be replaced. The mitigation plan will describe compensation ratios for acres filled, and mitigation sites, a monitoring protocol, annual performance standards and final success criteria for created or restored habitats, and corrective measures to be applied if performance standards are not met.
- Permittee-responsible mitigation habitat shall be monitored for a minimum of 5 years from completion of mitigation, or human intervention (including recontouring and grading), or until the success criteria identified in the approved mitigation plan have been met, whichever is longer.
- Water quality certification pursuant to Section 401 of the CWA, or waste discharge requirements (for waters of the state), will be required before issuance of the record of decision and before issuance of a Section 404 permit. Before construction in any areas containing aquatic features, the project applicant(s) shall obtain water quality certification for the project. Any measures required as part of the issuance of water quality certification and/or waste discharge requirements, shall be implemented. Project applicant(s) shall obtain a General Construction Stormwater Permit from the Central Valley RWQCB, prepare a stormwater pollution prevention plan (SWPPP), and implement best management practices (BMPs) to reduce water quality effects during construction.

Significance after Mitigation

If development occurs in the proposed SOIA under the City of Elk Grove’s jurisdiction that requires discretionary action, the City will be required to make General Plan consistency findings, including consistency with Policy CAQ-9 and CAQ-9 Action 1, which requires avoidance of wetlands, where feasible, and no net loss where it is infeasible to avoid adverse effects. In addition, successful implementation of Mitigation Measure 3.4-7 would reduce potentially significant impacts on waters of the United States and waters of the state because it would ensure no net loss of function of aquatic habitat, and would require applicants to develop and implement a BMP and water quality maintenance plan that conforms to applicable state and local regulations restricting surface

water runoff s to minimize adverse effects on water quality and wetland hydrology. With enforcement of the above mitigation measure, future development in the SOIA Area and off-site improvements would be designed to minimize potential impacts. The impact is **less than significant with mitigation**.

IMPACT **Conflicts with local policies and ordinances protecting biological resources.** *If there is development in the SOIA Area and associated off-site improvement areas in the future, it is possible that this could conflict with the City's tree ordinance and policies outlined in the Elk Grove General Plan that apply to special-status species, wildlife habitats, streamside habitats, and agricultural open space. This impact is considered potentially significant.*

3.4-8

The SOIA Area contains five valley oak trees that qualify as trees of local importance under Section 19.12.040 of the City code. Possible future off-site improvement areas may contain additional trees that qualify as trees of local importance. Elk Grove General Plan Policy CAQ-8, acknowledges that trees can function as important natural habitat features and thus should be retained to the extent possible. The large native oaks on-site, as well as other large, nonnative, ornamental species in the eastern portion of the SOIA Area provide potential nest sites for raptors, including Swainson's hawk. Converting land in the SOIA Area from agricultural to urban land uses, and construction of possible off-site improvements, could result in removal of trees protected under the City tree ordinance and/or General Plan policy. The City's tree ordinance and General Plan policies call for the preservation of large trees to the extent feasible; however, retaining trees on-site would still result in a loss of nesting habitat for Swainson's hawk and white-tailed kite because these trees would be surrounded by urban land uses following development and would no longer be suitable for nesting by these species.

While the SOIA Area does not contain any natural streams, the canal and some ditches function as streamside and wetland habitat for some native and endangered wildlife species (e.g., giant garter snake), and off-site improvement areas could contain natural streams and wetlands. Removal of the canal and ditches and removal of wetland or streamside habitat in off-site improvement areas could conflict with General Plan policies that call for the preservation of wetland and streamside habitats and habitat for special-status species (General Plan Policies CAQ-9, CAQ-11, and CAQ-17). In addition, General Plan Policy PTO-15 recognizes open space lands of all types as important resources, which should be preserved in the region for a variety of uses, including for wildlife habitat. Because the SOIA Area consists of agricultural open space that provides important habitat values for many species of wildlife, including the state-listed Swainson's hawk, loss of this agricultural land to urban uses, which could occur if there is development of the SOIA Area in the future, would conflict with this General Plan policy.

