



City of Elk Grove Proposed Sphere of Influence Amendment Draft Environmental Impact Report (LAFC # 09-10)

SCH No. 2010092076



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DRAFT
Environmental Impact Report
City of Elk Grove
Proposed Sphere of Influence Amendment (LAFC # 09-10)
City of Elk Grove, Sacramento County, California
State Clearinghouse No. 2010092076

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ACRONYMS AND ABBREVIATIONS

°F	Fahrenheit
2020 Master Plan	Sacramento Wastewater Treatment Plant Master Plan
AB 32	Global Warming Solutions Act
AB 5	Assembly Bill 5
AB 70	Assembly Bill 70
AB	Assembly Bill
Act	Cortese-Knox-Hertzberg Local Government Reorganization Act
ADWF	Average Dry Weather Flows
afy	Acre-feet per year
APCD	Air Pollution Control District
AQMD	Air Quality Management District
ARA	Aggregate Resource Areas
ARB	Air Resource Board
ASTM	American Society for Testing Materials
Authority	Sacramento Central Groundwater Authority
AWWF	Average Wet Weather Flows
BAC	Bollard Acoustical Consultants, Inc.
BACT	Best Available Control Technology
Basin Plan	Water Quality Control Plan
BAT	Best available technology
BCT	Best conventional pollution technology
BMP	Best management practice
BNSF	Burlington Northern Santa Fe
CAFE	Corporate Average Fuel Economy

Acronyms and Abbreviations

Cal EPA	California Environmental Protection Agency
Cal OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	Air Resources Board
CCOMWP	City-County Office of Metropolitan Water Planning
CCP	Cities for Climate Protection
CCR	Code of Regulations
CCSD	Cosumnes Community Service District
CCTS	Central California Taxonomic System
CDFG	California Department of Fish and Game
CEC	California Energy Commission
Central Basin	Central Sacramento County Groundwater Basin
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGP	Construction General Permit
CHP	California Highway Patrol
City	City of Elk Grove
CKH	Cortese-Knox-Hertzberg Local Government Reorganization Act
CLUP	Comprehensive Land Use Plan
CMP	Congestion Management Plan
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	Carbon monoxide
CO ₂	Carbon dioxide

CPUC	California Public Utilities Commission
CR	California Register of Historical Resources
CSD-1	County Sanitation District 1
CTR	California Toxics Rule
CVFPB	Central Valley Flood Protection Board
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act
CWA	Clean Water Act
CWHR	California Wildlife Habitat Relationships
dB	Decibel
dBA	A-weighted decibels
DERA	Department of Environmental Review and Assessment
DHS	Department of Health Services
DOT	Department of Transportations
DPM	Diesel particulate matter
DPR	Department of Pesticide Regulation
Draft EIR	Draft Environmental Impact Report
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EDR	Environmental Data Resources
EGCSD	Elk Grove Community Services District
EGPD	Elk Grove Police Department
EGUSD	Elk Grove Unified School District
EGWS	Elk Grove Water Service
EIR	Environmental Impact Report

Acronyms and Abbreviations

EMD	Environmental Management Department
EMF	Electric and magnetic field
EMT	Emergency medical technician
EOC	Emergency Operations Center
EPA	Environmental Protection Agency
Farmland	Farmland of Statewide Importance
FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FICON	Federal Interagency Commission on Noise
FMMP	Farmland Mapping and Monitoring Program
FY	Fiscal year
GWh/y	Gigawatt-hours per year
HCMP	Habitat Conservation Management Plan
HOV	High occupancy vehicle
HVAC	Heating, ventilation, and air conditioning
I-5	Interstate 5
ICLEI	International Council for Local Environmental Initiatives
IRF	Intermediate Regional Flood
ISO	Insurance Services Office
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
IWMB	Integrated Waste Management Board
JPA	Joint Powers Agreement
Kv	Kilovolt
LAFCo	Local Agency Formation Commission

Ldn	Day-Night Average Level
LEA	Local Enforcement Agency
L _{eq}	Equivalent sound level
LEV	Low-emission vehicle
LNG	Liquid natural gas
LOS	Level of service
LRSP	Laguna Ridge Specific Plan
LUST	Leaking underground storage tank
LUTIS	Leaking Underground Storage Tank Information System
MBA	Michael Brandman Associates
MBTA	Migratory Bird Treaty Act
MCE	Maximum Credible Earthquake Magnitude
mgd	million gallons a day
MMI	Modified Mercalli Intensity
MMTCO ₂ e	Million metric tons of carbon dioxide equivalent
MPO	Metropolitan Planning Organization
MSR	Municipal Service Review
MTIP	Metropolitan Transportation Improvement Program
MTP	Metropolitan Transportation Plan
MW	megawatts
NCIC	North Central Information Center
NEHRP	National Earthquake Hazards Reduction Program
NEHRPA	National Earthquake Hazards Reduction Program Act
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act of 1966

Acronyms and Abbreviations

NOC	Notice of Completion
NOI	Notice of Intent
NOP	Notice of Preparation
NO _x	Nitrogen
NPDES	National Pollutant Discharge Elimination System
NPS	Non-point source
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
OEHHA	Office of Environmental Health Hazard Assessment
OES	Office of Emergency Services
OHWD	Omoichumne-Hartnell Water District
OPSC	Office of Public School Construction
OSHA	Occupational Safety and Health Administration
PCC	Portland cement concrete
PG&E	Pacific Gas and Electricity
PM	Particulate matter
PM ₁₀	Particulate matter smaller than 10 microns in diameter
PM _{2.5}	Particulate matter smaller than 2.5 microns in diameter
ppm	Parts per million
RCRA	Resource Conservation and Recovery Act
Registry	California Climate Action Registry
ROG	Reactive organic gases
RTAC	Regional Targets Advisory Committee
RWQCB	Regional Water Quality Control Board

SAB	State Allocation Board
SACOG	Sacramento Area Council of Governments
SAFCA	Sacramento Area Flood Control Agency
SASD	Sacramento Area Sewer District
SB 5	Senate Bill 5
SB 50	Senate Bill No. 50
SB	Senate Bill
Scoping Plan	Climate Change Scoping Plan
SCSD	Sacramento County Sheriff's Department
SCWA	Sacramento County Water Agency
SDWA	Safe Drinking Water Act
SEL	Sound Exposure Level
SFNA	Sacramento Federal Ozone Nonattainment Area
SIP	State Implementation Plan
SM	Surface Mining Combining Land Use Zone
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMARA	Surface Mining and Reclamation Act of 1975
SMUD	Sacramento Municipal Utility District
SOI	Sphere of Influence
SOIA	Sphere of Influence Amendment
SO _x	Sulfur dioxides
SPCA	Society for Prevention of Cruelty to Animals
SPL	Sacramento Public Library Authority
SR-99	State Route 99
SRB	State Reclamation Board

Acronyms and Abbreviations

SRCS	Sacramento Regional County Sanitation District
SRCS	Sacramento Regional County Sanitation District
SRPD	State Regulatory Programs Division
SRWTP	Sacramento Regional Wastewater Treatment Plant
SSHCP	South Sacramento Habitat Conservation Plan
SSJDD	Sacramento-San Joaquin Drainage District
STC	Sound Transmission Class
SVAB	Sacramento Valley Air Basin
SWA	Solid Waste Authority
SWPPP	Stormwater Pollution Protection Plan
SWRCB	State Water Resources Control Board
TAC	Technical Advisory Committee
TAZ	Traffic analysis zone
TCR	Transportation Concept Report
TEA-21	Transportation Equity Act for the 21st Century
therms/y	Therms per year
TMDL	Total Maximum Daily Loading
TOD	Transit Oriented Development
tpd	Tons per day
U.S.	United States
UBC	Uniform Building Code
UFC	Uniform Fire Code
UPA	Urban Policy Area
UPRR	Union Pacific Railroad
USACE	United States Army Corps of Engineers

USB	Urban Services Boundary
USFWS	U.S. Fish and Wildlife Service
UWMP	Urban Water Management Plan
VFR	Visual flight rated
VMT	Vehicle miles traveled
WDR	Waste Discharge Requirement
WFA	Water Forum Agreement

EXECUTIVE SUMMARY

Purpose

This Draft Environmental Impact Report (Draft EIR) is prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts associated with the implementation of the Proposed Elk Grove Sphere of Influence Amendment (State Clearinghouse No. 2010092076). This document is prepared in conformance with CEQA (California Public Resources Code, Section 21000, et seq.) and the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000, et seq.).

The purpose of this Draft EIR is to inform decision makers, representatives of affected and responsible agencies, the public, and other interested parties of the potential environmental effects that may result from implementation of the proposed project. This Draft EIR describes potential impacts relating to a wide variety of environmental issues and methods by which these impacts can be mitigated or avoided.

Project Summary

Project Setting

The proposed project site is located in the unincorporated area of Sacramento County, California. The project area is generally located south-southwest of the existing City of Elk Grove boundaries close to the community of Franklin-Laguna. The area subject to the City of Elk Grove's application is described as the areas south of Bilby Road, Kammerer Road, and Grant Line Road, extending south to Eschinger Road and Cosumnes River; east towards Cosumnes River and just past Freeman Road; and west towards Interstate 5 (I-5) and the Union Pacific Railroad tracks. The proposed Sphere of Influence (SOI) boundary does not reach the Cosumnes River east of State Route 99 (SR-99) but follows the 100-year Federal Emergency Management Agency (FEMA) floodplain. The proposed project is located on the Elk Grove, California, United States Geological Survey 7.5-minute topographic quadrangle map, Township 6 North, Range 5 East, Section 13 (Latitude 38°21'37" North; Longitude 121°23'02" West).

Project Description

The proposed project consists of a request initiated by the Elk Grove City Council (Resolution #2008-54) to Sacramento Local Agency Formation Commission (LAFCo) to amend the City of Elk Grove's SOI. The current SOI is coterminous with the City boundary. The application to amend the SOI includes 7,869 acres generally described as the areas south of Bilby Road/Kammerer Road and Grant Line Road. Current City of Elk Grove land use projections indicate that future growth may require

additional lands outside of the current city boundary.¹ The City's available residential, industrial, and commercial land inventory is in the process of building out and may be unable to accommodate all anticipated urban growth within the city limits. As a result, the City needs to establish a direction to accommodate its anticipated future growth by designating an area for long-term planning. For purposes of analyzing environmental impacts, LAFCo has developed land use assumptions in the following sections that would allow LAFCo to understand environmental effects that may result from future anticipated growth during future annexations. There are no specific land use entitlements proposed at this time in conjunction with the proposed SOI Amendment (SOIA). California Government Code Section 65300 provides that a city may comprehensively plan for lands outside of its jurisdiction without the area being within an approved SOI. However, while the Elk Grove City Council has expressed its desire to have the proposed SOI Area master planned, the Council has explicitly stated that no comprehensive planning of the area will occur until LAFCo approves it.

The current City boundaries and coterminous SOI encompass 26,974 acres. The proposed SOIA would expand the existing SOI, not city limits, by 7,869 acres, or by 29 percent, to a total SOI of 34,843 acres. However, anticipated future growth and expansion through the annexation process would be limited to areas outside of the FEMA 100-year floodplain. This would limit future growth to 6,882 acres of the proposed 7,869-acre SOI expansion, leaving 13 percent of the area for non-urban uses, such as open space.

Project Objectives

The objectives of the proposed project are to:

- To amend the Sphere of Influence (SOI) boundary beyond the existing Elk Grove City limits to accommodate orderly and sustainable growth consistent with the City's General Plan.
- To implement the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 consistent with public service conditions present or reasonably foreseeable in the proposed SOIA Area.
- To establish a logical boundary within which future and timely annexation requests by the City of Elk Grove may be considered.
- To establish an SOI for the City of Elk Grove that will facilitate the protection of important environmental, cultural, and agricultural resources.

¹ City of Elk Grove, Sphere of Influence Amendment Application, 2010.

Summary of Environmental Impacts and Mitigation Measures

Table ES-1 summarizes the impacts, mitigation measures, and resulting level of significance after mitigation for the relevant environmental issue areas evaluated for the proposed project. The table is intended to provide an overview; narrative discussions for the issue areas are included in the corresponding section of this EIR. Table ES-1 is included in the EIR as required by CEQA Guidelines Section 15123(b)(1).

Significant Unavoidable Adverse Impacts

The proposed project would result in the following significant unavoidable impacts:

- **Visual Character:** Sacramento LAFCo acknowledges that expansion of the SOI boundary would result in future urbanization (at an undetermined time) of the project area. In addition, the City of Elk Grove estimates that 6,327 acres would be required outside the existing city boundaries to accommodate future growth. Therefore, future urbanization of agricultural lands would significantly alter the existing visual character of the proposed SOIA Area and add light and glare.
- **Important Farmland:** Sacramento LAFCo acknowledges that expansion of the SOI boundary would result in future urbanization (at an undetermined time) of the project area. More than 90 percent (7,360 acres) of the SOIA Area is designated as Important Farmland. The City of Elk Grove estimates that 6,327 acres would be required outside the existing city boundaries (within the proposed SOIA Area) to accommodate future growth. Therefore, urbanization of agricultural lands would result in permanent loss of prime agricultural lands.
- **Onsite Roadway Noise:** Should the proposed SOIA be fully developed in the future, it would contribute to onsite roadway noise levels that exceed acceptable noise exposure standards relative to the existing conditions. No feasible mitigation is available to mitigate this impact. Therefore, the residual significance of this impact is significant and unavoidable.
- **Traffic Noise:** Sacramento LAFCo acknowledges that expansion of the SOI boundary would result in future urbanization (at an undetermined time) of the project area. Urbanization of the SOIA Area would result in an increase in traffic noise from 0 to 13 dB L_{dn} relative to existing conditions. No feasible mitigation measure is available; therefore, impacts would remain significant and unavoidable.
- **Traffic Levels of Service:** Should the proposed SOIA Area be fully developed in the future, it would generate vehicle trips that would contribute to unacceptable levels of service (LOS) on various roadway and freeway segments under Existing Plus Project conditions. Mitigation is proposed that would require the applicant to contribute fees to fund necessary improvements;

however, there is uncertainty regarding actual implementation of the improvements. As such, the residual significance of this impact is significant and unavoidable.

- **Cumulative Traffic Levels of Service:** Should the proposed SOIA Area be fully developed in the future, it would generate vehicle trips that would contribute to unacceptable LOS on various roadway and freeway segments under Cumulative conditions. Mitigation is proposed that would require the applicant to contribute fees to fund necessary improvements; however, there is uncertainty regarding actual implementation of the improvements. As such, the residual significance of this impact is significant and unavoidable.

Summary of Project Alternatives

Below is a summary of the alternatives to the proposed project considered in Section 5, Alternatives to the Proposed Project.

No Project Alternative

Under the No Project Alternative, the project site would remain in its existing condition and no SOIA would occur. The SOI boundaries would be limited to the existing City of Elk Grove city limits. The SOIA Area is anticipated to continue to develop under the existing Sacramento County General Plan.

Alternate SOI Boundary Alternative

The Alternate SOI Boundary Alternative would entail the expansion of the City of Elk Grove's SOI to the northeast of the existing city limits and would encompass an area that is larger than the currently proposed SOI Area. This Alternate SOI Boundary modification is aimed to encompass an unincorporated area of Sacramento County that would allow the City meet its objectives of future growth and expansion but focus on areas adjacent to the City that are currently processing specific plans and development applications. As such, the alternate SOI boundary would include the North Vineyards Station Specific Plan (1,590 acres); the Vineyard Springs Comprehensive Plan (2,650 acres); and an area west of these specific plans that includes 6,500 acres bounded by Eagle Nest Road to the east, Elder Creek Road to the north, Calvine Road to the south, and Grant Line Road to the southeast. Similar to the proposed SOIA Area, the land use designations for the 6,500 acres is General Agriculture-20, most of the land (about 90 percent) is grazing land, according to the Farmland Mapping and Monitoring Program (FMMP).

Enhanced Regional Alternative

The Enhanced Regional Alternative would entail the expansion of the City of Elk Grove's SOI over 2,700 acres immediately to the south of the current City limits, generally one-half mile northerly of Eschinger Road, in the area between SR 99 and Franklin Boulevard. This Enhanced Regional Alternative would be located within portions of the area identified by the Sacramento Area Council of Governments (SACOG) Blueprint Preferred Scenario for Elk Grove as a Medium Density Residential place type, and as Vacant Urban Designated Lands (2050). This Alternative aims to encompass an

unincorporated area of the County that would allow the City to meet many of its objectives for future growth and expansion but focus on siting that growth in areas that meet regional as well as City objectives as set forth in regional transportation and air quality planning documents. By encouraging more compact urban development, the Alternative would reduce potential environmental impacts to air quality and greenhouse gas emissions, and the loss of agricultural and biological resources as well.

Areas of Controversy

Pursuant to CEQA Guidelines Section 15123(b), a summary section must address areas of controversy known to the lead agency, including issues raised by agencies and the public, and it must also address issues to be resolved, including the choice among alternatives and whether or how to mitigate the significant effects.

A Notice of Preparation (NOP) for the project was issued on September 27, 2010. The NOP describing the original concept for the project and issues to be addressed in the EIR was distributed to the State Clearinghouse, responsible agencies, and other interested parties for a 30-day public review period, extending from September 27, 2010 through October 26, 2010. The NOP identified the potential for significant impacts on the environment related to the following topical areas:

- Aesthetics
- Agricultural Resources
- Air Quality
- Greenhouse Gas Emissions
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population, Employment, and Housing
- Public Services and Recreation
- Utilities
- Transportation

Disagreement Among Experts

This Draft EIR contains substantial evidence to support all the conclusions presented herein. It is possible that there will be disagreement among various parties regarding these conclusions, although Sacramento LAFCo is not aware of any disputed conclusions at the time of this writing. Both the CEQA Guidelines and case law clearly provide the standards for treating disagreement among experts. Where evidence and opinions conflict on an issue concerning the environment, and the lead agency knows of these controversies in advance, the EIR must acknowledge the controversies, summarize the conflicting opinions of the experts, and include sufficient information to allow the public and decision makers to make an informed judgment about the environmental consequences of the proposed project.

Substantial Evidence

As defined by CEQA Section 21080(e) and CEQA Guidelines Section 156044, substantial evidence includes fact, a reasonable assumption predicated upon fact, or expert opinion supported by fact. Substantial evidence is not argument, speculation, unsubstantiated opinion or narrative, evidence that is clearly inaccurate or erroneous, or evidence of social or economic impacts that do not contribute to, or are not caused by, physical impacts on the environment. Evidence of economic and social impacts that do not contribute to or are not caused by physical changes in the environment is not substantial evidence that the project may have a significant effect on the environment

Potentially Controversial Issues

Below is a list of potentially controversial issues that may be raised during the public review and hearing process of this Draft EIR:

- Land Use
- Transportation
- Hydrology and Flooding
- Air Quality
- Agricultural Resources
- Biological Resources
- Public Services/Utility Systems
- Greenhouse Gases

It is also possible that evidence will be presented during the 45-day, statutory Draft EIR public review period that may create disagreement. Decision makers would consider this evidence during the public hearing process.

In rendering a decision on a project where there is disagreement among experts, the decision makers are not obligated to select the most environmentally preferable viewpoint. Decision makers are vested with the ability to choose whatever viewpoint is preferable and need not resolve a dispute among experts. In their proceedings, decision makers must consider comments received concerning the adequacy of the Draft EIR and address any objections raised in these comments. However, decision makers are not obligated to follow any directives, recommendations, or suggestions presented in comments on the Draft EIR, and can certify the Final EIR without needing to resolve disagreements among experts.

Public Review of the Draft EIR

The Draft EIR will be available for public review for the statutory 45-day review period beginning September 19, 2011. The document will be available for public review at the following location:

Sacramento Local Agency
Formation Commission
1112 I Street, Suite 100
Sacramento, California 95814

Executive Summary Matrix

Table ES-1 below summarizes the impacts, mitigation measures, and resulting level of significance after mitigation for the relevant environmental issue areas evaluated for the proposed project. The table is intended to provide an overview; narrative discussions for the issue areas are included in the corresponding section of this EIR. Table ES-1 is included in the EIR as required by CEQA Guidelines Section 15123(b)(1).

Table ES-1: Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 3.1 – Aesthetics		
Impact AES-1: The proposed project would have a substantial adverse effect on a scenic vista.	No mitigation is available.	Significant and unavoidable impact.
Impact AES-2: The project would not block views of scenic resources, including but not limited to trees, rock outcroppings, and historic buildings, within a state scenic highway.	No mitigation is necessary.	Less than significant impact.
Impact AES-3: The proposed project would degrade the visual character of the project site and its surroundings.	No mitigation is available.	Significant and unavoidable impact.
Impact AES-4: Implementation of the proposed project would result in the introduction of substantial new sources of light and glare.	<p>MM AES-4: Prior to submitting any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove will develop a comprehensive light and glare reduction plan for the SOIA Area, or demonstrate to LAFCo how the application of then-existing city policies and ordinances to the SOIA would achieve the following goals:</p> <ul style="list-style-type: none"> • Meet the standard of allowing no offsite trespass of direct lighting and meeting dark skies criteria, unless demonstrated public safety needs could not be met while complying with these standards. • The light and glare reduction plans should establish standards for outdoor urban lighting within the SOIA that would reduce high-intensity nighttime lighting and glare, including but not limited to requirements for directional shielding for street lighting, parking lot lighting, and other substantial light sources, and automatic shutoffs or motion sensors or lighting features to further reduce excess nighttime light. • The light and glare reduction plans should require the use shielded or screened public lighting fixtures to prevent the light from shining off the surface intended to be illuminated. 	Significant and unavoidable impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 3.2 – Agricultural Resources		
Impact AG-1: The project would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.	MM AG-1: At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove will identify lands to be set aside in permanent conservation easements at a ratio of one open space acre converted to urban land uses to one-half open space acre preserved and at a ratio of one agriculture acre converted to urban land uses to one-half agriculture acre preserved. Stacking of mitigation values will be permitted in order to serve multiple overlapping conservation purposes. The total acres of land conserved will be based on the total onsite open space and agriculture acreage converted to urban uses. Conserved open space and agriculture areas may include areas on the project site, lands secured for permanent habitat enhancement (e.g., giant garter snake, Swainson’s hawk habitat), or additional land identified by the City.	Significant and unavoidable impact.
Impact AG-2: The project would not conflict with existing zoning for agricultural use, or a Williamson Act contract.	Implement Mitigation Measure AG-1.	Significant and unavoidable impact.
Impact AG-3: The project would not involve other changes in the existing environment, which due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.	MM AG-3: At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA), the City of Elk Grove shall prepare an agricultural land use compatibility plan for the SOIA Area to the satisfaction of LAFCo. The plan shall include implementation of the City’s Right to Farm Ordinance, site design, screening, fencing, landscaping, setbacks, and buffers, as well as procedures for addressing complaints from future SOIA Area residents. Performance standards shall also be included, such as the satisfactory resolution of all complaints within 30 days from the receipt of the complaint.	Less than significant impact.
Section 3.3 – Air Quality/Greenhouse Gas Emissions		
Impact AIR-1: The project would not conflict with or obstruct implementation of the applicable air quality plan.	MM AIR-1a: The goal of this mitigation measure is to avoid air quality impacts by ensuring that the Elk Grove Sphere of Influence Amendment (SOIA) Area meets or exceeds the air pollution control requirements in	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>the federally mandated State Implementation Plan for the Sacramento Ozone Non-attainment Area (SIP), which consists of all or parts of Yolo, Solano, El Dorado, Placer, Sutter, and Sacramento counties, including the City of Elk Grove and the SOIA Area.</p> <p>At the time of submittal of any application to annex territory within the SOIA Area, the City of Elk Grove will prepare an Air Quality Mitigation Plan.</p> <ul style="list-style-type: none"> a. The Plan must reduce the SOIA Area’s operational ozone precursor emissions by 35 percent when compared with the potential emissions that could occur in the SOIA in the absence of the policies and measures included in the AQMP. b. The City of Elk Grove will coordinate the development of the Air Quality Mitigation Plan with the SMAQMD and SACOG, and will use modeling tools approved by those agencies to gauge the effectiveness of the measures. <p>OR</p> <p>MM AIR-1b: Alternative air quality mitigation): The AQMP required under Mitigation Measure AIR-1 will be required to demonstrate a 15-percent reduction in ozone precursor emissions if the following conditions are met:</p> <ul style="list-style-type: none"> a. The application for annexation of the SOIA Area or any portion thereof occurs after the June 15, 2019 SIP attainment deadline, and the SMAQMD confirms the ozone standards have been achieved. b. The City of Elk Grove demonstrates that the development proposal is consistent with the new SIP or attainment plan and the SMAQMD concurs with the analysis. If the demonstration uses modeling tools, the tools must be approved by SMAQMD and SACOG. 	
<p>Impact AIR-2: The project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.</p>	<p>MM AIR-2: At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall demonstrate that the SMAQMD’s most current</p>	<p>Less than significant impact.</p>

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	guidance on the screening and assessment of CO, PM ₁₀ , and PM _{2.5} hotspots will be implemented for all development proposals within the SOIA Area. In addition, the City of Elk Grove shall demonstrate that sufficient mitigation shall be required of all identified potentially significant CO, PM ₁₀ , and PM _{2.5} hotspots to reduce the impact to less than significant.	
Impact AIR-3: The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).	Implement Mitigation Measure AIR-1a or AIR-1b.	Less than significant impact.
Impact AIR-4: The project would not expose sensitive receptors to substantial pollutant concentrations.	MM AIR-4: At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall review existing sources of toxic air contaminants in and around the project site, including (but not limited to): State Route 99, rail lines, California Air Resources Board or Sacramento Metropolitan Air Quality Management District-permitted point-sources, warehouse operations and similar sources of heavy-duty truck trips. The City will adopt appropriate distance buffers to be applied between sources of toxic air contaminants and sensitive receptor land uses. Future development proposals that would result in the location of sensitive land uses closer to sources of toxic air contaminants than the adopted buffer distances shall require a detailed Health Risk Assessment to determine if significant impacts would occur, and include mitigation measures if necessary to reduce impacts to less than significant levels.	Less than significant impact.
Impact AIR-5: The project would not create objectionable odors affecting a substantial number of people:	MM AIR-5: At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall review existing sources of odor in and around the project site, including (but not limited to) any land use referenced in Sacramento Metropolitan Air Quality Management District CEQA Guidance document as an odor-generating land use. The City will adopt and apply appropriate distance buffers between existing sources of odor and receptor land uses in the SOIA Area.	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 3.4 – Biological Resources		
Impact BIO-1: The project would not have a substantial adverse effect, either directly or through habitat modifications, on special-status wildlife species.	<p>MM BIO-1a: At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove will demonstrate compliance with the following measures to LAFCo:</p> <ul style="list-style-type: none"> A. A reconnaissance-level biological survey of the SOIA Area shall be performed by a professional biologist approved by the lead agency to identify habitats and individuals of special-status species defined in this EIR. This will permit the lead agency to track impacts to special-status species on a regional basis rather than on project-by-project basis, when feasible. B. Avoidance of all special-status species or their habitats shall be attempted during project design. If avoidance is infeasible, mitigation of special-status species shall occur pursuant to measure C, below. C. The lead agency shall require the preparation and implementation of a Habitat Conservation Management Plan (HCMP) for all affected species and habitats. The HCMP shall be developed in consultation with CDFG and USFWS for listed species under FESA and CESA. D. The HCMP shall incorporate mitigation guidelines of these agencies for listed species. For non-listed but sensitive species as defined by this EIR, the HCMP should include provisions such as the following: <ul style="list-style-type: none"> – Require clustering of urban development to retain non-disturbed open space areas. – Require comprehensive site development standards to minimize removal of existing vegetation and to require installation and long-term maintenance of landscaping in setback and buffer areas. Landscaping in buffer areas adjacent of preserved habitat areas should be of native plant materials, and non-irrigated. – Minimize impacts to movement corridors to ensure movement of wildlife. 	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	<ul style="list-style-type: none"> – Provide for the integrity and continuity of wildlife and plant habitat. - Support the acquisition, development, maintenance, and restoration of habitat lands for wildlife and plant enhancement. <p>MM BIO-1b: To mitigate impacts on Swainson’s hawk and other raptors (including burrowing owl), prior to annexation of all or part of the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall demonstrate, through policy or adopted planning documents, that the following requirements shall be applied to development proposals within the SOIA Area, and required actions be completed prior to development activity:</p> <ul style="list-style-type: none"> • A qualified biologist will be retained by the applicant to conduct preconstruction surveys and to identify active nests on and within 0.5 mile of the proposed development and active burrows on the development site. 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 for all project phases. To the extent feasible, guidelines provided in Recommended Timing and Methodology for Swainson’s Hawk Nesting Surveys in the Central Valley shall be followed for surveys for Swainson’s hawk. • If no nests are found, no further mitigation is required. • If active nests are found, impacts on nesting Swainson’s hawks and other raptors shall be avoided by establishing appropriate buffers around the nests. No project activity shall commence within the buffer area until the young have fledged, the nest is no longer active, or until a qualified biologist has determined in coordination with CDFG that reducing the buffer would not result in nest abandonment. CDFG guidelines recommend implementation of 0.25- or 0.5-mile-wide buffers, but the size of the buffer may be adjusted if a qualified biologist and the City, in consultation with CDFG, determine that such an adjustment would not be likely to adversely affect the nest. Monitoring of the nest by a qualified biologist during and after 	

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	construction activities will be required if the activity has potential to adversely affect the nest.	
Impact BIO-2: The project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	<p>MM BIO-2: Prior to annexation of any or part of the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall demonstrate to LAFCo the implementation of requiring the following actions from all future development within the SIOA Area:</p> <ul style="list-style-type: none"> • Prior to the approval of grading or improvement plans, and before any groundbreaking activity associated with future projects, the City shall require project applicant(s) of all project's that would include fill of wetlands or other waters of the U.S. or waters of the state to complete site-specific wetland delineations and obtain all necessary permits under sections 401 and 404 of the Clean Water Act or the state's Porter-Cologne Act and a CDFG Streambed Alteration Agreement for the respective phase. Wetland habitat shall be restored, enhanced, and/or replaced at an acreage and location and by methods agreeable to USACE, the Central Valley RWQCB, and the City, as appropriate, depending on agency jurisdiction, and as determined during the Section 401 and Section 404 permitting processes. 	Less than significant impact.
Impact BIO-3: The project would not have a substantial adverse effect on wetlands.	Implement Mitigation Measure BIO-2.	Less than significant impact.
Impact BIO-4: The project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species.	Implement Mitigation Measure BIO-2.	Less than significant impact.
Impact BIO-5: The project would not conflict with local biological policies or ordinances, including tree preservation policies.	<p>MM BIO-5: At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove will demonstrate compliance with the following measures to LAFCo:</p> <p>A. Reconnaissance-level tree survey of the SOIA Area should be performed by a certified arborist to identify native tree resources, particularly those that may be designated as landmark or heritage trees. This will enable the lead agency to track impacts to native trees</p>	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>on a regional basis rather than a project-by-project basis, when feasible.</p> <p>B. Avoidance of all tree species shall be attempted during project design. If avoidance is infeasible, mitigation of native trees pursuant to measures D through F below shall be conducted.</p> <p>C. In addition to native oak trees, all native tree species should be protected under the City of Elk Grove's Tree Preservation Ordinance. The mitigation rate would be the same as those in the Ordinance, but it would also require obtaining replacement trees from local genetic stock.</p> <p>D. A live-year monitoring plan would be completed for all mitigation plantings. The monitoring plan would include appropriate irrigation schedules, as well as criteria for success and reestablishment during the 5-year period. A success rate of not less than 80 percent at the end of the 5-year monitoring period is recommended.</p> <p>E. Individual trees or groups of trees preserved shall be fully protected during construction. A temporary protective fence shall be established at a minimum of 10 feet beyond the drip line of the retained native trees. The fence shall be in place prior to beginning construction activities, including grading. Within this protective buffer, no grading, trenching, fill, or vegetation alteration shall be allowed.</p> <p>F. Mitigation shall target large tracts or contiguous native tree habitat. Connectivity between native tree woodland preserves as well as adequate buffering from development is important to promote native tree recruitment, the long-term viability of the habitat, and wildlife use of the area.</p>	
<p>Impact BIO-6: The project would not conflict with local habitat conservation plans.</p>	<p>Implement Mitigation Measure LU-3.</p>	<p>Less than significant impact.</p>

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 3.5 – Cultural Resources		
Impact CUL-1: Subsurface construction activities associated with the proposed project would not damage or destroy previously undiscovered historic resources.	<p>MM CUL-1: At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove will implement the following:</p> <ul style="list-style-type: none"> • If potentially significant historic resources are encountered during subsurface excavation activities for the project area, all construction activities within a 100-foot radius of the resource shall cease until a qualified archaeologist determines whether the resource requires further study. The City shall require that the applicant include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. Any previously undiscovered resources found during construction shall be recorded on appropriate California Department of Parks and Recreation (DPR) forms and evaluated for significance in terms of California Environmental Quality Act criteria by a qualified archaeologist. Potentially significant cultural resources consist of but are not limited to stone, bone, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. If the resource is determined to be significant under CEQA, the City and a qualified archaeologist shall determine whether preservation in place (avoidance) is feasible. Such preservation in place is the preferred mitigation. If such preservation is infeasible, the qualified archaeologist shall prepare and implement a research design and archaeological data recovery plan for the resource. The archaeologist shall also conduct appropriate technical analyses, prepare a comprehensive written report and file it with the appropriate information center (California Historical Resources Information System), and provide for the permanent curation of the recovered materials. 	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact CUL-2: Subsurface construction activities associated with the proposed project would not damage or destroy previously undiscovered archaeological resources.	<p>MM CUL-2: At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove will implement the following:</p> <ul style="list-style-type: none"> • If potentially significant archaeological resources are encountered during subsurface excavation activities, all construction activities within a 100-foot radius of the resource shall cease until a qualified archaeologist determines whether the resource requires further study. The City shall require that the applicant include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. Any previously undiscovered resources found during construction shall be recorded on appropriate Department of Parks and Recreation forms and evaluated for significance in terms of California Environmental Quality Act criteria by a qualified archaeologist. Potentially significant cultural resources consist of but are not limited to stone, bone, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. If the resource is determined to be significant under CEQA, the City and a qualified archaeologist shall determine whether preservation in place (avoidance) is feasible. Such preservation in place is the preferred mitigation. If such preservation is infeasible, the qualified archaeologist shall prepare and implement a research design and archaeological data recovery plan for the resource. The archaeologist shall also conduct appropriate technical analyses, prepare a comprehensive written report and file it with the appropriate information center (California Historical Resources Information System), and provide for the permanent curation of the recovered materials. 	Less than significant impact.
Impact CUL-3: Subsurface construction activities associated with the proposed project would not damage or destroy previously undiscovered paleontological resources.	<p>MM CUL-3: At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove will implement the following:</p> <ul style="list-style-type: none"> • In the event that plant or animal fossils are discovered during subsurface excavation activities for the proposed project, all excavation within 50 feet of the fossil shall cease until a qualified paleontologist has 	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>determined the significance of the find and provides recommendations in accordance with Society of Vertebrate Paleontology standards. The paleontologist shall notify the City of Elk Grove to determine procedures to be followed before construction is allowed to resume at the location of the find. If the find is determined to be significant and the City determines that avoidance is not feasible, the paleontologist shall design and implement a data recovery plan consistent with the Society of Vertebrate Paleontology standards. The plan shall be submitted to the City for review and approval. Upon approval, the plan shall be incorporated into the project.</p>	
<p>Impact CUL-4: Subsurface construction activities associated with the proposed project would not damage or destroy previously undiscovered human remains.</p>	<p>MM CUL-4: At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove will implement the following:</p> <ul style="list-style-type: none"> • If previously unknown human remains are encountered during construction activities, Section 7050.5 of the California Health and Safety Code applies, and the following procedures shall be followed: <ul style="list-style-type: none"> - In the event of an accidental discovery or recognition of any human remains, Public Resource Code Section 5097.98 must be followed. Once project-related ground disturbance begins and if there is accidental discovery of human remains, the following steps shall be taken: <ul style="list-style-type: none"> • There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the Sacramento County Coroner's Office is contacted to determine if the remains are Native American and if an investigation into cause of death is required. If the coroner determines the remains are Native American, the coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the most likely descendant (MDL) of the deceased Native American. The MDL may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98. 	<p>Less than significant impact.</p>

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 3.6 – Geology, Soils, and Seismicity		
Impact GEO-1: Development of the proposed project would not expose persons or structures to seismic hazards.	MM GEO-1: At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove will implement the applicable sections of the Uniform Building Code to ensure that structures within the SOIA Area meet all applicable seismic standards to the satisfaction of LAFCo. Additionally, the City shall require that a geotechnical report or other appropriate analysis be conducted at time of development application submittal to determine the shrink/swell potential and stability of the soil for public and private construction projects and identify measures necessary to ensure stable soil conditions.	Less than significant impact.
Impact GEO-2: Construction activities associated with the proposed project would not have the potential to create erosion and sedimentation.	No mitigation is necessary.	Less than significant impact.
Impact GEO-3: The proposed project would not expose persons or structures to hazards associated with unstable geologic units or soils.	No mitigation is necessary.	Less than significant impact.
Impact GEO-4: Development of the proposed project would not expose persons or structures to hazards associated with expansive soils.	No mitigation is necessary.	Less than significant impact.
Section 3.7 – Greenhouse Gas Emissions		
Impact GHG-1: The project would not generate greenhouse gas emissions, either directly or indirectly, that would have a significant impact on the environment.	MM GHG-1: Prior to annexation of any or part of the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall amend or augment the City's greenhouse gas emissions inventory projections to account for development of the SOIA Area. Emission factors used by the City shall be submitted for review and concurrence to the SMAQMD and the ARB. The City shall assess the potential emission reductions from development of the SOIA Area consistent with the City's Sustainability Element, Climate Action Plan; other applicable General Plan policies; and applicable city, county, and/or state programs that reduce greenhouse gases. The City shall demonstrate that future development of the SOIA	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	Area would be consistent with AB 32, S-3-05, and SB 375 regional emission reduction targets, or other emission reduction targets adopted by the State of California or regional agencies in effect at the time of application for annexation.	
Impact GHG-2: The project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing emissions of greenhouse gases.	Implement Mitigation Measure GHG-1.	Less than significant impact.
Section 3.8 – Hazards and Hazardous Materials		
Impact HAZ-1: The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	MM HAZ-1: Prior to environmental clearance for a development permit for a parcel within the SOIA Area, the County or City of Elk Grove (pursuant to City of Elk Grove General Plan, SA-8, Action 4) will require that a Phase I site assessment be completed by a qualified professional (e.g., a California registered environmental assessor). The study will identify current and historical land uses or conditions that may have resulted in a release of hazardous materials into the environment, or impact the proposed development of the site. The assessment will be performed in conformance with standards adopted by American Society for Testing Materials (ASTM) for Phase I site assessments. The Phase I site assessment shall identify any limitations to development that are due to the presence of hazardous materials in the vicinity of the subject site, and present recommendations for further investigation of the site, if necessary.	Less than significant impact.
Impact HAZ-2: The project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment.	Implement Mitigation Measure HAZ-1.	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact HAZ-3: The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.	No mitigation is necessary.	No impact.
Impact HAZ-4: The project would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would not create a significant hazard to the public or the environment.	Implement Mitigation Measure HAZ-1.	Less than significant impact.
Impact HAZ-5: The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	No mitigation is necessary.	No impact.
Impact HAZ-6: The project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	No mitigation is necessary.	Less than significant impact.
Impact HAZ-7: The project would not expose people to electric and magnetic fields from nearby high-voltage lines.	No mitigation is necessary.	Less than significant impact.
Section 3.9 – Hydrology and Water Quality		
Impact HYD-1: The project would not violate any water quality standards or waste discharge requests.	MM HYD-1: Prior to annexation of any or part of the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall demonstrate implementation of the following measures to LAFCo: A. A Master Stormwater Pollution Prevention Plan (SWPPP) shall be prepared and submitted to the RWQCB consistent with the requirements of Construction General Permit 2009-0009-DWQ or any successor regulation that identifies specific actions and Best Management Practices (BMPs) to prevent stormwater pollution during construction activities. The SWPPP shall identify a	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>practical sequence for BMP implementation, monitoring, and maintenance; site restoration; contingency measures; responsible parties; and agency contacts.</p> <p>B. A Master Stormwater Quality Control Plan consistent with the City's Municipal Stormwater Discharge (MS4) NPDES requirements shall be submitted to the RWQCB for review and approval. The plan shall include both regional and detailed drainage plans and identify expected, site-specific pollutants and required measures to treat those pollutants before they reach the Morrison Creek stream group, Deer Creek, the Cosumnes River or any tributaries downstream.</p>	
<p>Impact HYD-2: The project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted).</p>	<p>MM HYD-2: Prior to annexation of any or part of the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove demonstrate provide a Plan for Services that demonstrates that sufficient, sustainable potable water supplies adequate for projected demand needs are available and would not result in depletion of groundwater quantities greater than that under the 'without project' baseline.</p>	Less than significant impact.
<p>Impact HYD-3: The proposed project would not increase impervious surface coverage, which may result in increased stormwater runoff volumes and peak flows.</p>	<p>MM HYD-3: Prior to annexation of any or part of the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall prepare a Master Drainage Plan for the SOIA Area, and require site-specific drainage plans for future projects to conform with requirements of the master drainage plan. Individual projects shall prepare a detailed drainage plan that demonstrates attainment of pre-project runoff requirements prior to release at the outlet canal and describes the volume reduction measures and treatment controls used to reach attainment. The drainage plan shall identify all expected flows from the project area and the location, size, and type of facilities used to retain and treat the runoff volumes and peak flows to meet pre-project conditions. The Master Drainage Plan shall also include the geotechnical report verifying groundwater elevation for the regional basins.</p>	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>Impact HYD-4: The proposed project would not place structures within a 100-year flood hazard area that may have the potential to divert flood flows or to be subjected to flood hazard.</p>	<p>MM HYD-4a: Prior to annexation of any or part of the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall prepare a local plan of flood protection that shows the following for land within the SOIA Area: identification of all types of flood hazards (levee failure inundation, 100-year storm flooding, 200-year storm flooding and 500-year storm flooding), and locations of flood management facilities. The City will not approve any discretionary permit or entitlement, or any ministerial permit that would result in the construction of a new residence; any tentative map, or any parcel map for which a tentative map was not required; or enter into development agreement for projects located within a 200-year flood zone unless the City makes one of the following findings based on substantial evidence (as stated in Section 65865.5 of the California Government Code):</p> <ul style="list-style-type: none"> A. The facilities of the State Plan of Flood Control or other flood management facilities protect the property to the urban level of flood protection in urban and urbanizing areas or the national Federal Emergency Management Agency standard of flood protection in nonurbanized areas. B. The City has imposed conditions on the development agreement that will protect the property to the urban level of flood protection in urban and urbanizing areas or the Federal Emergency Management Agency standard of flood protection in nonurbanized areas. C. The local flood management agency has made adequate progress on the construction of a flood protection system that will result in flood protection equal to or greater than the urban level of flood protection in urban or urbanizing areas or will meet the Federal Emergency Management Agency standard of flood protection in nonurbanized areas for property located within a flood hazard zone, intended to be protected by the system. <p>MM HYD-4b: Prior to annexation of any or part of the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall demonstrate for land within the 100-year floodplain (to be identified by</p>	<p>Less than significant impact.</p>