In sum, there is the potential for conflict with the City's tree ordinance and with General Plan policies through removal of large trees, aquatic habitat (canals and ditches, streamside habitat, and wetlands), and agricultural open space. This impact is considered **potentially significant**.

Mitigation Measures

Mitigation Measure 3.4-8a: Implement Mitigation Measures 3.4-2c, 3.4-4, 3.4-6, and 3.4-7

Mitigation Measure 3.4-8b: Avoid, Minimize, or Compensate for Loss of Protected Trees and Aquatic and Streamside Habitats

At the time of submittal of any application to annex territory within the SOIA Area, the City of Elk Grove shall require all discretionary projects to avoid tree removal and removal or fill of waterways that provide important habitat to special-status species, if technically feasible and appropriate, through incorporation of these features into project design and planning. Avoidance shall be deemed technically feasible and appropriate if the features may be preserved on-site while still obtaining the project purpose and objectives and if the preserved habitat features (i.e., trees and aquatic habitats) could reasonably be expected to continue to function as suitable habitat following project implementation.

All trees retained on-site shall be protected from construction-related impacts by placing exclusion fencing around the drip line of retained trees and maintaining said fencing through the duration of construction.

If it is not technically feasible to retain trees on the project site, trees protected under City ordinance or General Plan policy shall be replaced at a 1:1 ratio (1 new inch dbh of tree for each inch dbh lost), unless alternative mitigation is approved by the City pursuant to Section 19.12.160 of the City code. Replacement trees may be planted on-site to areas that would not be developed or to nearby offsite open space areas. Alternatively, if approved by the City, trees to be removed may be transplanted to other open space areas in proximity to the SOIA Area. Payment of an in-lieu fee to a tree preservation fund may also be allowed to compensate for tree loss.

Significance after Mitigation

Successful implementation of mitigation measures 3.4-2c, 3.4-4, 3.4-6, 3.4-7, and 3.4-8 would reduce potentially significant impacts related to conflicts with City ordinances and policies protecting biological resources because it would require project applicants to avoid protected trees and aquatic habitats if technically feasible and would require compensation for loss of function of aquatic habitat and loss of agricultural habitat that provides habitat values for special-status species. With enforcement of the above mitigation measure, future development in the SOIA Area and off-site improvements would be designed to minimize potential impacts. The impact is **less than significant with mitigation**.

IMPACT 3.4-9 Conflicts with the provisions of an adopted habitat conservation plan. *If there is development in the SOIA Area and associated off-site improvement areas in the future, it is possible that this development could conflict with the provisions of the SSHCP, if it is adopted prior to annexation and development of the SOIA Area.*

The proposed SSHCP, described previously in Section 3.4.2 “Regulatory Framework,” includes the SOIA Area in its currently proposed plan area; however, the City of Elk Gove is not a participant in the proposed SSHCP. It is possible that the SSHCP could be completed and adopted before the SOIA Area is annexed into the City of Elk Grove. The current draft plan area map for the SSHCP identifies 67,618 acres of Urban Development Area

(UDA), which corresponds with the County's USB, and 33,499 acres of planned impact within that UDA. The SOIA Area is located outside of the UDA and outside of the USB and, as such, would not have been included in the planned impact calculation. However, the plan identifies a need for 33,796 acres of preserve area to offset the planned impacts that would occur within the UDA. There are 250,038 acres of plan area outside of the UDA within which preservation land would be sought from willing sellers. Therefore, possible future development of the 1,156-acre SOIA Area is unlikely to interfere with the ability to successfully implement the SSHCP preservation goals. The SSHCP, as currently envisioned, would not categorize specific areas for preservation lands and would rely on purchasing suitable land from willing sellers anywhere within the undeveloped portions of the plan area.