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	hydraulic and hydrologic modeling), that development will not result in an increase in floodwater surface elevations within or downstream of the SOIA Area.	
Impact HYD-5: The proposed project would not expose people or structures to a significant risk of loss, injury, or death involving flooding as a result of the failure of a levee or dam.	No mitigation is necessary.	Less than significant impact.
Section 3.10 – Land Use and Planning		
Impact LU-1: The project would not physically divide an established community.	No mitigation is necessary.	No impact.
Impact LU-2: The project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.	Implement Mitigation Measure AG-1.	Significant and unavoidable impact.
Impact LU-3: The project would not conflict with any applicable habitat conservation plan or natural community conservation plan.	MM LU-3: At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall either demonstrate participation in the South Sacramento County Habitat Conservation Plan or provide mitigation consistent with the requirements of state and federal regulatory authorities regarding impacts to special habitats and endangered species. If the proposed SOIA project is inconsistent with the South Sacramento County Habitat Conservation Plan, the City shall seek to have the Plan amended. The City shall continue to mitigate impacts on special habitats and endangered species in consultation with applicable federal and state agencies prior to adoption of the South Sacramento County Habitat Conservation Plan.	Less than significant impact.
Impact LU-4: The project would convert open space resources to urban uses.	Implement Mitigation Measure AG-1.	Significant and unavoidable impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 3.11 – Mineral Resources		
Impact MIN-1: The project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State.	No mitigation is necessary.	Less than significant impact.
Impact MIN-2: The project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.	No mitigation is necessary.	Less than significant impact.
Section 3.12 – Noise		
Impact NOI-1: Development within the SOIA Area would increase existing traffic noise levels at noise-sensitive land uses.	No feasible mitigation measure is available.	Significant and unavoidable impact.
Impact NOI-2: The proposed project would not expose future sensitive receptors to elevated noise levels from both transportation and non-transportation noise sources.	No mitigation is necessary.	Less than significant impact.
Section 3.13 – Population and Housing		
Impact POP-1: The project would not induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).	MM POP-1: At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove will consult with the Sacramento Area Council of Governments (SACOG) regarding the Regional Blueprint and consistency with the Metropolitan Transportation Plan.	Significant and unavoidable impact.
Section 3.14 – Public Services		
Impact PSU-1: The proposed project would not result in a need for new or expanded fire facilities or adverse impacts on fire protection.	MM PSU-1a: Prior to submittal of any application to annex territory within the Sphere of Influence Amendment(SOIA) Area, the City of Elk Grove will provide a Plan for Services that demonstrates that the water purveyor, if a public agency, has requested that the SOIA Area be within its Sphere of Influence; that such purveyor has prepared or approved an	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>infrastructure plan and funding program to ensure compliance with Federal Clean Water Act standards; and that sufficient, sustainable, potable water supplies adequate for projected needs are available to accommodate the buildout of the annexation territory, with no adverse impact to existing ratepayers.</p> <p>MM PSU-1b: Prior to submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove will provide a Plan for Services that demonstrates that CCSD and the City of Elk Grove have coordinated that the SOIA Area be within their respective Spheres of Influence and that such providers have prepared or approved a service plan and funding program to ensure that sufficient fire services are available to accommodate the buildout of the annexation territory, with no adverse impact to fire protection services of current and future residents.</p>	
Impact PSU-2: The proposed project would not result in a need for new or expanded police facilities or adverse impacts on police protection.	MM PSU-2: Prior to submittal of any application to annex territory within the Sphere of Influence Amendment Area, the City of Elk Grove will provide a Plan for Services that demonstrates that the City of Elk Grove has prepared or approved a service plan and funding program to ensure that sufficient police services are available to accommodate the buildout of the annexation territory, with no adverse impact to police protection services for current and future residents.	Less than significant impact.
Impact PSU-3: The proposed project would not result in a need for new or expanded school facilities or adverse impacts on education.	No mitigation is necessary.	Less than significant impact.
Impact PSU-4: The proposed project would not result in a need for new or expanded park, trail, or community facilities or adverse impacts on related services.	No mitigation is necessary.	Less than significant impact.
Impact PSU-5: The proposed project would not result in a need for new or expanded library facilities or adverse impacts on related services.	No mitigation is necessary.	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact PSU-6: The proposed project would not result in the need for new or expanded animal control facilities or adverse impacts on related services.	No mitigation is necessary.	Less than significant impact.
Impact PSU-7: The proposed project would not result in the need for new or expanded code enforcement services.	No mitigation is necessary.	Less than significant impact.
Section 3.15 – Transportation and Traffic		
Impact TRANS-1: Future annexation and development activities within the proposed project would generate new vehicle trips that would contribute to unacceptable traffic operations under Existing Plus Project Conditions.	MM TRANS-1: At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall cooperate with Sacramento County, and Caltrans that shall establish transportation improvement plans and funding mechanisms to provide service levels consistent with the City's and County's General Plan. In addition, any future annexation and development activity within the SOIA Area shall require the preparation of a traffic impact study that would include discussion of the project's fair-share contribution and mitigation strategies.	Significant and unavoidable impact.
Impact TRANS-2: Future annexation and development activities within the proposed project would generate new vehicle trips that would contribute to unacceptable traffic operations under Cumulative Conditions.	Implement Mitigation Measure TRANS-1.	Significant and unavoidable impact.
Impact TRANS-3: The project would not increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	No mitigation is necessary.	Less than significant impact.
Impact TRANS-4: The project would not result in inadequate emergency access.	No mitigation is necessary.	Less than significant impact.
Impact TRANS-5: Future annexation and development activities within the proposed project would not conflict with adopted policies, plans, or	MM TRANS-5a: At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall update the City's Bicycle and Pedestrian Master	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.</p>	<p>Plan to delineate bicycle and pedestrian facilities in the SOIA Area consistent with the goals and policies of the City’s General Plan. The update will identify on-street and off-street bikeways and pedestrian routes as well as support facilities. Development in the SOIA Area shall be responsible for implementing the master plan recommendation as development occurs in the project area.</p> <p>MM TRANS-5b: At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall complete a transit master plan for the SOIA Area consistent with policies of the City’s General Plan. This plan will identify the roadways to be used by bus transit routes, locations for bus turnouts and pedestrian shelters, locations for bus transfer stations, alignment for fixed route rail service, and the location of rail service stations. Future development in the SOIA Area and the City of Elk Grove shall be responsible for implementing the master plan recommendations as development occurs in the project area.</p>	
Section 3.16 – Utilities and Service Systems		
<p>Impact USS-1: The proposed project would not generate a demand for increased water services over that which is currently produced in the area and would not result in a need for additional water supplies or facilities.</p>	<p>Implement Mitigation Measure HYD-2, and:</p> <p>MM USS-1: Prior to submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove will provide a Plan for Services that demonstrates that the water purveyor has requested that the SOIA Area be within its Sphere of Influence if a public agency, and that such purveyor has prepared or approved an infrastructure plan and funding program to ensure compliance with Federal Clean Drinking Water Act standards; and that sufficient, sustainable potable water supplies adequate for projected needs are available to accommodate the buildout of the annexation territory, with no adverse impact to existing ratepayers.</p>	<p>Less than significant impact.</p>

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact USS-2: The proposed project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities.	MM USS-2: Prior to submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove will provide a Plan for Services that demonstrates that the wastewater transmission and treatment providers have requested that the SOIA Area be within their respective Spheres of Influence if a public agency, and that such providers have prepared or approved an infrastructure plan and funding program to ensure compliance with Federal Clean Water Act and applicable state standards; and that sufficient transmission infrastructure, and treatment and disposal capacity adequate for projected needs are available to accommodate the buildout of the annexation territory, with no adverse impact to existing ratepayers.	Less than significant impact.
Impact USS-3: The proposed project would not require or result in the construction of new stormwater drainage facilities or expansion of existing facilities.	Implement Mitigation Measure HYD-3.	Less than significant impact.
Impact USS-4: The proposed project would be served by landfills with sufficient permitted capacity and would comply with applicable regulations.	MM USS-4: At the time of submittal of any application to annex any or all territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall identify solid waste services to be extended, the level and range of services, timing of services, improvements of facility upgrades associated with the services, and how the services will be financed to accommodate the buildout of the SOIA Area.	Less than significant impact.
Impact USS-5: The proposed project would not result in the unnecessary, wasteful, or inefficient use of energy.	No mitigation is necessary.	Less than significant impact.

SECTION 1: INTRODUCTION

1.1 - Overview of the CEQA Process

This Draft Environmental Impact Report (Draft EIR) is prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts associated with the implementation of the Proposed City of Elk Grove Sphere of Influence (SOI) Amendment project (LAFC # 09-10, State Clearinghouse No. 2010092076). This document is prepared in conformance with CEQA (California Public Resources Code, Section 21000, et seq.) and the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000, et seq.).

1.1.1 - Overview

The proposed project consists of an application to Sacramento Local Agency Formation Commission (LAFCo) to amend the City of Elk Grove's SOI. The current SOI is coterminous with the City boundary. The amended SOI would include an additional 7,869 acres generally described as the areas south of Bilby Road/Kammerer Road and Grant Line Road. Section 2, Project Description provides a complete description of the project.

1.1.2 - Purpose and Authority

This Draft EIR provides a program-level analysis of the environmental effects of the Proposed City of Elk Grove Sphere of Influence Amendment (SOIA) project. The environmental impacts of the proposed project are analyzed in the EIR to the degree of specificity appropriate, in accordance with CEQA Guidelines Sections 15146 and 15180. This document addresses the potentially significant adverse environmental impacts that may be directly or indirectly associated with the expansion of the existing City of Elk Grove SOI boundary. There are no specific land use entitlements proposed at this time in conjunction with the proposed SOIA. No physical development is proposed in conjunction with the proposed application. However, this EIR acknowledges that future urbanization of the project area may occur as an indirect result of this SOIA; therefore, this EIR contains a programmatic analysis of reasonably foreseeable indirect environmental impacts attributable to or would result from the proposed project. This Draft EIR is intended to serve as an informational document for the public agency decision makers and the public regarding the proposed project. This document is not intended as a programmatic document for use to "tier" the CEQA analysis for future projects.

CEQA requires that an EIR contain, at a minimum, certain specific elements. These elements are contained in this Draft EIR and include:

- Table of Contents
- Introduction
- Executive Summary

Introduction

- Project Description
- Environmental Setting, Significant Environmental Impacts, and Mitigation Measures
- Cumulative Impacts
- Significant Unavoidable Adverse Impacts
- Alternatives to the Proposed Project
- Growth-Inducing Impacts
- Effects Found Not To Be Significant
- Areas of Known Controversy

1.1.3 - Lead Agency Determination

The Sacramento LAFCo is designated as the lead agency for the project. CEQA Guidelines Section 15367 defines the lead agency as “the public agency, which has the principal responsibility for carrying out or approving a project.”

This Draft EIR was prepared by Michael Brandman Associates, an environmental consultant. Prior to public review, it was extensively reviewed and evaluated by the Sacramento LAFCo staff. This Draft EIR reflects the independent judgment and analysis of the Sacramento LAFCo as required by CEQA. Lists of organizations and persons consulted and the report preparation personnel are provided in Section 8, Persons and Organizations Consulted/List of Preparers, of this Draft EIR.

1.1.4 - LAFCo Authority

LAFCo’s powers are set forth in the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Act). The legislative intent of Section 56300 of the Government Code requires that each LAFCo establish policies and exercise its powers in a manner that provides planned, well-ordered, efficient urban development patterns with appropriate consideration of preserving open space lands within those patterns. LAFCo’s purposes are the discouragement of urban sprawl and the encouragement of the orderly formation of local agencies based upon local conditions and circumstances. The project must be approved by LAFCo and meet all LAFCo requirements. Specific Policy Elements established by the Act are as follows:

- Encourage orderly growth and development patterns (Section 56001).
- Discouraging urban sprawl, preserving open-space and prime agricultural lands, efficiently providing government services, and encouraging the orderly formation and development of local agencies based upon local conditions and circumstances (Section 56301).
- Guide development away from open space and prime agricultural land uses unless such action would not promote planned, orderly, and efficient development (Section 56377).

In order to implement the legislative mandate, LAFCos have the specific authority to review the following actions: annexations to, or detachment from, cities or districts; formation or dissolution of

districts; incorporation or disincorporation of cities; consolidation or reorganization of cities or districts; establishment of subsidiary districts; and development of, and amendments to, sphere of influence.

In order to implement the legislative policies, LAFCo has the power to approve, modify and approve, or deny applications and impose terms and conditions (Section 56885.5). However, LAFCo may not exercise direct land use authority through use of zoning or subdivision processes.

Factors to be considered by Sacramento LAFCo when reviewing the proposed SOIA are the following:

- Population, population density; land area and land use; per capita assessed valuation; topography, natural boundaries, and drainage basins; proximity to other populated areas, the likelihood of significant growth in the area and in adjacent incorporated and unincorporated areas during the next 10 years.
- Need for organized community services; the present cost and adequacy of governmental services and controls in the area; probable future needs for such services and controls; probable effect of the proposed incorporation, formation, annexation, or exclusion and of alternative courses of action on the cost and adequacy of services and controls in the area and adjacent areas.
- The effect of the proposed action and of alternative actions on adjacent areas, on mutual social and economic communities of interests, and on the local governmental structure of the county.
- Conformity of the proposal and its effects with commission policies on providing planned, orderly, efficient patterns of urban development and with state policies and priorities on conversion of open-space lands to other uses.
- Effect of the proposal on maintaining the physical and economic integrity of lands in an agricultural preserve in open-space uses.
- The definiteness and certainty of the boundaries of the territory, the nonconformance of proposed boundaries with lines of assessment or ownership, the creation of islands or corridors of unincorporated territory, and other similar matters affecting the proposed boundaries.
- Conformity with appropriate city or county general and specific plans.
- The “sphere of influence” or any local agency that may be applicable to the proposal being reviewed.

LAFCo Compliance with CEQA

The Policies, Standards, and Procedures adopted by the Sacramento LAFCo include policies and procedures for implementing CEQA requirements for environmental review of LAFCo projects.

Introduction

These policies and procedures include a list of standards for determining the significance of environmental impacts, as well as requirements that EIRs for LAFCo actions include an evaluation of countywide or cumulative impacts and an alternatives analysis evaluating a reasonable range of alternatives. After reviewing the information in an environmental document, LAFCo may:

- At its discretion, approve a project without change if the anticipated environmental impacts are insignificant.
- Require an applicant to modify a project.
- Establish mitigation measures as conditions of project approval.
- Deny the proposal because of its unacceptable adverse environmental impacts.
- Approve a project despite its significant adverse environmental impacts by making findings of fact and a statement that project benefits outweigh the costs (statement of overriding considerations).

1.2 - Scope of the EIR

This Draft EIR addresses the potential environmental effects of the proposed project. The Sacramento LAFCo issued a Notice of Preparation (NOP) for the proposed project on September 27, 2010, which circulated between September 27, 2010 and October 26, 2010, for the statutory 30-day public review period. The scope of this Draft EIR includes the potential environmental impacts identified in the NOP and issues raised by agencies and the public in response to the NOP. The NOP is contained in Appendix A of this Draft EIR.

Twenty-five comment letters were received in response to the NOP. They are listed in Table 1-1 and provided in Appendix A of this Draft EIR.

Table 1-1: NOP Comment Letters

Status	Affiliation	Signatory	Date
Public Agencies	Sacramento County Municipal Services Agency Department of Waste Management and Recycling	Paul Philleo, Director,	July 30, 2008
	California Department of Transportation	Alyssa Begley, Chief	August 22, 2008
	California Highway Patrol	A. R. Jones, Captain	September 23, 2010
	Florin Resource Conservation District	Thomas S. Bartlett, CPA, Finance Manager	September 24, 2010

Table 1-1: (cont.): NOP Comment Letters

Status	Affiliation	Signatory	Date
Public Agencies (<i>cont.</i>)	Sacramento Regional County Sanitation District	Sarena Deeble	October 1, 2010
	Elk Grove Unified School District	Robert Pierce, Associate Superintendent	October 8, 2010
	Sacramento County Planning and Community Development Department	Michael Winter, Planner III	October 13, 2010
	Cosumnes Community Services District	Jeff Ramos, General Manager	October 13, 2010
	Sacramento Regional Transit District	Rosemary Covington	October 13, 2010
	Sacramento County Department of Waste Management and Recycling	Dave Ghirardelli	October 18, 2010
	Sacramento Metropolitan Air Quality Management District	Larry Robinson, Program Coordinator	October 26, 2010
	Sacramento County Municipal Services Agency	Antonia Barry, Principal Environmental Analyst	October 26, 2010
	California Department of Transportation	Alyssa Begley, Chief	October 27, 2010
	Sacramento Municipal Utility District	Jerry Clark, Land Agent	November 2, 2010
Private Organizations and Individuals	Sacramento Audubon Society	Keith Wagner, President	July 26, 2006
	Private Citizen	Marilyn Armbruster	October 24, 2010
	The Nature Conservancy	Michael Conner, Project Director	October 26, 2010
	Private Citizen	Lynn Wheat	October 26, 2010
	Private Citizen	Mark Dempsey	October 26, 2010
	Friends of the Swainson's Hawk	James P. Pachl, Attorney at Law	October 27, 2010
	Cosumnes Basin Habitat Defense Project	Mike Eaton	October 27, 2010
	Habitat 2020	Rob Burness	October 27, 2010
	Stone Lakes National Wildlife Refuge Association	Robert Burness, Chair, Watershed Committee	October 27, 2010
	Private Citizen	Tina Suarez-Murias	October 27, 2010
	Habitat 2020 and Sierra Club	Sean Wirth	October 28, 2010

Source: Sacramento County LAFCo, 2010.

1.2.1 - Environmental Issues Determined Not To Be Significant

Certain subjects with various topical areas were determined not to be significant. Other potentially significant issues are analyzed in these topical areas; however, the following issues are not analyzed:

- Forest Land Zoning (Section 3.2, Agricultural Resources)
- Forest Lands (Section 3.2, Agricultural Resources)
- Septic and Alternative Wastewater Disposal Systems (Section 3.6, Geology, Soils, and Seismicity)
- Airport and Private Airstrip Hazards (Section 3.8, Hazards and Hazardous Materials)
- Seiche, Tsunami, or Mudflow Hazards (Section 3.9, Hydrology and Water Quality)
- Aviation Noise (Section 3.12, Noise)
- Displacement of Persons or Housing (Section 3.13, Population and Housing)
- Air Traffic Patterns (Section 3.15, Transportation/Traffic)

An explanation of why each issue is determined not to be significant is provided in Section 7, Effects Found Not To Be Significant.

1.2.2 - Potentially Significant Environmental Issues

The NOP found that the following topical areas may contain potentially significant environmental issues that will require further analysis in the EIR. These sections are as follows:

- | | |
|-----------------------------------|---------------------------------|
| • Aesthetics, Light, and Glare | • Land Use |
| • Agricultural Resources | • Mineral Resources |
| • Air Quality/Greenhouse Gases | • Noise |
| • Biological Resources | • Population and Housing |
| • Cultural Resources | • Public Services |
| • Geology, Soils, and Seismicity | • Transportation |
| • Hazards and Hazardous Materials | • Utilities and Service Systems |
| • Hydrology and Water Quality | |

1.3 - Organization of the EIR

This Draft EIR is organized into the following main sections:

- **Section ES: Executive Summary.** This section includes a summary of the proposed project and alternatives to be addressed in the Draft EIR. A brief description of the areas of controversy and issues to be resolved, and overview of the Mitigation Monitoring and Reporting Program, in addition to a table that summarizes the impacts, mitigation measures, and level of significance after mitigation, are also included in this section.

- **Section 1: Introduction.** This section provides an introduction and overview describing the purpose of this Draft EIR, its scope and components, and its review and certification process.
- **Section 2: Project Description.** This section includes a detailed description of the proposed project, including its location, site, and project characteristics. A discussion of the project objectives, intended uses of the Draft EIR, responsible agencies, and approvals that are needed for the proposed project are also provided.
- **Section 3: Environmental Impact Analysis.** This section analyzes the environmental impacts of the proposed project. Impacts are organized into major topic areas. Each topic area includes a description of the environmental setting, methodology, significance criteria, impacts, mitigation measures, and significance after mitigation. The specific environmental topics that are addressed within Section 4 are as follows:
 - **Section 3.1 – Aesthetics:** Addresses the potential visual impacts of the proposed project and the overall increase in illumination produced by the project.
 - **Section 3.2 – Agricultural Resources:** Addresses the potential conversion of Important Farmland to non-agricultural use, as well as conflicts with Williamson Act contracts and agricultural zoning.
 - **Section 3.3 – Air Quality:** Addresses the potential air quality impacts associated with project implementation, as well as consistency with the Sacramento Metropolitan Air Pollution Control District’s air quality plans.
 - **Section 3.4 – Biological Resources:** Addresses the project’s potential impacts on habitat, vegetation, and wildlife; the potential degradation or elimination of important habitat; and impacts on listed, proposed, and candidate threatened and endangered species.
 - **Section 3.5 – Cultural Resources:** Addresses potential impacts of project development on known historical resources and potential archaeological and paleontological resources.
 - **Section 3.6 – Geology, Soils, and Seismicity:** Addresses the potential impacts the project may have on soils and assesses the effects of project development in relation to geologic and seismic conditions.
 - **Section 3.7 – Greenhouse Gas Emissions:** Addresses the potential greenhouse gas emissions impacts as a result of project implementation.
 - **Section 3.8 – Hazards and Hazardous Materials:** Addresses the potential for the presence of hazardous materials or conditions on the project site and in the project area that may have the potential to impact human health.
 - **Section 3.9 – Hydrology and Water Quality:** Addresses the potential impacts of the project on local hydrological conditions, including drainage areas, and changes in the flow rates.
 - **Section 3.10 – Land Use and Planning:** Addresses the potential land use impacts associated with division of an established community and consistency with the

Sacramento County General Plan, Sacramento LAFCo Policies, and the City of Elk Grove General Plan.

- **Section 3.11 – Mineral Resources:** Addresses potential environmental impacts to mineral resources resulting from project implementation.
 - **Section 3.12 – Noise:** Addresses potential noise impacts on ambient noise levels as a result of project implementation.
 - **Section 3.13 – Population and Housing:** Addresses the growth-inducing effects of the proposed SOIA.
 - **Section 3.14 – Public Services:** Addresses potential impacts on fire protection and emergency medical services, police protection, schools, parks, libraries, and trails as a result of project implementation.
 - **Section 3.15 – Transportation:** Addresses the impacts on the local and regional roadway system, public transportation, bicycle, and pedestrian access.
 - **Section 3.16 – Utilities and Service Systems:** Addresses potential impacts on utility and service systems, including water, wastewater, storm drainage, solid waste, and energy providers as a result of project implementation.
- **Section 4: Cumulative Effects.** This section discusses the cumulative effects associated with the proposed SOIA, in conjunction with past, present, and future projects.
 - **Section 5: Alternatives to the Proposed Project.** This section compares the impacts of the proposed project with three land-use project alternatives: the No Project Alternative, the Alternate SOI Boundary Alternative, and the Enhanced Regional Alternative. An environmentally superior alternative is identified.
 - **Section 6: Other CEQA Considerations.** This section provides a summary of significant environmental impacts, including unavoidable and growth-inducing impacts. This section discusses the cumulative impacts associated with the proposed project, including the impacts of past, present, and probable future projects. In addition, the proposed project's energy demand is discussed.
 - **Section 7: Effects Found Not To Be Significant.** This section contains analysis of the topical sections not addressed in Section 3.
 - **Section 8: Organizations and Persons Consulted/List of Preparers.** This section contains a full list of persons and organizations that were consulted during the preparation of this Draft EIR, as well as the authors who assisted in the preparation of the Draft EIR, by name and affiliation.
 - **Section 9: References.** This section contains a full list of references that were used in the preparation of this Draft EIR.

- **Appendices:** This section includes all notices and other procedural documents pertinent to the Draft EIR, as well as all technical material prepared to support the analysis.

1.4 - Documents Incorporated by Reference

As permitted by CEQA Guidelines Section 15150, this Draft EIR has referenced several technical studies, analyses, and previously certified environmental documentation. Information from the documents, which have been incorporated by reference, has been briefly summarized in the appropriate section(s). The relationship between the incorporated part of the referenced document and the Draft EIR has also been described. The documents and other sources that have been used in the preparation of this Draft EIR include, but are not limited to:

- County of Sacramento General Plan
- County of Sacramento Municipal Code
- City of Elk Grove General Plan
- City of Elk Grove Municipal Services Review

These documents are specifically identified in Section 9, References, of this Draft EIR. In accordance with CEQA Guidelines Section 15150(b), these referenced documents and other sources used in the preparation of the Draft EIR are available for review at the Sacramento LAFCo.

1.5 - Review of the Draft EIR

Upon completion of the Draft EIR, the Sacramento LAFCo filed a Notice of Completion (NOC) with the State Office of Planning and Research to begin the public review period (Public Resources Code, Section 21161). Concurrent with the NOC, this Draft EIR has been distributed to responsible and trustee agencies, other affected agencies, surrounding cities, and interested parties, as well as all parties requesting a copy of the Draft EIR in accordance with Public Resources Code 21092(b)(3). During the public review period, the Draft EIR, including the technical appendices, is available for review at the Sacramento LAFCo offices, located at the address provided below. Agencies, organizations, and interested parties not previously contacted or who did not respond to the NOP currently have the opportunity to comment on the Draft EIR during the public review period on the Draft EIR. Written comments on this Draft EIR should be addressed to:

Don Lockhart AICP, Assistant Executive Officer
Sacramento Local Agency Formation Commission
1112 I Street, Suite 100
Sacramento, California 95814
Phone: (916) 874-6458
Email: Donald.Lockhart@SacLAFCo.org

Introduction

Submittal of electronic comments in Microsoft Word or Adobe PDF format is encouraged. Upon completion of the public review period, written responses to all significant environmental issues raised will be prepared and made available for review by the commenting agencies at least 10 days prior to the public hearing before the Commission on the project, at which the certification of the Final EIR will be considered. Comments received and the responses to comments will be included as part of the record for consideration by decision makers for the project.

SECTION 2: PROJECT DESCRIPTION

This Environmental Impact Report (EIR) analyzes the potential environmental effects of the proposed City of Elk Grove Sphere of Influence Amendment (SOIA) project (LAFC # 09-10), immediately south-southwest of the City Elk Grove, California. The City has proposed to amend its current SOI boundary to be able to prepare and, once approved, comprehensively plan for the logical future growth of the City.

The proposed SOIA for the City of Elk Grove (City) is an important policy instrument used in implementing the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (CKH). A Sphere of Influence (SOI) is defined by Government Code 56425 as “a plan for the probable physical boundary and service area of a local governmental agency, as determined by LAFCo” For the purposes of this document, the area within the project boundary is referred to as the SOIA Area. The SOIA Area represents territory adjacent to the service area of a jurisdiction where services might reasonably be expected to be provided in the next 20 years. For a multi-service agency such as the City of Elk Grove, approval of an SOIA by LAFCo indicates that the Commission has designated the amended SOI Area as appropriate for planning purposes for potential future urbanization. While designation of territory within the City’s SOI does not define or identify specific development projects, change or modify land use jurisdiction or zoning, or grant land use entitlements, it may be viewed as an indicator of the potential urbanization of the area. However, the approval by LAFCo of this or any other SOIA does not authorize any change in land use or governance. The CKH further requires that a Municipal Service Review (MSR) be conducted prior to or in conjunction with the update or amendment of a Sphere of Influence, as necessary.

2.1 - Project Location and Setting

2.1.1 - Location

The SOIA Area is located in the unincorporated area of Sacramento County, California. The SOIA Area is generally located south-southwest of the existing City of Elk Grove boundaries (Exhibit 2-1) close to the community of Franklin-Laguna. More specifically, the area subject to this application by the City for an SOIA is described as the areas south of Bilby Road, Kammerer Road, and Grant Line Road, extending south to Eschinger Road and Cosumnes River; east towards Cosumnes River and just past Freeman Road; and west towards Interstate 5 (I-5) and the Union Pacific Railroad tracks (Exhibit 2-2). The proposed boundary does not reach the Cosumnes River east of State Route 99 (SR-99) but follows the 100-year Federal Emergency Management Agency (FEMA) floodplain. The proposed SOIA Area is located on the Elk Grove, California, United States Geological Survey 7.5-minute topographic quadrangle map, Township 6 North, Range 5 East, Section 13 (Latitude 38°21’37” North; Longitude 121°23’02” West). Photographs of the project site are provided in Exhibit 2-3a and Exhibit 2-3b.

Existing Conditions

City of Elk Grove

The City of Elk Grove consists of approximately 42 square miles (26,954 acres) in the southern portion of Sacramento County. Urban land uses generally consist of residential, commercial, office, industrial, recreational, and public uses within and adjacent to the City of Elk Grove. Natural features within the City's planning area include the Stone Lakes National Wildlife Refuge, the Cosumnes River, the Sacramento River, and associated tributaries (such as Deer Creek, Morrison Creek, and Laguna Creek), and vegetation communities consisting of valley oak woodland, annual grassland, valley foothill riparian, and agricultural lands.

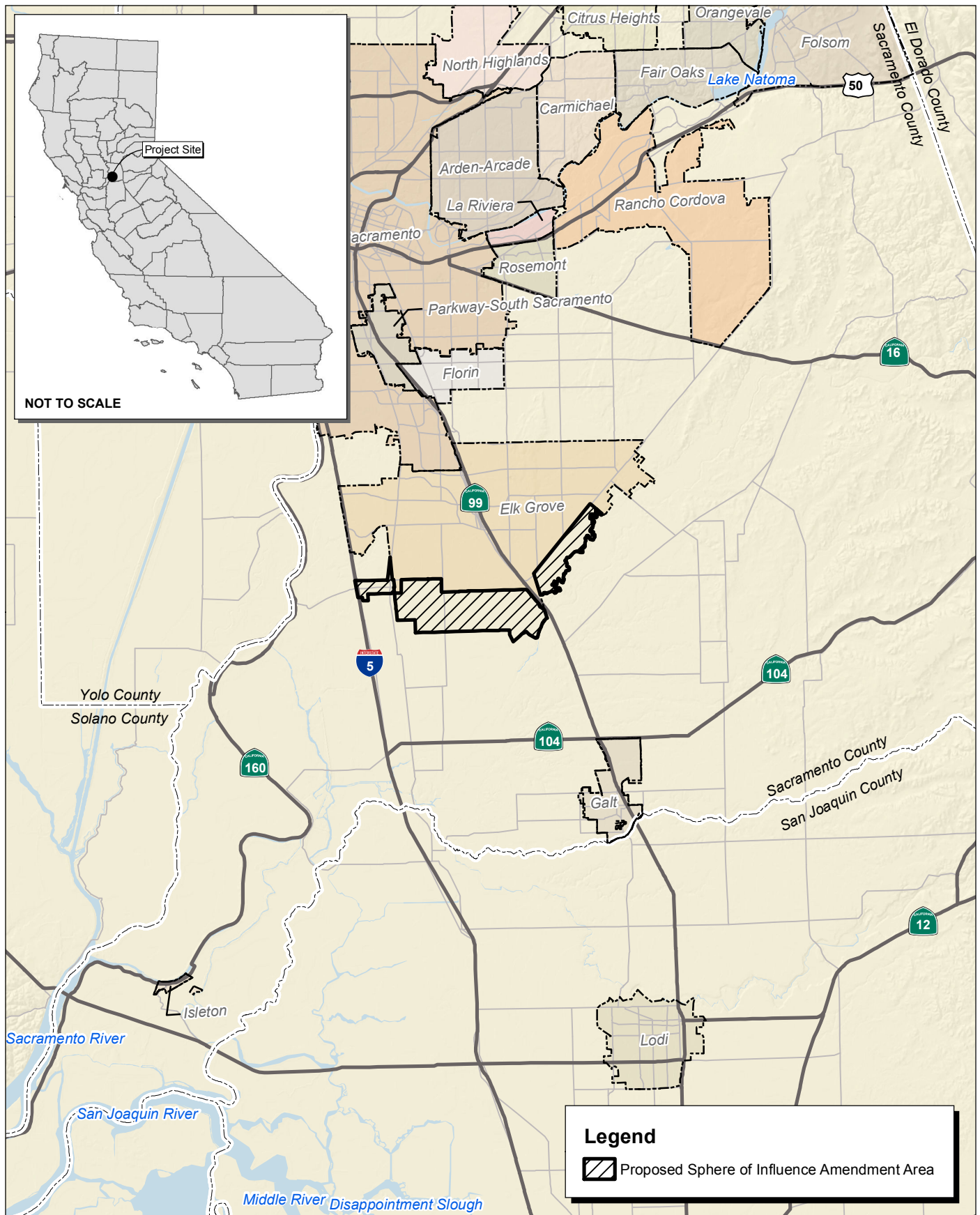
Project Site

The 7,869-acre project site primarily contains agricultural uses consisting of fallow/row crops/nursery, orchards, vineyard, and dairy and livestock operations. Few structures exist within the project site, and these are limited to barns, rural housing, storage sheds, and related structures. A small area surrounding the intersections of Hood Franklin Road/County Road J8 and Bilby Road/County Road J8 is developed with relatively suburban uses. This area is identified as the Old Town Franklin community. The existing land uses in this community can be described as a mix of rural housing, light industrial, commercial, and public facilities. Franklin Cemetery is located at the intersection of Franklin Boulevard and Hood Franklin Road. Sunset Skyranch Airport (Elk Grove Airport) is a privately owned airport that lies in the eastern portion of the project area, immediately adjacent to the existing Elk Grove city limits. Effective July 1, 2010 the airport has been closed. Exhibit 2-4 shows the existing land uses on the project site.

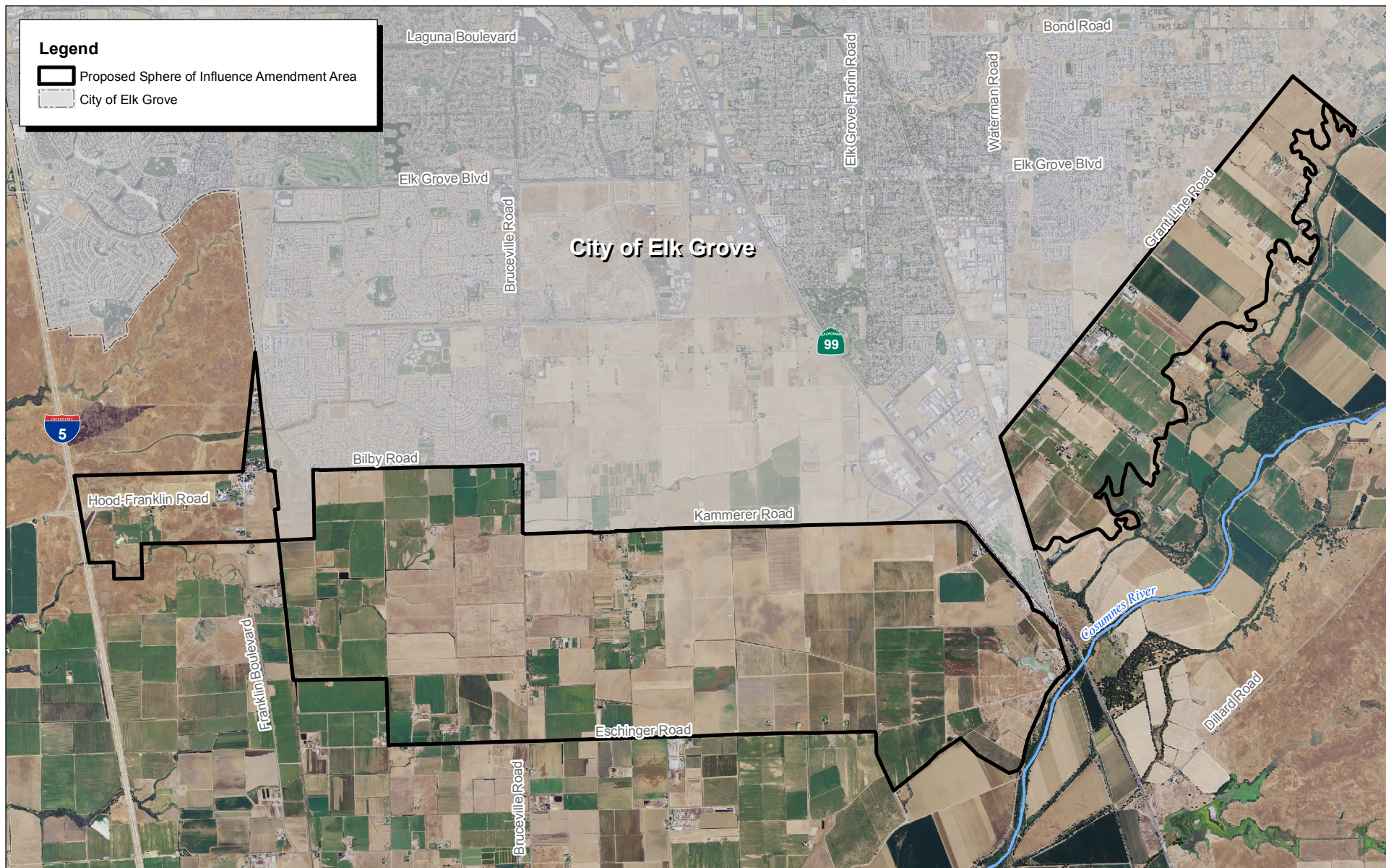
The project site is mapped as containing 446.4 acres of Prime Farmland and 4,862.8 acres of Farmland of Statewide Importance. Both designations fall under the Important Farmland umbrella as classified by the California Department of Conservation Farmland Mapping and Monitoring Program.

Approximately 2,474 acres of the project site are covered by active, multiple Williamson Act contracts. Some property owners have filed a Notice of Non-Renewal on approximately 548.8 acres to initiate termination of the contract. Exhibit 2-5 shows the SOIA Area properties for which a Non-Renewal Notice has been filed.

The proposed SOIA Area is located within the South Sacramento Habitat Conservation Plan (SSHCP) area. The SSHCP is a regional approach to addressing issues related to urban development, habitat conservation, and habitat protection. A portion of the SOIA Area west of SR-99 and south of Kammerer Road is located outside of the SSHCP's currently designated Urban Development Area. No conservation or mitigation sites exist with the project area except in the westernmost portions, where some parcels, within the Stone Lakes National Wildlife Refuge, are protected by a perpetual conservation agreement or owned by a conservancy group. In addition, the SOIA Area does not lie within a critical habitat area as identified in the SSHCP.



Source: Census 2000 Data, The CaSIL, MBA GIS 2010.



Source: Sacramento County NAIP, 2009, County of Sacramento, City of Elk Grove, 2009.



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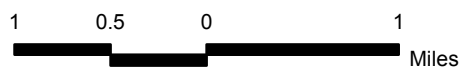


Exhibit 2-2 Local Vicinity Map Aerial Base



View of the Sunset Sky Ranch Airport (Elk Grove Airport).



Typical View of the Project Area west of Highway 99.



View of the Project Area from Rau Road looking west.



View of the Barn near the south end of Rau Road.

Source: Michael Brandman Associates, 2011.



Michael Brandman Associates

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Exhibit 2-3a Site Photographs

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ENVIRONMENTAL IMPACT REPORT



View of the Vineyards at the southeast corner from Eschinger Road.



View of the Union Pacific Railroad Looking east on Core Road.



View of the Franklin Cemetery from Hood Franklin Road.



View of the Suburban Development in Old Town Franklin area.

Source: Michael Brandman Associates, 2011.

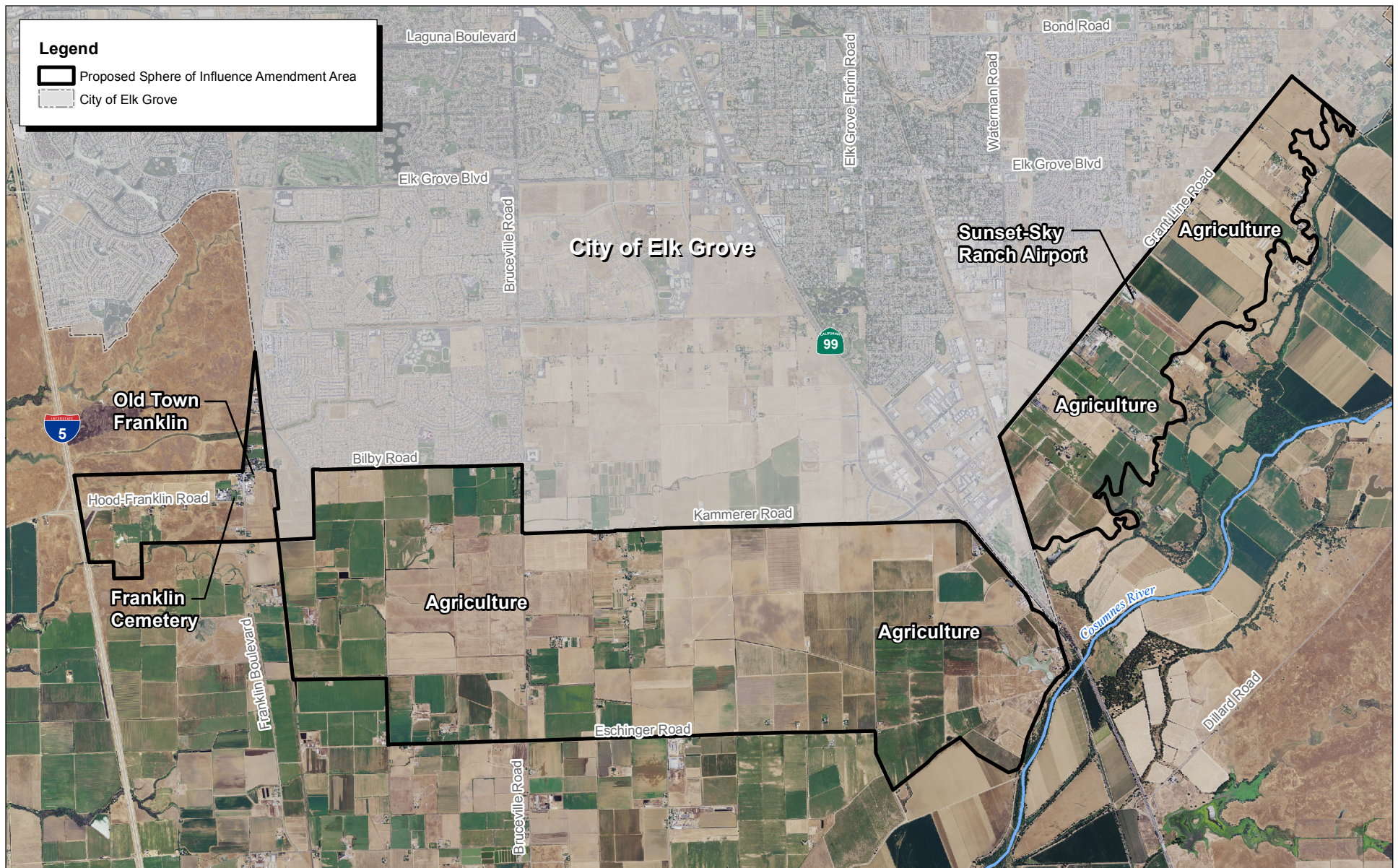


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Exhibit 2-3b Site Photographs

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Source: Sacramento County NAIP, 2009, County of Sacramento, City of Elk Grove, 2009.



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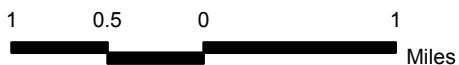
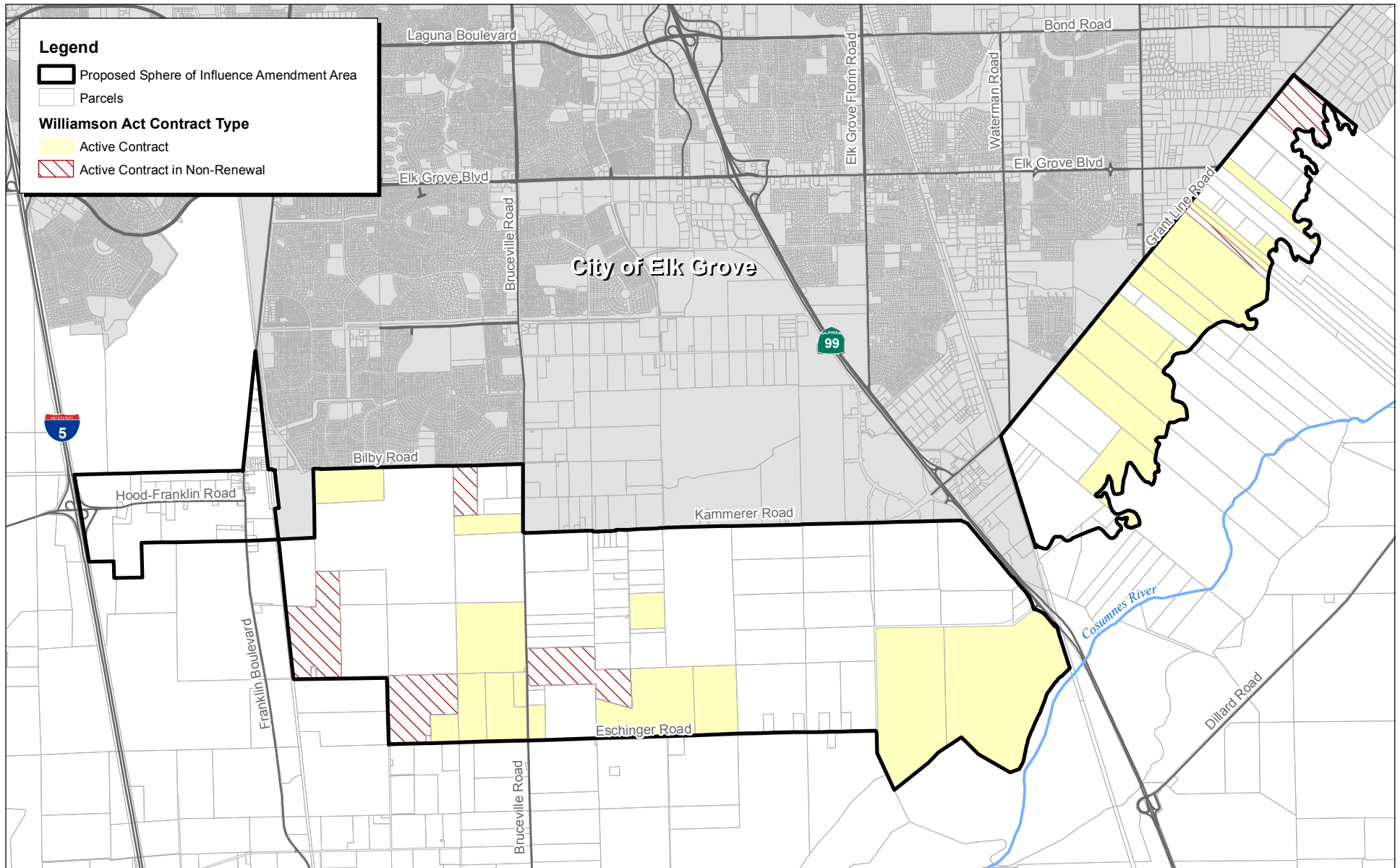


Exhibit 2-4 Existing Land Uses



Source: County of Sacramento, City of Elk Grove, 2009.



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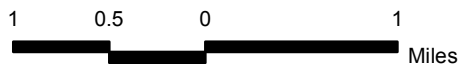


Exhibit 2-5 Williamson Act Lands

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ENVIRONMENTAL IMPACT REPORT

2.1.2 - Surrounding Land Uses

Exhibit 2-6 shows the surrounding communities.

West

The Stone Lakes National Wildlife Refuge, managed by the U.S. Fish and Wildlife Service, protects natural habitats and agricultural resources, forms the western boundary of the project site. The Stone Lakes National Wildlife Refuge lies within the Sacramento-San Joaquin Delta. Land uses within the Refuge include aquatic habitat, annual grasslands, seasonal wetlands, pastures, oak woodlands, and agricultural uses. Agricultural uses occupy the area immediately next to the proposed SOIA Area's western boundary. County of Sacramento General Plan land use designations west of the project site include Agricultural Cropland, Recreation, and Resource Conservation.

North

The project site is bounded by the City of Elk Grove to the north. Residential uses dominate the western portion of the City, and rural residential and small-scale agricultural uses prevail in the eastern portion of the City, to the north of the proposed SOIA boundary. City of Elk Grove land use designations north of the project site include Commercial, Medium Density Residential, Southeast Policy Area, Low Density Residential, and Estate Residential. The Laguna Ridge Specific Plan lies approximately 0.5 mile north of Kammerer Road.

Also north lies the Southeast Policy Area, which has no pending land use entitlements. A 2006 application for the Southeast Policy Area was withdrawn last year (2010). Any future planning for the Southeast Policy Area will need to be consistent with the General Plan's Land Use Element. Adjacent to the north is the approved Sterling Meadows project, comprising 984 single-family units and 200 multi-family units. The Lent Ranch Marketplace Special Planning Area lies to the north, with frontage along SR-99.

East

The Community of Cosumnes and unincorporated community of Wilton lie to the east and are not part of the proposed SOIA. Wilton is primarily rural in character, and rural residential development on large lots is typical of the area. Rural residential and agricultural uses exist immediately east of the project boundary. Land in this area also lies within the FEMA 100-year floodplain. County of Sacramento land use designations east of the project site include Agricultural Cropland, Natural Preserve, and Resource Conservation.

South

The unincorporated communities of Bruceville and Point Pleasant lie to the south and are not part of the proposed SOIA. These communities are within the unincorporated Community of Franklin-Laguna. Land uses in this area are similar to the adjacent agricultural land uses within the project

Project Description

site. County of Sacramento General Plan land use designations south of the project site include Agricultural Cropland.

2.1.3 - Land Use Designations

The proposed SOIA does not change or propose to change any land use designations. The existing land uses for the project area are determined by the County's General Plan designations for the area. The current land use and zoning designations, as defined by the County's General Plan and Zoning Ordinance, are described in Exhibit 2-7 and Exhibit 2-8, respectively. As shown in Table 2-1 and Table 2-2, the primary land use within the project site is agriculture.

Table 2-1: Existing Land Use

County General Plan Land Use	Acreage
Agricultural Cropland	5,645
Agricultural Cropland-RCA	463
Agricultural Residential	27
Commercial/Office	14
General Agriculture (20 acre)	1,521
Intensive Industrial	34
Low Density Residential	87
Natural Preserve	78
Total	7,869
Source: City of Elk Grove, Sphere of Influence Amendment Application, 2010.	

Table 2-2: Existing Zoning

County Zoning	Acreage
A2 ^a	53
Agricultural-20 acres (AG20)	302
Agricultural-40 acres (AG40)	53
Agricultural-80 acres (AG80)	7,328
Agricultural Residential-2 acres (AR2)	18
Agricultural Residential-10 acres (AR10)	50
Limited Commercial zone (LC)	8
Heavy Industrial (M2)	20
Single Family Zone (R-1-A)	35

Table 2-2 (cont.): Existing Zoning

County Zoning	Acreage
RR	2
Total	7,869
Note: ^a Multiple zoning designations: Agricultural-40 acres (AG40), Agricultural-80 acres (AG80) Source: Sacramento County NAIP, 2009.	

2.2 - Project Characteristics

The proposed project consists of a request initiated by the Elk Grove City Council (Resolution #2008-54) to Sacramento Local Agency Formation Commission (LAFCo) to amend the City of Elk Grove's SOI. The current SOI is coterminous with the City boundary. The application to amend the SOI includes 7,869 acres generally described as the areas south of Bilby Road/Kammerer Road and Grant Line Road, as shown in Exhibit 2-2. Current City of Elk Grove land use projections indicate that future growth may require additional lands outside of the current city boundary.¹ The City's available residential, industrial, and commercial land inventory is in the process of building out and may be unable to accommodate all anticipated urban growth within the city limits. As a result, the City needs to establish a direction to accommodate its anticipated future growth by designating an area for long-term planning. For purposes of analyzing environmental impacts, LAFCo has developed land use assumptions in the following sections that would allow LAFCo to understand environmental effects that may result from future anticipated growth during future annexations. There are no specific land use entitlements proposed at this time in conjunction with the proposed SOIA. California Government Code Section 65300 provides that a city may comprehensively plan for lands outside of its jurisdiction without the area being within an approved SOI. However, while the Elk Grove City Council has expressed its desire to have the proposed SOI area master planned, the Council has explicitly stated that no comprehensive planning of the area will occur until LAFCo approves the SOIA.

The current City boundaries and coterminous SOI encompass 26,974 acres. The proposed SOI Amendment would expand the existing SOI, not city limits, by 7,869 acres, or by 29 percent, to a total SOI of 34,843 acres. However, anticipated future growth and expansion through the annexation process would be limited to areas outside of the FEMA 100-year floodplain, in accordance with Elk Grove Safety Policy SA 15. Likewise, the Central Valley Flood Management Planning Program will require 200-year floodplain protection for urban areas. This would limit future growth to 6,882 acres of the proposed 7,869-acre SOI expansion, leaving 13 percent of the area for non-urban uses, such as open space. Table 2-3 shows the total acreages in the existing and proposed SOIA Areas.

¹ City of Elk Grove, Sphere of Influence Amendment Application, 2010.

Table 2-3: Existing and Proposed Sphere of Influence Area

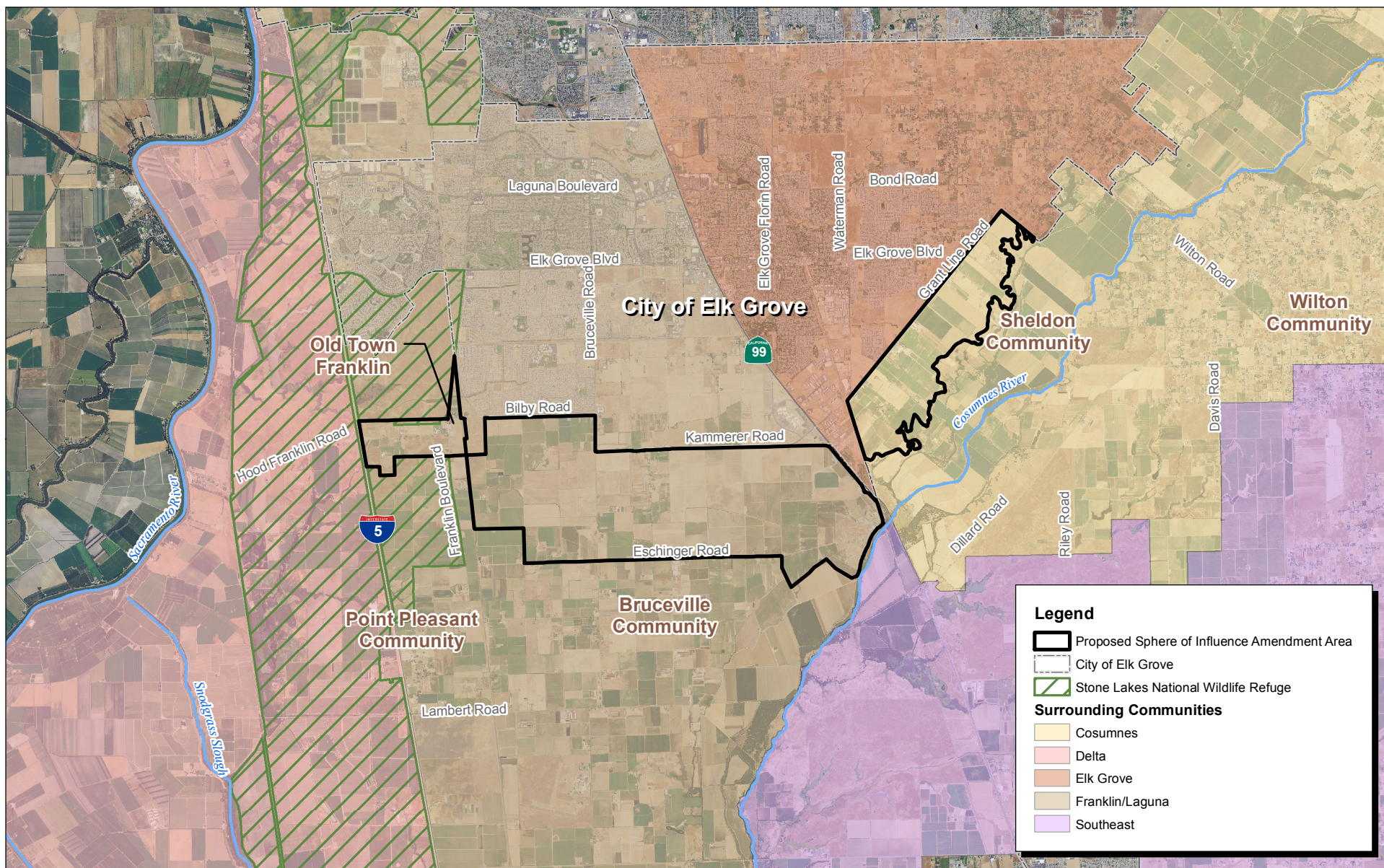
SOI Boundary	Acreage
Current City boundaries/SOI	26,974
Proposed SOI Amendment	7,869
Overall SOI area	34,843
Source: City of Elk Grove, Sphere of Influence Amendment Application, 2010.	

Nearby communities of interest include the unincorporated communities of Bruceville, Old Town Franklin, Point Pleasant, Sheldon, and Wilton. Bruceville and Point Pleasant are south of the proposed SOIA Area. Old Town Franklin is immediately adjacent to the City and is included within the proposed SOIA Area. Wilton is located across the Cosumnes River, outside of the proposed SOIA Area.

The City of Elk Grove and the County of Sacramento have continued to work collaboratively to establish a “joint vision” shared between the City and County regarding the future planning and preservation activities within the City’s proposed SOIA Area. The proposed SOIA is consistent with these ongoing discussions.

Land Use Assumptions

The following land use assumptions are intended to provide a general program level concept of the future and potential impacts that may result from future development in the SOIA Area. As previously stated, these assumptions have been developed by LAFCo for the purposes of understanding possible environmental effects that should be considered with future annexation proposals. They do not necessarily represent the City’s vision for land use distribution in the SOIA Area. In consultation with LAFCo, the City has provided anticipated growth and land needs outside its existing City limits/SOI. As shown in Table 2-4, the City expects that it would require a total of 6,327 acres outside of the city limits to accommodate the City’s projected job and housing growth to 2035. The amount of land projected for employment-oriented land uses would be 34 percent and residential uses 66 percent. The proposed SOIA Area incorporates 7,869 acres of which only 6,882 is developable as discussed earlier. Assuming the same percentages, land available for employment-generating uses would be 2,340 acres, and land available for residential uses would be 4,542 acres within the SOIA Area.



Source: Sacramento County NAIP, 2009, County of Sacramento, City of Elk Grove, 2009. USFWS National Cadastral Data, 2011.



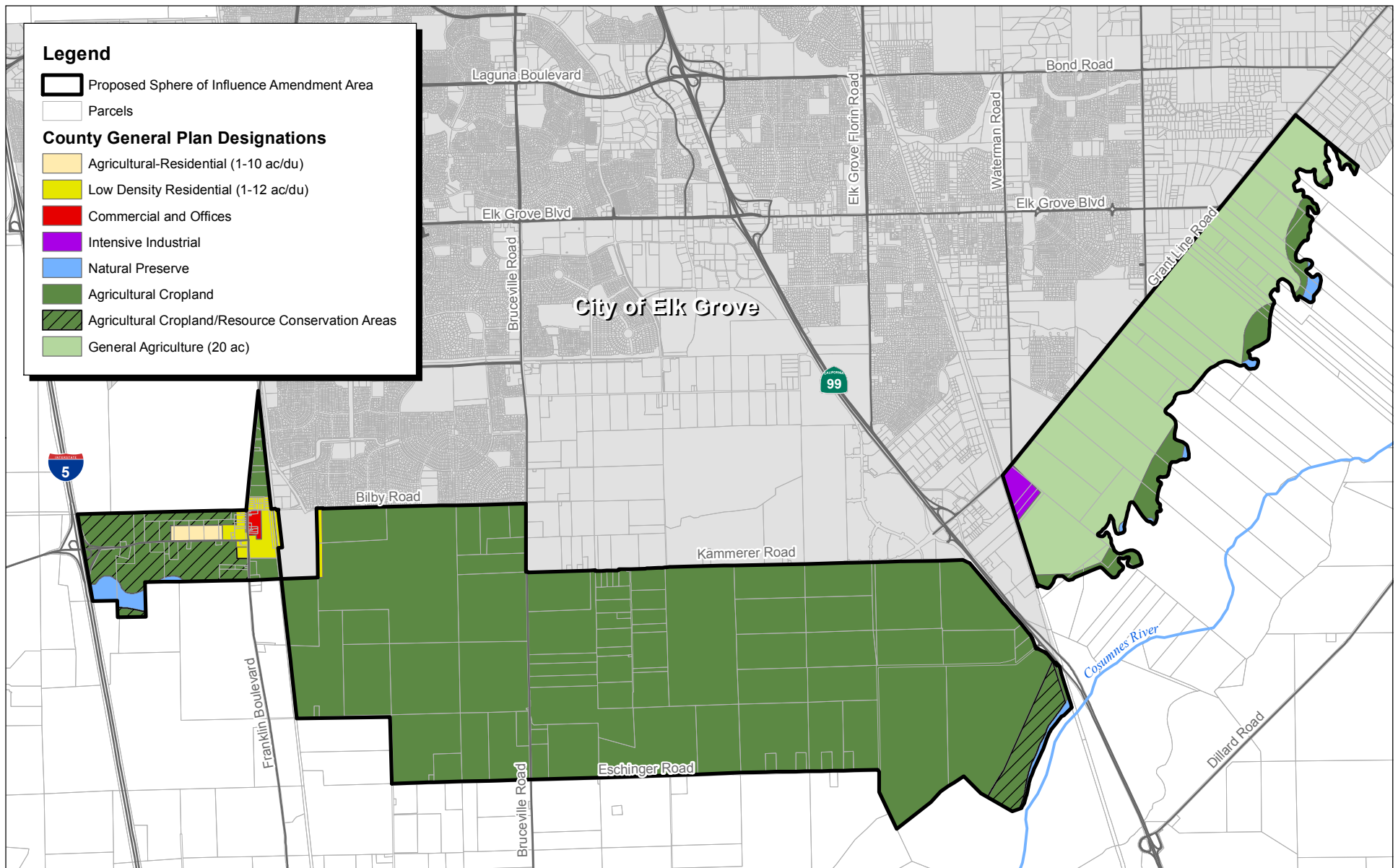
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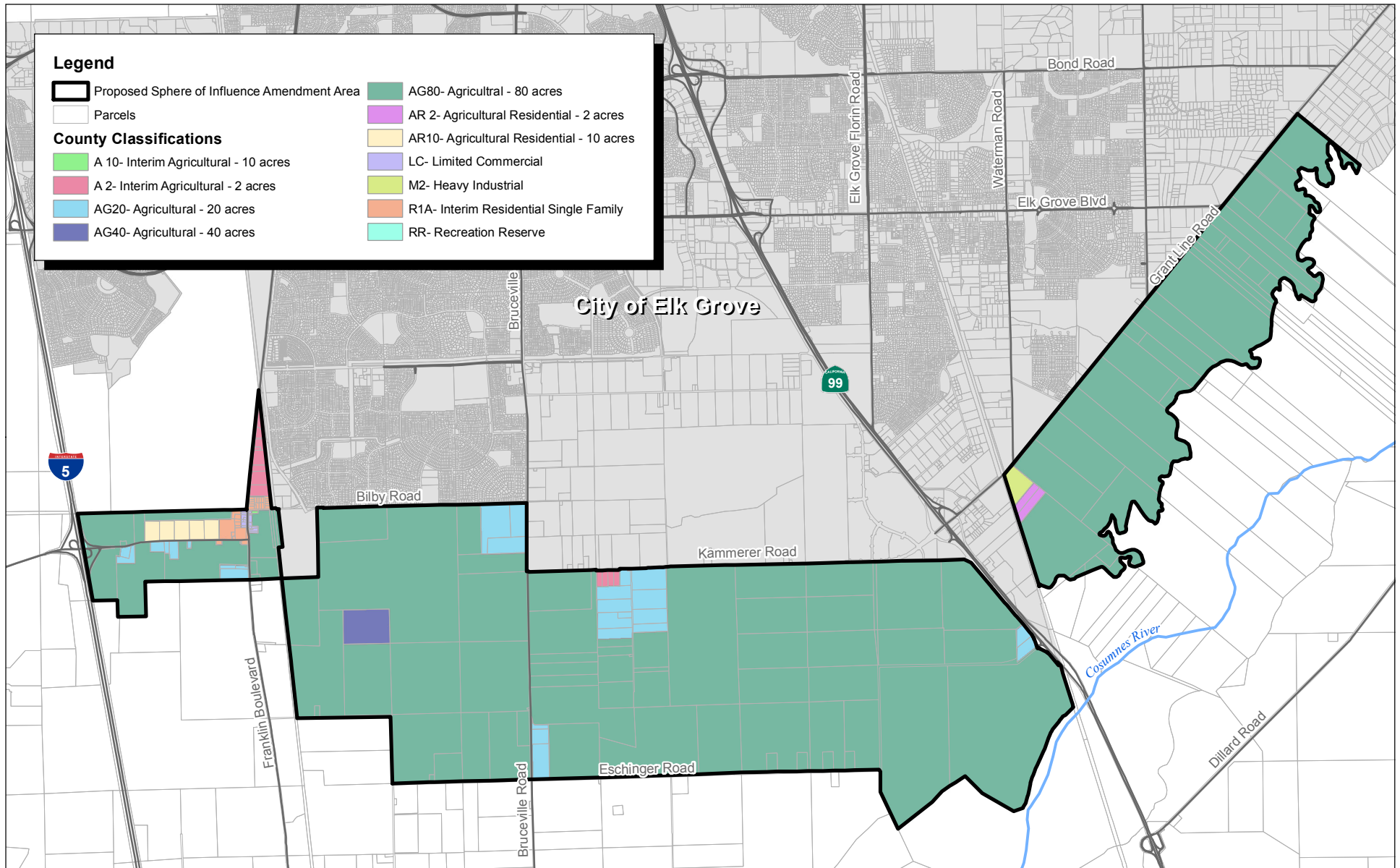
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Exhibit 2-6 Surrounding Communities

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Source: Sacramento County NAIP, 2009, County of Sacramento, City of Elk Grove, 2009.



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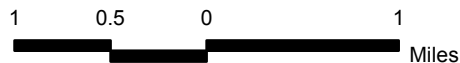


Exhibit 2-8 Existing County Zoning Classifications

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ENVIRONMENTAL IMPACT REPORT

Table 2-4: City of Elk Grove Future Land Demand Projections

Land Demand Projections	City of Elk Grove Projected Scenario
Existing employment land acres	4,708
Employees percent difference from 2008	68%
Projected 2035 employment land acres*	7,888
Employment land acreage needed outside the existing city boundary	3,180
Existing dwelling land acres	17,493
Dwelling units percent difference from 2008	35%
Projected 2035 dwelling land acres*	23,559
Dwelling land acreage needed outside the existing city boundary	6,065
New growth acreage needed	9,246
Available vacant land within existing City	2,918
Total acreage needed outside the existing city boundary	6,327
Notes: Calculated by Elk Grove Staff * Assumes Sterling Meadows Policy Area, Southeast Area Specific Plan, Laguna Ridge Specific Plan, and Elk Grove Triangle Policy areas, plus 500 acres of other areas within the City are currently vacant Source: City of Elk Grove	

The land use assumptions used for the proposed SOIA Area are based on the buildout assumptions used for the 2003 City of Elk Grove General Plan Update DEIR and shown in Table 2-5. The same percentages of development are used for the identified land use categories and are applied to develop a land use scenario for the SOIA Area, as shown in Table 2-6.

Table 2-5: City of Elk Grove General Plan Land Use Summary at Buildout within the City Limits (General Plan 2003 DEIR)

Land Use Category	Acreage	Percentage
Rural Residential (0.1 to 0.5 du/acre)	5,256	36
Estate Residential (0.6 to 4.0 du/acre)	1,034	7
Low Density Residential (4.1 to 7.0 du/acre)	7,729	53
Medium Density Residential (7.1 to 15.0 du/acre)	425	3
High Density Residential (15.1 to 30.0 du/acre)	247	2
Total	14,691	100

Project Description

Table 2-5 (cont.): City of Elk Grove General Plan Land Use Summary at Buildout within the City Limits (General Plan 2003 DEIR)

Land Use Category	Acreage	Percentage
Office/Multi-Family (20.0 du/ac maximum)	206	6
Commercial/Office	39	1
Commercial/Office/Multi-Family (20.0 du/ac maximum)	45	1
Commercial	932	28
Office	65	2
Public Schools	683	21
Institution	160	5
Public/Quasi Public	325	10
Light Industry	350	11
Heavy Industry	505	15
Total	3,310	100
Note: These acreages do not include acreages within Policy Areas and Open Space Land designations shown on the Land Use Map.		

Table 2-6: Proposed Land Use Projections within the SOIA Area

Land Use Category	Acres Proposed within the SOIA
Rural Residential (0.1 to 0.5 du/acre)	1,625
Estate Residential (0.6 to 4.0 du/acre)	320
Low Density Residential (4.1 to 7.0 du/acre)	2,390
Medium Density Residential (7.1 to 15.0 du/acre)	131
High Density Residential (15.1 to 30.0 du/acre)	76
Total	4,542
Office/Multi-Family (20.0 du/ac maximum) ²	146
Commercial/Office ²	28
Commercial/Office/Multi-Family (20.0 du/ac maximum) ²	32
Commercial	659
Office	46
Public Schools	483
Institution	113

Table 2-6 (cont.): Proposed Land Use Projections within the SOIA Area

Land Use Category	Acres Proposed within the SOIA
Public/Quasi Public	230
Light Industry	247
Heavy Industry	357
Total	2,340
Open Space¹	987
Total SOIA Area	7,869
Note: ¹ Area limited FEMA 100-year floodplain. ² Mixed-use designations have been calculated as a percentage of total acres available for employment. Source: Michael Brandman Associates, 2011	

Roadways

A diversity of local roadways and facilities exist within or adjacent to the SOIA Area. The major roads serving the area include Bilby Road, Kammerer Road, Hood-Franklin Road, Grant Line Road, Eschinger Road, and Bruceville Road. Hood-Franklin Road, Kammerer Road, and Grant Line Road provide direct access to I-5 and SR-99. No new roads or road improvements are proposed as part of this application.

The SOIA Area currently requires minimal circulation and roadway services, as the area remains primarily agricultural. Since no specific land use plan has been defined, existing uses are expected to remain largely unchanged. Existing service providers are expected to continue the current service level. Addition of the SOIA Area would cause no additional, immediate demand for circulation service and roadway infrastructure; however, it is reasonably foreseeable, based on land use assumptions, to accommodate development that is due to land and job growth in the region that would lead to an increased demand for circulation service and roadway infrastructure in the future.

Utilities

The full array of service considerations are more fully discussed in the Municipal Services Review, which is not considered a project under CEQA.

Storm Drainage

The SOIA Area currently requires minimal storm drainage services, as the area remains primarily agricultural. Since no specific land use plan has been defined, existing uses are expected to remain the same. Existing service providers are expected to continue the current service level. Addition of the SOIA Area would cause no additional, immediate demand for municipal storm drainage service and infrastructure. Accordingly, no new storm drainage infrastructure is proposed; however, it is reasonably foreseeable, based on land use assumptions, to accommodate development that is due to

Project Description

land and job growth in the region that would lead to an increased demand for storm drainage infrastructure in the future.

Water

The SOIA Area currently requires minimal municipal water services, as the area remains primarily agricultural. Since no specific land use plan has been defined, existing uses are expected to remain the same. Existing service providers are expected to continue the current service level. Addition of the SOIA Area would cause no additional immediate demand for municipal water service, water supplies, and infrastructure. Accordingly, no new water infrastructure is proposed; however, it is reasonably foreseeable, based on land use assumptions, to accommodate development that is due to land and job growth in the region that would lead to an increased demand for municipal water service, water supplies, and infrastructure in the future.

Sacramento County Water Agency (SCWA) is the logical municipal water service provider for residents in the SOIA Area. SCWA would need to plan for the financing and extension of infrastructure and services to fully serve the entire SOIA Area as part of the comprehensive planning for the area. However, this is not a part of the subject SOIA application and is beyond the scope of this EIR.

Wastewater

The SOIA Area currently does not require or receive any existing municipal wastewater services, as the area remains primarily agricultural. Since no specific land use plan has been defined, existing uses are expected to remain the same. Existing service providers are expected to continue the current service level. Addition of the SOIA Area would cause no additional immediate demand for municipal wastewater service and infrastructure. Accordingly, no new wastewater infrastructure is proposed; however, it is reasonably foreseeable, based on land use assumptions, to accommodate development that is due to land and job growth in the region that would lead to an increased demand for municipal wastewater and infrastructure in the future.

The Sacramento Area Sewer District (SASD) may be the future local sanitary sewer collection and transmission service provider for residents in the SOIA Area. The Sacramento Regional County Sanitation District (SRCSD) may be the wastewater treatment service provider, under a similar scenario. The SOIA Area is not within the existing Sphere of Influence of either district. If future annexation proposals include these service providers, the City of Elk Grove would need to annex into the SRCSD and SASD service areas. The districts would need to extend infrastructure and services to fully serve the entire SOI Amendment area. However, this is not a part of the subject SOIA application and is beyond the scope of this EIR.

Electricity and Natural Gas

Sacramento Municipal Utility District (SMUD) and Pacific Gas and Electricity (PG&E) are the service providers in the SOIA Area and would remain the logical electrical and natural gas service providers if the SOIA is approved. Since no land use changes are proposed, there is no change in the existing level of electricity and natural gas services in the area. Accordingly, no new electrical or natural gas infrastructure is proposed; however, it is reasonably foreseeable, based on land use assumptions, to accommodate development that is due to land and job growth in the region that would lead to an increased demand for electricity and natural gas services in the future.

2.2.1 - Construction Activities

The proposed project does not include any land development activity. The project may indirectly result in indirect future construction activities; however, there is currently not enough information to estimate or project future construction at this time.

2.2.2 - Project Background

Over the course of 2007, the Elk Grove City Council initiated the process of comprehensively planning the Urban Study Areas as outlined in the City's General Plan. The initially identified boundary for the City's SOI was the same as the Urban Study Area boundary, extending south of the existing city limits to the edge of the 100-year flood plain boundary of the Cosumnes River. However, prior to submitting its application to LAFCo, the City and County met and conferred regarding the proposed boundaries, development standards, and planning and zoning requirements with the County, pursuant to Government Code Section 56425(b). The City complied with this requirement by meeting with County staff during four City-County meetings between December 2007 and February 2008. During the meetings, the City and County staff discussed a number of mutual concerns, including lands needed to accommodate projected growth, drainage and flooding issues, future growth outside of the 100-year floodplain, infrastructure and municipal services, habitat and open space preservation, agricultural users, and coordination with the South Sacramento Habitat Conservation Plan (SSHCP). Based on those discussions, the SOIA boundaries were modified to the proposed SOIA boundaries, extending only as far as Eschinger Road to the south and terminating at the edge of the 100-year floodplain of the Cosumnes River.

The proposed SOIA Area includes the area that connects to I-5 at the Hood-Franklin interchange. This area was not included in the Urban Study Area, but it is proposed by the City to be included in the proposed SOIA application to serve as a gateway from I-5 to the City.

2.2.3 - Proposed General Plan and Zoning

The City's General Plan designates the affected territory as an Urban Study Area. The Urban Study Area designation envisions the areas in which future growth, to some extent, could occur. The General Plan does not identify a formal land use plan for these areas, but it describes the following

Project Description

policies to guide the study of future development in cooperation with the public and other agencies and parties:

- **Policy LU-16:** The areas designated in the Planning Area as “Urban Study Areas” are envisioned as areas in which urbanization to some extent could occur, generally in compliance with the following criteria:
 - Development should be limited to areas outside of the 100-year flood- plain. Development should take place in compliance with the goals and policies of this General Plan.
 - Any study of potential land uses in these areas should be accomplished in cooperation with the County of Sacramento, the Sacramento Local Agency Formation Commission, and other agencies and parties with ownership or jurisdiction of lands in and near the study area.
 - Any study of land uses in these areas should be accompanied by an environmental evaluation of the potential impacts of development.
 - Prior to the completion of land use studies, the City’s policy is that County of Sacramento land use designations in effect as of December 31, 2002, are retained.
- **Policy LU-17:** Implement a comprehensive and city-wide strategy for the preservation of open space, habitat and agriculture, both inside and outside the City’s existing city limits.

A growth scenario is envisioned in Table 2-6. However, no specific land use designation or rezoning is proposed or required at this point. Current County General Plan land use designations are anticipated to remain the same until such land planning by the City occurs, in conjunction with a General Plan amendment, rezoning, and annexation application. Land use jurisdiction of the SOIA Area would not change, and any related development entitlements would not take effect until such time as an annexation may be approved.

2.3 - Project Objectives

The objectives of the proposed project are to:

- To amend the Sphere of Influence (SOI) boundary beyond the existing Elk Grove city limits to accommodate orderly and sustainable growth consistent with the City’s General Plan.
- To implement the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 consistent with public service conditions present or reasonably foreseeable in the proposed SOI Amendment area.
- To establish a logical boundary within which future and timely annexation requests by the City of Elk Grove may be considered.

- To establish an SOI for the City of Elk Grove that will facilitate the protection of important environmental, cultural, and agricultural resources.

2.4 - Intended Uses of This Draft EIR

This Draft EIR is being prepared by Sacramento LAFCo to assess the potential environmental impacts that may arise in connection with actions related to implementation of the proposed project. Pursuant to CEQA Guidelines Section 15367, the Sacramento LAFCo is the lead agency for the proposed project and has discretionary authority over the proposed project and approval of the City's SOIA request. This Draft EIR is intended to serve as an informational document for the public agency decision makers and the public regarding the proposed project. This document is not intended as a programmatic document for use to "tier" the CEQA analysis for future projects.

2.4.1 - Discretionary and Ministerial Actions

Discretionary approval is required by the Sacramento LAFCo for implementation of the proposed project. The project application would require the following discretionary approval and action:

- Sphere of Influence Amendment – Sacramento Local Agency Formation Commission

2.4.2 - Responsible and Trustee Agencies

The Sacramento Local Agency Formation Commission is granted sole authority to consider local agency reorganizations under the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000. As stated in Section 1, Introduction, this document is not intended as a programmatic document for use to tier the CEQA analysis for future projects.

There may be a number of agencies who may serve as Responsible and Trustee Agencies, pursuant to CEQA Guidelines Section 15381 and Section 15386, respectively during future planning or development activities. These agencies may include but are not limited to the following:

- United States Army Corps of Engineers
- United States Fish and Wildlife Service
- California Department of Fish and Game
- California Department of Transportation
- California Department of Conservation
- Central Valley Regional Water Quality Control Board
- Sacramento County Water Agency
- Sacramento Area Sewer District
- Sacramento Regional County Sanitation District

SECTION 3: ENVIRONMENTAL IMPACT ANALYSIS

Organization of Issue Areas

This Draft Environmental Impact Report (Draft EIR) provides analysis of impacts for those environmental topics where it was determined in the NOP, or through subsequent analysis that the proposed project would result in “potentially significant impacts.” Sections 3.1 through 3.16 discuss the environmental impacts that may result with approval and implementation of the proposed project.

Issues Addressed in This EIR

The following environmental issues are addressed in Section 3:

- Aesthetics, Light, and Glare
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology, Soils, and Seismicity
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Transportation and Traffic
- Utilities and Service Systems

Each environmental issue area in Sections 3.1 through 3.16 contains a description of:

1. The environmental setting as it relates to the specific issue
2. The regulatory framework governing that issue
3. The methodology used in identifying the issues
4. The significance criteria
5. An evaluation of the project-specific impacts and identification of mitigation measures
6. A determination of the level of significance after mitigation measures are implemented

Determination of Significance

Pursuant to CEQA Guidelines Section 15125(a), an EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the Notice of Preparation (NOP) is published (in this case, 2010). This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. The environmental setting is presented from a site, local, sub-regional, and/or regional perspectives, as appropriate to each environmental topic. The environmental setting is normally the baseline physical condition by which the lead agency determines whether an impact is significant. The environmental effects of the project are defined as changes to the environmental setting that are either direct or reasonably foreseeable indirect physical changes to the environment that are attributable to the project.

According to CEQA Statute Section 21065.3, a “project-specific effect” means all the direct or indirect environmental effects of a project other than cumulative or growth-inducing effects. According to the CEQA Guidelines Section 15382, a significant effect on the environment means “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project.” For each category of physical condition evaluated in this EIR, thresholds of significance have been developed using criteria discussed in the CEQA Guidelines; criteria based on factual or scientific information; criteria based on regulatory standards of local, state, and federal agencies; and criteria based on goals, objectives, and policies identified in the Sacramento County General Plan and the City of Elk Grove General Plan.

Mitigation measures identified in this report are characterized by one of three categories: (1) measures necessary to reduce the identified impact below a level of significance; (2) measures recommended to reduce the magnitude of a significant impact, but not below a level of significance; and (3) measures recommended to reduce the magnitude of a less than significant impact. Where implementation of more than one mitigation measure is needed to reduce an impact below a level of significance, this is noted.

The Cortese-Knox-Hertzberg Act Sections 56885.5 and 56886 provide the Sacramento LAFCo with broad authority to condition incorporation projects that promote effective and orderly organization changes. However, Section 56886 does prohibit LAFCo from directly regulating (or mitigating) land use and property development (including the subdivision of land).

Mitigation and Findings

Determining the severity of project impacts is fundamental to achieving the objectives of CEQA. CEQA Guidelines Section 15091 requires that decision makers mitigate, as completely as is feasible, the significant impacts identified in the Final EIR. If the EIR identifies any significant unmitigated impacts, CEQA Guidelines Section 15093 requires decision makers in approving a project to adopt a

statement of overriding considerations that explains why the benefits of the project outweigh the adverse environmental consequences identified in the EIR.

Impact Analysis and Mitigation Measure Format

The format adopted in this EIR to present the evaluation of impacts is described and illustrated below.

Summary Heading of Impact

Impact AES-1: An impact summary heading appears immediately preceding the impact description (Summary Heading of Impact in this example). The impact abbreviation identifies the section of the report (AES for Aesthetics, Light, and Glare in this example) and the sequential order of the impact (1 in this example) within that section. To the right of the impact number is the impact statement, which identifies the potential impact.

Impact Analysis

A narrative analysis follows the impact statement.

Significance Before Mitigation

This section identifies the level of significance of the impact before any mitigation is proposed.

Mitigation Measures

In some cases, following the impact discussion, reference is made to state and federal regulations and agency policies that would fully or partially mitigate the impact. In addition, policies and programs from applicable local land use plans that partially or fully mitigate the impact may be cited.

Project-specific mitigation measures, beyond those contained in other documents, are set off with a summary heading and described using the format presented below:

MM AES-1a Project-specific mitigation is identified that would reduce the impact to the lowest degree feasible. The mitigation number links the particular mitigation to the impact with which it is associated (**AES-1** in this example); the letter identifies the sequential order of that mitigation for that impact (**a** in this example).

Significance After Mitigation

This section identifies the resulting level of significance of the impact following mitigation.

Abbreviations used in the mitigation measure numbering are:

Code	Environmental Issue
AES	Aesthetics, Light, and Glare
AG	Agricultural Resources
AIR	Air Quality
BIO	Biological Resources
CUL	Cultural Resources
GEO	Geology, Soils, and Seismicity
GHG	Greenhouse Gas Emissions
HAZ	Hazards and Hazardous Materials
HYD	Hydrology and Water Quality
LU	Land Use and Planning
MIN	Mineral Resources
NOI	Noise
POP	Population and Housing
PSU	Public Services
TRANS	Transportation and Traffic
USS	Utilities and Service Systems

3.1 - Aesthetics

3.1.1 - Introduction

This section describes the existing aesthetics, light, and glare setting and potential direct and indirect effects from project implementation on visual resources and the site and its surroundings.

Descriptions and analysis in this section are based on site reconnaissance by Michael Brandman Associates, as well as review of the Sacramento County General Plan, City of Elk Grove General Plan and the proposed project.