Because mitigation measures for particular species have not yet been established under the SSHCP, it is not possible to design mitigation for potentially affected species in consistency with the SSHCP. If the SSHCP has been finalized and approved before commencement of mitigation pursuant to the MMP developed for the project, USACE, the Central Valley RWQCB, and the City may consider (if applicable and feasible) modifications to the MMP to be consistent with the SSHCP. In addition, the City would be required to analyze consistency of future proposed projects in the SOIA Area with the provisions of the SSHCP once adopted.

Project consistency with the SSHCP is not required under CEQA because the SSHCP has not been adopted and is not scheduled for adoption until summer 2017. The exact scope and content of the SSHCP is not known at this time. Therefore, further evaluation of project consistency with the SSHCP would be too speculative for meaningful analysis and an impact conclusion cannot be made at this time.

IMPACTS ASSOCIATED ONLY WITH POSSIBLE FUTURE OFF-SITE IMPROVEMENTS

IMPACT 3.4-10 Riparian habitat and sensitive natural communities. *Possible future off-site improvements could result in loss of riparian habitat or other sensitive natural communities if they are present in off-site improvement areas and would be removed by project development. This impact is considered **potentially significant**.*

No riparian communities or other sensitive natural communities are present in the SOIA Area; however, since the location of possible future off-site improvement areas is unknown, annexation and eventual development of the SOIA Area could result in direct removal of sensitive natural communities or riparian habitats if they are present in future off-site improvement areas required to support eventual development of the SOIA Area. Therefore, project implementation could have a substantial adverse effect on riparian habitat and other sensitive natural communities identified in local or regional plans, policies, regulations, or by CDFW or USFWS. This impact would be **potentially significant**.

Mitigation Measures

Mitigation Measure 3.4-10: Avoid, Minimize, or Compensate for Loss of Riparian Habitat and Sensitive Natural Communities

At the time of submittal of any application to annex territory within the SOIA Area, the City of Elk Grove shall demonstrate that it will require all discretionary projects that require off-site improvements to retain a qualified botanist to identify, map, and quantify riparian habitat and other sensitive natural communities in proposed off-site improvement areas before final project design is completed. Off-site improvement projects shall be planned and designed to avoid loss or substantial degradation of riparian habitat and

other sensitive natural communities, if technically feasible and appropriate. Avoidance shall be deemed technically feasible and appropriate if the features may be preserved on-site while still obtaining the project purpose and objectives and if the preserved habitat/community could reasonably be expected to provide comparable habitat functions following project implementation. The avoidance measures shall include relocating off-site improvement components, as necessary and where practicable alternatives are available, to prevent direct loss of riparian habitats and other sensitive natural communities.

If riparian habitat or other sensitive natural communities are present in off-site improvement areas and cannot feasibly be avoided, the project applicant shall consult with the City of Elk Grove and CDFW to determine appropriate mitigation for removal of riparian habitat and sensitive natural communities resulting from project implementation. Mitigation measures may include restoration of affected habitat on-site, habitat restoration offsite, or preservation and enhancement of existing habitat/natural community offsite. The compensation habitat shall be similar in composition and structure to the habitat/natural community to be removed and shall be at ratios adequate to offset the loss of habitat functions in the affected off-site improvement area.

If required, the project applicants shall obtain a Section 1602 streambed alteration agreement from CDFW and comply with all conditions of the agreement.

Significance after Mitigation

Successful implementation of mitigation measures 3.4-10 would reduce potentially significant impacts related to riparian habitat and sensitive natural communities because it would require project applicants to avoid these habitats if technically feasible and would require compensation for loss of riparian habitat and sensitive natural communities. With enforcement of the above mitigation measure, future development in off-site improvement areas would be designed to minimize potential impacts. The impact is **less than significant with mitigation**.