3.1.2 - Environmental Setting

Aesthetic Character

Regional Setting

Sacramento County lies near the center of California's Central Valley, at the southern end of the Sacramento Valley. Aesthetic views within the valley region are generally characterized by broad, sweeping panoramas of flat agricultural lands and open space dotted with trees, divided by numerous rivers and creeks, and populated with scattered towns and cities. To the east, the Sierra Nevada and their foothills form a background, and the Coast Range provides a backdrop on the western horizon.

In general, the dominant visual characteristics within the unincorporated area are the open sections of the valley floor, urbanized land uses, agricultural land uses, rivers and creeks, and trees. Because the unincorporated area consists of relatively flat terrain, views of these resources are available from roadways throughout the area, including US 50, Interstate 5 (I-5), State Route 99 (SR-99), SR-16, SR-160/River Road, Grant Line Road, and Scott Road. Oak trees, vernal pools, streams, creeks, the Delta region and the historic structures and rural communities such as Locke and Sloughouse are among the County's visual heritage that many residents value as part of their quality of life. Distant views of the Sierra Nevada, the Coast Range, Mount Diablo, and the Sutter Buttes can be visible under clear conditions and are also considered part of the County's visual heritage.

City of Elk Grove

The City of Elk Grove covers approximately 42 square miles (26,954 acres) in the southern portion of Sacramento County. Urban land uses in the City generally consist of residential, commercial, office, industrial, recreational, and public uses within and adjacent to the City of Elk Grove. Natural features within the vicinity of the City include the Stone Lakes National Wildlife Refuge, the Cosumnes River, the Sacramento River and associated tributaries (such as Deer Creek, Morrison Creek, and Laguna Creek), and vegetation communities such as valley oak woodland, annual grassland, valley foothill riparian, and agricultural lands. Agricultural uses are concentrated the eastern portion of the City and on a smaller portion of south Elk Grove. The remaining portions of the City are developed with urban uses.

Project Site

The 7,869-acre project site primarily contains agricultural uses consisting of fallow/row crops/nursery, orchards, vineyard, and livestock operations. Few structures exist within the project site, and these are limited to barns, rural housing, storage sheds, and related structures. A small area surrounding the intersections of Hood Franklin Road/County Road J8 and Bilby Road/County Road J8, identified as the Old Town Franklin community, is developed with relatively suburban uses. The existing land uses in this community can be described as a mix of rural housing, light industrial, commercial, and public facilities. Sunset Sky ranch Airport (Elk Grove Airport) is a privately owned airport that lies in the eastern portion of the project area, immediately adjacent to the existing Elk Grove city limits. Effective July 1, 2010 the airport has been closed. Exhibit 2-4 shows the existing land uses on the project site.

The project site is mapped as containing 446.4 acres of Prime Farmland and 4,862.8 acres of Farmland of Statewide Importance. Both designations fall under the Important Farmland designation as classified by the California Department of Conservation Farmland Mapping and Monitoring Program.

Approximately 2,474 acres of the project site are encumbered by an active Williamson Act contract. Some property owners have filed Notices of Non-Renewal on approximately 548.8 acres to initiate termination of the contract. Exhibit 2-5 shows the Sphere of Influence Amendment (SOIA) properties for which a Non-Renewal Notice has been filed.

Exhibits 2-3a and 2-3b provide photographs of the project area.

Surrounding Land Uses

Below is a description of surrounding land uses, including views from and of the project site. Considering the greater expanse of SOIA boundaries, the views described in this section exemplify general characteristics of the project area and the surrounding areas.

West

Stone Lakes National Wildlife Refuge, which protects scarce natural habitats and agricultural resources, forms the western boundary of the project site. The Stone Lakes National Wildlife Refuge lies within the Community of Delta that lies west of the project site. Land uses within the Refuge include aquatic habitat, annual grasslands, seasonal wetlands, pastures, oak woodlands, and agricultural uses. Agricultural uses occupy the area immediately next to the proposed SOIA's western boundary. County of Sacramento land use designations west of the project site include Agricultural Cropland and Resource Conservation.

Views of the agricultural fields are the primary views to the west. The Union Pacific Railroad forms the western boundary of the project site and can be seen from the west, followed by the agricultural

uses to the east. The vertical elements in this visual expanse are the power transmission lines and a few scattered structures that are visible in the distance.

North

The project site is bounded by the City of Elk Grove to the north. Residential uses dominate the eastern portion of the City and agricultural uses prevail in the western portion of the City, to the north of the SOIA boundary. City of Elk Grove land use designations north of the project site include Commercial, Medium Density Residential, Southeast Policy Area, Low Density Residential, and Estate Residential.

The views of single-family residences up to two stories high are the primary views to the north, west of Bruceville Road. A senior apartment community (Seasons at Laguna Ridge), located at the northeast corner of Bruceville Road and Bilby Road, is also visible to the north. The views to the north, east of Bruceville Road consist primarily of agricultural fields and related residences and structures. Views of commercial and light industrial development are available at the junction of SR-99 and Grant Line Road. The land uses on the north side have unobstructed views of the project site.

East

The Community of Cosumnes and unincorporated communities of Wilton and Sheldon lie to the east of the project site. Both Wilton and Sheldon are primarily rural in character and rural residential development on large lots is typical of the communities. Rural residential and agricultural uses exist immediately east of the project boundary. Cosumnes River and its associated FEMA 100-year floodplain form the eastern boundary. County of Sacramento land use designations east of the project site include Agricultural Cropland and Natural Preserve.

The riparian areas associated with the Cosumnes River are visible to the east. Sunset Skyranch Airport (Elk Grove Airport) is a recently closed, privately owned airport that lies in the eastern portion of the project area, immediately adjacent to the existing Elk Grove city limits. Views of the remaining airport infrastructure may be available at a localized level. The land uses on the east side have unobstructed views of the project site that primarily include agricultural uses.

South

The unincorporated communities of Bruceville and Point Pleasant lie to the south of the proposed SOIA boundary. Land uses in this area are similar to the adjacent agricultural land uses within the project site. County of Sacramento land use designations south of the project site include Agricultural Cropland.

The project site has unobstructed views of agricultural land uses to the south. A light industrial development can be seen to the south at the intersection of Eschinger Road and Carroll Road. The land uses on the east side have unobstructed views of the project site

Light and Glare

The project site is sparsely developed and primarily used for agriculture and related activities. These rural land uses typically do not generate substantial amounts of glare, lighting, or illumination, and the ambient nighttime lighting and illumination levels are very low. Vehicles traveling along Bilby Road, Bruceville Road, Kammerer Road, Eschinger Road may contribute to some light and glare. However, these roads mainly lie along the project boundaries; as such, the existing light and glare conditions on the project site are low.

3.1.3 - Regulatory Framework

State

California Environmental Quality Act (CEQA)

CEQA affords protection for the environment, including aesthetic resources. The CEQA Guidelines Appendix G provides four criteria that may be used to evaluate the significance of visual quality impacts: negative effects on a scenic vista, damage to scenic resources within a state scenic highway, degradation of the visual character or quality of a site and its surroundings, and creation of a new source of substantial light or glare affecting views.

California Scenic Highway Program

The California Department of Transportation (Caltrans) administers the California Scenic Highway Program. The goal of the program is to preserve and protect scenic highway corridors from change that would affect the aesthetic value of the land adjacent to highways. SR-160 (River Road) is a State-designated scenic highway that runs on top of levees along the Sacramento River from the Contra Costa County line to the southern city limit of Sacramento. River Road meanders through the historic Delta agricultural areas and small towns along the Sacramento River.

Local

City of Elk Grove

Approval by LAFCo of this SOIA does not authorize any change in land use or governance. However, the proposed project would adjust the City of Elk Grove's SOI and allow the City the opportunity to file an annexation request with LAFCo to annex lands within the SOIA Area. The City of Elk Grove General Plan establishes goals and policies to guide both present and future development within the City's jurisdiction. The City of Elk Grove's General Plan policies and action items related to aesthetics that may apply to potential future development in the SOIA Area are provided below.

- **Policy CAQ-8:** Large trees (both native and non-native) are an important aesthetic (and, in some cases, biological) resource. Trees which function as an important part of the City's or a neighborhood's aesthetic character or as 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 an 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, which 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 Policy** 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 decisionmakers 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-8-Action 9:** Provide funds for education, programs, and materials emphasizing the value and importance of trees. Support private foundations with local funds for their tree planting efforts. Encourage the harvesting of native seeds and plants prior to the clearing of project sites.
- **Policy LU-35:** The City of Elk Grove shall require that new development—including commercial, office, industrial, and residential development— is of high quality and reflects the City's desire to create a high quality, attractive, functional, and efficient built environment.
- **LU-35-Action 1:** Prepare and adopt Design Guidelines for residential and nonresidential development.

- **LU-35-Action 2:** The Design Guidelines shall include a provision to minimize the use of reflective materials in building design in order to reduce the potential impacts of daytime glare.
- **LU-35-Action 3:** The Citywide Design Guidelines shall include provisions for the design of outdoor light fixtures to be directed/shielded downward and screened to avoid nighttime lighting spillover effects on adjacent land uses and nighttime sky glow conditions.
- **Policy LU-36:** Signs should be used primarily to facilitate business identification, rather than the advertisement of goods and services. Sign size limits and locations should be designated consistent with this policy.
- **LU-36-Action 1:** Amend the City's Sign Regulations to conform with this policy, adjusting maximum sign sizes, heights, etc.
- **Policy LU-37:** Require the construction of "City of Elk Grove" signage and landscape treatments at major entrances to the city.
- **LU-37-Action 1:** Develop an Entry Monument Master Plan which identifies the location of City entry statements and provides guidelines for the design of these features and their implementation, including funding.
- **Policy LU-38:** Reduce the unsightly appearance of overhead and aboveground utilities.
- **LU-38-Action 1:** To the extent possible, new utility facilities should be located underground. Facilities to be placed underground should include electrical transformers (where consistent with the guidelines of the electrical utility), water backflow preventers, and similar items.
- **LU-38-Action 2:** Require that development on sites with existing overhead utilities be required to place these facilities underground where consistent with the guidelines of the electrical utility.

3.1.4 - Methodology

Michael Brandman Associates (MBA) evaluated potential project impacts on aesthetics, light, and glare through site reconnaissance and review of applicable plans and policies. MBA personnel visited the project site and surrounding land uses in October 2010, and documented the site conditions through photographs and notation. The County of Sacramento General Plan and the County of Sacramento Zoning Code were reviewed to determine applicable policies for the proposed project.

3.1.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist of the CEQA Guidelines, aesthetics impacts resulting from the implementation of the proposed project would be considered significant if the project would:

- a) Have a substantial adverse effect on a scenic vista?
- b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?
- c) Substantially degrade the existing visual character or quality of the site and its surroundings?

- d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

3.1.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Scenic Vista

Impact AES-1: The proposed project would have a substantial adverse effect on a scenic vista.

Impact Analysis

This impact will evaluate the potential for the proposed project to adversely affect scenic vistas.

A scenic vista is generally considered a view of an area that has remarkable scenery or is a resource that is indigenous to the area. The project site is occupied with primarily agricultural land uses and consists of relatively flat terrain. Therefore, views of these resources are available from roadways throughout the area including SR-99 and I-5. Although the current land uses provide views of an agricultural landscape that is representative of the region, the project area does not contain resources that exemplify the agricultural history of the area (such as historic structures or landmarks; see Section 3.5, Cultural Resources).

However, the proposed SOIA does have the potential to indirectly alter the existing scenic vistas of the SOIA Area through the potential for future urbanization of the SOIA. The land use assumptions developed in Section 2.0, Project Description allow LAFCo to understand probable environmental effects that may result from future anticipated growth. Potential indirect impacts on scenic vistas include the following:

- Views of the valley from roadways such as Kammerer Road or Bruceville Road could significantly change. Instead of unobstructed views of the valley floor and distant hillsides, views from many locations could be blocked with the addition of numerous buildings. It is possible that many of the new buildings will be multi-story, some with heights far beyond what currently has been developed in the SOIA Area.
- It is reasonably foreseeable that views of the valley, whether from the valley floor (existing residences) or from the surrounding elevations would no longer be that of a rural and bucolic setting. Views could become that of an urban/suburban environment that is typical of many cities.

Scenic vistas could be adversely affected by the proposed project, and this would be potentially significant impact.

Aesthetics

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

No mitigation is available.

Level of Significance After Mitigation

Significant and unavoidable impact.

State Scenic Highways

Impact AES-2:	The project would not block views of scenic resources, including but not limited to trees, rock outcroppings, and historic buildings, within a state scenic highway.
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Impact Analysis

This impact will evaluate the potential for the proposed project to adversely affect scenic resources within a scenic highway.

The California Department of Transportation Scenic Highway Mapping System identifies SR-160 as an officially designated scenic highway. It provides a view of the river to the west and of extensive rich farmland to the east. SR-160 is located approximately 4 miles west of the project site's western boundary, and views of the project site either are obstructed by intervening land uses or have limited visibility from SR-160. Other significant natural features in the project area are the Cosumnes River, which provides natural scenic views, and adjacent agricultural lands, which provide an open visual resource. The riparian habitat associated with the Cosumnes River can be seen east of the project site.

Although the implementation of the SOIA could indirectly result in obstructed views from SR-160 and the loss of trees, potential rock outcroppings, and historic buildings within the view from SR-160 is located approximately 4 miles west of the project site's western boundary, and views of the project site either are obstructed by intervening land uses or have limited visibility from SR-160. Therefore, rock outcropping and historic buildings within the SOIA Area cannot readily be seen from the highway. Therefore, views of scenic resources within scenic highways would not be altered by the proposed project. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Visual Character

Impact AES-3: **The proposed project would degrade the visual character of the project site and its surroundings.**

Impact Analysis

This impact will evaluate the potential for the proposed project to degrade visual character.

The proposed project includes an application to the LAFCo requesting an amendment to the City's existing Sphere of Influence to include areas immediately south and southeast of the City. The land use assumptions developed in Section 2.0, Project Description, allow LAFCo to understand probable environmental effects that may result from future anticipated growth. If the intensity of development based on the land use assumptions occurs in the future, it would significantly alter—but not necessarily degrade—the visual character of the SOIA Area. The SOIA has the potential to indirectly develop the SOIA Area, an area encompassing approximately 7,000 acres. The rural, open space, agricultural character of the area could reasonably be foreseen to change to that of an urbanized environment. Existing buildings, which are limited in both number and size, would likely be demolished and replaced by hundreds of new buildings, potentially with heights up to five stories. Agricultural fields could be replaced with buildings, roads, parks, and urban landscaping. Indirect impacts resulting from this potential future growth would be potentially significant with regard to permanent alteration of visual character of the area from agricultural uses to urban uses.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

No mitigation is available.

Level of Significance After Mitigation

Significant and unavoidable impact.

Light and Glare

Impact AES-4: **Implementation of the proposed project would result in the introduction of substantial new sources of light and glare.**

Impact Analysis

This impact will evaluate the potential for proposed project to introduce new sources of light and glare.

The SOIA Area is primarily agricultural and sources of light and glare are minimal. Future development of urban uses in the SOIA Area would significantly impact night sky views and increase glare.

The SOIA could indirectly result in the urbanization of an area that is predominately rural and agricultural. In terms of nighttime views, the change could be significant because large areas with relatively little existing lighting could be replaced with hundreds of buildings and associated lighting. In addition to building lighting, it is reasonably foreseeable that hundreds of streetlights would be installed to serve development, along with the lighting of parking lots, outdoor signage, and recreational facilities. While all of this lighting could be designed to minimize lighting spillover effects, the cumulative effect could be substantial. Since approval of an SOIA by LAFCo indicates that the Commission has designated the revised SOI area for future growth, indirect impacts would be potentially significant with regard to increased light and glare. Implementation of Mitigation Measure AES-4 would serve to help reduce the increase in light and glare within the SOIA Area; however the urbanization of what is predominately rural and agricultural in nature will be a significant and unavoidable impact.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM AES-4 Prior to submitting any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove will develop a comprehensive light and glare reduction plan for the SOIA Area, or demonstrate to LAFCo how the application of then-existing city policies and ordinances to the SOIA would achieve the following goals:

- Meet the standard of allowing no offsite trespass of direct lighting and meeting dark skies criteria, unless demonstrated public safety needs could not be met while complying with these standards.
- The light and glare reduction plans should establish standards for outdoor urban lighting within the SOIA that would reduce high-intensity nighttime lighting and glare, including but not limited to requirements for directional shielding for street lighting, parking lot lighting, and other substantial light sources, and automatic shutoffs or motion sensors or lighting features to further reduce excess nighttime light.
- The light and glare reduction plans should require the use shielded or screened public lighting fixtures to prevent the light from shining off the surface intended to be illuminated.

Level of Significance After Mitigation

Significant and unavoidable impact.

3.2 - Agricultural Resources

This section describes and evaluates potential direct and indirect environmental impacts to agricultural resources that may result from the proposed City of Elk Grove Sphere of Influence Amendment (SOIA). Descriptions and analysis in this section are based on information provided by the California Department of Conservation Farmland Mapping and Monitoring Program and the United States Department of Agriculture. The Notice of Preparation identified the Agricultural Resources topical issue for evaluation (Sacramento Local Agency Formation Commission 2010).

3.2.1 - Environmental Setting

Project Site

The project site primarily contains agricultural uses with rural housing, light industrial, commercial, and public facilities. Agricultural-based General Plan land use designations account for approximately 97 percent of the land area within the SOIA Area.

Surrounding Agricultural Land Uses

West

Stone Lakes National Wildlife Refuge, which protects scarce natural habitats and agricultural resources, forms the western boundary of the project site. Land uses within the Refuge include pastures and agricultural uses. Agricultural uses occupy the area immediately next to the proposed SOIA's western boundary. County of Sacramento land use designations west of the project site include Agricultural Cropland, Recreation, and Resource Conservation.

North

The project site is bounded by the City of Elk Grove to the north. Land uses immediately north of the SOIA Area include suburban residential uses and vacant land.

East

Rural residential and agricultural uses exist immediately east of the project boundary. Land in this area also lies within the Federal Emergency Management Agency 100-year floodplain. County of Sacramento land use designations east of the project site include Agricultural Cropland, Natural Preserve, and Resource Conservation.

South

Land uses in this area are similar to the adjacent agricultural land uses within the project site. County of Sacramento land use designations south of the project site include Agricultural Cropland.

Agricultural Economy

Agriculture provides jobs directly through farming operations and in related industries such as food processing, transportation, equipment sales, and other vertically integrated production processes. Agriculture in the Central Valley provides more than 10 percent of all jobs. The sub-region in the

Central Valley least dependent on agricultural jobs is the Sacramento Metropolitan sub-region, representing only 1.7 percent of all jobs. In 2007, total gross agricultural production was estimated at \$36.6 billion. Of that, the Sacramento metropolitan region accounted for \$1.46 billion, or approximately 4 percent of the State's total production (Great Valley Center 2009).

Farmland Classifications

The California Department of Conservation Farmland Mapping and Monitoring Program (FMMP) classifies cultivated agricultural land into four categories, listed below:

- **Prime Farmland:** Land with the best combination of physical and chemical features able to sustain the long-term production of agricultural crops. These lands have the soil quality, growing season, and moisture supply needed to produce sustained high yields.
- **Unique Farmland:** Land of lesser-quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated but may include non-irrigated orchards or vineyards, as found in some climactic zones in California.
- **Farmland of Statewide Importance:** Land similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to hold and store moisture.
- **Farmland of Local Importance:** Land of importance in the local agricultural economy, as determined by each county's Board of Supervisors and a local advisory committee.

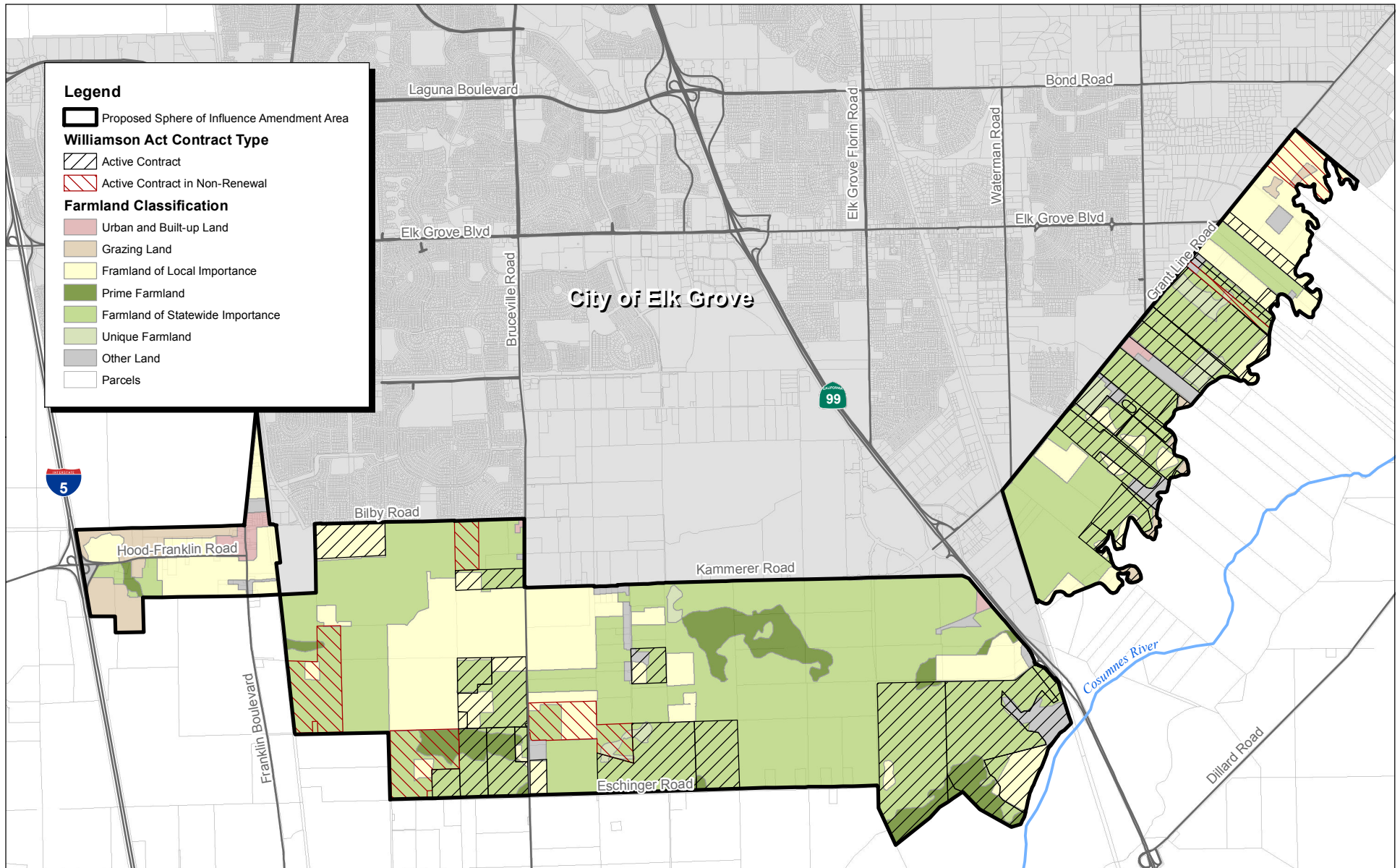
The project site contains land within all four farmland categories, as shown on Exhibit 3.2-1. Table 3.2-1 provides the allocation of farmland within the project site.

Table 3.2-1: FMMP Agricultural Lands

Farmland Category	Acres
Prime Farmland	446.40
Unique Farmland	122.40
Farmland of Statewide Importance	4,862.80
Farmland of Local Importance	1,928.70
Total	7,360.30
Note: Acreage calculations are based on the project boundary and source information provided by the City of Elk Grove. Source: Michael Brandman Associates, 2010.	

Williamson Act Contracts

The California Land Conservation Act of 1965, commonly called the Williamson Act, has long been the mainstay of Sacramento County's agricultural land preservation program. The purpose of the Williamson Act is to secure a long-term landowner commitment to maintain farmland in agricultural uses in exchange for assessment of the land based upon use rather than market value.



Source: County of Sacramento, City of Elk Grove, Farmland Mapping and Monitoring Program, 2008.

According to the General Plan Agricultural Element, by 1989—20 years after the program’s initiation—253,240 acres representing 38 percent of the County were enrolled within the Williamson Act program. Table 3.2-2 shows the acreage of Williamson Act contracts.

Table 3.2-2: Williamson Act Contracts

Contract Status	Acres
Active Contract	2,474.00
Contract in Non-Renewal	548.80
Total	3,022.80
Note: Acreage calculations are based on the project boundary and source information provided by the City of Elk Grove and information obtained from the State of California. Source: Michael Brandman Associates, 2010.	

The project site contains several agricultural zoning classifications, listed in Table 3.2-3, which provides acreages of each within the project site.

Table 3.2-3: Agricultural Zoning

County Zoning	Acreage
A2 ^(a)	53
Agricultural-20 acres (AG20)	302
Agricultural-40 acres (AG40)	53
Agricultural-80 acres (AG80)	7,328
Agricultural Residential-2 acres (AR2)	18
Agricultural Residential-10 acres (AR10)	50
Total	7,804
Notes: ^(a) Multiple zoning designations: Agricultural-40 acres (AG40), Agricultural-80 acres (AG80) Source: City of Elk Grove, Sphere of Influence Amendment Application, 2010.	

3.2.2 - Regulatory Framework

State

Farmland Mapping and Monitoring Program (FMMP)

The FMMP was established in 1982 to continue farmland mapping efforts initiated in 1975 by the Soil Conservation Service (since renamed Natural Resources Conservation Service [NRCS]) of the U.S. Department of Agriculture. Since 1980, the State of California has assisted the NRCS with completing its mapping in the State. The Farmland Mapping and Monitoring Program was created within the California Department of Conservation to carry on the mapping activity on a continuing basis and with a greater level of detail.

Williamson Act

The Williamson Act is a voluntary program that allows property owners to have their properties assessed on the basis of their agricultural production rather than at the current market value. The property owner is thus relieved of having to pay higher property taxes, as long as the land remains in agricultural production. The purpose of the Williamson Act is to encourage property owners to continue to farm their land, and to prevent the premature conversion of farmland to urban uses.

Upon approval of an application by the Sacramento County Board of Supervisors, the agricultural preserve is established, and the land within the preserve is restricted to agricultural and compatible uses for at least 10 years. Williamson Act contracts are automatically renewed annually for an additional 1-year period, unless the property owner applies for non-renewal or early cancellation. The Williamson Act also contains limited provisions for cancellation of contracts, and a substantial penalty for the cancellation is assessed.

Local

City of Elk Grove

Approval by LAFCo of this SOIA does not authorize any change in land use or governance. However, the proposed project would adjust the City of Elk Grove's SOI and allow the City the opportunity to file an annexation request with LAFCo to annex lands within the SOIA Area. The City of Elk Grove General Plan establishes goals and policies to guide both present and future development within the City's jurisdiction. Therefore, the City of Elk Grove's General Plan policies directly or indirectly related to agricultural resources that may apply to potential future development in the SOIA Area are provided below.

- **Policy CAQ-2:** The loss of agricultural productivity on lands designated for urban uses within the city limits as of January 2004 is accepted as a consequence of the development of Elk Grove. As discussed in the Land Use Element, the City's land use concept for the Planning Area outside the 2004 city limits anticipates the retention of significant areas of agricultural production outside the current city limits.
- **Policy CAQ-3:** The City of Elk Grove considers the only mitigation for the loss of agricultural land to consist of the creation of the new agricultural land in the Sacramento region equal in area, productivity, and other characteristics to the area that would be lost due to development. The protection of existing agricultural land through the purchase of fee title or easements is not considered by the City to provide mitigation, since programs of this type result in a net loss of farmland.
- **Policy CAQ-4:** While agricultural uses are anticipated to be phased out within the city limits, the City recognizes the right of these uses to continue as long as individual owners/farmers desire. The City shall not require buffers between farmland and urban uses, relying instead on the following actions to address the impacts of farming on urban uses:
 - **CAQ-4-Action 1:** Implement the City's "Right to Farm" ordinance.

- **CAQ-4-Action 2:** Prospective buyers of property adjacent to agricultural land shall be notified through the title report that they could be subject to inconvenience or discomfort resulting from accepted farming activities as per provisions of the City's right-to-farm ordinance.

3.2.3 - Methodology

The City of Elk Grove General Plan was reviewed for applicable policies that apply to the project site. The analysis excluded changes in General Plan land use designations or zoning classifications, including pre-zoning, because neither of these changes is proposed or necessary for project implementation.

3.2.4 - Thresholds of Significance

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the State's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project, and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:

- a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?
- b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?
- c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))? (Refer to Section 7, Effects Found Not To Be Significant.)
- d) Result in the loss of forest land or conversion of forest land to non-forest use? (Refer to Section 7, Effects Found Not To Be Significant.)
- e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

3.2.5 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Direct Farmland Conversion

Impact AG-1:	The project would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.
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Impact Analysis

This impact will evaluate the potential for the proposed project to convert Important Farmland to non-agricultural use.

The proposed SOIA would expand the City's Sphere of Influence boundary to include agricultural lands classified as Farmland. The land use assumptions discussed in Section 2.0, Project Description, consider the SOIA Area to be potentially developed with urban uses that would result in a loss of 7,360.30 acres of Important Farmland. However, the proposed project by itself precludes direct development proposals or proposed changes to General Plan land use designations or zoning classifications that would have the potential to convert Farmland; therefore, direct conversion of Farmland would not occur. Since approval of an SOIA by LAFCo indicates that the Commission has designated the revised SOIA Area for future urbanization, impacts related to permanent conversion of agricultural uses to urban uses would be potentially significant. Potential indirect impacts of the proposed project could include the conversion of Williamson Act contract properties to urbanized, non-agricultural uses, as discussed below under Impact AG-3. Implementation of Mitigation Measure AG-1 would reduce the conversion of farmland, but impacts would remain significant and unavoidable.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM AG-1 At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove will identify lands to be set aside in permanent conservation easements at a ratio of one open space acre converted to urban land uses to one-half open space acre preserved and at a ratio of one agriculture acre converted to urban land uses to one-half agriculture acre preserved. Stacking of mitigation values will be permitted in order to serve multiple overlapping conservation purposes. The total acres of land conserved will be based on the total onsite open space and agriculture acreage converted to urban uses. Conserved open space and agriculture areas may include areas on the project site,

lands secured for permanent habitat enhancement (e.g., giant garter snake, Swainson's hawk habitat), or additional land identified by the City.

Level of Significance After Mitigation

Significant and unavoidable impact.

Conflict with Agricultural Zoning

Impact AG-2:	The project would not conflict with existing zoning for agricultural use, or a Williamson Act contract.
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Impact Analysis

This impact will evaluate potential agricultural conflicts and loss of Williamson Act contract lands within the SOIA Area.

The proposed SOIA would expand the City's Sphere of Influence to include lands zoned for agricultural use. Should project approval occur, the existing Sacramento County agricultural zoning classifications identified in Table 3.2-3 would be retained. Any future development if pursued by the City of Elk Grove will require annexation of the subject parcel(s) and would be subject to its own CEQA review. Accordingly, land use and zoning designation would be revised in conjunction with the project applications.

There are approximately 24 parcels within the SOIA Area that are under Williamson Act contracts. These 24 contracts, which represent approximately 2,474 acres, are "on-going" contracts, meaning that the property owners have not applied to be released from the contracts. Removal of these properties from their Williamson Act contracts represents a potentially significant impact, as it would allow for the conversion of these properties to urban uses. The impact of removing these properties from their Williamson Act contracts is taken into account when considering the impacts associated with the loss of farmland within Sacramento County.

Land use compatibility impacts conflicting with the agriculturally zoned parcels in the SOIA Area would result from the construction of an intense urban development within the SOIA Area that could include residential, industrial, and commercial uses. Characteristics of existing agricultural operations include truck and tractor traffic; the presence of dust, litter, odors, outdoor lighting, garbage and equipment storage; pollution from idling diesel truck engines; and the presence and use of hazardous materials, emergency generators, and water well pumps.

These characteristics could trigger complaints from future residents within the SOIA Area and subsequent limitations placed on the existing agricultural and industrial operations in the area. For example, the use of hazardous materials, including the spraying and/or use of pesticides and fertilizers, and the plowing of fields may have to be discontinued because of liability and annoyance concerns. Limitations on agricultural businesses adversely impact their economic viability and the County's agricultural industry as a whole. Therefore, this is a potentially significant impact.

Agricultural Resources

Implementation of Mitigation Measure AG-1, as noted above, would lessen the severity of this impact, but would not reduce it to a less than significant level. As such, this impact would remain significant and unavoidable.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measure AG-1.

Level of Significance After Mitigation

Significant and unavoidable impact.

Indirect Farmland Conversion

Impact AG-3:	The project would not involve other changes in the existing environment, which due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.
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Impact Analysis

This impact will evaluate the potential for the proposed project to create pressure to convert farmland to non-agricultural use as well as potential conflicts between future urban uses within the SOIA Area and continuing agricultural uses in adjacent areas.

The project site is surrounded by urban uses to the north, and agricultural land to the south, east, and west. The lands south, east, and west of the project site are designated Agricultural Cropland, Recreation and Resource Conservation, or Natural Preserve by the County of Sacramento.

The proposed project could indirectly result in the loss of approximately 7,360 acres of prime farmland, farmland of local and state importance, and unique farmland, as designated on the Sacramento County Important Farmlands map (California Department of Conservation) and as shown on Exhibit 3.2-1. These properties could be converted to urbanized, non-agricultural uses as an indirect effect of the project.

Land use compatibility impacts could occur between future urban development within the SOIA Area and agricultural uses in adjacent areas. Compatibility issues would most likely include noise, odor, lighting, and truck and tractor traffic as identified above. Future development of the SOIA Area would be required to comply with the City of Elk Grove's General Plan policies. The City's policies are based upon and would be no less restrictive than the intent and purpose of the existing County residential, commercial, and industrial policies, which require that future residential development recognize the presence of potentially incompatible land uses. Site design, screening, fencing, landscaping, setbacks, and buffers would be appropriate given existing and future land uses.

Mitigation Measure AG-3 would require the City to prepare a plan to avoid such land use compatibility conflicts prior to annexation. The plan shall include implementation of the City's Right to Farm Ordinance, site design, screening, fencing, landscaping, setbacks, and buffers, as well as procedures for addressing complaints from future SOIA Area residents. Performance standards shall also be included, such as the satisfactory resolution of all complaints within 30 days from the receipt of the complaint. Implementation of Mitigation Measure AG-3 would reduce potential indirect farmland conversion and land use compatibility impacts to a less than significant level.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM AG-3 At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA), the City of Elk Grove shall prepare an agricultural land use compatibility plan for the SOIA Area to the satisfaction of LAFCo. The plan shall include implementation of the City's Right to Farm Ordinance, site design, screening, fencing, landscaping, setbacks, and buffers, as well as procedures for addressing complaints from future SOIA Area residents. Performance standards shall also be included, such as the satisfactory resolution of all complaints within 30 days from the receipt of the complaint.

Level of Significance After Mitigation

Less than significant impact.

3.3 - Air Quality

3.3.1 - Introduction

This section describes the existing air quality setting and potential direct and indirect air quality effects from project implementation on the site and its surrounding area. Michael Brandman Associates performed air quality analysis for the proposed project, which included emissions modeling using EMFAC2007 and qualitative assessments of air pollutant emissions for the potential indirect future development that could result from implementation of the SOIA. Emissions modeling output is provided in Appendix B.

3.3.2 - Environmental Setting

This section discusses meteorological conditions, including temperature, precipitation, and wind. Meteorology is the study of weather and climate. Weather refers to the state of the atmosphere at a given time and place with regard to temperature, air pressure, humidity, cloudiness, and precipitation. The term weather refers to conditions over short periods; conditions over long periods, generally at least 30 to 50 years, are referred to as climate. Air quality is a function of both the rate and location of pollutant emissions under the influence of meteorological conditions and topographic features. Atmospheric conditions such as wind speed, wind direction, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants, and consequently affect air quality.

Sacramento Valley Air Basin

The project is located within the Sacramento Valley Air Basin (SVAB), a large north-south-oriented valley in Northern California. The SVAB is generally shaped like a bowl. It is open in the south and surrounded by mountain ranges on all other sides. The Sierra Nevada Mountains form the eastern border of SVAB, and the Coastal Ranges are located along the western boundary of the SVAB.

The SVAB encompasses 11 counties, including Shasta, Tehama, Glenn, Colusa, Yolo, Butte, Yuba, Sutter, and Sacramento. The SVAB also includes the northeastern half of Solano County and the western portion of Placer County. The SVAB is further divided into two planning areas: the Broader Sacramento Area that consists of the southern (more populated) portion of the SVAB, and the Upper Sacramento Valley. The project is located in the Broader Sacramento Area portion of the SVAB.

Transport

Transport is the term used to describe the flow of air pollutants from one geographic area to another. The project area is considered both a contributor and recipient of transported air pollutants. The air quality in the Broader Sacramento Area can be impacted by ozone precursors generated in the San Francisco Bay Area, and on occasion, by pollutants transported from the San Joaquin Valley. However, local emissions dominate the inventory of air pollution on hot, stagnant summer days. (ARB 2001).

Climate and Meteorology

The climate in the Sacramento Valley area is classified as Mediterranean, with mild, wet winters and warm, dry summers. The major climatic controls are the Pacific High Pressure System over the eastern Pacific Ocean and the local topography. The formation of a high-pressure area over the Great Basin Region to the east of the Sierra Nevada also affects the meteorology of the Sacramento area, primarily during the winter months.

The Pacific High Pressure System is a semi-permanent, subtropical, high-pressure system located on the Pacific Coast. The size and strength of the Pacific High Pressure System varies seasonally. By varying degrees, weather in the summer, spring, and fall is generally a result of the movement and intensity of the Pacific High Pressure System. During the summer, its size and strength is at a maximum and the regional climate is dominated by its influence. As a result, clear skies with intense solar heating occur over California's interior, forming a thermal trough of low pressure. This low-pressure trough intensifies the prevailing northwesterly flow over the area. Little precipitation occurs during the summer because the Pacific High Pressure System blocks migrating extra-tropical weather systems.

As the Pacific High Pressure System shifts southward during the fall, its dominance over the area diminishes. During the winter, three weather regimes generally prevail:

1. Storm periods characterized by cloudiness, precipitation, and shifting, gusty winds.
2. Clear weather associated with either a buildup of pressure over the interior of California or the influence of a well-developed Great Basin High Pressure system.
3. Persistent fog or stratus clouds and temperature inversions associated with a weak influence of the Great Basin High, trapping a layer of cool, moist air in the interior valleys.

Thus, sky cover, temperature, and humidity conditions are much more variable during the winter. Air movement is also variable, with stagnant conditions occurring more frequently than during the summer months.

The prevailing wind in this area is southerly all year. This is due to the north-south orientation of the valley and the deflecting effects of the towering Sierra Nevada on the prevailing oceanic wind that moves through the Carquinez Strait near the Delta, at the junction of the Sacramento and San Joaquin rivers. This phenomenon causes what is locally termed the "delta breeze." No other tidewater gap exists in the Coastal Mountains to admit significant marine air into the Sacramento or the San Joaquin valleys.

Occasionally, a strong north or northeasterly barometric pressure gradient develops, forcing air south or southwestward down the Siskiyou Mountains or the Sierra Nevada. This air is warmed by compression as it descends, reaching the valley floor as a hot, dry north wind. Heat waves in the

summer are produced by these winds and fortunately, are usually followed within 2 or 3 days by the normally cool, southwest delta breezes, especially at night.

The vertical mixing of air pollutants is limited by the presence of persistent temperature inversions. A temperature inversion is a meteorological phenomenon where air temperature increases with height. Usually, within the lower atmosphere (the troposphere), the air near the surface of the earth is warmer than the air above it, largely because the atmosphere is heated from below by solar radiation absorbed at the surface. Sometimes the gradient is inverted, so that the air gets colder nearer to the surface of the Earth: this is a temperature inversion.

Inversions may be either ground level or elevated. Ground-level inversions occur frequently during early fall and winter (i.e., October through January). High concentrations of primary pollutants, which are those emitted directly into the atmosphere (e.g., carbon monoxide), may be found at these times. Elevated inversions act as a lid over the SVAB and limit vertical mixing. Severe air stagnation occurs as a result of these inversions. Elevated inversions contribute to the occurrence of high levels of ozone during the summer months.

Summers are usually dry with warm to hot afternoons and mostly mild nights. The rainy season generally is from November through March. About 75 percent of the annual precipitation occurs then, but measurable rain falls only on an average of 9 days per month during that period. The shielding effect of mountains to the north, east, and west usually modifies winter storms.

Topographic effects, the north-south alignment of the valley, the coast range, and the Sierra Nevada strongly influence the wind flow in the project area. A sea-level gap in the Coast Range allows cool, oceanic air to flow occasionally into the valley during the summer season, with a marked lowering of temperature through the Sacramento-San Joaquin River Delta to the capital. In the spring and fall, a large north-to-south pressure gradient develops over the northern part of the State. Air flowing over the Siskiyou Mountains to the north warms and dries as it descends to the valley floor. Winter storms can bring strong, southerly winds.

Elk Grove's proximity to the Pacific Ocean and location within the Sacramento Valley are the greatest influences on temperature variability in the project area. The nearest weather station to the Amendment area is the Sacramento Executive Airport, approximately 13 miles northwest. For the period of record (1947 to 2007) average daytime maximum temperatures in the summer (June, July, August) was 91 degrees Fahrenheit (°F), whereas the average wintertime (December, January, February) daytime maximum was only 56°F. Nighttime minimum temperatures in the summer are 57°F and the nighttime minimum temperatures in the winter are 39°F. The summer months have an average of 52 days in which the maximum temperature is equal to or greater than 90°F. The winter months have an average of 16 days in which the minimum temperature is equal to or less than 32°F. Hot spells can occur from May to October, where temperatures may exceed 100°F, and are typically

caused by airflow from sub-tropical, high-pressure areas that bring light to nearly calm winds and humidity below 20 percent (WRCC 2010).

Annual average rainfall is approximately 17 inches, with almost 89 percent of rain falling between the months of November and April. Rainfall during these months is primarily due to winter storms. Thunderstorms are few in number, usually mild in character, and occur mainly in the spring. An occasional thunderstorm may drift over the valley from the Sierra Nevada in the summer. Snow falls so rarely, and in such small amounts, that its occurrence may be disregarded as a climatic feature. Heavy fog occurs quite frequently in mid-winter, rarely in the summer months, and seldom in spring or fall. The fog may last several days if stagnant atmospheric conditions are present (WRCC 2007).

Winds in the impacted area are seasonally influenced. The prevailing wind is from the south primarily because of marine breezes through the Carquinez Strait, although during winter, the sea breezes diminish and winds from the north occur more frequently. Winter storms, however, can bring strong southerly winds. Between late spring and early fall, a layer of warm air often overlays a layer of cool air from the Delta and San Francisco Bay, resulting in an inversion. Typical winter inversions are formed when the sun heats the upper layers of air, trapping below them air that has been cooled by contact with the colder surface of the Earth during the night. Although each inversion type predominates at certain times of the year, both types can occur at any time of the year. Local topography produces many variations that can affect the inversion base and thus influence local air quality.

Regional Air Quality

Background

An emissions inventory is an account of the amount of air pollution generated by various emissions sources. To estimate the sources and quantities of air pollution, the California Air Resources Board (ARB), in cooperation with local air districts and industry, maintains an inventory of California emission sources. Sources are subdivided into the four major emission categories: mobile, stationary, areawide, and natural sources.

Mobile Sources include on-road sources and off-road mobile sources. The on-road emissions inventory, which includes automobiles, motorcycles, and trucks, is an estimation of population, activity, and emissions of the on-road motor vehicles used in California. The off-road emissions inventory is an estimate of the population, activity, and emissions of various off-road equipment, including recreational vehicles, farm and construction equipment, lawn and garden equipment, forklifts, locomotives, commercial marine ships, and marine pleasure craft. ARB staff estimates mobile source emissions with assistance from districts and other government agencies.

Stationary sources are large, fixed sources of air pollution, such as power plants, refineries, and manufacturing facilities. Stationary sources also include aggregated point sources. These include

many small point sources, or facilities, that are not inventoried individually but are estimated as a group and reported as a single-source category. Examples include gas stations and dry cleaners. Each of the local air districts estimates the emissions for the majority of stationary sources within its jurisdiction. Stationary source emissions are based on estimates made by facility operators and local air districts. Emissions from specific facilities can be identified by name and location.

Areawide sources include source categories associated with human activity, and these emissions take place over a wide geographic area. Consumer products, fireplaces, farming operations (such as tilling), and unpaved road dust are examples of areawide sources. ARB and local air district staffs estimate areawide emissions. Emissions from areawide sources may be either from small, individual sources, such as residential fireplaces, or from widely distributed sources that cannot be tied to a single location, such as consumer products and dust from unpaved roads.

Natural, or non-anthropogenic, sources include source categories with naturally occurring emissions such as geogenic (e.g., petroleum seeps), wildfires, and biogenic emissions from plants. ARB staff and the air districts also estimate natural sources.

Sacramento County Emissions Inventory

The 2008 emissions inventory for Sacramento County is available in ARB's 2009 Almanac Emission Projection Data. Table 3.3-1 summarizes the estimated 2008 emissions for the main pollutants of concern in Sacramento County.

Table 3.3-1: 2008 Sacramento County Emissions Inventory

Emission Category	Tons per Day			
	ROG	NO _x	PM ₁₀	PM _{2.5}
Stationary Sources	8.07	3.90	1.50	0.90
Areawide Sources	17.27	3.10	39.38	10.12
Mobile Sources	35.63	68.98	3.55	2.79
Natural Sources	10.18	0.01	0.02	0.02
Total Sacramento County	71.15	75.99	44.45	13.83
Source: ARB 2009.				

ROG. Mobile sources contributed approximately 50 percent of the 2008 reactive organic gases (ROG) emissions, with on-road motor vehicle emissions constituting the majority of the mobile emissions. Areawide sources accounted for approximately 24 percent of the 2008 emissions inventory.

NO_x. Mobile sources generated the majority of oxides of nitrogen (NO_x) emissions in Sacramento County at approximately 91 percent of the total NO_x inventory.

PM₁₀. For particulate matter smaller than 10 microns in diameter (PM₁₀), areawide sources contributed more almost 90 percent of the 2008 inventory. The main PM₁₀-generating areawide sources include unpaved road dust, paved road dust, and construction and demolition.

PM_{2.5}. Areawide sources contributed more than 70 percent of the 2008 inventory of particulate matter smaller than 2.5 microns in diameter (PM_{2.5}), and mobile sources generated approximately 20 percent of the inventory. The main PM_{2.5}-generating areawide sources include residential fuel combustion and paved road dust.

Local Air Quality

The local air quality can be evaluated by reviewing relevant air pollution concentrations near the project area. The Sacramento Metropolitan Air Quality Management District (SMAQMD) and the ARB operate monitoring stations throughout Sacramento County. Existing levels of ambient air quality and historical trends and projections of air quality in the project area are best documented from measurements made near the SOIA Area. The SMAQMD operates one air monitoring station in the Elk Grove amendment area. The Elk Grove/Bruceville Road Site is at 12490 Bruceville Road in Elk Grove, CA. At the Elk Grove/Bruceville Road Site, the air monitoring station monitors ozone and PM_{2.5}, as well as NO₂. Table 3.3-2 summarizes 2004 to 2006 published monitoring data.

Table 3.3-2: Local Air Quality Monitoring (Elk Grove/Bruceville Road Station)

Air Pollutant, Averaging Time (Units)	2007	2008	2009
Ozone			
Max 1 Hour (ppm)	0.102	0.111	0.102
Days > CAAQS (0.09 ppm)	1	5	2
Max State 8 Hour (ppm)	0.088	0.093	0.087
Days > CAAQS (0.07 ppm)	13	13	12
Days > NAAQS (0.08 ppm)	5	7	5
Fine particulate matter (PM_{2.5})			
State Annual Average (µg/m ³)	*	16.1	14.6
National Annual Average (µg/m ³)	*	*	*
Max State 24 Hour (µg/m ³)	57.7	83.3	41.0
Max National 24 Hour (µg/m ³)	*	*	*
Estimated Days > NAAQS (65 µg/m ³)	*	*	*
Abbreviations: > = exceed ppm = parts per million µg/m ³ = micrograms per cubic meter CAAQS = California Ambient Air Quality Standard NAAQS = National Ambient Air Quality Standard Mean = Annual Arithmetic Mean NA = Not applicable (standard not in effect) ¹ From the California measurement. * No data was available for these dates. Source: ARB 2010a.			

Odors

The SMAQMD provides the following examples of sources of odor in its 2009 Guide to Air Quality Assessment: agriculture, wastewater treatment, food processing, chemical plants, composting, landfills, dairies, and rendering plants. The proposed amendment area primarily contains agricultural uses consisting of fallow/row crops/nursery, orchards, vineyard, and livestock operations. The proposed incorporation area does not contain substantial amounts of food processing, chemical plants, or composting facilities. In the context of land use planning, it is important to consider the distance between the odor source and receptors (also known as a buffer zone or setback). The greater the distance between an odor source and receptor, the less concentrated the odor emission would be when it reaches the receptor. Because the area in question is quite rural, distance alone from odiferous sources can allow odors to disperse to lower, undetectable concentrations before reaching receptors.

Sensitive Receptors

Certain populations, such as children, the elderly, and persons with preexisting respiratory or cardiovascular illness, are particularly sensitive to the health impacts of air pollution. Some individuals are more severely impacted by air pollution than others, usually because of pre-existing health problems, proximity to the emissions source, or duration of exposure to air pollutants.

Residential areas are considered sensitive to poor air quality because people are often at home for extended periods and their exposure can be high. Recreational land uses are moderately sensitive to air pollution, because vigorous exercise places a high demand on cardio-vascular function. People in industrial and commercial areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, with most workers spending the majority of their time indoors.

The project contains existing rural residences throughout the proposed amendment area. More information about existing land uses within the proposed amendment area is provided in Section 3-8, Land Use.

Pollutants are generally classified as either criteria pollutants or non-criteria pollutants. Federal ambient air quality standards have been established for criteria pollutants, whereas no ambient standards have been established for non-criteria pollutants. For some criteria pollutants, separate standards have been set for different periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions).

Ozone

Ozone is not emitted directly into the air but is formed by a photochemical reaction in the atmosphere. Ozone precursors, which include ROG and NO_x, react in the atmosphere in the presence of sunlight to form ozone. Because photochemical reaction rates depend on the intensity of ultraviolet light and air temperature, ozone is primarily a summer air pollution problem, and often the effects of the emitted ROG and NO_x are felt a distance downwind of the emission sources. Ozone is

subsequently considered a regional pollutant. Ground-level ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and can cause substantial damage to vegetation and other materials.

Ozone can irritate lung airways and cause inflammation much like a sunburn. Other symptoms include wheezing, coughing, pain when taking a deep breath, and breathing difficulties during exercise or outdoor activities. People with respiratory problems are most vulnerable, but even healthy people who are active outdoors can be affected when ozone levels are high. Chronic ozone exposure can induce morphological (tissue) changes throughout the respiratory tract, particularly at the junction of the conducting airways and the gas exchange zone in the deep lung. Anyone who spends time outdoors in the summer is at risk, particularly children and other people who are active outdoors. Even at very low levels, ground-level ozone triggers a variety of health problems, including aggravated asthma, reduced lung capacity, and increased susceptibility to respiratory illnesses such as pneumonia and bronchitis.

Ozone also damages vegetation and ecosystems. It leads to reduced agricultural crop and commercial forest yields; reduced growth and survivability of tree seedlings; and increased susceptibility to diseases, pests, and other stresses such as harsh weather. In the United States alone, ozone is responsible for an estimated \$500 million in reduced crop production each year. Ozone also damages the foliage of trees and other plants, affecting the landscape of cities, national parks and forests, and recreation areas. In addition, ozone causes damage to buildings, rubber, and some plastics.

Carbon Monoxide (CO)

Carbon monoxide (CO) is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. Higher levels of CO generally occur in areas with heavy traffic congestion. In cities, 85 to 95 percent of all CO emissions may come from motor vehicle exhaust. Other sources of CO emissions include industrial processes (such as metals processing and chemical manufacturing), residential wood burning, and natural sources such as forest fires. Woodstoves, gas stoves, cigarette smoke, and unvented gas and kerosene space heaters are sources of CO indoors. The highest levels of CO in the outside air typically occur during the colder months of the year when inversion conditions are more frequent. The air pollution becomes trapped near the ground beneath a layer of warm air.

CO is a public health concern because it combines readily with hemoglobin and thus reduces the amount of oxygen transported in the bloodstream. The health threat from lower levels of CO is most serious for those who suffer from heart disease such as angina, clogged arteries, or congestive heart failure. For a person with heart disease, a single exposure to CO at low levels may cause chest pain and reduce that person's ability to exercise; repeated exposures may contribute to other cardiovascular effects. High levels of CO can affect even healthy people. People who breathe high levels of CO can develop vision problems, reduced ability to work or learn, reduced manual dexterity,

and difficulty performing complex tasks. At extremely high levels, CO is poisonous and can cause death.

Motor vehicles are the dominant source of CO emissions in most areas. CO is described as having only a local influence because it dissipates quickly. High CO levels develop primarily during winter, when periods of light winds combine with the formation of ground-level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Because CO is a product of incomplete combustion, motor vehicles exhibit increased CO emission rates at low air temperatures. High CO concentrations occur in areas of limited geographic size sometimes referred to as hot spots. Since CO concentrations are strongly associated with motor vehicle emissions, high CO concentrations generally occur in the immediate vicinity of roadways with high traffic volumes and traffic congestion, active parking lots, and in automobile tunnels. Areas adjacent to heavily traveled and congested intersections are particularly susceptible to high CO concentrations.

Respirable Particulate Matter (PM₁₀ and PM_{2.5})

Particulate matter (PM) is the term for a mixture of solid particles and liquid droplets found in the air. Some particles, such as dust, dirt, soot, or smoke, are large or dark enough to be seen with the naked eye. Others are so small; they can only be detected using an electron microscope.

Particle pollution includes inhalable coarse particles, with diameters smaller than 10 micrometers and fine particles, with diameters that are 2.5 micrometers and smaller. For reference, PM_{2.5} is approximately one-thirtieth the size of the average human hair.

These particles come in many sizes and shapes and can be made up of hundreds of different chemicals. Some particles, known as primary particles, are emitted directly from a source, such as construction sites, unpaved roads, fields, smokestacks, or fires. Others form in complicated reactions in the atmosphere between such chemicals as sulfur dioxides (SO_x) and NO_x, which are emitted from power plants, industries, and automobiles. These particles, known as secondary particles, make up most of the fine particulate pollution in the country.

Particle exposure can lead to a variety of health effects. For example, numerous studies link particle levels to increased hospital admissions and emergency room visits—and even to death from heart or lung diseases. Both long- and short-term particle exposures have been linked to health problems. Long-term exposures, such as those experienced by people living for many years in areas with high particle levels, have been associated with problems such as reduced lung function and the development of chronic bronchitis and even premature death. Short-term exposures to particles (hours or days) can aggravate lung disease, causing asthma attacks and acute bronchitis, and may increase susceptibility to respiratory infections. In people with heart disease, short-term exposure has been linked to heart attacks and arrhythmias. Healthy children and adults have not been reported to

suffer serious effects from short-term exposures, although they may experience temporary minor irritation when particle levels are elevated.

Other Criteria Air Pollutants

The standards for NO₂, SO₂, and lead are being met within the region, and trends in historical data of ambient concentrations of these pollutants show no signs of violating state or federal standards in the future.

Toxic Air Contaminants

In addition to the above-listed criteria pollutants, toxic air contaminants (TACs) are another group of pollutants of concern. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least forty different toxic air contaminants. The most important, in terms of health risk, are diesel particulate matter (DPM), benzene, formaldehyde, 1,3-butadiene, and acetaldehyde. Public exposure to TACs can result from emissions from normal operations as well as accidental releases. Health effects of TACs include cancer, birth defects, neurological damage, and death.

Toxic air contaminants are less pervasive in the urban atmosphere than criteria air pollutants, but they are linked to short-term (acute) or long-term (chronic or carcinogenic) adverse human health effects. There are hundreds of different types of toxic air contaminants with varying degrees of toxicity. Sources of toxic air contaminants include industrial processes, commercial operations (e.g., gasoline stations and dry cleaners), and motor vehicle exhaust.

3.3.3 - Regulatory Framework

Air pollutants are regulated at the national, state, and air basin level; each agency has a different degree of control. The United States Environmental Protection Agency (EPA) regulates at the national level. The California Air Resources Board (ARB) regulates at the state level. The Sacramento Metropolitan Air Quality Management District (SMAQMD) regulates at the air basin level, maintaining ambient air monitoring sites, and regulating stationary sources and indirect sources.

Federal and State Regulatory Agencies

The EPA is responsible for global, international, national, and interstate air pollution issues and policies. The EPA sets national vehicle and stationary source emission standards, oversees approval of all State Implementation Plans, provides research and guidance for air pollution programs, and sets National Ambient Air Quality Standards, also known as federal standards. There are federal standards for six common air pollutants, called criteria air pollutants, which were identified from provisions of the Clean Air Act of 1970. The criteria pollutants are:

- Ozone
- Nitrogen dioxide
- Lead
- Particulate matter (PM₁₀ and PM_{2.5})
- Carbon monoxide (CO)
- Sulfur dioxide

The federal standards were set to protect public health, including that of sensitive individuals; thus, the standards continue to change as more medical research is available regarding the health effects of the criteria pollutants. Primary federal standards are the levels of air quality necessary, with an adequate margin of safety, to protect the public health (California Air Resources Board 2010a).

A State Implementation Plan is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain federal standards. The State Implementation Plan for the State of California is administered by the ARB, which has overall responsibility for statewide air quality maintenance and air pollution prevention. California's State Implementation Plan incorporates individual federal attainment plans for regional air districts—air district prepares their federal attainment plan, which sent to ARB to be approved and incorporated into the California State Implementation Plan. Federal attainment plans include the technical foundation for understanding air quality (e.g., emission inventories and air quality monitoring), control measures and strategies, and enforcement mechanisms.

The ARB also administers California Ambient Air Quality Standards (state standards) for the 10 air pollutants designated in the California Clean Air Act. The 10 state air pollutants are the six federal standards listed above as well visibility-reducing particulates, hydrogen sulfide, sulfates, and vinyl chloride.

The federal and state ambient air quality standards, relevant effects, properties, and sources of the pollutants are summarized in Table 3.3-3.

Table 3.3-3: Ambient Air Quality Standards

Air Pollutant	Averaging Time	California Standard	National Standard
Ozone (O ₃)	1 hour	0.09 ppm	—
	8 hour	0.070 ppm	0.075 ppm
Particulate matter (PM ₁₀)	24 hour	50 µg/m ³	150 µg/m ³
	Mean	20 µg/m ³	—
Particulate matter (PM _{2.5})	24 hour	—	35 µg/m ³
	Mean	12 µg/m ³	15.0 µg/m ³
Carbon monoxide (CO)	1 hour	20 ppm	35 ppm
	8 hour	9.0 ppm	9 ppm

Table 3.3-3 (cont.): Ambient Air Quality Standards

Air Pollutant	Averaging Time	California Standard	National Standard
Nitrogen dioxide (NO ₂)	1 hour	0.18 ppm	0.100 ppm
	Mean	0.030 ppm	0.053 ppm
Sulfur dioxide (SO ₂)	1 hour	0.25 ppm	0.075 ppm
	3 hour	—	0.5 ppm
	24 hour	0.04 ppm	—
Lead	30-day	1.5 µg/m ³	—
	Quarter	—	1.5 µg/m ³
	Rolling 3-month average	—	0.15 µg/m ³
Sulfates	24 hour	25 µg/m ³	—
Hydrogen sulfide	1 hour	0.03 ppm	—
Vinyl chloride	24 hour	0.01 ppm	—
Visibility-reducing particles	8 hour	Extinction coefficient of 0.23 per kilometer, visibility of 10 miles or more due to particles when relative humidity is less than 70 percent	—
Abbreviations: ppm = parts per million Mean = Annual Arithmetic Mean Source: ARB 2010b.			

µg/m³ = micrograms per cubic meter
 30-day = 30-day average Quarter = Calendar quarter

ARB's Land Use Handbook

The ARB adopted the Air Quality and Land Use Handbook: A Community Health Perspective (Land Use Handbook) in 2005. The Land Use Handbook provides information and guidance on siting sensitive receptors in relation to sources of TACs. The sources of TACs identified in the Land Use Handbook are high traffic freeways and roads, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and large gas dispensing facilities. If the project involves siting a sensitive receptor or source of TAC discussed in the Land Use Handbook, siting mitigation may be added to avoid potential land use conflicts, thereby reducing the potential for health impacts to the sensitive receptors.

Local Regulatory Agencies

The specific air pollution control agency for the County of Sacramento is the SMAQMD, but various local, regional, state, and federal government agencies share the responsibility for air quality management in Sacramento County. The SMAQMD operates at the local level, with primary

responsibility for attaining and maintaining the national and state ambient air quality standards in Sacramento County. Other local agencies are responsible for the other counties in the larger nonattainment area. The air districts work jointly with the EPA, the ARB, Sacramento Area Council of Governments (SACOG), county transportation and planning departments, cities, and counties, and various non-governmental organizations to improve air quality through a variety of programs. These programs include the adoption of regulations and policies, as well as implementation of extensive education and public outreach programs.

Sacramento County, as well as some of the counties surrounding it, has been designated “severe” nonattainment for ozone by the EPA. This area is labeled the Sacramento Federal Ozone Nonattainment Area (SFNA). The SMAQMD is not only responsible for achieving federal and state air quality standards to ensure healthy air in Sacramento County; it is also responsible for working with jurisdictions outside of Sacramento County to bring the entire SFNA into compliance.

In addition to state and federal powers to regulate criteria air pollutants, Sacramento County has acknowledged its responsibilities regarding air quality issues by preparing an Air Quality Element for the General Plan. Although the County has no direct regulatory authority over emission sources, it recognizes that land use decisions effect how and where motor vehicles are driven. Because motor vehicles are the largest pollution source in the area, the General Plan lists policy goals and plans that will improve land use and transportation decisions. Table 3.3-4 shows the current status of Sacramento County with the ambient air quality standards.

Table 3.3-4: Sacramento County Air Quality Attainment Status

Parameter	California Standard	Federal Standard
Ozone	Nonattainment Classification=Serious	Nonattainment1 Classification=Severe
Respirable particulate matter (PM ₁₀)	Nonattainment	Nonattainment2 Classification=Moderate
Fine particulate matter (PM _{2.5})	Nonattainment	Nonattainment3
Carbon monoxide	Attainment for 1-hour and 8-hour standards	Attainment for 1-hour and 8-hour standards
Nitrogen dioxide	Attainment for 1-hour standard	Attainment for annual standard
Sulfur dioxide	Attainment for 1-hour and 8-hour standards	Attainment for 3-hour, 24-hour, and annual standards
Lead	Attainment for 30-day standard	Attainment for calendar quarter standard
Visibility-reducing particles	Unclassified for 8-hour standard	No federal standard
Sulfates	Attainment for 24-hour standard	No federal standard
Hydrogen sulfide	Unclassified for 1-hour standard	No federal standard

Table 3.3-4 (cont.): Sacramento County Air Quality Attainment Status

Parameter	California Standard	Federal Standard
<p>Notes:</p> <ol style="list-style-type: none"> 1 A formal request for voluntary reclassification from “serious” to “severe” for the 8-hour ozone nonattainment area with an associated attainment deadline of June 15, 2019, was submitted from the Air Resources Board to EPA on February 14, 2008. EPA approved the request effective June 4, 2010. 2 Air quality meets the federal PM₁₀ standards. However, the SMAQMD must request redesignation and submit a maintenance plan to be formally designated as attainment. 3 EPA promulgated a new 24-hour standard for PM_{2.5}. The EPA Administrator signed the final PM_{2.5} nonattainment designations for Sacramento on October 8, 2009. The designations become effective 30 days after publication in the Federal Register. <p>Source: SMAQMD 2011.</p>		

Voluntary Federal Reclassification Request

On February 14, 2008, the five air districts that constitute the Sacramento Region requested ARB to submit a formal request to EPA to reclassify the area from “serious” to “severe” nonattainment for the federal 8-hour ozone standard, with an associated attainment deadline of June 15, 2019. The request is based on an evaluation of the emission reductions necessary to attain the federal standard, and the emission reductions associated with feasible rules. It was determined that the Sacramento Region would not be able to achieve the necessary emission reduction in the existing attainment timeframe through the existing suite of feasible rules.

Air Quality Plans

Federal Plans

The 1994 Sacramento Regional Clean Air Plan (also called the State Implementation Plan or SIP) was developed cooperatively with all the districts in the Sacramento Region: El Dorado Air Pollution Control District (APCD), Feather River Air Quality Management District (AQMD), Placer County APCD, SMAQMD, and Yolo-Solano AQMD. The Clean Air Plan was adopted in 1994 in compliance with the 1990 Amendments to the Federal Clean Air Act. At that time, the Sacramento region could not show that it would meet the federal 1-hour ozone standard by 1999. In exchange for moving the deadline to 2005, the region accepted a designation of “severe nonattainment” for the federal 1-hour ozone standard, with additional emission requirements on stationary sources.

As a “severe nonattainment” area, the Sacramento Region is required to submit a rate-of-progress milestone evaluations pursuant to Section 182(g) of the Federal Clean Air Act. The Sacramento Regional 1999 Milestone Report was also developed cooperatively with the above-named districts and included a compliance demonstration that the milestone requirements were met. The 2002 Milestone Report also includes a compliance demonstration that the 2002 milestone requirement has been met for the Sacramento nonattainment area.

The Sacramento region has been designated as a “serious” nonattainment area for the federal 8-hour ozone standard with an attainment deadline of June 2013. The Sacramento region air districts

adopted the 8-Hour Ozone Attainment and Reasonable Further Progress Plan in early 2009. This plan includes the information and analyses to fulfill the federal CAA requirements for demonstrating reasonable further progress and attainment of the 1997 8-hour ozone standard for the Sacramento region. In addition, the plan establishes an updated emissions inventory, provides photochemical modeling results, proposes the implementation of reasonably available control measures, and sets new motor vehicle emission budgets for transportation conformity purposes.

In 2002, the U.S. EPA officially determined that Sacramento County had attained the PM₁₀ National Ambient Air Quality Standards by the attainment deadline. The County prepared the PM₁₀ Implementation/Maintenance Plan and Redesignation Request for Sacramento County, last updated October 28, 2010. As of this date, the EPA has not formally approved the plan or redesignation request. The purpose of the plan is to fulfill the requirements for EPA to re-designate Sacramento County to attainment by preparing the following plan elements and tasks:

- Document the extent of the PM₁₀ problem in Sacramento County
- Determine the emission inventory sources contributing to the PM₁₀ problem
- Identify the appropriate control measures that achieved attainment of the PM₁₀ NAAQS
- Demonstrate maintenance of the PM₁₀ NAAQS
- Request formal re-designation of the PM₁₀ NAAQS
- Establish PM₁₀ Motor Vehicle Emission Budgets for Sacramento County

On October 16, 2006, the EPA promulgated a new 24-hour standard for PM_{2.5}. This change lowered the daily standard from 65µg/m³ to 35µg/m³ to protect the general public from short-term exposure of the fine particulate matter. As shown in Table 3.3-4, Sacramento County does not meet the new standards. An attainment plan must be submitted not later than 3 years after the effective date of the designation (EPA estimates this to be April 2012). The plan must include transportation conformity budgets and control measures.

State Plans

The CCAA requires nonattainment areas to achieve and maintain the state ambient air quality standards by the earliest practicable date and local air districts to develop plans for attaining the state standards. In compliance with the CCAA, the SMAQMD prepared and submitted the 1991 Air Quality Attainment Plan mainly to address Sacramento County's nonattainment status for ozone and CO. The CCAA also requires that by the end of 1994 and once every 3 years thereafter, the districts are to assess their progress toward attaining the air quality standards. The triennial assessment is to report the extent of air quality improvement and the amounts of emission reductions achieved from control measures for the preceding three-year period. The latest Triennial Report (2009 Triennial Report) was submitted for approval by the SMAQMD Board of Directors on March 26, 2009. In addition, the SMAQMD is required to submit an annual progress report to the ARB by December 31 of each year.

Local

City of Elk Grove

Approval by LAFCo of this SOIA does not authorize any change in land use or governance. However, the proposed project would adjust the City of Elk Grove's SOI and allow the City the opportunity to file an annexation request with LAFCo to annex lands within the SOIA Area. The City of Elk Grove General Plan establishes goals and policies to guide both present and future development within the City's jurisdiction. The City of Elk Grove's General Plan policies related to directly or indirectly to air quality that may apply to potential future development in the SOIA Area are provided below:

- **Policy CAQ-26:** It is the policy of the City of Elk Grove to minimize air pollutant emissions from all City facilities and operations to the extent feasible and consistent with the City's need to provide a high level of public service.
- **CAQ-26-Action 1:** The City shall encourage all its employees to use transportation alternatives such as public transit, bicycling, walking, and carpooling for commute and other work-related trips. The City shall provide information on these and other applicable programs to all employees.
- **CAQ-26-Action 2:** All City facilities shall incorporate energy-conserving design and construction techniques.
- **CAQ-26-Action 3:** The City shall encourage City contractors and vendors to reduce emissions from their operations (such as by using low emission vehicles), and shall consider including a preference for low emission contractors and vendors in City requests for proposals where appropriate.
- **Policy CAQ-27:** The City shall promote energy conservation measures in new development to reduce on-site emissions and power plant emissions. The City shall seek to reduce the energy impacts from new residential and commercial projects through investigation and implementation of energy efficiency measures during all phases of design and development.
- **CAQ-27-Action 1:** Provide information to the public and builders on available energy conservation techniques and products.
- **CAQ-27-Action 2:** Encourage the use of trees planted in locations that will maximize energy conservation and air quality benefits. Encourage the use of landscaping materials which produce lower levels of hydrocarbon emissions.
- **CAQ-27-Action 3:** During project review, City staff shall consider energy conservation and, where appropriate, suggest additional energy conservation techniques.
- **CAQ-27-Action 4:** During project review, ensure that "Best Available Control Technology" is properly used and implemented.
- **CAQ-27-Action 5:** Encourage new commercial uses to limit delivery hours to nonpeak hours.

- **Policy CAQ-28:** The City shall emphasize “demand management” strategies which seek to reduce single-occupant vehicle use in order to achieve state and federal air quality plan objectives.
- **CAQ-28-Action 1:** Implement the requirements for designated carpool and vanpool parking for all new office developments.
- **CAQ-28 Action 2:** All City facilities shall include designated carpool and vanpool spaces, and all City staff shall be encouraged to take part in ridesharing.
- **Policy CAQ-29:** The City shall seek to ensure that public transit is a viable and attractive alternative to the use of private motor vehicles.
- **CAQ-29-Action 1:** Consider implementation of a development impact fee to provide funding for the development of new public transit facilities in Elk Grove.
- **CAQ-29-Action 2:** The City shall review all options for providing public transit to the residents and businesses of Elk Grove and seek to implement the option which provides the most effective and cost-efficient service.
- **Policy CAQ-30:** All new development projects which have the potential to result in substantial air quality impacts shall incorporate design, construction, and/or operational features to result in a reduction in emissions equal to 15 percent compared to an “unmitigated baseline” project. An “unmitigated baseline project” is a development project which is built and/or operated without the implementation of trip-reduction, energy conservation, or similar features, including any such features which may be required by the Zoning Code or other applicable codes.
- **CAQ-30-Action 1:** The City shall develop and implement “Emission Reduction Measures” to achieve the reduction required by this policy. These Emission Reduction Measures should consider the following:
 - Cost-effectiveness
 - A maximum cost for measures, and consideration of a waiver from full compliance if this maximum cost would be exceeded.
 - Credits for emission reductions already in place (e.g., for buildings in the latter phases of a multi-phased project which included emission reduction measures in its design) or which are required to mitigate other impacts.
- **Policy CAQ-31:** The City shall support intergovernmental efforts directed at stringent tailpipe emission standards and inspection and maintenance programs for all feasible vehicle classes and revisions to the Air Quality Attainment Plan to accelerate and strengthen market-based strategies consistent with the General Plan.
- **CAQ-31-Action 1:** The City shall ensure that all City vehicles conform with applicable emission standards and the time of purchase and continuing throughout their use by the City. The City shall consider pollutant emissions as one criterion for vehicle purchasing decisions, seeking to purchase lower-emitting vehicles.

- **CAQ-31-Action 2:** The City shall participate in intergovernmental groups seeking to improve local and regional air quality.
- **CAQ-31-Action 3:** In conjunction with Sacramento Metropolitan Air Quality Management District, support and participate in a public education and outreach program dealing with air quality issues, with a goal of attaining a solid foundation of public support for needed air quality measures.
- **CAQ-31-Action 4:** The City shall consider the adoption of an ordinance to discourage excessive idling of diesel-powered and other heavy vehicles to reduce air pollutant emissions.
- **Policy CAQ-32:** As part of the environmental review of projects, the City shall identify the air quality impacts of development proposals to avoid significant adverse impacts and require appropriate mitigation measures, potentially including—in the case of projects which may conflict with applicable air quality plans—emission reductions in addition to those required by Policy CAQ-30.
- **CAQ-32-Action 1:** Coordinate with the Sacramento Metropolitan Air Quality Management District on the review of proposed development projects, specifically including projects that could conflict with any applicable air quality plans and/or the State Implementation Plan.
- **Policy CAQ-33:** The City shall require that public and private development projects use low emission vehicles and equipment as part of project construction and operation, unless determined to be infeasible.
- **Policy SA-10:** Industries which store and process hazardous or toxic materials shall provide a buffer zone between the installation and the property boundaries sufficient to protect public safety. The adequacy of the buffer zone shall be determined by the City of Elk Grove.
- **Policy CI-4:** Specific Plans, Special Planning Areas, and development projects shall be designed to promote pedestrian movement through direct, safe, and pleasant routes that connect destinations inside and outside the plan or project area.
- **Policy CI-8:** The City shall encourage the extension of bus rapid transit and/or light rail service to the planned office and retail areas north of Kammerer Road and west of Hwy 99.
- **Policy CI-13:** The City shall require that all roadways and intersections in Elk Grove operate at a minimum Level of Service “D” at all times.
- **Policy CI-15:** Development projects shall be required to provide funding or to construct roadway/intersection improvements to implement the City’s Circulation Master Plan. The payment of established traffic impact or similar fees shall be considered to provide compliance with the requirements of this policy with regard to those facilities included in the fee program, provided that the City finds that the fee adequately funds all required roadway and intersection improvements. If payment of established fees is used to provide compliance with this policy, the City may also require the payment of additional fees if necessary to cover the fair share cost of facilities not included in the fee program.

3.3.4 - Methodology

Methodology for Analysis

The SMAQMD updated its CEQA Guide to Air Quality Assessment in 2009, with additional revisions in April and June of 2011. The updated document includes chapters for project-level analysis and the chapter Program-Level Analysis of General and Area Plans. However, the SOIA would allow the City of Elk Grove to file annexation requests for lands within the SOIA Area, and could indirectly lead to urbanization of the area. Therefore, the analysis utilizes the SMAQMD's guidance to the extent practicable, and examines the project in relationship to Appendix G, Environmental Checklist, of the CEQA Guidelines air quality impact questions.

Operational on-road mobile emissions for the potential future development of the project based on the land use assumptions provided in Section 2.2 were modeled using EMFAC2007.

3.3.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, air quality impacts resulting from the implementation of the proposed project would be considered significant if the project would:

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Would the project:

- a.) Conflict with or obstruct implementation of the applicable air quality plan?
- b.) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?
- c.) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?
- d.) Expose sensitive receptors to substantial pollutant concentrations?
- e.) Create objectionable odors affecting a substantial number of people?

3.3.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Air Quality Plan

Impact AIR-1: **The project would not conflict with or obstruct implementation of the applicable air quality plan.**

Impact Analysis

The SMAQMD's CEQA Guide recommends evaluation of the following three criteria for determining potential significance for consistency with the applicable air quality plan:

1. The plan's consistency with both the Sacramento Regional Ozone Attainment Plan and SACOG's Metropolitan Transportation Plan population growth projections;
2. The relationship between the plan's projected vehicle miles traveled (VMT) and population growth (i.e., whether the two projections are proportional or whether the VMT increases at a slower rate than population, indicating a successful mode shift); and
3. The extent to which the plan implements OAP transportation control measures.

The project does not include changes to land use, or general plan goals and policies. In addition, no specific land use entitlements, specific development proposals, or land development activity are proposed at this time in conjunction with the proposed SOIA. The policies and provisions of the County's General Plan, zoning code, and other land use regulations would continue to be in effect; no land use designations, redesignations or rezoning, or any other modifications or extensions of existing General Plans or area plans is proposed. Therefore, the project would not directly result in air quality impacts. It is important to note that the City may begin comprehensive planning for the area after approval of the SOIA. However, it is currently unknown when comprehensive planning would be undertaken by the City. The proposed project does have the potential to indirectly affect consistency with applicable air quality plans through the potential for future urbanization of the SOIA Area.

The proposed project would involve the extension of the City of Elk Grove's SOI to include the 7,869-acre project site. As stated in Section 2.2, the City calculated anticipated growth and land needs outside its existing SOI based on its understanding of the SACOG MTP for 2035. The City expects that it would require a total of 5,327 acres outside of the city limits to accommodate the projected job and housing growth to 2035. The project area contains a calculated 6,882 acres of developable area. Therefore, the project site contains 1,555 acres of developable land, or approximately 29 percent, more than is needed to accommodate the expected job and housing growth required of the City.

As stated in Section 2, land use assumptions were developed for this EIR with the intent to provide a general program level concept of growth that may result from future development in the SOIA Area, and allow LAFCo to understand probable future and potential environmental effects that may result from future anticipated growth.

The Transportation Impact Study prepared by Fehr and Peers calculated that full buildout of the SOIA Area under the assumed conceptual land uses provided in Section 2.2 would result in approximately 218,000 trips per day and 1,389,072 daily vehicle miles traveled (VMT). All calculations are based on the conceptual land uses. As noted above, a portion of these trips, and associated VMT, would be generated by growth planned for and analyzed within the SMAQMD's Regional Ozone Attainment Plan and SACOG's MTP. It may be assumed that roughly 60 percent of the trips and VMT would be generated by planned growth, whereas approximately 30 percent of the trips would generate additional growth accommodated by the developable land within the SOIA Area that is in excess of the City's calculated land needed for anticipated growth.

The project site contains an excess of land beyond what is estimated as required to accommodate anticipated growth. As shown in Impact AIR-3, the project's assumed growth would result in indirect generation of mobile trips that would emit approximately 2.43 tons per day (tpd) of ROG, 9.17 tpd NO_x, and 0.67 tpd of PM₁₀ in 2035. Therefore, future planning actions and annexations have the potential to conflict with the adopted air quality plan by resulting in an increase in population and/or VMT above what was anticipated by the SMAQMD and SACOG. As stated in Section 2.2, state planning law provides that a city may comprehensively plan for lands outside of its jurisdiction. As stated above, the City would conduct comprehensive planning for the area at an unknown future date. Therefore, mitigation is proposed for the City of Elk Grove to prepare and evaluate a comprehensive plan for development of the project site that is consistent with the applicable air quality plan and MTC prior to incorporation of land into the City. Implementation of Mitigation Measure AIR-1a or AIR-1b would reduce this impact to less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM AIR-1a The goal of this mitigation measure is to avoid air quality impacts by ensuring that the Elk Grove Sphere of Influence Amendment (SOIA) Area meets or exceeds the air pollution control requirements in the federally mandated State Implementation Plan for the Sacramento Ozone Non-attainment Area (SIP), which consists of all or parts of Yolo, Solano, El Dorado, Placer, Sutter, and Sacramento counties, including the City of Elk Grove and the SOIA Area.

At the time of submittal of any application to annex territory within the SOIA Area, the City of Elk Grove will prepare an Air Quality Mitigation Plan.

- a. The Plan must reduce the SOIA Area's operational ozone precursor emissions by 35 percent when compared with the potential emissions that could occur in the SOIA in the absence of the policies and measures included in the AQMP.

- b. The City of Elk Grove will coordinate the development of the Air Quality Mitigation Plan with the SMAQMD and SACOG, and will use modeling tools approved by those agencies to gauge the effectiveness of the measures.

OR

MM AIR-1b (Alternative air quality mitigation): The AQMP required under Mitigation Measure AIR-1 will be required to demonstrate a 15-percent reduction in ozone precursor emissions if the following conditions are met:

- a. The application for annexation of the SOIA Area or any portion thereof occurs after the June 15, 2019 SIP attainment deadline, and the SMAQMD confirms the ozone standards have been achieved.
- b. The City of Elk Grove demonstrates that the development proposal is consistent with the new SIP or attainment plan and the SMAQMD concurs with the analysis. If the demonstration uses modeling tools, the tools must be approved by SMAQMD and SACOG.

Level of Significance After Mitigation

Less than significant impact.

Air Quality Standards

Impact AIR-2:	The project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.
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Impact Analysis

This impact is related to localized criteria pollutant impacts because criteria pollutants are the pollutants with ambient air quality standards. Potential localized impacts would be exceedances of state or federal standards for PM_{2.5}, PM₁₀, or CO. Such localized exceedances are also called ‘hotspots’. Because the potential for PM_{2.5}, PM₁₀ hotspots is dependant on project-level details, such as the intensity, location, duration and components of development, it is not feasible to estimate the project’s potential for PM_{2.5}, PM₁₀ hotspot generation. However, the Transportation Impact Study prepared by Fehr and Peers was reviewed for use estimating CO hotspots.

Project emissions may be considered significant if a CO hotspot intersection analysis determines that project-generated emissions cause a localized violation of the state CO 1-hour standard of 20 ppm, state CO 8-hour standard of 9 ppm, federal CO 1-hour standard of 35 ppm, or federal CO 8-hour standard of 9 ppm.

Because increased CO concentrations are usually associated with roadways that are congested and with heavy traffic volume, the SMAQMD has established that preliminary screening can be used to determine with fair certainty that the effect a project has on any given intersection would not cause a

potential CO hotspot. Therefore, the SMAQMD has established that if all project-affected intersections are negative for both of the following criteria, then the project can be said to have no potential to create a violation of the CO standard:

- Traffic generated by the proposed project would not result in the deterioration of intersection Level of Service (LOS) to LOS E or F; or
- The project would not contribute additional traffic to an intersection that already operates at LOS of E or F.

If either of the criteria can be associated with any intersection affected by the project, a CO Protocol Analysis must be prepared to determine significance. The Transportation Impact Study prepared by Fehr and Peers contains two analysis scenarios— existing plus project (year 2010), and cumulative conditions (year 2035)— utilizing the land use assumptions provided in Section 2, Project Description. The Transportation Impact Study reviewed impacts to roadway segments, but did not include impact analysis of intersections. As stated in the Transportation Impact Study:

Due to the general nature of the land use development assumptions for buildout of the proposed project, the transportation analysis is not, and cannot, be as detailed as subsequent future project specific annexation and development proposals that will ultimately be required.

Therefore, there is no intersection LOS data to conduct a CO hotspot analysis, and the ability to forecast the level of detail required to conduct a CO hotspot is not feasible.

As discussed above, land use assumptions were developed for this EIR with the intent to provide a general program level concept of growth that may result from future development in the SOIA Area, and allow LAFCo to understand possible future and potential environmental effects that may result from future anticipated growth. Although land use assumptions are conceptual only, the project has the potential to result in a significant indirect impact through allowing future urbanization of the project area. Implementation of Mitigation Measure AIR-2 would reduce the potential to less than significant by requiring future development to implement the SMAQMD's recommended CO hotspot screening and analysis procedures, and requiring project-specific mitigation to reduce identified potentially significant impacts.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM AIR-2 At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall demonstrate that the

SMAQMD's most current guidance on the screening and assessment of CO, PM₁₀, and PM_{2.5} hotspots will be implemented for all development proposals within the SOIA Area. In addition, the City of Elk Grove shall demonstrate that sufficient mitigation shall be required of all identified potentially significant CO, PM₁₀, and PM_{2.5} hotspots to reduce the impact to less than significant.

Level of Significance After Mitigation

Less than significant impact.

Criteria Pollutants in Nonattainment Area

Impact AIR-3:	The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).
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Impact Analysis

The non-attainment pollutants of concern for this impact are ozone, PM₁₀ and PM_{2.5}. Ozone is not emitted directly into the air, but is a regional pollutant formed by a photochemical reaction in the atmosphere. Ozone precursors, ROG and NO_x, react in the atmosphere in the presence of sunlight to form ozone. Therefore, the SMAQMD does not have a recommended ozone threshold, but has regional thresholds of significance for project-emitted NO_x and ROG.