IMPACT 3.4-11 **Additional special-status wildlife.** *Possible future off-site improvements could result in the loss and degradation of habitat for special-status wildlife species that do not have potential to occur in the SOIA Area. These species include the federally listed species vernal pool fairy shrimp, vernal pool tadpole shrimp, and valley elderberry longhorn beetle, as well as California species of special concern such as western red bat and American badger. This impact is considered **potentially significant**.*

Since the location of possible future off-site improvement areas is unknown, annexation and eventual development of the SOIA Area could result in direct removal or degradation of habitat types not found in the SOIA Area, including vernal pools, seasonal wetlands, elderberry shrubs, and riparian habitats. Loss and degradation of these habitat types could result in direct or indirect injury, mortality, displacement or, reduced reproductive success of special-status wildlife species associated with these habitats if they are present in future off-site improvement areas required to support eventual development of the SOIA Area. This impact would be **potentially significant**.

Mitigation Measures

Mitigation Measure 3.4-11a: Implement Mitigation Measures 3.4-5, 3.4-6, 3.4-7, 3.4-8b, and 3.4-9

Mitigation Measure 3.4-11b: Identify Potential Species Habitat, Implement Avoidance Measures, Secure Incidental Take Authorization for Federally Listed Species and Implement all Conditions of the Take Authorization, Compensate for Loss of Habitat

At the time of submittal of any application to annex territory within the SOIA Area, the City of Elk Grove shall demonstrate that it will require all discretionary projects to conduct a biological review and analysis for off-site improvement projects to identify potential special-status species habitat. Off-site improvement projects shall be planned and designed to avoid adverse effects to special-status wildlife species, if technically feasible and appropriate. Avoidance shall be deemed technically feasible and appropriate if the species and its habitat may be preserved on-site while still obtaining the project purpose and objectives and if the preserved species habitat could reasonably be expected to continue to function as suitable habitat for the affected species following project implementation.

If, after examining all feasible means to avoid impacts to potential special-status species habitat through project site planning and design, adverse effects cannot be avoided, then impacts shall be mitigated in accordance with guidance from the appropriate state or federal agency charged with the protection of the subject species, including surveys conducted according to applicable standards and protocols, where necessary, implementation of impact minimization measures based on accepted standards and guidelines and best available science, and compensatory mitigation for unavoidable loss of special-status species habitats through preservation and enhancement of existing occupied habitat, relocating individuals or populations to other suitable habitat, and/or restoring or creating suitable replacement habitat in sufficient quantities to offset the loss of occupied habitat and individuals. Purchase of mitigation credits at an agency-approved mitigation bank (i.e., approved by the agency with jurisdiction over the affected species or habitat) in Sacramento County, will also be acceptable for compensatory mitigation.

If the project would result in take of state or federally listed species, then the City will require project proponent/s to obtain take authorization from the U.S. Fish & Wildlife Service or the California Department of Fish and Wildlife, as appropriate, depending on species status, and comply with all conditions of the take authorization. The City will require project applicants to develop a mitigation and monitoring plan to compensate for the loss of special-status species and their habitats. The mitigation and monitoring plan will describe in detail how loss of special-status species and their habitats shall be avoided or offset, including details on restoration and creation of habitat, compensation for the temporal loss of habitat, success criteria ensuring habitat function goals and objectives are met, performance standards to ensure success, and remedial actions if performance standards are not met. The plan will include detailed information on the habitats present within the preservation and mitigation areas, the long-term management and monitoring of these habitats, legal protection for the preservation and mitigation areas (e.g., conservation easement, declaration of restrictions), and funding mechanism information (e.g., endowment).

Significance after Mitigation

If off-site improvements occur under the City of Elk Grove's jurisdiction that require discretionary action, the City will be required to make General Plan consistency findings, including consistency with Policy CAQ-11 and CAQ-11 Action 1, which suggest that the City will assess special-status wildlife species occurrences and seek to preserve or mitigate impacts to such species and their habitats.

In addition, successful implementation of Mitigation Measures 3.4-5, 3.4-6, 3.4-7, 3.4-8b, and 3.4-10b would reduce impacts on special-status wildlife species because it would ensure that loss and degradation of habitat and take of individuals is avoided or minimized, or that compensatory mitigation is provided. With enforcement of the above mitigation measure, future development in the SOIA Area and off-site improvements would be designed to minimize potential impacts. The impact is **less than significant with mitigation.**

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