The Transportation Impact Study prepared by Fehr and Peers calculated that full buildout of the SOIA Area under the assumed conceptual land uses provided in Section 2.2 would result in approximately 218,000 trips per day and 1,389,072 daily vehicle miles traveled (VMT). EMFAC2007, BURDEN, was used to calculate future ROG, NO_x, and PM₁₀ emissions for the year 2020, 2030, and 2035. EMFAC output is provided as Appendix B to this EIR. As shown in Table 3.3-5, buildout of the SOIA Area under the assumed conceptual land uses would result in approximately 2.43 tons per day (tpd) of ROG, 9.17 tpd NO_x, and 0.67 tpd of PM₁₀ in 2035. As stated in Impact AIR-1, roughly 60 percent of the SOIA developable area would accommodate growth anticipated for the City in the Sacramento Regional Ozone Attainment Plan and MTC 2035.

Table 3.3-5: Indirect Mobile Emissions

Year of Analysis	Tons per Day		
	ROG	NO _x	PM ₁₀
2020	5.28	14.45	0.94
2025	3.61	11.71	0.77
2035	2.43	9.17	0.67
Source: Michael Brandman Associates, 2011. Appendix B.			

As previously indicated, the project would not directly result in the creation of any new emission sources when compared with existing conditions; therefore, the project would not result in a direct cumulatively considerable net increase of any criteria pollutant. However, as discussed in Impact AIR-1, the developable portion of the project site is approximately 1,555 acres larger than the City needs to accommodate anticipated growth. Therefore, although no specific development proposals or land use changes are proposed as part of this project, the project would allow future incorporation and development of the project site that could result in emissions greater than that anticipated by the SMAQMD's attainment plans and SACOG MTC. As such, the project has the potential to result in a substantial increase in nonattainment pollutants; specifically, ozone precursors. However, implementation of Mitigation Measure AIR-1a or AIR-1b would reduce this impact to less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measure AIR-1a or AIR-1b.

Level of Significance After Mitigation

Less than significant impact.

Sensitive Receptors

Impact AIR-4:	The project would not expose sensitive receptors to substantial pollutant concentrations.
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Impact Analysis

Similar to Impact AIR-2, this impact is related to site-specific, or localized, impacts. The potential for impacting sensitive receptors is dependant on project-level details, such as the intensity, location, duration and components of development. However, the proposed project may result in an indirect effect because it would allow future urbanization of the SOIA Area. Therefore, the project may indirectly result in sensitive receptors being located within close proximity of pollution sources, such as high-volume roadways, industrial uses, point sources (such as fuel stations), or other potential source of substantial pollution concentrations. Future specific development proposal must be evaluated for potential air quality impacts. As such, analysis of sensitive receptor impacts would be conducted when development is proposed.

As stated in the Regulatory Framework, the ARB has published the Land Use Handbook, which contains advisory recommendations on siting new sensitive receptors near sources of TACs. The Land Use Handbook's siting recommendations are shown in Table 3.3-6.

Table 3.3-6: Land Use Handbook Guidance on Siting New Sensitive Receptors

Source Category	Advisory Recommendations
Freeways and High-Traffic Roads	Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
Distribution Centers	<p>Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week).</p> <p>Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.</p>
Rail Yards	<p>Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard.</p> <p>Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.</p>
Ports	Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the ARB on the status of pending analyses of health risks.
Refineries	Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloroethylene	<p>Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district.</p> <p>Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations.</p>
Gasoline Dispensing Facilities	<p>Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater).</p> <p>A 50-foot separation is recommended for typical gas dispensing facilities.</p>
<p>Notes: The Land Use Handbook states: x These recommendations are advisory. Land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues. Source: ARB 2005.</p>	

As shown in Exhibit 3.15-1 and Exhibit 3.15-4, State Route 99 and Interstate 5 would not meet or exceed the 100,000 vehicles/day criteria used in the Handbook's guidance in the existing conditions

or the cumulative plus project conditions. In addition, the main roads through the SOIA Area would not meet or exceed the 50,000 vehicles/day criteria used in the Handbook's guidance in the existing conditions or the cumulative plus project conditions.

However, because the project may indirectly result in future urbanization of the SOIA Area, mitigation is proposed to provide a comprehensive plan for avoiding impacts to existing as well as future sensitive receptors on the project site. Implementation of Mitigation Measure AIR-4 would reduce this impact to less than significant by avoiding placement of sensitive receptors near sources of substantial TACs.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM AIR-4 At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall review existing sources of toxic air contaminants in and around the project site, including (but not limited to): State Route 99, rail lines, California Air Resources Board or Sacramento Metropolitan Air Quality Management District-permitted point-sources, warehouse operations and similar sources of heavy-duty truck trips. The City will adopt appropriate distance buffers to be applied between sources of toxic air contaminants and sensitive receptor land uses. Future development proposals that would result in the location of sensitive land uses closer to sources of toxic air contaminants than the adopted buffer distances shall require a detailed Health Risk Assessment to determine if significant impacts would occur, and include mitigation measures if necessary to reduce impacts to less than significant levels.

Level of Significance After Mitigation

Less than significant impact.

Odors

Impact AIR-5:	The project would not create objectionable odors affecting a substantial number of people:
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Impact Analysis

As previously indicated, the project would not result in any changes to existing land use patterns or to the current baseline conditions with regard to existing sources of odors. Existing odor sources are located throughout the project area, including a confined animal feeding operations within and adjacent to the western portion of the SOIA Area. It is unknown if these existing uses would continue to operate in the future, or if additional sources of odor would be proposed as part of potential urbanization within the SOIA Area. However, because the project may indirectly result in future urbanization of the project area, the project may indirectly result in receptors being located within

close proximity of odor sources. Therefore, mitigation is proposed to avoid impacts potential odor impacts. Implementation of Mitigation Measure AIR-5 would reduce this impact to less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM AIR-5 At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall review existing sources of odor in and around the project site, including (but not limited to) any land use referenced in Sacramento Metropolitan Air Quality Management District CEQA Guidance document as an odor-generating land use. The City will adopt and apply appropriate distance buffers between existing sources of odor and receptor land uses in the SOIA Area.

Level of Significance After Mitigation

Less than significant impact.

3.4 - Biological Resources

3.4.1 - Introduction

This section describes the existing biological setting and potential direct and indirect effects of the proposed action on sensitive biological resources from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on a site reconnaissance performed by MBA Biologist/Regulatory Specialist Dale Hameister on October 11, 2010, with respect to the current regulatory framework. Although the proposed project does not involve any development activities, this environmental analysis is based on the land use assumptions developed by LAFCo for the purposes of understanding the possible environmental effects that should be considered with Sphere of Influence proposals. Since no physical development is associated with the proposed project, a general biological resources assessment was conducted to document existing conditions.

3.4.2 - Environmental Setting

The Sphere of Influence Amendment (SOIA) consists primarily of flat agricultural lands. Other land uses includes the recently closed Sunset Sky Ranch Airport, the developed areas of Old Town Franklin, the Franklin Cemetery, and low-density residential (Exhibit 2-4). Agricultural areas include row crops and grazing areas for livestock. The SOIA contains drainage canals, irrigation ditches, agricultural ponds, and other aquatic resources (Exhibit 3.4-1 and Exhibit 3.9-2). There is very little riparian habitat within the project area. Riparian areas are generally found in small patches along drainage ditches within agricultural areas. There are significant areas of riparian habitat within the vicinity of the project area within the Stone Lakes National Wildlife Preserve; west of the SOIA; and along the Cosumnes River, south and east of the project area.

The project area does not contain any areas defined as woodlands. However, there are many large trees within the SOIA that are generally associated with rural residential areas. Trees and shrubs within the SOIA may provide nesting habitat for many migratory bird species.

Agricultural cropland

Agricultural cropland is the most predominant land use within the SOIA. Rural residential areas are interspersed within the agricultural areas in the SOIA. Because this habitat is intensively managed, vegetation is limited to cultivated crops, predominately grains, orchards, and vineyards, with ruderal (weedy) vegetation along the margins. Common ruderal species to be expected include Italian ryegrass (*Lolium multiflorum*), ripgut brome (*Bromus diandrus*), pigweed (*Amaranthus albus*), and yellow star-thistle (*Centaurea solstitialis*).

Agricultural cropland generally provides low-quality breeding habitat for wildlife species due to the high level and frequency of disturbance; however, it provides cover and foraging habitat for many species. Species expected to occur in this habitat include American crow (*Corvus brachyrhynchos*),

American robin (*Turdus migratorius*), western scrub jay (*Aphelocoma californica*), Brewer's blackbird (*Euphagus cyanocephalus*), and European starling (*Sturnus vulgaris*).

Irrigation Ditches

Irrigation ditches flow through several portions of the SOIA Area. These ditches are predominantly devoid of vegetation; however, the associated banks support hydrophytic vegetation. Predominant species associated with this habitat include bulrush (*Scirpus microcarpus*), curly dock (*Rumex crispus*), narrow-leaved cattail (*Typha angustifolia*), and smartweed (*Polygonum* sp.). Additionally, some riparian woodland vegetation is associated with the ditches. The riparian woodland species could include arroyo willow (*Salix lasiolepis*), Fremont's cottonwood (*Populus fremontii*), and valley oak.

Irrigation ditches provide suitable breeding, cover, and foraging habitat for a variety of wildlife species. Belted kingfisher (*Ceryle alcyon*) and great egret (*Ardea alba*) have been observed in this habitat. Marsh wren (*Cistothorus palustris*), red-wing blackbird (*Agelaius phoeniceus*), and other bird species could also use this habitat.

Irrigated Pastures

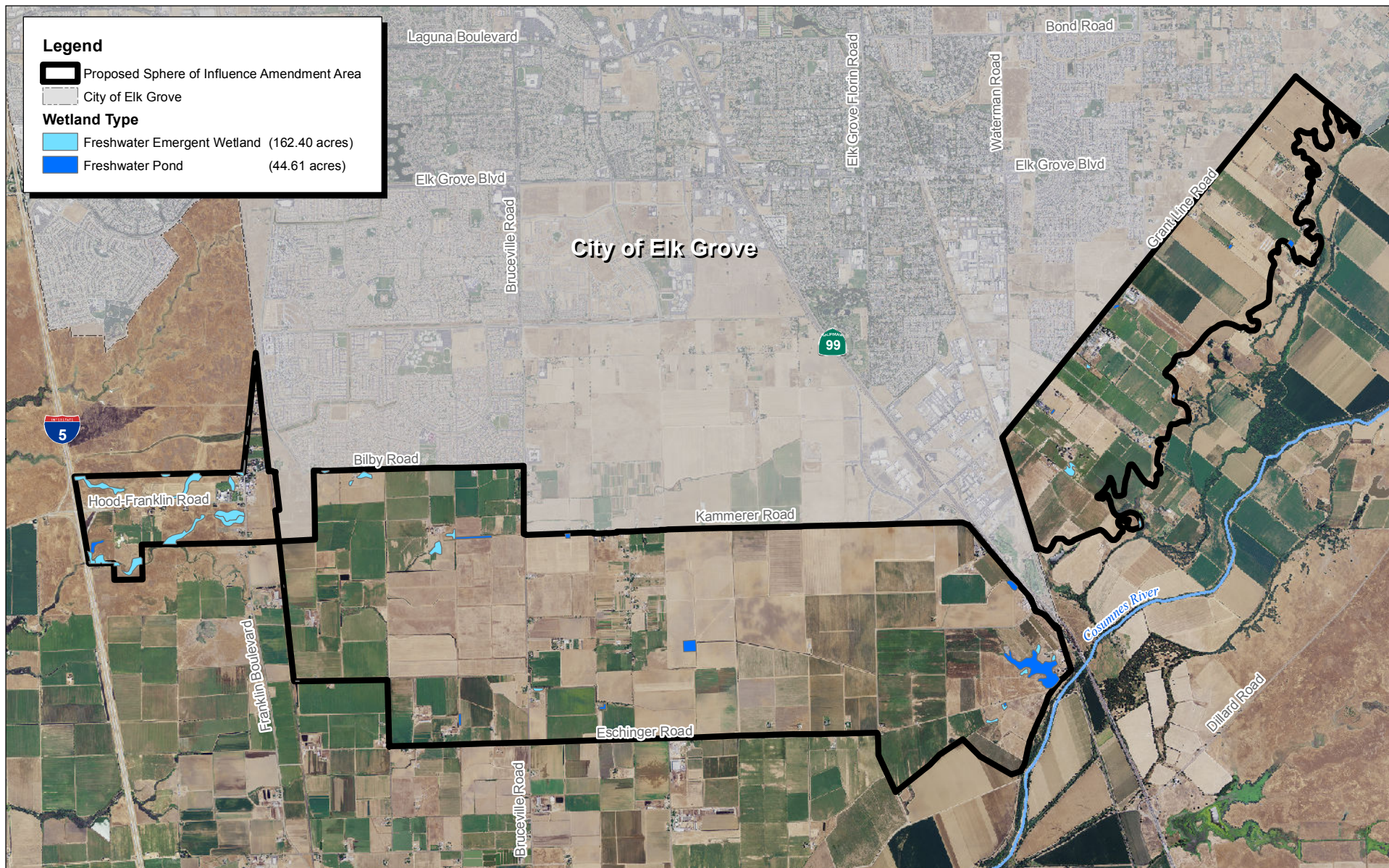
Irrigated pastures lie within the SOIA Area, particularly on rural residential parcels at the eastern area, as well as the central portion of the SOIA Area. These pastures are used for livestock grazing. Grass and herbaceous species tolerant of year-round wet conditions are associated with this habitat. The frequent irrigation of these areas has resulted in the establishment of areas of seasonal and perennial wetland conditions in some pastures.

Irrigated pastures support foraging habitat for a variety of avian and small mammal species, and the wetlands areas interspersed throughout this habitat likely support a variety of wildlife species.

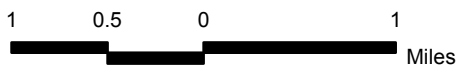
Species expected to occur within this habitat include great egret, great blue heron (*Ardea herodias*), red-winged blackbird, bullfrog (*Rana catesbeiana*), and Pacific chorus frog (*Pseudacris regilla*).

Wetlands

Focused surveys were not conducted for the project area; however, existing databases were used to assess the potential presence of sensitive habitat within the SOIA Area. The National Wetlands Inventory is maintained by the U.S. Fish and Wildlife Service. The data set represents the extent, approximate location, and type of wetlands and deepwater habitats in the United States. The National Wetland Inventory (NWI) was used to approximate the amount of wetlands within the SOIA and to assess the potential indirect impacts of any future development within the SOIA. The NWI maps are created from high-altitude aerial imagery but do not constitute a comprehensive inventory of all possible wetlands.



Source: Sacramento County NAIP, 2009, U.S. Fish and Wildlife Service (NWI).



32330002 • 09/2011 | 3.4-1_wetlands.mxd

Exhibit 3.4-1

Wetlands within the Proposed Sphere of Influence Amendment Area

SACRAMENTO LAFCO • ELK GROVE SPHERE OF INFLUENCE AMENDMENT
ENVIRONMENTAL IMPACT REPORT

Areas mapped as wetlands on the NWI also do not confirm the jurisdictional status of the features for U.S. Army Corps of Engineers (USACE) or California Department of Fish and Game (CDFG) jurisdictional status. Based on the NWI, there are 162.40 acres of freshwater emergent wetlands and 44.61 acres of freshwater ponds within the SOIA (Exhibit 3.4-1). The majority of the pond and wetland areas appear to be associated with agricultural activities, including water storage and irrigation runoff.

Surrounding Land Uses

West. Stone Lakes National Wildlife Refuge forms the western boundary of the project site. The refuge contains extensive wetlands and riparian areas that support sensitive species. Land uses within the Refuge include pastures and agricultural uses. Agricultural uses within the Refuge occupy the area immediately next to the proposed SOIA's western boundary. County of Sacramento land use designations west of the project site include Agricultural Cropland, Recreation, and Resource Conservation.

North. The project site is bounded by the City of Elk Grove to the north. Land uses immediately north of the SOIA Area include suburban residential uses and vacant land.

East. Rural residential and agricultural uses exist immediately east of the project boundary. Land in this area also lies within the FEMA 100-year floodplain. County of Sacramento land use designations east of the project site include Agricultural Cropland, Natural Preserve, and Resource Conservation. The Cosumnes River east of the project area contains riparian habitat that is known to support sensitive species.

South. Land uses in this area are similar to the adjacent agricultural land uses within the project site. County of Sacramento land use designations south of the project site include Agricultural Cropland.

Special-Status Species – Plants and Wildlife

Sensitive species are native species that have been accorded special legal or management protection because of concern for their continued existence. There are several categories of protection at both federal and state levels, depending on the magnitude of threat to continued existence and existing knowledge of population levels.

Federal Special-Status Species

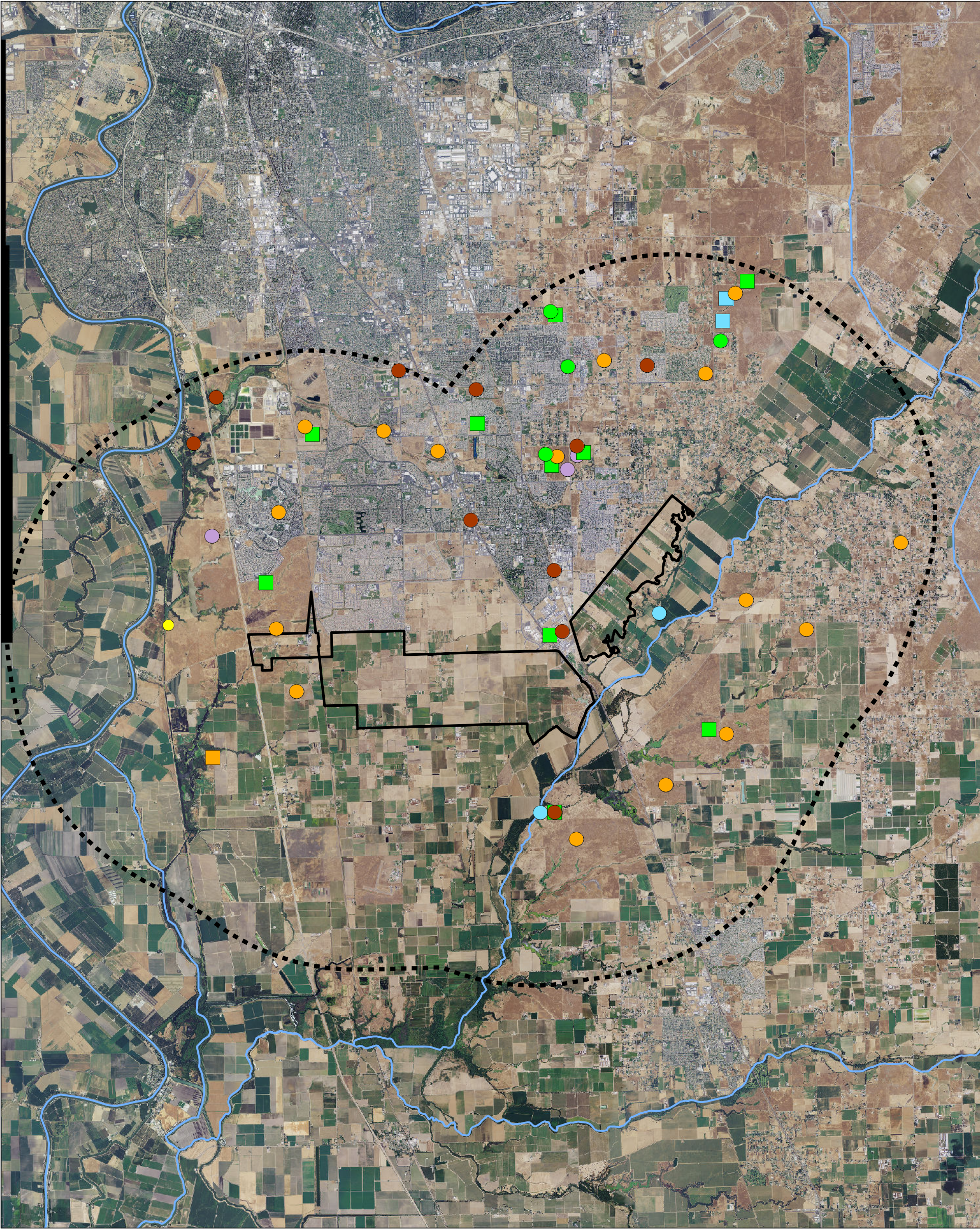
- Endangered Species Act (50 Code of Federal Regulations 17.11): Animals listed or proposed for listing as threatened or endangered
- Endangered Species Act (50 Code of Federal Regulations 17.12): Plants listed or proposed for listing as threatened or endangered
- Endangered Species Act (70 Federal Register 24870): Species identified as candidates for future listing as threatened or endangered

State and Local Special-Status Species

- California Endangered Species Act (14 California Code of Regulations 670.5): Species listed or proposed for listing as threatened or endangered by the State of California
- California Department of Fish and Game (Fish & Game Code Section 1900 et seq.): Plants listed as rare
- California Department of Fish and Game (Fish & Game Code Section 3511): Fully protected birds
- California Department of Fish and Game (Fish & Game Code Section 4700): Fully protected mammals
- California Department of Fish and Game (Fish & Game Code Section 5050): Fully protected reptiles and amphibians
- California Department of Fish and Game (Fish & Game Code Section 5515): Fully protected fish
- California Department of Fish and Game (DFG): Animal species of special concern to DFG—birds (Remsen, 1978), mammals (Williams, 1986), amphibians and reptiles (Jennings and Hayes 1994)
- California Native Plant Society (lists 1B and 2): Plants listed by CNPS as “rare, threatened, or endangered” in California
- California Native Plant Society (Lists 3 and 4): Plants identified by the CNPS as needing further information to determine status
- CEQA (Public Resources Code Section 15380): Species meeting the definition of rare or endangered under CEQA

Based on the California Natural Diversity Database (CNDDB), no special-status plant species have been recorded within the SOIA (Exhibit 3.4-2a). There are three special-status wildlife species that have been recorded within the SOIA Area. These species are state threatened Swainson’s hawk (*Buteo swainsoni*), California Species of Concern tricolored blackbird (*Agelaius tricolor*), and burrowing owl (*Athene cunicularia*). While there is no specific policy regarding the tricolored blackbird itself, its colonies are considered protected. No detailed surveys were conducted; however, Swainson’s hawks were observed during the reconnaissance survey of the project area. Swainson’s hawk is listed as threatened by CDFG, but it can be locally common in agricultural areas of the central valley with suitable foraging habitat and tall trees along riparian areas, which is its preferred nesting habitat. Exhibit 3.4-2b shows the concentration of Swainson’s hawk occurrences along the Cosumnes River south and east of the SOIA Area.

A summary of potential special-status plant species is provided in Table 3.4-1. A summary of potential special-status wildlife species is provided in Table 3.4-2.



Legend

Proposed Sphere of Influence Amendment Area

5-Mile Buffer

CNDDDB Plants

Boggs Lake hedge-hyssop - *Gratiola heterosepala*

Great Valley Valley Oak Riparian Forest - Great Valley Valley Oak Riparian Forest

Heckard's pepper-grass - *Lepidium latipes* var. *heckardii*

Sanford's arrowhead - *Sagittaria sanfordii*

dwarf downingia - *Downingia pusilla*

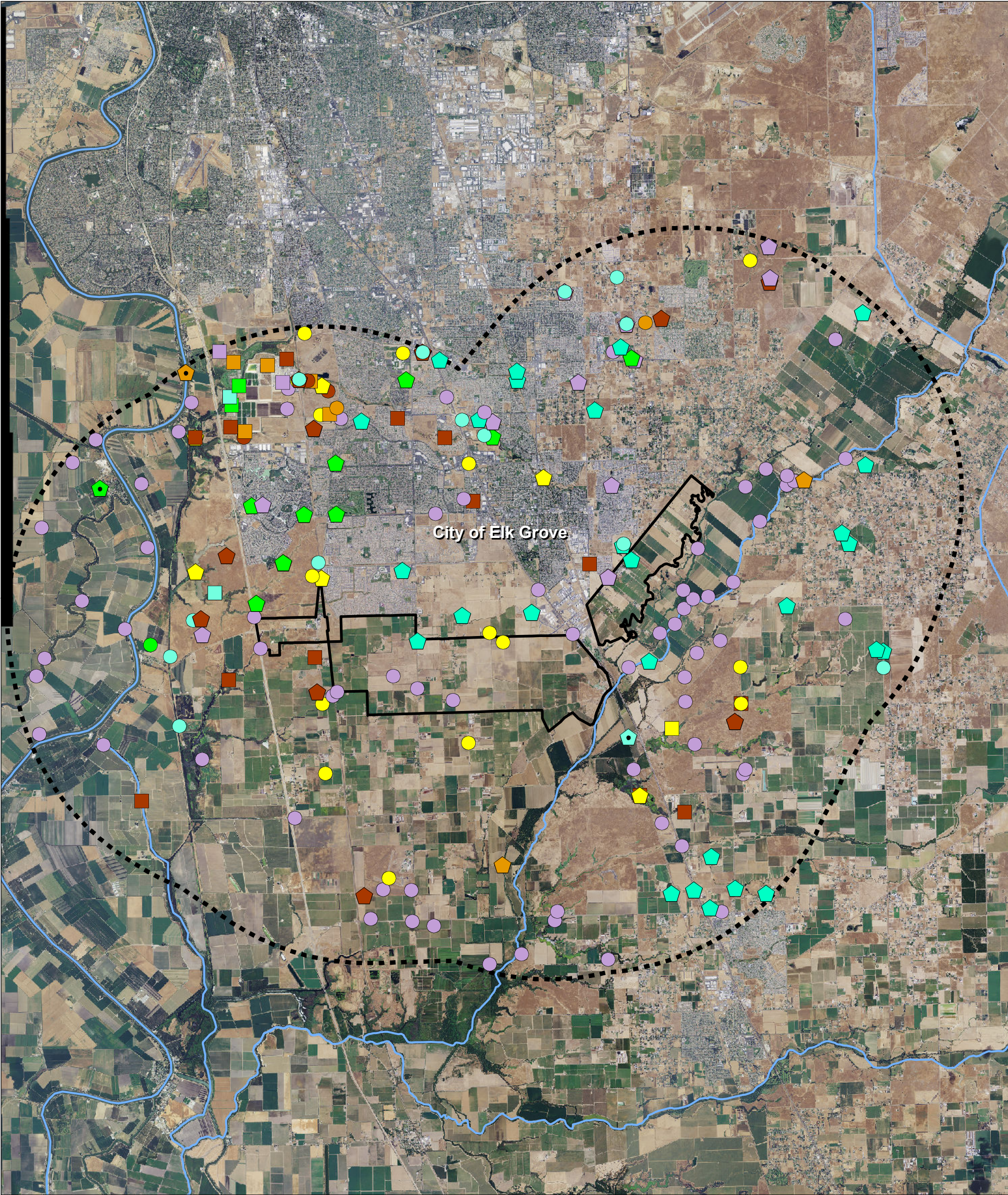
Northern Hardpan Vernal Pool - Northern Hardpan Vernal Pool

legenere - *Legenere limosa*

slender Orcutt grass - *Orcuttia tenuis*

watershield - *Brasenia schreberi*

Exhibit 3.4-2a
CNDDDB-Recorded Occurrences of
Special Status Plants



Legend

- Proposed Sphere of Influence Amendment Area
- 5-Mile Buffer

CNDDB Animals

- American badger - Taxidea taxus
- California linderiella - Linderiella occidentalis
- Cooper's hawk - Accipiter cooperii
- Swainson's hawk - Buteo swainsoni
- black-crowned night heron - Nycticorax nycticorax
- burrowing owl - Athene cunicularia

- double-crested cormorant - Phalacrocorax auritus
- ferruginous hawk - Buteo regalis
- giant garter snake - Thamnophis gigas
- great blue heron - Ardea herodias
- great egret - Ardea alba
- merlin - Falco columbarius
- midvalley fairy shrimp - Branchinecta mesoallensis
- tricolored blackbird - Agelaius tricolor
- valley elderberry longhorn beetle - Desmocerus californicus dimorphus

- vernal pool fairy shrimp - Branchinecta lynchi
- vernal pool tadpole shrimp - Lepidurus packardii
- western pond turtle - Emys marmorata
- western yellow-billed cuckoo - Coccyzus americanus occidentalis
- white-tailed kite - Elanus leucurus
- yellow-headed blackbird - Xanthocephalus xanthocephalus

Table 3.4-1: Summary of Special-Status Plant Species Review

Scientific Name Common Name	Listing Status* USFWS/ CDFG/CNPS	General Habitat Description	Potential for Presence**	Period of Identification
<i>California macrophylla</i> Round-leaved filaree	—/—/1B.1	Cismontane woodland and valley and foothill grassland habitats. 15 to 1,200 meters in elevation.	None. There are no suitable natural habitats within the SOIA Area; currently, the SOIA Area is primarily used for agricultural operations. There are no recorded occurrences of this species within 5 miles of the project area.	March–May
<i>Carex comosa</i> Bristly sedge	—/—/2.1	Coastal prairie and valley and foothill grassland habitats in clay soils. 0 to 625 meters in elevation.	None. There are no suitable natural habitats within the SOIA Area; currently, the SOIA Area is primarily used for agricultural operations. There are no recorded occurrences of this species within 5 miles of the project area.	May–September
<i>Cirsium crassicaule</i> Slough thistle	—/—/1B.1	Chenopod scrub, marshes and swamps, and riparian scrub habitats. 3 to 100 meters in elevation.	None. There are no natural habitats within the SOIA Area; currently, the SOIA Area is primarily used for agricultural operations. There are no recorded occurrences of this species within 5 miles of the project area.	May–August
<i>Eryngium racemosum</i> Delta button-celery	—/CE/1B.1	Riparian scrub in vernal mesic clay depressions. 3 to 30 meters in elevation.	None. There are no suitable natural habitats within the SOIA Area; currently, the SOIA Area is primarily used for agricultural operations. There are no recorded occurrences of this species within 5 miles of the project area.	June–October

Table 3.4-1 (cont.): Summary of Special-Status Plant Species Review

Scientific Name Common Name	Listing Status* USFWS/ CDFG/CNPS	General Habitat Description	Potential for Presence**	Period of Identification
<i>Eschscholzia rhombipetala</i> Diamond-petaled California poppy	—/—/1B.1	Valley and foothill grassland habitat in alkali, clay soils.	None. There are no suitable natural habitats within the SOIA Area. The SOIA Area is currently primarily used for agricultural operations. There are no recorded occurrences of this species within 5 miles of the project area.	March–April
<i>Hisbiscus lasiocarpus</i> Woolly rose-mallow	—/—/2.2	Freshwater marshes and swamps. 0 to 120 meters in elevation.	Moderate. There may be suitable habitat within brackish marshes or ditches in the SOIA Area. There are recorded occurrences of this species within 5 miles of the project area.	June–September
<i>Lathyrus jepsonii</i> var. <i>jepsonii</i> Delta tule pea	—/—/1B.2	Freshwater and brackish marshes and swamps. 0 to 4 meters in elevation.	Moderate. There may be suitable habitat within brackish marshes or ditches in the SOIA Area. There are recorded occurrences of this species within 5 miles of the project area.	May–July
<i>Sagittaria sanfordii</i> Sanford’s arrowhead	—/—/1B.2	Assorted shallow freshwater marshes and swamps. 0 to 2,132 feet in elevation.	Moderate. There may be suitable habitat within freshwater marshes or ditches in the SOIA Area. There are recorded occurrences of this species within 5 miles of the project area.	May–October

Table 3.4-1 (cont.): Summary of Special-Status Plant Species Review

Scientific Name Common Name	Listing Status* USFWS/ CDFG/CNPS	General Habitat Description	Potential for Presence**	Period of Identification
*Status Codes:				
Federal FE = Federally Endangered FT = Federally Threatened FD = Federally Delisted	State CE = State Endangered CT = State Threatened SSC = State Species of Special Concern	CNPS 1A = Presumed extinct in California 1B.X = Rare, threatened, or endangered in California and elsewhere 2.X = Rare, threatened, or endangered in California, but more common elsewhere Threat rank: 0.1 = Seriously threatened in California 0.2 = Fairly threatened in California 0.3 = Not very threatened in California		
**Potential for Presence				
High = Species was observed, or suitable habitat is present and the species has been recorded recently within or adjacent to the project area. Moderate = Species is locally common and suitable habitat is present. Low = Habitat is marginal, or suitable habitat is present but species is rare or locally uncommon. Very Low = Habitat is poor or absent, or species is very rare and has not been recorded within 5 miles of the project area. None = Habitat is absent and/or site is not within range of this species. Source: California Natural Diversity Database, 2010.				

Table 3.4-2: Summary of Special-Status Wildlife Species Review

Scientific Name Common name	Listing Status USFWS/ CDFG/WBVG	General Habitat Description	Potential for Presence	Period of Identification
Invertebrates				
<i>Branchinecta conservatio</i> Conservancy fairy shrimp	FE/—/—	Vernal pools, swales, and ephemeral freshwater habitats.	Moderate. There may be suitable vernal pool habitat within the SOIA Area. There are no recorded occurrences of this species within 5 miles of the project area.	Year-round

Table 3.4-2 (cont.): Summary of Special-Status Wildlife Species Review

Scientific Name Common name	Listing Status USFWS/ CDFG/WBWW	General Habitat Description	Potential for Presence	Period of Identification
<i>Branchinecta lynchi</i> Vernal pool fairy shrimp	FT/—/—	Vernal pools, seasonally ponded swales, and ephemeral freshwater habitats.	Moderate. There may be suitable vernal pool habitat within the SOIA Area. There are recorded occurrences of this species within 5 miles of the project area.	Year-round
<i>Desmocerus californicus dimorphus</i> Valley elderberry longhorn beetle	FT/—/—	Elderberry shrubs (<i>Sambucus mexicana</i>).	Moderate. There may be elderberry plant habitat within the SOIA Area. There are recorded occurrences of this species within 5 miles of the project area.	Year-round
<i>Lepidurus packardii</i> Vernal pool tadpole shrimp	FE/—/—	Vernal pools and ephemeral freshwater habitats.	Moderate. There may be suitable vernal pool habitat within the SOIA Area. There are recorded occurrences of this species within 5 miles of the project area.	Year-round
Fishes				
<i>Acipenser medirostris</i> Green sturgeon	FT/SSC/—	Anadromous species; large portions of life history are spent in the ocean. Migrations by adults into freshwater occur between late February and late July, with a spawning period generally ranging from March to July. Spawning takes place in deep, fast-moving water with temperatures between 46.5 and 57°F. Preferred spawning substrate is likely large cobble, but can range from clean sand to bedrock. Juveniles typically migrate out to sea before the end of their second year, primarily during summer and fall.	None. Irrigation channels and drainage ditches within the SOIA Area do not provide suitable habitat. There are no recorded occurrences of this species within 5 miles of the SOIA Area.	Year-round

Table 3.4-2 (cont.): Summary of Special-Status Wildlife Species Review

Scientific Name Common name	Listing Status USFWS/ CDFG/WBVG	General Habitat Description	Potential for Presence	Period of Identification
<i>Hypomesus transpacificus</i> Delta smelt	FT/CT/—	Sacramento-San Joaquin Delta.	None. Irrigation channels and drainage ditches within the SOIA Area do not provide suitable habitat. There are no recorded occurrences of this species within 5 miles of the SOIA Area. Critical Habitat for this species is west of the SOIA Area.	Year-round
<i>Mylopharodon conocephalus</i> Hardhead	—/SSC/—	Sacramento-San Joaquin Delta.	None. Irrigation channels and drainage ditches within the SOIA Area do not provide suitable habitat. There are no recorded occurrences of this species within 5 miles of the SOIA Area.	Year-round
<i>Oncorhynchus mykiss</i> Central Valley steelhead	FT/—/—	Sacramento and San Joaquin rivers and their tributaries.	None. Irrigation channels and drainage ditches within the SOIA Area do not provide suitable habitat. There are no recorded occurrences of this species within 5 miles of the SOIA Area.	Year-round
<i>Onchorhynchus tshawytscha</i> Central Valley spring-run chinook	FT/CT/—	Sacramento and San Joaquin rivers and their tributaries.	None. Irrigation channels and drainage ditches within the SOIA Area do not provide suitable habitat. There are no recorded occurrences of this species within 5 miles of the SOIA Area.	Year-round
<i>Onchorhynchus tshawytscha</i> Central Valley winter-run chinook	FE/CE/—	Sacramento and San Joaquin rivers and their tributaries.	None. Irrigation channels and drainage ditches within the SOIA Area do not provide suitable habitat. There are no recorded occurrences of this species within 5 miles of the SOIA Area.	Year-round

Table 3.4-2 (cont.): Summary of Special-Status Wildlife Species Review

Scientific Name Common name	Listing Status USFWS/ CDFG/WBVG	General Habitat Description	Potential for Presence	Period of Identification
Amphibians				
<i>Ambystoma californiense</i> California tiger salamander	FT/CC/—	Annual grassland habitat and grassy understory of valley-foothill hardwood habitats. Uncommon along streamcourses in valley-foothill riparian habitats. Adults spend most of the year in subterranean refugia, especially burrows of California ground squirrels. Migrate to vernal pools and other temporary rainwater ponds to breed and lay eggs.	Low. There may be suitable habitat within vernal pools or temporary ponds in the SOIA Area. There are no recorded occurrences of this species within 5 miles of the project area.	March to May (aquatic larval sampling) October through winter (drift fence surveys)
<i>Rana boylei</i> Foothill yellow-legged frog	—/CSC/—	Partly shaded, shallow streams and riffles with a rocky substrate in a variety of habitats.	None. There is no suitable shaded stream habitat with riffles or rocky substrate within the SOIA Area. There are no recorded occurrences of this species within 5 miles of the project area.	April–July (breeding season survey)
<i>Rana draytonii</i> California red-legged frog	FT/CSC/—	Lowlands and foothills in or near permanent or late-season sources of deep water with dense, shrubby, or emergent vegetation.	None. There is no suitable habitat consisting of dense emergent riparian vegetation and still or slow-moving water bodies that could serve as breeding sites within the SOIA Area. There are no recorded occurrences of this species within 5 miles of the project area.	January through February (breeding season survey)
<i>Spea hammondi</i> Western spadefoot toad	—/CSC/—	Grasslands with temporary pools.	Low. The SOIA Area and surrounding lands are active agricultural fields and orchards with the possibility of pooling and grassland habitat for this species. There are no recorded occurrences of this species within 5 miles of the site.	January–May (adult visual survey)

Table 3.4-2 (cont.): Summary of Special-Status Wildlife Species Review

Scientific Name Common name	Listing Status USFWS/ CDFG/WBVG	General Habitat Description	Potential for Presence	Period of Identification
Reptiles				
<i>Actinemys marmorata</i> Western pond turtle	—/CSC/—	Ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Requires basking sites and suitable upland habitat for egg laying. May move overland up to 325 feet for egg laying.	Moderate. There may be suitable aquatic habitat with potential basking sites within the SOIA Area. There are recorded occurrences of this species within 5 miles of the project area.	Year-round
<i>Masticophis flagellum ruddocki</i> San Joaquin whipsnake	—/SSC/—	Grassland, savanna, chaparral, and woodland.	None. The project area and surrounding lands are active agricultural fields and orchards and does not provide adequate chaparral, grassland, or savanna habitat suitable for this species. There are no recorded occurrences of this species within 5 miles of the site.	Year-round
<i>Phrynosoma coronatum</i> California horned lizard	—/SSC/—	Common in lowlands along sandy washes with scattered low shrubs to provide cover and open areas for basking and loose soils in which they can bury themselves.	None. Because of the active agricultural operations within the SOIA Area, there are no habitats suitable for this species. There are no recorded occurrences of this species within 5 miles of the site.	April to September
<i>Thamnophis gigas</i> Giant garter snake	FT/CT/—	Marshes, sloughs, irrigation channels, and occasionally in slow-moving streams. Requires emergent vegetation for cover.	Moderate. There may be suitable habitat within the SOIA Area along irrigation canals and drainages. There are recorded occurrences of this species within 5 miles of the project area.	Mid-March to October

Table 3.4-2 (cont.): Summary of Special-Status Wildlife Species Review

Scientific Name Common name	Listing Status USFWS/ CDFG/WBWW	General Habitat Description	Potential for Presence	Period of Identification
Birds				
<i>Accipiter striatus</i> Sharp-shinned hawk	—/CSC/—	Winter resident throughout much of the state; permanent at higher elevations. Breeds in ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers but is not restricted to riparian habitats.	Low. This species does not nest within the region, although the site may be used for foraging. There are no recorded occurrences of this species within 5 miles of the project area.	Year-round
<i>Agelaius tricolor</i> Tricolored blackbird	—/CSC/—	Largely endemic to California, most numerous in the Central Valley and nearby vicinity. Breeds near fresh water, preferably in emergent wetland with tall, dense cattails or tules, but also in thickets of willow, blackberry, wild rose, tall herbs. Feeds in grassland and cropland habitats.	Moderate. There may be suitable habitat within the SOIA Area where there is freshwater emergent wetlands with adequate nesting habitat. There are recorded occurrences of this species within 5 miles of the project area.	April–July
<i>Aquila chrysaetos</i> Golden eagle	—/CFP/—	Breeds on cliffs or in large trees or electrical towers, forages in open habitats.	Low. The SOIA Area is an agricultural region that does not provide suitable nesting habitat for this species. There are no recorded occurrences of this species within 5 miles of the project area.	Year-round
<i>Athene cunicularia</i> Western burrowing owl	—/CSC/—	Open, dry annual or perennial grasslands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals.	Moderate. There may be suitable habitat within the SOIA Area in small mammal burrows. There are recorded occurrences of this species within 5 miles of the project area.	December 1 to January 31 and April 15 to July 15
<i>Buteo swainsoni</i> Swainson's hawk	—/CT/—	Uncommon breeding resident and migrant in the Central Valley, Klamath Basin, Northeastern Plateau, Lassen County, and Mojave Desert. Breeds in open stands in juniper-sage flats, riparian areas, and in	High - Present. Suitable foraging habitat is present in agricultural fields, and trees associated with residences or in the southwest corner of the project area may be used for	March to September

Table 3.4-2 (cont.): Summary of Special-Status Wildlife Species Review

Scientific Name Common name	Listing Status USFWS/ CDFG/WBWWG	General Habitat Description	Potential for Presence	Period of Identification
		oak savannah in the Central Valley. Forages in adjacent grasslands, grain or alfalfa fields, or livestock pastures.	nesting. The species was observed in the SOIA Area.	
<i>Buteo regalis</i> Ferruginous hawk	—/CSC/—	Forages in grasslands and occasionally in other open habitats during migration and winter.	Low. This species does not breed in California, although the area is suitable for foraging. There are no recorded occurrences of this species within 5 miles of the project area.	September to April
<i>Circus cyaneus</i> Northern harrier	—/CSC/—	Winter resident throughout most of the state; year-round in the Central Valley and Coast Range. Forages in marshes, grasslands, and ruderal habitats; nests in extensive marshes and wet fields or grasslands.	Moderate. Suitable foraging habitat is present within the SOIA Area within grasslands and ruderal habitats. There are no recorded occurrences of this species within 5 miles of the project area.	April to September (breeding)
<i>Coccyzus americanus occidentalis</i> Western yellow-billed cuckoo	FC/CE/—	Uncommon to rare summer resident of valley foothill and desert riparian habitats. Inhabits extensive deciduous riparian thickets or forests with dense, low-level, or understory foliage, and which abut on slow-moving watercourses, backwaters, or seeps. Willow is almost always a dominant component of the vegetation. In Sacramento Valley, also utilizes adjacent orchards, especially walnut.	None. There is no suitable riparian habitat for this species within the SOIA Area. There are no recorded occurrences of this species within 5 miles of the project area. May be found in the Stone Lakes Wildlife Preserve to the west of the SOIA Area.	April to September
<i>Dendroica petechia</i> Yellow warbler	—/CSC/—	Requires riparian thickets of willow and other brushy tangles near watercourses for cover. Nests in dense shrubs along streams or rivers.	Low. There is no suitable riparian thicket habitat for this species within the SOIA Area. There are no recorded occurrences of this species within 5 miles of the project area.	April–September

Table 3.4-2 (cont.): Summary of Special-Status Wildlife Species Review

Scientific Name Common name	Listing Status USFWS/ CDFG/WBVG	General Habitat Description	Potential for Presence	Period of Identification
<i>Elanus leucurus</i> White-tailed kite	—/CFP/—	Year-round resident. Nests or roosts in dense, broad-leafed deciduous trees. Forages in herbaceous lowlands with variable tree growth and dense populations of voles.	Low. Agricultural fields within the SOIA Area are suitable for foraging, and trees associated with residences and agricultural areas may be suitable for nesting. There are no recorded occurrences of this species within 5 miles of the area.	January to August (breeding)
<i>Falco columbarius</i> Merlin	—/CSC/—	Uncommon winter migrant. Seldom found in heavily wooded areas or open deserts. Frequents open habitats at low elevations near water and tree stands. Favors coastlines, lakeshores, and wetlands. Ranges from annual grasslands to ponderosa pine and montane hardwood-conifer habitats.	Low. This species does not breed in California, although suitable foraging habitat is present in agricultural fields. There are no recorded occurrences of this species within 5 miles of the project area.	September to May
<i>Falco mexicanus</i> Prairie falcon	—/CSC/—	Year-round resident throughout much of the state; winters in the Central Valley and along the coast. Occurs in open habitats such as grasslands, desert scrub, rangelands, and croplands. Nests in a scrape on a sheltered ledge of a cliff overlooking a large, open area.	Low. This species does not breed in the region, although suitable foraging habitat is present in agricultural fields. There are no recorded occurrences of this species within 5 miles of the project area.	Year-round
<i>Falco peregrinus anatum</i> American peregrine falcon	FD/CE/—	Forages in marshes and grasslands. Nesting habitat includes high, protected cliffs and ledges, also utilizes human-made structures. Winters at lower elevations; year-round resident through much of the state.	None. The project area contains no habitat suitable for nesting or for foraging by this species. There are no recorded occurrences of this species within 5 miles of the project area.	Year-round

Table 3.4-2 (cont.): Summary of Special-Status Wildlife Species Review

Scientific Name Common name	Listing Status USFWS/ CDFG/WBVG	General Habitat Description	Potential for Presence	Period of Identification
<i>Grus canadensis tabida</i> Greater sandhill crane	—/CFP/—	Found in open, fresh water wetlands, particularly habitats that contain open sedge meadows in wetlands that are adjacent to short vegetation uplands.	Moderate. There may be suitable sedge meadow/wetlands habitat within the SOIA Area. There are no recorded occurrences of this species within 5 miles of the project area.	Year-round
<i>Haliaeetus leucocephalus</i> Bald eagle	FT/CFP/—	Year-round at ocean shorelines, lake margins, and river courses. Nests in large, old-growth, or dominant live trees with open branchwork, especially ponderosa pine.	None. The project area contains no habitat suitable for nesting or for foraging by this species. There are no recorded occurrences of this species within 5 miles of the project area.	Year-round
<i>Icteria virens</i> Yellow-breasted chat	—/CSC/—	Breeds in riparian habitats having dense understory vegetation, such as willow and blackberry.	Moderate. There may be suitable nesting habitat within the SOIA Area. There are recorded occurrences of this species within 5 miles of the project area.	April–July
<i>Progne subis</i> Purple martin	—/CSC/—	An uncommon to rare summer resident in a variety of wooded, low-elevation habitats; a rare migrant in spring and fall, absent in winter. Breeding habitat includes old-growth, multi-layered, open forest, and woodland with snags; forages over riparian areas, forest, and woodlands. Drain holes in bridges and overpasses now commonly used for nesting in urban habitats.	Low. There is no suitable nesting habitat for this species within the SOIA Area. There are no recorded occurrences of this species within 5 miles of the project area.	April–September
<i>Xanthocephalus xanthocephalus</i> Yellow-headed blackbird	—/CSC/—	Breeds commonly east of Cascade Range and Sierra Nevada, in Imperial and Colorado River valleys, in the Central Valley, and at selected locations in the coast ranges. Nests in fresh emergent	Moderate. There may be suitable emergent wetland habitat within the SOIA Area. There are recorded occurrences of this species within 5 miles of the project area.	April–July (breeding)

Table 3.4-2 (cont.): Summary of Special-Status Wildlife Species Review

Scientific Name Common name	Listing Status USFWS/ CDFG/WBVG	General Habitat Description	Potential for Presence	Period of Identification
		wetland with dense vegetation and deep water, often along borders of lakes or ponds. Forages in emergent wetland and moist, open areas, especially cropland and muddy shores of lacustrine habitat.		
Mammals				
<i>Antrozous pallidus</i> Pallid bat	—/CSC/High	Occurs in a variety of habitats throughout the state to 6,000 feet in elevation. It is most abundant in xeric ecosystems. Pallid bats roost alone, and in both large and small groups. Day and night roosts include crevices in rocky outcrops and cliffs, caves, mines, trees, and human structures such as bridges, barns, porches, bat boxes, and buildings. This species also has been found roosting on or near the ground under stone piles, rags, and baseboards. Pallid bat is a gregarious species and often roost in colonies of 20 to several hundred individuals. Non-migratory. Hibernates during winter, with very little activity.	Low. The project area contains limited roosting habitat, and this species is not commonly associated with agricultural areas. There are no recorded occurrences of this species within 5 miles of the project area.	April to October
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	—/CSC/High	Occurs throughout the State to 11,000 feet in elevation. Distribution correlated with availability of caves and cave-like roosting habitat. Roosts in colonies in caves, mines, tunnels, or buildings in mesic habitats. The species forages along habitat edges, gleaning insects from bushes and trees. Seasonal movement patterns not well understood. There may be local migration along altitudinal gradients. Hibernates during winter, with very little activity.	Low. The project area contains limited roosting habitat, and this species is not commonly associated with agricultural areas. There are no recorded occurrences of this species within 5 miles of the project area.	Consult agency

Table 3.4-2 (cont.): Summary of Special-Status Wildlife Species Review

Scientific Name Common name	Listing Status USFWS/ CDFG/WBWWG	General Habitat Description	Potential for Presence	Period of Identification
<i>Euderma maculata</i> Spotted bat	—/CSC/High	Distribution is extremely patchy and is correlated closely with prominent rock features. Non-migratory, although there may be local migration along altitudinal gradients. Depends upon rock-faced cliff roosting habitat. Thought to roost singly during the day. Forages throughout the night, so it does not utilize night roosts.	Low. The project area contains no roosting habitat, and this species is not commonly associated with agricultural areas. There are no recorded occurrences of this species within 5 miles of the project area.	Year-round
<i>Eumops perotis californicus</i> Greater western mastiff bat	—/CSC/High	Roosts in rock crevices of vertical cliffs and less commonly in buildings. Does not migrate or hibernate.	None. The project area contains no roosting habitat, and this species is not commonly associated with agricultural areas. There are no recorded occurrences of this species within 5 miles of the project area.	Year-round
<i>Lasiurus blossevillei</i> Western red bat	—/CSC/High	Western red bat is a solitary, foliage-roosting species. Day roosts in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas. Closely associated with riparian habitats; cottonwood stands are preferred roost areas. Roosts behind foliage and hidden from sight. Females do not form maternity colonies, but give birth singly in trees. Migrates south in the winter, and returns north for breeding.	Low. The project area contains limited roosting habitat. There are no recorded occurrences of this species within 5 miles of the project area.	April to October
<i>Myotis thysanodes</i> Fringed myotis	—/—/High	Widely distributed throughout California in all habitat types. Known to migrate, but very little information available regarding migration patterns. Most abundant in xeric woodlands, such as oak and pinyon-juniper forests. Roosts in	Low. The project area contains limited roosting habitat, and this species is not commonly associated with agricultural areas. There are no recorded occurrences of this species within 5 miles of the project area	Year-round

Table 3.4-2 (cont.): Summary of Special-Status Wildlife Species Review

Scientific Name Common name	Listing Status USFWS/ CDFG/WBWW	General Habitat Description	Potential for Presence	Period of Identification
		caves, buildings, underground mines, rock crevices in cliff faces, and bridges in groups ranging from 10 to 2,000. Hibernates in buildings or underground mines		
<i>Myotis volans</i> Long-legged myotis	—/—/High	Found primarily in forested areas, especially blue oak-foothill pine, montane hardwood-conifer, ponderosa pine, and Sierran mixed conifer. Migrates short distances to hibernation areas. Roosts in abandoned buildings, cracks in the ground, bridges, cliff crevices, exfoliating tree bark, and hollows within snags. Females form large maternity colonies of hundreds of individuals. Hibernates in winter in caves and mines.	Low. The project area contains limited roosting habitat, and this species is not commonly associated with agricultural areas. There are no recorded occurrences of this species within 5 miles of the project area	Year-round
<i>Taxidea taxus</i> American badger	—/SSC/—	Herbaceous, shrub, and open stages of most habitats with dry, friable soils.	Moderate. There may be suitable habitat within the SOIA Area. There are recorded occurrences of this species within 5 miles of the project area.	Year-round
<i>Vulpes macrotis mutica</i> San Joaquin kit fox	FE/CT/—	Occur in annual grasslands or grassy open stages of vegetation dominated by scattered brush, shrubs, and scrub with loose-textured, sandy, and loamy soils.	None. There is no suitable habitat for this species within the project area, due to the site's active agricultural fields and orchards. However, this species may disperse across the site. There are no recorded occurrences of this species within 5 miles of the project.	Year-round

Table 3.4-2 (cont.): Summary of Special-Status Wildlife Species Review

Scientific Name Common name	Listing Status USFWS/ CDFG/WBWW	General Habitat Description	Potential for Presence	Period of Identification
Status Codes				
Federal FE = Federally Endangered FT = Federally Threatened FD = Federally Delisted		State CE = State Endangered CT = State Threatened CSC = State Species of Special Concern CC = State Candidate	Western Bat Working Group - WBWG High = Species imperiled or at high risk of imperilment. Medium = Lack of information prevents assessment of status and should be considered a threat.	
**Potential for Presence				
High = Species was observed, or suitable habitat is present and the species has been recorded recently within or adjacent to the project area. Moderate = Species is locally common and suitable habitat is present. Low = Habitat is marginal, or suitable habitat is present but species is rare or locally uncommon. Very Low = Habitat is poor or absent, or species is very rare and has not been recorded within 5 miles of the project area. None = Habitat is absent and/or site is not within the range of this species. Source: California Natural Diversity Database, 2010.				

Designated Critical Habitat

No designated critical habitat occurs within the project area. However, the onsite drainages connect directly to the downstream drainages to the west, which includes designated critical habitat for the Delta smelt (*Hypomesus transpacificus*).

3.4.3 - Regulatory Framework

Federal

Federal Endangered Species Act (FESA)

The purposes of this Act are to provide a means to conserve the ecosystems that endangered and threatened species depend on and to provide a program for conservation and recovery of these species. The Federal Endangered Species Act (FESA) defines species as “endangered” and “threatened” and provides regulatory protection for any species so designated. Section 9 of the FESA prohibits the take of species listed by the U.S. Fish and Wildlife Service (USFWS) as threatened or endangered. As defined in the FESA, take means “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in such conduct.” Harm is defined by the USFWS to encompass “an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering” (50 Code of Federal Regulations Section 17.3). Thus, some instances of habitat modification can constitute prohibited “take” if it can be shown that such modification can be expected to result in injury or death to one or more individuals of a listed species.

In recognition that take cannot always be avoided, Section 10(a) of the FESA includes provisions for take that is incidental to, but not the purpose of, otherwise lawful activities. Section 10 (a)(1)(B) permits (incidental take permits) may be issued if taking is incidental and will not appreciably reduce the likelihood of survival and recovery of the species in the wild.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) makes it unlawful to pursue, capture, kill, or possess or attempt to do the same to any migratory bird or part, nest, or egg of any such bird listed in wildlife protection treaties between the United States, Great Britain, Mexico, Japan, and the countries of the former Soviet Union. As with the FESA, the MBTA authorizes the Secretary of the Interior to issue permits for incidental take.

Federal Clean Water Act: Sections 404 and 401

Section 404 of the Federal Clean Water Act, which is administered by the United States Army Corps of Engineers (USACE), regulates the discharge of dredge and fill material into waters of the United States (U.S.). The definition of “Waters of the U.S.” is set forth in the Title 33 Code of Federal Regulations (CFR) 328.3. The term “waters of the United States” means (1) navigable waters, (2) interstate waters, (3) intrastate waters with an interstate commerce nexus, (4) impoundments of the

these waters, (5) non-navigable tributaries, including non-relatively permanent waters (intermittent, ephemeral streams) that exhibit a significant chemical, physical or biological nexus to downstream jurisdictional waters, (6) territorial seas, and (7) wetlands adjacent to otherwise jurisdictional waters.

With respect to adjacent wetlands, the USACE defines “adjacent” to mean “bordering, contiguous or neighboring.” Typically, wetlands within the floodplain of jurisdictional features (lakes, rivers, tributaries, etc.) will be considered “adjacent.” According to the USACE, wetlands means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation adapted for life in saturated soil conditions (33 CFR 328.3(b)). Wetlands generally include swamps, marshes, bogs, and similar areas.

Any project impacting jurisdictional waters/wetlands must obtain a dredge/fill (404) permit from the USACE prior to commencement of activities affecting those resources.

In connection with notification to the USACE under Section 404 of the Clean Water Act (CWA), pursuant to 33 CFR Part 330, a written request for Section 401 water quality certification must be submitted to the Regional Water Quality Control Board (RWQCB) to ensure that no degradation of water quality will result from the proposed project. Subject to CWA section 401(a)(1), the USACE cannot issue a section 404 dredge/fill permit until such time as a CWA section 401 Water Quality Certification has been approved by the applicable RWQCB. In the nationwide permitting program, compliance with the Section 401 is set forth in general condition (GC 21).

In order to meet the requirements of the RWQCB for issuance of a 401-water quality certification, the project proponent must provide assurances that the project will not adversely affect the water quality of receiving water bodies. A written request for 401 water quality certification must be prepared and submitted to the RWQCB for review. The request will include a detailed project description, a description of proposed impacts, identification and discussion of beneficial uses of affected receiving waters (as described within the appropriate Basin Plan), a water quality plan identifying project-specific Best Management practices (BMPs), discussion of other approvals and certifications being obtained, a conceptual restoration plan, and a completed notification form.

State

California Endangered Species Act (CESA)

The State of California considers an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy. The State considers a threatened species as one present in such small numbers throughout its range that it is considered likely to become an endangered species in the near future in the absence of special protection or management. A rare species is considered as present in such small numbers throughout its range that it may become endangered if its present environment worsens. The designation “rare species” applies only to California native plants. State

threatened and endangered species include both plants and wildlife (not including invertebrates) and are legally protected against “take” as this term is defined in the CESA (California Fish & Game Code Section 2050, et seq.). “Species of Special Concern” is an informal designation used by the CDFG for some declining wildlife species that are not officially listed as endangered, threatened, or rare. This designation does not provide legal protection, but it signifies that these species are recognized as vulnerable by CDFG.

Sections 1600–1603 of the State 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 are subject to the regulatory authority of the CDFG pursuant to Sections 1600 through 1603 of the California Code, requiring preparation of a Streambed Alteration Agreement. Under the Code, a stream is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. Included are watercourses with surface or subsurface flows that support or have supported riparian vegetation. CDFG also has jurisdiction within altered or artificial waterways based on the value of those waterways to fish and wildlife and has jurisdiction over dry washes that carry water ephemerally during storm events.

Sections 2080 and 2081 of the State Fish and Game Code

Section 2080 of the State Fish and Game Code states that no person shall import into this state (California), export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission [State Fish and Game Commission] determines to be an endangered species or threatened species, or attempt any of those acts, except as otherwise provided in this chapter, the Native Plant Protection Act, or the California Desert Native Plants Act. Under Section 2081 of the Code, the CDFG may authorize individuals or public agencies to import, export, take, or possess, any state-listed endangered, threatened, or candidate species. These otherwise prohibited acts may be authorized through permits or Memoranda of Understanding if (1) the take is incidental to an otherwise lawful activity, (2) impacts of the authorized take are minimized and fully mitigated, (3) the permit is consistent with any regulations adopted pursuant to any recovery plan for the species, and (4) the applicant ensures adequate funding to implement the measures required by CDFG. CDFG shall make this determination based on the best scientific and other information that is reasonably available and shall include consideration of the species’ capability to survive and reproduce.

Section 3503 of the State Fish and Game Code

Section 3503 of the State Fish and Game Code states, “It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.”

Native Plant Protection Act

The Native Plant Protection Act includes measures to preserve, protect, and enhance rare and endangered native plants. The definition of “rare and endangered” differs from those contained in CESA. However, the list of native plants afforded protection pursuant to this act includes those listed as rare and endangered under the CESA. The Native Plant Protection Act provides limitations on take as follows: “No person shall import into this state, or take, possess, or sell within this state” any rare or endangered native plant, except in compliance with provisions of the act (CDFG Code Section 1908), et seq.). Individual landowners are required to notify the CDFG at least 10 days in advance of changing land uses to allow the CDFG to salvage any rare or endangered native plant material.

California Native Plant Society

The California Native Plant Society (CNPS) is a statewide resource conservation organization that has developed an inventory of California’s special-status plant species. This inventory is a summary of information on the distribution, rarity, and endangerment of California’s vascular plants. This rare plant inventory consists of four lists. CNPS presumes that List 1A plant species are extinct in California because they have not been seen in the wild for many years. CNPS considers List 1B plants as rare, threatened, or endangered throughout their range. List 2 plant species are considered rare, threatened, or endangered in California, but more common in other states. Plant species on lists 1A, 1B, and 2 meet CDFG criteria for endangered, threatened, or rare listing. Plant species for which CNPS requires additional information in order to properly evaluate their status are included on List 3. List 4 plant species are those of limited distribution in California whose susceptibility to threat is considered low at the current time.

Local

City of Elk Grove

The City of Elk Grove General Plan establishes goals and policies to guide both present and future development within the City’s jurisdiction. The City of Elk Grove’s General Plan policies related to biological resources that may apply to potential future development in the SOIA Area are provided below.

- **Policy CAQ-6:** Within the Primary Zone of the Legal Delta (as defined by the State of California in the State Water Code, Section 12220), the City’s land use and other policies shall conform with the “Land Use and Resource Management Plan for the Primary Zone of the Delta” developed by the Delta Protection Commission.
- **CAQ-6-Action 1:** Coordinate with the Delta Protection Commission by providing updates on the status of any requests by the City to include any lands in the Primary Zone in the City’s sphere of influence or incorporated boundaries.
- **CAQ-6-Action 2:** Prior to the annexation of any land in the Primary Zone of the Legal Delta, ensure that this General Plan is consistent with the Delta Protection Commission’s Act and Plan as it affects the area within the Primary Zone.

- **Policy CAQ-7:** Encourage development clustering where clustering would facilitate onsite protection of woodlands, grasslands, wetlands, stream corridors, scenic areas, or other appropriate natural features as open space, provided that:
 1. Urban infrastructure capacity is available for urban use.
 2. Onsite resource protection is appropriate and consistent with other General Plan Policies.
 3. The architecture and scale of development is appropriate for the area.
 4. Development rights for the open space area are permanently dedicated and appropriate long-term management is provided for by either a public agency, homeowners association, or other appropriate entity.

This policy shall not apply in the Rural Residential area east of State Route 99, where clustering of development is not permitted.

- **Policy CAQ-8:** Large trees (both native and non-native) are an important aesthetic (and, in some cases, biological) resource. Trees which function as an important part of the City's or a neighborhood's aesthetic character or as 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 an 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, which 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-8-Action 9:** Provide funds for education, programs, and materials emphasizing the value and importance of trees. Support private foundations with local funds for their tree planting efforts. Encourage the harvesting of native seeds and plants prior to the clearing of project sites.
- **Policy CAQ-9:** Wetlands, vernal pools, marshland and riparian (streamside) areas are considered to be 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, re-vegetation 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.
- **Policy 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.
- **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 occurring based on City biological resource mapping and data provided in the General Plan EIR or other technical material that 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, 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 offsite 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 offsite, relocation of the species to another suitable habitat area, payment of mitigation credit fees.
- Participation in a habitat conservation plan.
- **Policy CAQ-19:** Encourage the retention of natural stream corridors, and the creation of natural stream channels where improvements to drainage capacity are required.
- **CAQ-19-Action 1:** Re-vegetation using native plant species shall be encouraged; use of non-native species shall be discouraged. Use of invasive species shall be prohibited.
- **CAQ-19-Action 2:** The City shall permit stream channel realignment only:
 - When necessary to eliminate flood hazards, after alternatives to provide flood capacity while protecting the natural alignment have been shown to be infeasible; or
 - To protect and preserve natural features and vegetation which would otherwise be removed; or
 - If the existing channel has been significantly disrupted by agricultural improvements or other man-made changes.
- **CAQ-19-Action 3:** The City shall require, to the maximum extent practical, retention of topographic diversity and variation when channels are realigned or modified, including:
 - “Self-sustaining” meander characteristics,
 - Berms,
 - Naturalized side slope, and
 - Varied channel bottom elevation, consistent with the characteristics of the watershed, public safety, and other site-specific considerations.
- **CAQ-19-Action 4:** Where existing streams support riparian vegetation, evaluate options for constructing secondary flood control channels or other facilities for flood control and water quality purposes.

- **CAQ-19-Action 5:** Channel lowering of existing natural streams shall occur only after consideration of alternatives (including surface drainage systems which do not require channel lowering) and only when it is necessary to accommodate the gravity drainage of storm runoff and/or accommodate floodflows under existing bridge structures.
- **CAQ-19-Action 6:** All storm drainage improvements on natural streams shall be designed where feasible to maintain water flows necessary to protect and enhance existing fish habitat, native riparian vegetation, water quality, and/or ground water recharge.
- **CAQ-19-Action 7:** Improvements in watercourses shall be designed for low maintenance, and to accommodate peak flows with vegetation (including mitigation plantings) in the channel. Channel modifications shall retain marsh and riparian vegetation whenever possible.
- **CAQ-19-Action 9:** Trails along stream corridors shall be located to minimize wildlife impacts and shall be restricted to non-motorized traffic.
- **CAQ-19-Action 10:** Except where approved by the City as part of the development of a public or private development project, no grading, clearing, tree cutting, debris disposal or any other similar action shall be allowed in stream corridors except for normal channel maintenance.
- **Policy CAQ-20:** Fill may not be placed in any 100-year floodplain as delineated by currently effective FEMA Flood Insurance Rate Maps or subsequent comprehensive drainage plans unless specifically approved by the City.

No fill shall be permitted in wetland areas unless approved by the City and appropriate state and federal agencies.

- **Policy CAQ-21:** Development adjacent to a natural stream(s) shall provide a “stream buffer zone” along the stream.

“Natural streams” shall be generally considered to consist of the following, subject to site-specific review by the City:

- Deer Creek
- Elk Grove Creek
- Laguna Creek and its tributaries
- Morrison Creek
- Strawberry Creek
- White House Creek

The following are examples of desired features for this transition zone; the specific design for each transition zone shall be approved on a case-by-case basis by the City.

Stream buffer zones should generally measure at least 50 (fifty) feet from the stream centerline (total width of 100) feet or more, depending on the characteristics of the stream, and shall include:

1. Sufficient width for a mowed firebreak (where necessary), access for channel maintenance and flood control, and for planned passive recreation uses.
2. Sufficient width to provide for:

- a. Quality and quantity of existing and created habitat,
 - b. Presence of species as well as species sensitivity to human disturbance,
 - c. Areas for regeneration of vegetation,
 - d. Vegetative filtration for water quality,
 - e. Corridor for wildlife habitat linkage,
 - f. Protection from runoff and other impacts of urban uses adjacent to the corridor,
 - g. Trails and greenbelts.
3. The stream buffer zone should not include above ground water quality treatment structures designed to meet pollutant discharge requirements.
- **Policy CAQ-22:** Stream crossings shall be minimized and be aesthetically compatible with the natural appearance of the stream channel. The use of bridges and other stream crossings with natural (unpaved) bottoms shall be encouraged to minimize impacts to natural habitat.
 - **Policy CAQ-23:** Uses in the stream corridors shall be limited to recreation and agricultural uses compatible with resource protection and flood control measures. Roads, parking, and associated fill slopes shall be located outside of the stream corridor, except at stream crossings.
 - **Policy CAQ-24:** Open space lands within a stream corridor shall be required to be retained as open space as a condition of development approval for projects that include a stream corridor. Unencumbered maintenance access to the stream shall be provided.
 - **Policy LU-16:** The areas designated in the Planning Area as “Urban Study Areas” are envisioned as areas in which urbanization to some extent could occur, generally in compliance with the following criteria:
 - Development should be limited to areas outside of the 100-year floodplain.
 - Development should take place in compliance with the goals and policies of this General Plan.
 - Any study of potential land uses in these areas should be accomplished in cooperation with the County of Sacramento, the Sacramento Local Agency Formation Commission, and other agencies and parties with ownership or jurisdiction of lands in and near the study area.
 - Any study of land uses in these areas should be accompanied by an environmental evaluation of the potential impacts of development.
 - Prior to the completion of land use studies, the City’s policy is that County of Sacramento land use designations in effect as of December 31, 2002, are retained.
 - **LU-16-Action 1:** Work with the County of Sacramento to establish and implement a program to study the potential for these areas to support urban development.
 - **Policy LU-39:** The City shall coordinate with regional planning agencies setting land use and environmental policies and programs and cooperate in the implementation of programs consistent with General Plan policy.

South Sacramento Habitat Conservation Plan

The South Sacramento Habitat Conservation Plan (SSHCP) is in the process of development and environmental review. The SSHCP is a regional approach to addressing issues related to urban development, habitat conservation, and agricultural protection. The SSHCP is intended to consolidate environmental efforts to protect and enhance wetlands and upland habitats to provide ecologically viable conservation areas. It will streamline the permitting process for development projects. The SSHCP will cover 30 different species of plants and wildlife, including 10 that are state or federally listed as threatened or endangered. The SSHCP will be an agreement between state/federal wildlife and wetland regulators and local jurisdictions, which will allow land owners to engage in the “incidental take” of covered species (i.e., to destroy or degrade habitat) in return for conservation commitments from local jurisdictions. The SSHCP study area includes the City of Elk Grove and the proposed SOI project area.

SSHCP Goals and Objectives

- Key Principles - Develop a Habitat Conservation Plan through a process that:
 - Involves all stakeholders in the study area including developers, environmentalists, agriculturists, and government agencies.
 - Educates stakeholders regarding the importance of the plan, its components, and its significance to them.
 - Progresses in an efficient and expeditious manner through consensus building.

3.4.4 - Methodology

The proposed project does not result in any physical development; therefore, no specific surveys were conducted to assess potential impacts. A reconnaissance level survey was conducted by MBA biologist/regulatory specialist Dale Hameister on October 11, 2010. The survey was intended to identify the general biological resources within the project area and to photograph-document the current existing conditions within the project area. In addition, information was reviewed from the USFWS species list and from query results from the CNDDDB, the CNPS, and the California Wildlife Habitat Relationships (CWHR).

3.4.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, biological resources impacts resulting from the implementation of the proposed project would be considered significant if the project would:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?
- c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

3.4.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Special-Status Species

Impact BIO-1:	The project would not have a substantial adverse effect, either directly or through habitat modifications, on special-status wildlife species.
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Impact Analysis

Implementation of the SOIA could indirectly result in impacts to wildlife habitat within the SOIA Area. In addition, the proposed SOIA does have the potential to indirectly affect special-status wildlife species through the potential for future urbanization of the SOIA. It is reasonably foreseeable that future development of the SOIA could change the rural, open space, agricultural character of the area to that of an urbanized environment, thus resulting in potentially significant impacts to special-status wildlife species. One special-status species, the state threatened Swainson's hawk, was observed during the reconnaissance survey of the project area.

No USFWS designated critical habitat occurs within the project area. However, the onsite drainage canals connect directly to drainages to the west, which includes designated critical habitat for the Delta smelt.

State fully protected greater sandhill crane and state threatened Swainson's hawk have a high potential to occur within the project area. County of Sacramento methodology for determining foraging habitat impacts in unincorporated Sacramento County recognizes that Swainson's hawk foraging habitat value is greater in large expansive open spaces and agricultural areas than in areas

that have been fragmented by agricultural-residential or urban development. The concept is that impact to foraging habitat occurs as properties develop to increasingly more intensive uses on smaller minimum parcel sizes. Therefore, foraging habitat impacts are assessed when agricultural and agricultural-residential parcels are rezoned to smaller minimum parcel sizes. The level of impact is calculated in acres and is based on the starting habitat value and ending habitat value. As a baseline, Department of Environmental Review and Assessment (DERA) assumes that properties zoned AG-40 and larger have 100 percent habitat value, AG-20 properties have 75 percent habitat value, and AR-10 properties have 25 percent habitat value. More than 90 percent of the SOIA Area is zoned as AG-40 and larger and, therefore, would have 100 percent foraging value.

The Local Area Formation Commission (LAFCo) acknowledges that approval of the SOIA Area could result in urbanization of the SOIA Area at an undetermined future time. The City's Swainson's hawk mitigation program requires that project applicants protect existing habitat through either purchase and transfer of conservation easements or payment of mitigation fees. Future development within the SOIA Area would be subject to its own CEQA review and would comply with the City's conditions as well as follow the recommendation developed by the Swainson's Hawk Technical Advisory Committee (TAC) (2000) to maximize the potential for locating nesting Swainson's hawks, and thus reducing the potential for nest failures as a result of project activities/disturbances. California Department of Fish and Game's (CDFG) recommends that surveys should be conducted for a 0.5-mile radius around all project activities, and if active nesting is identified within the 0.5-mile radius, consultation is required. In general, the TAC recommends this approach as well. However, since future urbanization activities could impact more than 7,000 acres of land zoned as AG-40 and higher, impacts to Swainson's hawk's foraging habitat are identified to be potentially significant.

Burrowing owl, a California Species of Concern, has a high potential to occur within the project area. Burrowing owls prefer open habitats such as grasslands, deserts, golf courses, and agricultural areas where suitable burrows are present. Burrowing owls prefer California ground squirrel burrows, but will also use fox, coyote, and rabbit burrows, as well as manmade culverts and debris piles. Indirect impacts to burrowing owls could be significant. Future development within the SOIA should follow the recommendation by the Burrowing Owl Consortium, which has developed survey protocol approved by CDFG.

Indirect impacts of future development could have potentially significant impacts. Future development within the SOIA Area would be subject to its own CEQA review and comply with existing regulations including FESA, CESA, MBTA, and CDFG Code. The following mitigation measure is recommended to ensure that impacts would be less than significant.

Level of Significance before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measure LU-3, which requires participation in the South Sacramento County Habitat Conservation Plan, and

- MM BIO-1a** At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove will demonstrate compliance with the following measures to LAFCo:
- A. A reconnaissance-level biological survey of the SOIA Area shall be performed by a professional biologist approved by the lead agency to identify habitats and individuals of special-status species defined in this EIR. This will permit the lead agency to track impacts to special-status species on a regional basis rather than on project-by-project basis, when feasible.
 - B. Avoidance of all special-status species or their habitats shall be attempted during project design. If avoidance is infeasible, mitigation of special-status species shall occur pursuant to measure C, below.
 - C. The lead agency shall require the preparation and implementation of a Habitat Conservation Management Plan (HCMP) for all affected species and habitats. The HCMP shall be developed in consultation with CDFG and USFWS for listed species under FESA and CESA.
 - D. The HCMP shall incorporate mitigation guidelines of these agencies for listed species. For non-listed but sensitive species as defined by this EIR, the HCMP should include provisions such as the following:
 - Require clustering of urban development to retain non-disturbed open space areas.
 - Require comprehensive site development standards to minimize removal of existing vegetation and to require installation and long-term maintenance of landscaping in setback and buffer areas. Landscaping in buffer areas adjacent of preserved habitat areas should be of native plant materials, and non-irrigated.
 - Minimize impacts to movement corridors to ensure movement of wildlife.
 - Provide for the integrity and continuity of wildlife and plant habitat.
 - Support the acquisition, development, maintenance, and restoration of habitat lands for wildlife and plant enhancement.
- MM BIO-1b** To mitigate impacts on Swainson's hawk and other raptors (including burrowing owl), prior to annexation of all or part of the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall demonstrate, through policy or adopted planning documents, that the following requirements shall be applied to development

proposals within the SOIA Area, and required actions be completed prior to development activity:

- A qualified biologist will be retained by the applicant to conduct preconstruction surveys and to identify active nests on and within 0.5 mile of the proposed development and active burrows on the development site. 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 for all project phases. To the extent feasible, guidelines provided in Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in the Central Valley shall be followed for surveys for Swainson's hawk.
- If no nests are found, no further mitigation is required.
- If active nests are found, impacts on nesting Swainson's hawks and other raptors shall be avoided by establishing appropriate buffers around the nests. No project activity shall commence within the buffer area until the young have fledged, the nest is no longer active, or until a qualified biologist has determined in coordination with CDFG that reducing the buffer would not result in nest abandonment. CDFG guidelines recommend implementation of 0.25- or 0.5-mile-wide buffers, but the size of the buffer may be adjusted if a qualified biologist and the City, in consultation with CDFG, determine that such an adjustment would not be likely to adversely affect the nest. Monitoring of the nest by a qualified biologist during and after construction activities will be required if the activity has potential to adversely affect the nest.

Level of Significance after Mitigation

Less than significant impact.

Riparian Habitat and Sensitive Natural Communities

Impact BIO-2:	The project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
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Impact Analysis

Based on the NWI, the SOIA Area may contain approximately 162 acres of freshwater emergent wetlands and approximately 45 acres of freshwater ponds. Please note that the NWI federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. Riparian areas, which provide suitable habitat for the giant garter snake, also include drainage ditches within agricultural areas. There are significant

Biological Resources

areas of riparian habitat within the vicinity of the project area within Stone Lakes National Wildlife Preserve west of the project area and along the Cosumnes River and Deer Creek south and east of the project area. In addition, riparian habitat may be found along drainage ditches within the agricultural lands within the SOIA Area.

The project could lead to future urbanization of the project area; indirect impacts of future development on existing riparian areas would potentially be significant due to the riparian habitat within the project area. Implementation of the SOIA could lead to the development of hundreds of new buildings and the rural, open space, agricultural character of the area could reasonably be foreseen to change to that of an urbanized environment, thus resulting in potentially significant impacts to sensitive natural communities. Future development within the SOIA Area will be subject to its own CEQA review and evaluate specific development projects in compliance with federal, state, and local regulations pertaining to the protection of riparian habitat consistent with Mitigation Measure BIO-2 below, including requirements to obtain permits and fully mitigate any potential impacts. Therefore, the impact would be less than significant after implementation of Mitigation Measure BIO-2.

Level of Significance before Mitigation

Potentially significant impact.

Mitigation Measures

MM BIO-2 Prior to annexation of any or part of the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall demonstrate to LAFCo the implementation of requiring the following actions from all future development within the SIOA Area:

- Prior to the approval of grading or improvement plans, and before any groundbreaking activity associated with future projects, the City shall require project applicant(s) of all project's that would include fill of wetlands or other waters of the U.S. or waters of the state to complete site-specific wetland delineations and obtain all necessary permits under sections 401 and 404 of the Clean Water Act or the state's Porter-Cologne Act and a CDFG Streambed Alteration Agreement for the respective phase. Wetland habitat shall be restored, enhanced, and/or replaced at an acreage and location and by methods agreeable to USACE, the Central Valley RWQCB, and the City, as appropriate, depending on agency jurisdiction, and as determined during the Section 401 and Section 404 permitting processes.

Level of Significance after Mitigation

Less than significant impact.

Wetlands

Impact BIO-3: **The project would not have a substantial adverse effect on wetlands.**

Impact Analysis

Based on the NWI, the SOIA Area may contain approximately 162 acres of freshwater emergent wetlands and approximately 45 acres of freshwater ponds. Please note that the NWI federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory.

As mentioned above in Impact BIO-1, implementation of the SOIA could indirectly result in biological resource impacts within the SOIA Area. Implementation of the SOIA Area may lead to the development of hundreds of new buildings, and the rural, open space, agricultural character of the area could reasonably be foreseen to change to that of an urbanized environment, thus resulting in potentially significant impacts to wetlands.

City of Elk Grove General Plan Policy CAQ-21 requires “stream buffer zone” adjacent to natural streams and creeks. The City’s General Plan states that the stream buffer zones should generally measure at least 50 feet from the stream centerline (total width of 100) feet or more, depending on the characteristics of the stream zone. The City would approve design of the stream zone on a case-by-case basis. These policies as well as implementation of the Mitigation Measure BIO-2 would preserve wetlands within the SOIA Area and ensure there is no net loss of wetlands from any future development. Therefore, the impact would be less than significant after implementation of Mitigation Measure BIO-2.

Level of Significance before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measure BIO-2.

Level of Significance after Mitigation

Less than significant impact.

Wildlife or Fish Movement

Impact BIO-4: **The project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species.**

Impact Analysis

The SOIA Area primarily consists of agricultural areas with open space that do not constrict wildlife movement but is not formerly identified as a migratory or wildlife corridor. City of Elk Grove General Plan Policy CAQ-7 is intended to encourage development clustering where clustering would facilitate onsite protection of woodlands, grasslands, wetlands, stream corridors, scenic areas, or other

appropriate natural features as open space. This policy will help to preserve movement of wildlife within the SOIA.

As mentioned above in Impact BIO-1, implementation of the SOIA could indirectly result in impacts within the SOIA Area. Implementation of the SOIA could lead to the development of hundreds of new buildings, and the rural, open space, agricultural character of the area could reasonably be foreseen to change to that of an urbanized environment, thus resulting in potentially significant impacts to wildlife or fish movement. Implementation of the SOIA may lead to the development of hundreds of new buildings, and the rural, open space, agricultural character of the area could reasonably be foreseen to change to that of an urbanized environment, thus resulting in potentially significant impacts to wetlands. However, any future development within the SOIA Area will be subject to its own CEQA review and seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities. As aforementioned above, site plan and project design for future projects could potentially reduce impacts on wetlands.

City of Elk Grove General Plan Policy CAQ-21 requires “stream buffer zone” adjacent to natural streams and creeks. The City’s General Plan states that the stream buffer zones should generally measure at least 50 feet from the stream centerline (total width of 100) feet or more, depending on the characteristics of the stream zone. This, in addition to Mitigation Measure Bio-2 above, would minimize impacts to a level of less than significant.

Level of Significance before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measure BIO-2.

Level of Significance after Mitigation

Less than significant impact.

Conflicts with Local Biological Policies or Ordinances

Impact BIO-5:	The project would not conflict with local biological policies or ordinances, including tree preservation policies.
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Impact Analysis

While implementation of the SOIA could indirectly result in conflicts with Local Biological Policies or Ordinances within the SOIA Area—and while it is likely that implementation of the SOIA could lead to the development of hundreds of new buildings, and the rural, open space, agricultural character of the area could reasonably be foreseen to change to that of an urbanized environment, thus resulting in potentially significant impacts—any development will be subject to existing federal and state regulations pertaining to biological resources. The County of Sacramento General Plan and the

City of Elk Grove General Plan do not have conflicting policies on biological resources. Both have goals and policies dedicated to the protection of sensitive species as well as the preservation of open space and the protection and enhancement of riparian and wetland habitats (refer to Impact BIO-4).

The project area does not contain any areas defined as woodlands. However, there are many large trees within the SOIA Area that are generally associated with rural residential areas and may qualify for tree preservation, according to City's Tree Preservation Ordinance. Development of the SOIA Area may result in the removal of such trees. The following mitigation measure is recommended to ensure that impacts would be less than significant.

Level of Significance before Mitigation

Potentially significant impact.

Mitigation Measures

- MM BIO-5** At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove will demonstrate compliance with the following measures to LAFCo:
- A. Reconnaissance-level tree survey of the SOIA Area should be performed by a certified arborist to identify native tree resources, particularly those that may be designated as landmark or heritage trees. This will enable the lead agency to track impacts to native trees on a regional basis rather than a project-by-project basis, when feasible.
 - B. Avoidance of all tree species shall be attempted during project design. If avoidance is infeasible, mitigation of native trees pursuant to measures D through F below shall be conducted.
 - C. In addition to native oak trees, all native tree species should be protected under the City of Elk Grove's Tree Preservation Ordinance. The mitigation rate would be the same as those in the Ordinance, but it would also require obtaining replacement trees from local genetic stock.
 - D. A live-year monitoring plan would be completed for all mitigation plantings. The monitoring plan would include appropriate irrigation schedules, as well as criteria for success and reestablishment during the 5-year period. A success rate of not less than 80 percent at the end of the 5-year monitoring period is recommended.
 - E. Individual trees or groups of trees preserved shall be fully protected during construction. A temporary protective fence shall be established at a minimum of 10 feet beyond the drip line of the retained native trees. The fence shall be in place prior to beginning construction activities, including

grading. Within this protective buffer, no grading, trenching, fill, or vegetation alteration shall be allowed.

- F. Mitigation shall target large tracts or contiguous native tree habitat. Connectivity between native tree woodland preserves as well as adequate buffering from development is important to promote native tree recruitment, the long-term viability of the habitat, and wildlife use of the area.

Level of Significance after Mitigation

Less than significant impact.

Conservation Plan

Impact BIO-6: **The project would not conflict with local habitat conservation plans.**

Impact Analysis

As mentioned above in Impact BIO-1, implementation of the SOIA could indirectly result in impacts within the SOIA Area. Implementation of the SOIA could lead to the development of hundreds of new buildings and the rural, open space, agricultural character of the area could reasonably be foreseen to change to that of an urbanized environment, thus resulting in potential conflicts with local habitat conservation plans. The South Sacramento Habitat Conservation Plan is being developed but has not yet been implemented. The City of Elk Grove and Sacramento County are participating partners in the SSHCP; the SOIA is currently not in an area identified for urban development in the SSHCP. When the plan is implemented, future development activities within the SOIA Area will be subject to the SSHCP and evaluate for consistency in a project-level CEQA review; any annexation applications would be required to adhere to and be consistent with SSHCP requirements prior to approval. Implementation of Mitigation Measure LU-3 would render any impacts less than significant.

Level of Significance before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measure LU-3.

Level of Significance after Mitigation

Less than significant impact.

3.5 - Cultural Resources

3.5.1 - Introduction

This section describes the existing cultural resources setting and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on information provided in the Sacramento General Plan Update Final Environmental Impact Report, April 2010, literature review conducted for prehistoric and historic resources within the project area proposed for the FEIR, and a record search conducted by the North Central Information Center in Sacramento for the FEIR.

3.5.2 - Environmental Setting

Overview

The term “cultural resources” encompasses historic, archaeological, and paleontological resources, and burial sites. Below is a brief summary of each component:

- **Historic Resources:** Historic resources are associated with the recent past. In California, historic resources are typically associated with the Spanish, Mexican, and American periods in the State’s history and are generally less than 200 years old.
- **Archaeological Resources:** Archaeology is the study of prehistoric human activities and cultures. Archaeological resources are generally associated with indigenous cultures.
- **Paleontological Resources:** Paleontology is the study of plant and animal fossils.
- **Burial Sites:** Burial sites are formal or informal locations where human remains, usually associated with indigenous cultures, are interred.

Cultural Setting

Prehistoric Background

Early archaeological investigations in central California were conducted at sites located in the Sacramento-San Joaquin Delta region. The first published account documents investigations in the Lodi and Stockton area (Schenck and Dawson 1929). The initial archaeological reports typically contained descriptive narratives, with more systematic approaches sponsored by Sacramento Junior College in the 1930s. At the same time, University of California at Berkeley excavated several sites in the lower Sacramento Valley and Delta region, which resulted in recognizing archaeological site patterns based on variations of inter-site assemblages. Research during the 1930s identified temporal periods in central California prehistory and provided an initial chronological sequence (Lillard and Purves 1936; Lillard, et al. 1939). In 1939, Lillard noted that each cultural period led directly to the next and that influences spread from the Delta region to other regions in central California (Lillard, et al. 1939). In the late 1940s and early 1950s, Beardsley documented similarities in artifacts among sites in the San Francisco Bay region and the Delta and refined his findings into a cultural model that

ultimately became known as the Central California Taxonomic System (CCTS). This system proposed a uniform, linear sequence of cultural succession (Beardsley 1948 and 1954). The CCTS system was challenged by Gerow, whose work looked at radiocarbon dating to show that Early and Middle Horizon sites were not subsequent developments but, at least partially, contemporaneous (1954; 1974; Gerow with Force 1968).

To address some of the flaws in the CCTS system, Fredrickson (1973) introduced a revision that incorporated a system of spatial and cultural integrative units. Fredrickson separated cultural, temporal, and spatial units from each other and assigned them to six chronological periods: Paleo-Indian (10000 to 6000 B.C.); Lower, Middle and Upper Archaic (6000 B.C. to A.D. 500), and Emergent (Upper and Lower, A.D. 500 to 1800). The suggested temporal ranges are similar to earlier horizons, which are broad cultural units that can be arranged in a temporal sequence (Moratto 1984). In addition, Fredrickson defined several patterns—a general way of life shared within a specific geographical region. These patterns include:

- Windmill Pattern or Early Horizon (3000 to 1000 B.C.)
- Berkeley Pattern or Middle Horizon (1000 B.C. to A.D. 500)
- Augustine Pattern or Late Horizon (A.D. 500 to historic period)

Brief descriptions of these temporal ranges and their unique characteristics follow.

Windmill Pattern or Early Horizon (3000 to 1000 B.C.)

Characterized by the Windmill Pattern, the Early Horizon was centered in the Cosumnes district of the Delta and emphasized hunting rather than gathering, as evidenced by the abundance of projectile points in relation to plant processing tools. Additionally, atlatl, dart, and spear technologies typically included stemmed projectile points of slate and chert but minimal obsidian. The large variety of projectile point types and faunal remains suggests exploitation of numerous types of terrestrial and aquatic species (Bennyhoff 1950; Ragir 1972). Burials occurred in cemeteries and intra-village graves. These burials typically were ventrally extended, although some dorsal extensions are known with a westerly orientation and a high number of grave goods. Trade networks focused on acquisition of ornamental and ceremonial objects in finished form rather than on raw material. The presence of artifacts made of exotic materials such as quartz, obsidian, and shell indicates an extensive trade network that may represent the arrival of Utian populations into central California. Also indicative of this period are rectangular *Haliotis* and *Olivella* shell beads, and charmstones that usually were perforated.

Berkeley Pattern or Middle Horizon (1000 B.C. to A.D. 500)

The Middle Horizon is characterized by the Berkeley Pattern, which displays considerable changes from the Early Horizon. This period exhibited a strong milling technology represented by minimally shaped cobble mortars and pestles, although metates and manos were still used. Dart and atlatl

technologies during this period were characterized by non-stemmed projectile points made primarily of obsidian. Fredrickson (1973) suggests that the Berkeley Pattern marked the eastward expansion of Miwok groups from the San Francisco Bay Area. Compared with the Early Horizon, there is a higher proportion of grinding implements at this time, implying an emphasis on plant resources rather than on hunting. Typical burials occurred within the village with flexed positions, variable cardinal orientation, and some cremations. As noted by Lillard, the practice of spreading ground ochre over the burial was common at this time (Lillard, et al. 1939). Grave goods during this period are generally sparse and typically include only utilitarian items and a few ornamental objects. However, objects such as charmstones, quartz crystals, and bone whistles occasionally were present, which suggest the religious or ceremonial significance of the individual (Hughes 1994). During this period, larger populations are suggested by the number and depth of sites compared with the Windmill Pattern. According to Fredrickson (1973), the Berkeley Pattern reflects gradual expansion or assimilation of different populations rather than sudden population replacement and a gradual shift in economic emphasis.

Augustine Pattern or Late Horizon (A.D. 500 to Historic Period)

The Late Horizon is characterized by the Augustine Pattern, which represents a shift in the general subsistence pattern. Changes include the introduction of bow and arrow technology; and most importantly, acorns became the predominant food resource. Trade systems expanded to include raw resources as well as finished products. There are more baked clay artifacts and extensive use of *Halotis* ornaments of many elaborate shapes and forms. Burial patterns retained the use of flexed burials with variable orientation, but there was a reduction in the use of ochre and widespread evidence of cremation (Moratto 1984). Judging from the number and types of grave goods associated with the two types of burials, cremation seems to have been reserved for individuals of higher status, whereas other individuals were buried in flexed positions. Johnson (1976) suggests that the Augustine Pattern represents expansion of the Wintuan population from the north, which resulted in combining new traits with those established during the Berkeley Pattern.

Central California research has expanded from an emphasis on defining chronological and cultural units to a more comprehensive look at settlement and subsistence systems. This shift is illustrated by the early use of burials to identify mortuary assemblages and more recent research using osteological data to determine the health of prehistoric populations (Dickel et al. 1984). Although debate continues over a single model or sequence for central California, the general framework consisting of three temporal/cultural units is generally accepted, although the identification of regional and local variation is a major goal of current archaeological research.

Native American Background

At the time of European contact, the project vicinity was occupied by the Eastern (Plains) Miwok tribe of California Native Americans. The Plains Miwok occupied the area bounded by both banks of the Sacramento River from Rio Vista to the west to Sacramento to the north, the lower reaches of the

Calaveras and Mokelumne river drainages to the south, and the foothills of the Sierra Nevada to the east. Plains Miwok territory extended approximately 60 miles east to west and 35 miles north to south. Based primarily on linguistic variation, the Eastern Miwok are part of the Miwokan subgroup of the Utian language family. The Eastern Miwok are further divided into five distinct linguistic and cultural groups: Bay Miwok, Plains Miwok, Northern Sierra Miwok, Central Sierra Miwok, and the Southern Sierra Miwok (Levy 1978).

Plains Miwok political organization was centered around the tribelet. Each Plains Miwok tribelet was an independent political entity and functioned primarily within their recognized geographical boundaries. Large, multilineal villages were concentrated on rises along watercourses, and all but the smallest villages were occupied permanently, except during the fall acorn harvest (Bennyhoff 1977). The Plains Miwok constructed houses made of conically arranged wood poles covered with a thatch of grass, brush, or tules, and richer men built semi-subterranean, earth-covered dwellings. Assembly houses were also constructed in villages, and served as the gathering point for ritual and social activities. These structures were semi-subterranean, and consisted of a 3- to 4-foot-deep pit measuring 40 to 50 feet in diameter, which was covered with layers of plant materials and then covered with earth, all supported by a conical roof on four wooden center posts. Other communal buildings constructed in villages would have been a sweathouse used for curing diseases and purification before hunting expeditions, a circular assembly house, and a conical structure built over a bedrock mortar so that acorn and seed grinding could take place in wet weather (Levy 1978).

The Plains Miwok subsistence base varied and included gathering seasonal plant resources, hunting, and fishing. The Plains Miwok did not depend on one staple alone, as their territory provided year-round sources of different food. Acorns were an important food resource and were stored in granaries, in addition to buckeye and pine nuts (gray and sugar pine), and to a lesser extent laurel nuts and hazelnuts. A large variety of seeds and roots, as well as various types of greens and mushrooms, also contributed to their diet. The Plains Miwok conducted an annual burning of the land (in August) to promote the growth of forage for deer, antelope, and tule elk, which they hunted communally and individually. Meat from a hunted animal was divided among tribelet members according to culturally defined rules. Ethnographic reports indicate that the Plains Miwok also caught blacktailed jackrabbits and cottontails with nets in the summer during communal hunting activities, as well as beaver, gray squirrels, ground squirrels, and woodrats, which were caught with snares and traps. Birds were hunted for food, and waterfowl were an important resource. In addition, band-tailed pigeons, red-shafted flickers, jays, and woodpeckers were hunted and used for their feathers and skins to decorate clothing and regalia. Fishing was also important for the Plains Miwok, and salmon provided the dominant food resource, and sturgeon and lampreys were caught as well. In the rivers, mussels and freshwater clams were collected (Bennyhoff 1977; Levy 1978). Archaeological investigations at sites on South Stone Lake (CA-SAC-65 and CA-SAC-145) indicate a considerable reliance on fishing for subsistence among the prehistoric populations (Schulz and Simons 1973; Schulz et al. 1979). In

addition to gathering resources, the Plains Miwok obtained wild tobacco, in addition to planting tobacco seeds and cultivating the plants (Bennyhoff 1977; Levy 1978).

The first contact between the Plains Miwok and Euro-Americans came during Spanish military and religious expeditions. The Franciscan order of the Roman Catholic Church in Spain established Mission San Jose, the fourteenth in the Alta California system, on June 11, 1797 (Bennyhoff 1977; Hoover et al. 1990). Alvarez Gabriel Moraga led an overland expedition from this San Francisco Bay area mission to the Sacramento region in 1808. On May 13, 1817, Father Narciso Duran and Luis Arguello left the beach at the Presidio of San Francisco and sailed up the Sacramento River. They reached a point midway between Clarksburg and Freeport before they turned back and went around Brannan Island (Beck and Haase 1974).

Historic Background

Early Spanish explorers and the Franciscan and Jesuit missionaries who followed them were the first Europeans to reach northern California. The interior of the Sacramento Valley, away from the easily defended and more accessible chain of coastal missions and pueblos, was left largely untouched by the Spanish and “Californios” (Hoover et al. 1990). Settlement of the Sacramento area did not begin until the late 1830s and early 1840s, when entrepreneurs such as John Sutter and Jared Sheldon obtained land grants from the Mexican government, typically in exchange for an agreement to protect Mexican interest in these remote regions (Beck and Haase 1974). In 1839, John Sutter built the earliest Euro-American settlement within Sacramento County. Named Sutter’s Fort, the well-known outpost brought with it an increase in Euro-American trappers, hunters, and settlers to the Sacramento area. As a result of the Mexican War (1847–1848), California became part of the territory of the United States. In 1848, gold was discovered at Sutter’s Mill in Coloma, which resulted in a torrent of gold seekers flooding into the Sacramento region. As the population soared and the gold decreased, many of the settlers who decided to stay turned to alternative vocations, particularly agriculture. Many found that the local land was relatively cheap and provided good crops. Raising grain, livestock, and produce to sell to the thousands of miners heading to the gold fields proved profitable ventures. These combined events hastened the settlement of the area and the development of Sacramento as an economic and transportation center. The designation of Sacramento as the state capital in 1854 also resulted in the area’s increase in socio-political importance.

Local History

In 1850, Elk Grove developed around a stage stop on the Monterey Trail, though after the Union Pacific railroad passed by east of town, Elk Grove’s center shifted to its present location. Elk Grove is approximately 15 miles south of historic Sutter’s Fort and thus became a crossroads for business, entertainment, mail service, and agriculture, and acted as home base for gold miners in the Sierra Nevada foothills.

Initially, the incorporated town “Old Town” Elk Grove was located about a mile east of State Route 99 (SR-99 [formerly U.S. Route 99, the north-south artery of the California Central Valley]). Although the town developed around agriculture, it would eventually become a residential suburb of Sacramento serving as a bedroom community for business and government employees working in Sacramento. Most of the newer housing developments in Elk Grove are located west between SR-99 and Interstate 5, the major north-south highway along the U.S. West Coast, in two areas locally called “Laguna Creek” and “Laguna West.” On July 1, 2000, Elk Grove incorporated as a city.

3.5.3 - Regulatory Framework

Federal

National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA), as amended, established the National Register of Historic Places (NRHP), which contains an inventory of the nation’s significant prehistoric and historic properties. Under 36 CFR 60, a property is recommended for possible inclusion on the NRHP if it is at least 50 years old, has integrity, and meets one of the following criteria:

- It is associated with significant events in history, or broad patterns of events.
- It is associated with significant people in the past.
- It embodies the distinctive characteristics of an architectural type, period, or method of construction; or it is the work of a master or possesses high artistic value; or it represents a significant and distinguishable entity whose components may lack individual distinction.
- It has yielded, or may yield, information important in history or prehistory.

Certain types of properties are usually excluded from consideration for listing in the NRHP, but they can be considered if they meet special requirements in addition to meeting the criteria listed above. Such properties include religious sites, relocated properties, graves and cemeteries, reconstructed properties, commemorative properties, and properties that have achieved significance within the past 50 years.

State

California Register of Historical Resources

As defined by Section 15064.5(a)(3)(A-D) of the California Environmental Quality Act (CEQA) Guidelines, a resource shall be considered historically significant if the resource meets the criteria for listing on the California Register of Historical Resources (CR). The California Register of Historical Resources and many local preservation ordinances have employed the criteria for eligibility to the NRHP as a model, since the NHPA provides the highest standard for evaluating the significance of historic resources. A resource that meets the NRHP criteria is clearly significant. In addition, a

resource that does not meet the NRHP standards may still be considered historically significant at a local or state level.

California Environmental Quality Act

The CEQA Guidelines state that a resource need not be listed on any register to be found historically significant. The CEQA guidelines direct lead agencies to evaluate archaeological sites to determine if they meet the criteria for listing in the California Register. If an archaeological site is a historical resource, in that it is listed or eligible for listing in the California Register, potential adverse impacts to it must be considered. If an archaeological site is considered not to be a historical resource but meets the definition of a “unique archeological resource” as defined in Public Resources Code Section 21083.2, then it would be treated in accordance with the provisions of that section.

Local

City of Elk Grove

However, the proposed project would adjust the City of Elk Grove’s SOI and allow the City the opportunity to file an annexation request with LAFCo to annex lands within the SOIA Area. The City of Elk Grove General Plan establishes goals and policies to guide both present and future development within the City’s jurisdiction. Therefore, the City of Elk Grove’s General Plan policies related to cultural resources that may apply to potential future development in the SOIA Area are provided below:

- **Policy HR-1:** Encourage the preservation and enhancement of existing historical and archaeological resources in the City.
- **HR-1-Action 1:** Develop and update a comprehensive Historic Resource inventory using the National Register, the California Register, California Historical Landmarks, California Points of Historical Interest, and any other structures or properties the City Council determines to have historic value.
The Inventory should contain a map that shows the location of all of the structures with a historically significant designation, and a list of all of the historically significant structures within Elk Grove.
- **HR-1-Action 2:** Establish a Historic Preservation Committee to provide input regarding the City’s historic preservation regulations. This Committee could include members of the public experienced in and knowledgeable about historic resources in general and in the city.
- **Policy HR-3:** Encourage restoration, renovation, and/or rehabilitation of all historic structures.
- **Policy HR-6:** Protect and preserve prehistoric and historic archaeological resources throughout the City.
- **HR-6-Action 1:** In areas identified in the Background Report as having a significant potential for containing archaeological or paleontological artifacts, require completion of a detailed onsite study as part of the environmental review process. Implement all recommended mitigation measures.

- **HR-6-Action 2:** Impose the following conditions on all discretionary projects in areas which do not have a significant potential for containing archaeological or paleontological resources:
 - “The Planning Division shall be notified immediately if any prehistoric, archaeological, or paleontologic artifact is uncovered during construction. All construction must stop and an archaeologist that meets the Secretary of the Interior’s Professional Qualifications Standards in prehistoric or historical archaeology shall be retained to evaluate the finds and recommend appropriate action.”
 - “All construction must stop if any human remains are uncovered, and the County Coroner must be notified according to Section 7050.5 of California’s Health and Safety Code. If the remains are determined to be Native American, the procedures outlined in CEQA Section 15064.5 (d) and (e) shall be followed.”
- **Policy CO-155:** Utilize the California Archeological and the Sacramento History and Science Division to assist in determining need for survey.
- **Policy CO-156:** Refer projects with identified archaeological and cultural resources to the Cultural Resources Committee to determine significance of resource and recommend appropriate means of protection and mitigation. The Committee shall coordinate with the Native American Heritage Commission in developing recommendations.
- **Policy CO-158:** Native American burial sites encountered during preapproved survey or during construction shall, whenever possible, remain in situ. Excavation and reburial shall occur when in situ preservation is not possible or when the archaeological significance of the site merits excavation and recording procedure. Onsite reinterment shall have priority. The project developer shall provide the burden of proof that off site reinterment is the only feasible alternative. Reinterment shall be the responsibility of local tribal representatives.
- **Policy CO-159:** The cost of all excavation conducted prior to completion of the project shall be the responsibility of the project developer.
- **Policy CO-160:** Monitor projects during construction to ensure crews follow proper reporting, safeguards, and procedures.
- **Policy CO-161:** As a condition of approval of discretionary permits, a procedure shall be included to cover the potential discovery of archaeological resources during development or construction.
- **Policy CO-162:** As a condition of approval for discretionary projects which are in areas of cultural resource sensitivity, the following procedure shall be included to cover the potential discovery of archaeological resource during development or construction:

Should any cultural resources, such as structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains be encountered during any development activities, work shall be suspended and the Sacramento County Department of Environmental Review and Assessment shall be immediately notified. At that time, the Department of Environmental Review and Assessment will coordinate any necessary investigation of the site with appropriate specialists,

as needed. The project proponent shall be required to implement any mitigation deemed necessary for the protection of the cultural resources. In addition, pursuant to Section 5097.98 of the State Public Resources Code and Section 7050.5 of the State Health and Safety Code, in the event of the discovery of human remains, all work is to stop and the County Coroner shall be immediately notified. If the remains are determined to be Native American, guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains.

- **Policy CO-163:** Conduct surveys and designate structures with architectural or historical importance on community plan maps. Where appropriate, plans shall designate significant historical architectural districts.
- **Policy CO-164:** Develop local architectural preservation standards drawing from state and Federal guidelines.
- **Policy CO-165:** Refer projects involving structures or within districts having historical or architectural importance to the Cultural Resources Committee to recommend appropriate means of protection and mitigation.
- **Policy CO-166:** Development surrounding areas of historic significance shall have compatible design in order to protect and enhance the historic quality of the areas.

3.5.4 - Methodology

The analysis of impacts to cultural resources from implementation of the Elk Grove General Plan 2023 was evaluated in Section 4.11, Cultural and Paleontological Resources, of the Final Environmental Impact Report (FEIR) October 2003. All mitigation measures identified for significant impacts in the Elk Grove General Plan 2023 FEIR and adopted by the City continue to remain the responsibility of the City as part of implementation of the General Plan. The cultural resource setting for the project area has not changed since adoption of the FEIR. Analysis for this section is based on the literature review conducted for prehistoric and historic resources within the project area proposed for the FEIR, as well as the information obtained from a record search conducted by the North Central Information Center in Sacramento for the FEIR. As shown in Figure 1 in the City of Elk Grove – General Plan Background Report on Paleontological, Archaeological, and Historic Resources, the SOIA Area was analyzed as part of the Elk Grove General Plan Study Area (Windmiller 2002).

Results of the North Central Information Center (NCIC) records search conducted in May 2002 identified 93 prehistoric and historic Native American sites within the City of Elk Grove Planning Area. In addition, the NCIC identified 24 historic sites, many of which are remnants of farms and ranches within the City of Elk Grove Planning Area. The Elk Grove Planning Area contains three sites listed on the National Register of Historic Places; within the City limits, the “Old Town” Elk Grove was listed as a District in 1988, the Eastern Star Hall, located approximately 1.5 miles north of

the community of Hood along the Sacramento River, and the Ehrhardt House/Jungkeit Dairy, located at the intersection of Dartmoor Way and Percheron Drive. Three State Historical Landmarks are also within the City of Elk Grove Planning Area: Murphy's Ranch (#680), near the southwest corner of Grant Line Road and SR-99; Grave of Elitha Cumi Donner Wilder (#719), located in Elk Grove Masonic Cemetery; and the site of the first County free library branch, located at 9125 Elk Grove Boulevard; as well as the Grave of Alexander Hamilton Willard (#657), located in Franklin Cemetery within the City Planning Area.

3.5.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, cultural resources impacts resulting from the implementation of the proposed project would be considered significant if the project would:

- a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?
- b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?
- c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?
- d) Disturb any human remains, including those interred outside of formal cemeteries?

3.5.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Historic Resources

Impact CUL-1:	Subsurface construction activities associated with the proposed project would not damage or destroy previously undiscovered historic resources.
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Impact Analysis

For purposes of this analysis, the term "historic resources" includes a resource listed in or determined to be eligible for listing by the State Historical Resources Commission, for listing in the California Register of Historical Resources (PRC Section 5024.1, Title 14 CCR Section 4850, et seq.). A resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the PRC Section 5024.1(g) requirements, shall be presumed to be historically or culturally significant.

Any object, building, structure, site, area, place, record, or manuscript—which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California—may

be considered a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be historically significant if the resource meets the criteria for listing on the California Register of Historical Resources (PRC Section 5024.1; Title 14 CCR Section 4852).

The proposed project would expand the City of Elk Grove's sphere of influence (SOI), and no physical development is proposed at this time. However, land use assumptions discussed in Section 2, Project Description indicate that future projects could result in the disturbance, alteration, or destruction of previously unidentified historic resources. Although specific project proposal details are not available at this time, future development could result in the disturbance, alteration, or destruction of previously unidentified historic resources as noted above. Impacts would be less than significant with implementation of MM CUL-1, because it would avoid the disturbance of historic resources.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

- MM CUL-1** At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove will implement the following:
- If potentially significant historic resources are encountered during subsurface excavation activities for the project area, all construction activities within a 100-foot radius of the resource shall cease until a qualified archaeologist determines whether the resource requires further study. The City shall require that the applicant include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. Any previously undiscovered resources found during construction shall be recorded on appropriate California Department of Parks and Recreation (DPR) forms and evaluated for significance in terms of California Environmental Quality Act criteria by a qualified archaeologist. Potentially significant cultural resources consist of but are not limited to stone, bone, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. If the resource is determined to be significant under CEQA, the City and a qualified archaeologist shall determine whether preservation in place (avoidance) is feasible. Such preservation in place is the preferred mitigation. If such preservation is infeasible, the qualified archaeologist shall prepare and implement a research design and archaeological data recovery plan for the resource. The archaeologist shall also conduct appropriate technical analyses, prepare a comprehensive written report and file it with the

appropriate information center (California Historical Resources Information System), and provide for the permanent curation of the recovered materials.

Level of Significance After Mitigation

Less than significant impact.

Archaeological Resources

Impact CUL-2:	Subsurface construction activities associated with the proposed project would not damage or destroy previously undiscovered archaeological resources.
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Impact Analysis

The proposed project would expand the City of Elk Grove's SOI, and no physical development is proposed at this time. However, land use assumptions discussed in Section 2, Project Description indicate that future projects may uncover previously unknown, buried archaeological resources. Impacts would be less than significant with implementation of MM CUL-2 described below, as it would serve to avoid the disturbance of archaeological resources.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

- MM CUL-2** At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove will implement the following:
- If potentially significant archaeological resources are encountered during subsurface excavation activities, all construction activities within a 100-foot radius of the resource shall cease until a qualified archaeologist determines whether the resource requires further study. The City shall require that the applicant include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. Any previously undiscovered resources found during construction shall be recorded on appropriate Department of Parks and Recreation forms and evaluated for significance in terms of California Environmental Quality Act criteria by a qualified archaeologist. Potentially significant cultural resources consist of but are not limited to stone, bone, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. If the resource is determined to be significant under CEQA, the City and a qualified archaeologist shall determine whether preservation in place (avoidance) is feasible. Such preservation in place is the preferred mitigation. If such preservation is infeasible, the qualified archaeologist shall prepare and

implement a research design and archaeological data recovery plan for the resource. The archaeologist shall also conduct appropriate technical analyses, prepare a comprehensive written report and file it with the appropriate information center (California Historical Resources Information System), and provide for the permanent curation of the recovered materials.

Level of Significance After Mitigation

Less than significant impact.

Paleontological Resources

Impact CUL-3: **Subsurface construction activities associated with the proposed project would not damage or destroy previously undiscovered paleontological resources.**

Impact Analysis

Paleontology is defined as the science examining past geological periods as know from fossil remains. Paleontological resources include fossil remains, as well as fossil localities and formations, which have produced fossil material in other nearby areas. CEQA offers protection for these sensitive resources and requires that they be addressed during the EIR process.

The Elk Grove General Plan 2023 FEIR Paleontological Resources Section notes that a file search was conducted in the GeoRef database covering the years 1785 to the present. In addition, files from the Museum of Paleontology at the University of California, Berkeley were reviewed. A broad, reconnaissance-level field survey of the Planning Area for the purpose of inspecting the land surface and potential outcrops of fossiliferous geological formations was also conducted. No fossils have been officially reported from the Planning Area, although there are instances of local finds. In 1959, a Pleistocene bone bed within the Riverbank Formation along the west side of Deer Creek was discovered by a local farmer. Additional fossils recovered from the Riverbank Formation are typically large, late Pleistocene vertebrates.

The proposed project would expand the City of Elk Grove's SOI, and no physical development is proposed at this time. However, land use assumptions discussed in Section 2, Project Description indicate that future projects could result in the disturbance, alteration, or destruction of previously unidentified paleontological resources. Any future activity would be subject to an independent CEQA review and would address impacts to paleontological resources and prescribe appropriate mitigation measures based on the type of activity proposed. Impacts would be less than significant with implementation of MM CUL-3 described below, because it would avoid the disturbance of paleontological resources.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM CUL-3 At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove will implement the following:

- In the event that plant or animal fossils are discovered during subsurface excavation activities for the proposed project, all excavation within 50 feet of the fossil shall cease until a qualified paleontologist has determined the significance of the find and provides recommendations in accordance with Society of Vertebrate Paleontology standards. The paleontologist shall notify the City of Elk Grove to determine procedures to be followed before construction is allowed to resume at the location of the find. If the find is determined to be significant and the City determines that avoidance is not feasible, the paleontologist shall design and implement a data recovery plan consistent with the Society of Vertebrate Paleontology standards. The plan shall be submitted to the City for review and approval. Upon approval, the plan shall be incorporated into the project.

Level of Significance After Mitigation

Less than significant impact.

Burial Sites

Impact CUL-4:	Subsurface construction activities associated with the proposed project would not damage or destroy previously undiscovered human remains.
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Impact Analysis

The proposed project would expand the City of Elk Grove's SOI, and no physical development is proposed at this time. However, land use assumptions discussed in Section 2, Project Description indicate that subsurface construction activities associated with a future project, such as trenching and grading, could potentially damage or destroy previously undiscovered human remains. Accordingly, this is a potentially significant impact.

As such, Mitigation Measure CUL-4 requires standard inadvertent discovery procedures to be implemented in the event that human remains are encountered during construction. With the implementation of mitigation, impacts to burial sites would be reduced to a level of less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM CUL-4 At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove will implement the following:

- If previously unknown human remains are encountered during construction activities, Section 7050.5 of the California Health and Safety Code applies, and the following procedures shall be followed:
 - In the event of an accidental discovery or recognition of any human remains, Public Resource Code Section 5097.98 must be followed. Once project-related ground disturbance begins and if there is accidental discovery of human remains, the following steps shall be taken:
 - There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the Sacramento County Coroner's Office is contacted to determine if the remains are Native American and if an investigation into cause of death is required. If the coroner determines the remains are Native American, the coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the most likely descendant (MDL) of the deceased Native American. The MDL may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98.

Level of Significance After Mitigation

Less than significant impact.

3.6 - Geology, Soils, and Seismicity

3.6.1 - Introduction

This section describes the existing geology, soils, and seismicity setting and potential direct and indirect effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on information provided by the City of Elk Grove General Plan, City of Elk Grove Zoning Ordinance, the 1993 County of Sacramento General Plan, 2009 Sacramento County General Plan Update Draft Environmental Impact Report, and applicable state laws.

3.6.2 - Environmental Setting

Regional Geology

The Elk Grove Sphere of Influence Amendment (SOIA) Area is located within the San Joaquin Valley, in the northern section of the Great Valley geomorphic province. The Great Valley geomorphic province is described as a relatively flat alluvial plain consisting of sedimentary deposits dated from the Jurassic age through the Holocene age. The province is approximately 50 miles wide and 400 miles long, bounded by the Klamath and Cascade mountain ranges to the north, the Sierra Nevada Mountains to the east, and the California Coast Mountains to the west. The major topographical feature in the Sacramento Valley is the Sutter Buttes, which is a volcanic remnant that rises approximately 1,980 feet above the valley floor.

The Great Valley province is divided into four smaller geomorphic subunits: the Delta, the River Floodplain, the Alluvial Plain, and the Low Foothills.

The Delta

The Delta includes the low-lying lands located in the southwestern portion of the County. Historically, the Delta contained tidal marshes and meandering sloughs, which have been altered over time. The area now contains present era, Holocene deposits.

River Floodplain

The River Floodplain contains unconsolidated, inorganic soils, which were formed by the deposition of sediment when floodwaters overtopped the natural levees of the County's rivers and major streams.

Alluvial Plain

The Alluvial Plain subunit is located to the east of the River Floodplain. This subunit contains older Quaternary deposits and is underlain by layers of dense, impervious clay hardpan.

Low Foothills

The Low Foothills subunit is located to the east of the alluvial plain. This subunit contains moderately consolidated silts, sands, and clays of continental origin.

Regional Seismicity

Seismicity is defined as the geographic and historical distribution of earthquakes, or more simply, earthquake activity. Seismic activity may result in geologic and seismic hazards, including seismically induced fault displacement and rupture, ground shaking, liquefaction, lateral spreading, landslides and avalanches, and structural hazards.

To understand the implications of seismic events, discussions of faulting and seismic hazards are provided below.

Faulting

Earthquake activity is intrinsically related to the distribution of fault systems (i.e., faults or fault zones) in a particular area. A fault is defined as a fracture or zone of closely associated fractures along which rocks on one side have been displaced with respect to those on the other side.

Depending on activity patterns, faults and fault-related geologic features may be classified as active, potentially active, or inactive.

Faults form in rocks when stresses overcome the internal strength of the rock, resulting in a fracture. Large faults develop in response to large, regional stresses operating over a long time, such as those stresses caused by the relative displacement between tectonic plates. According to the elastic rebound theory, these stresses cause strain to build up in the earth's crust until enough strain has built up to exceed the strength along a fault and cause a brittle failure. The slip between the two stuck plates or coherent blocks generates an earthquake. Following an earthquake, strain will build once again until the occurrence of another earthquake. The magnitude of slip is related to the maximum allowable strain that can be built up along a particular fault segment. The greatest buildup in strain that is due to the largest relative motion between tectonic plates or fault blocks over the longest period of time will generally produce the largest earthquakes. The distribution of these earthquakes is a study of much interest for both hazard prediction and the study of active deformation of the earth's crust.

Deformation is a complex process, and strain caused by tectonic forces is not only accommodated through faulting but also by folding, uplift, and subsidence, which can be gradual or in direct response to earthquakes.

Faults are mapped to determine earthquake hazards, since they occur where earthquakes tend to recur. A historic plane of weakness is more likely to fail under stress and strain than a previously unbroken block of crust. Faults are, therefore, a prime indicator of past seismic activity, and faults with recent activity are presumed to be the best candidates for future earthquakes. However, since slip is not always accommodated by faults that intersect the surface along traces, and since the orientation of stresses and strain in the crust can shift, predicting the location of future earthquakes is complicated. Earthquakes sometimes occur in areas with previously undetected faults or along faults previously thought inactive.

No active faults or Alquist-Priolo earthquake hazard zone have been identified in the Elk Grove SOIA Area (Sacramento County General Plan Update Draft Environmental Impact Report 2009). Several inactive subsurface faults have been identified in the Delta region, ranging in distance from 21 to 94 miles from the planning area. The faults nearest to the Elk Grove SOIA Area are summarized in Table 3.6-1.

Table 3.6-1: Fault Summary

Fault	Approximate Distance from Planning Area (miles)	Maximum Credible Earthquake Magnitude (MCE)¹
Foothills Fault System	21	6.5
Great Valley Fault (segment 5)	27	6.5
Great Valley Fault (segment 4)	29	6.6
Greenville Fault	41	6.9
Concord-Green Valley Fault	42	6.9
Huntington Creek-Berryessa Fault	45	6.9
West Napa Fault	49	6.5
Calaveras Fault	50	6.8
Rodgers Creek	56	7.0
Hayward Fault	59	7.1
Bartlett Springs Fault	72	7.1
Maacama Fault (south)	73	6.9
Collayomi Fault	76	6.5
Ortogonalita Fault	76	6.9
San Andreas Fault (1906)	76	7.9
San Gregorio Fault	78	7.3
Monte Vista-Shannon Fault	80	6.8
Mohawk Valley-Honey Lake Fault Zone	82	7.3
Point Reyes Fault	82	6.8
Genoa	87	6.9
Sargent	91	6.8
Zayante-Vergeles	94	6.8
Note: ¹ According to the California Department of Transportation, the Maximum Credible Earthquake Magnitude (MCE) is defined as the maximum intensity earthquake that is assumed to occur closest to the site. This earthquake is also described as the maximum magnitude earthquake, or maximum earthquake. Source: Laguna Ridge Specific Plan Revised Draft Environmental Impact Report, 2003.		

Seismic Hazards

Seismicity describes the effects of seismic waves that are radiated from an earthquake as it ruptures. While most of the energy released during an earthquake results in the permanent displacement of the ground, as much as 10 percent of the energy may dissipate immediately in the form of seismic waves. Seismic hazards pose a substantial danger to property and human safety and are present because of the risk of naturally occurring geologic events and processes impacting human development. Therefore, the hazard is influenced as much by the conditions of human development as by the frequency and distribution of major geologic events. Seismic hazards present in California include ground rupture along faults, strong seismic shaking, liquefaction, ground failure, landsliding, and slope failure.

Fault Rupture

Fault rupture is a seismic hazard that affects structures sited above an active fault. The hazard from fault rupture is the movement of the ground surface along a fault during an earthquake. Typically, this movement takes place during the short time of an earthquake, but it also can occur slowly over many years in a process known as creep. Most structures and underground utilities cannot accommodate the surface displacements of several inches to several feet commonly associated with fault rupture or creep.

Ground Shaking

The severity of ground shaking depends on several variables such as earthquake magnitude, epicenter distance, local geology, thickness, seismic wave-propagation properties of unconsolidated materials, groundwater conditions, and topographic setting. Ground shaking hazards are most pronounced in areas near faults or with unconsolidated alluvium.

Earthquakes are measured either on energy released (Richter Magnitude scale) or the intensity of ground shaking at a particular location (Modified Mercalli scale). The Richter Magnitude scale measures the magnitude of an earthquake based on the logarithm of the amplitude of waves recorded by seismographs, with adjustments made for the variation in the distance between the various seismographs and the epicenter of the earthquake. This scale starts with 1.0 and has no maximum limit. The scale is logarithmic—an earthquake with a magnitude of 2.0 is 10 times the magnitude (30 times the energy) of an earthquake with a magnitude of 1.0. The Modified Mercalli scale is an arbitrary measure of earthquake intensity; it does not have a mathematical basis. This scale is composed of 12 increasing levels of intensity that range from imperceptible shaking (Scale I) to catastrophic destruction (Scale XII). The Modified Mercalli Intensity Scale is summarized in Table 3.6-2

Based on observations of damage from recent earthquakes in California (e.g., San Fernando 1971, Whittier-Narrows 1987, Landers 1992, Northridge 1994), ground shaking is responsible for 70 to 100 percent of all earthquake damage. The most common type of damage from ground shaking is

structural damage to buildings, which can range from cosmetic stucco cracks to total collapse. The overall level of structural damage from a nearby large earthquake would likely be moderate to heavy, depending on the characteristics of the earthquake, the type of ground, and the condition of the building. Besides damage to buildings, strong ground shaking can cause severe damage from falling objects or broken utility lines. Fire and explosions are also hazards associated with strong ground shaking.

While Richter magnitude provides a useful measure of comparison between earthquakes, the moment magnitude is more widely used for scientific comparison since it accounts for the actual slip that generated the earthquake. Actual physical damage is due to the propagation of seismic or ground waves as a result of initial failure, and the intensity of shaking is as much related to earthquake magnitude as is the condition of underlying materials. Loose materials tend to amplify ground waves, while hard rock can quickly attenuate them, causing little damage to overlying structures.

Table 3.6-2: Modified Mercalli Intensity Scale

Richter Magnitude	Modified Mercalli Intensity	Effects	Average Peak Ground Velocity (centimeters/seconds)	Average Peak Acceleration
0.1–0.9	I	Not felt. Marginal and long-period effects of large earthquakes	—	—
1.0–2.9	II	Felt by only a few persons at rest, especially on upper floors of building. Delicately suspended objects may swing.	—	—
3.0–3.9	III	Felt quite noticeable in doors, especially on upper floors of building, but many people do not recognize it as an earthquake. Standing cars may rock slightly. Vibration like passing a truck. Duration estimated.	—	0.0035–0.007 g
4.0–4.5	IV	During the day, felt indoors by many, outdoors by few. At night, some awakened. Dishes, windows, doors disturbed; walls make creaking sound. Sensations like heavy truck striking building. Standing cars rocked noticeably.	1–3	0.015–0.035 g
4.6–4.9	V	Felt by nearly everyone, many awakened. Some dishes, windows, broken; cracked plaster in a few places; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop.	3–7	0.035–0.07 g

Table 3.6-2 (cont.): Modified Mercalli Intensity Scale

Richter Magnitude	Modified Mercalli Intensity	Effects	Average Peak Ground Velocity (centimeters/seconds)	Average Peak Acceleration
5.0–5.5	VI	Felt by all, many frightened and run outdoors. Some heavy furniture moved; a few instances of falling plaster and damaged chimneys. Damage slight.	7–20	0.07–0.15 g
5.6–6.4	VII	Everyone runs outdoors. Damage negligible in buildings of good design and construction; slight to moderate in well built, ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving cars.	20–60	0.15–0.35 g
6.5–6.9	VIII	Damage slight in specially designed structures; considerable in ordinary substantial buildings with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monument walls, and heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving in cars disturbed.	60–200	0.35–0.7 g
7.0–7.4	IX	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.	200–500	0.7–1.2 g
7.5–7.9	X	Some well-built structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Railway lines bent. Landslides considerable from riverbanks and steep slopes. Shifted sand and mud. Water splashed, sloped over banks.	≥ 500	>1.2 g
8.0–8.4	XI	Few, if any masonry structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly.	—	—

Table 3.6-2 (cont.): Modified Mercalli Intensity Scale

Richter Magnitude	Modified Mercalli Intensity	Effects	Average Peak Ground Velocity (centimeters/seconds)	Average Peak Acceleration
≥ 8.5	XII	Total damage. Waves seen on ground. Lines of sight and level distorted. Objects thrown into the air.	—	—
Source: United States Geologic Survey, 2010				

Ground Failure

Ground failure includes liquefaction and the liquefaction-induced phenomena of lateral spreading, and lurching.

Liquefaction is a process by which sediments below the water table temporarily lose strength during an earthquake and behave as a viscous liquid rather than a solid. Liquefaction is restricted to certain geologic and hydrologic environments, primarily recently deposited sand and silt in areas with high groundwater levels. The process of liquefaction involves seismic waves passing through saturated granular layers, distorting the granular structure, and causing the particles to collapse. This causes the granular layer to behave temporarily as a viscous liquid, resulting in liquefaction.

Liquefaction can cause the soil beneath a structure to lose strength, which may result in the loss of foundation-bearing capacity. This loss of strength commonly causes the structure to settle or tip. Loss of bearing strength can also cause light buildings with basements, buried tanks, and foundation piles to rise buoyantly through the liquefied soil.

Lateral spreading is lateral ground movement, with some vertical component, caused by liquefaction. In effect, the soil rides on top of the liquefied layer. Lateral spreading can occur on relatively flat sites with slopes less than 2 percent, under certain circumstances, and can cause ground cracking and settlement.

Lurching is the movement of the ground surface toward an open face when the soil liquefies. An open face could be a graded slope, stream bank, canal face, gully, or other similar feature.

Landslides and Slope Failure

Landslides and other forms of slope failure form in response to the long-term geologic cycle of uplift, mass wasting, and disturbance of slopes. Mass wasting refers to a variety of erosional processes from gradual downhill soil creep to mudslides, debris flows, landslides and rock fall—processes that are commonly triggered by intense precipitation, which varies according to climactic shifts. Often, various forms of mass wasting are grouped together as landslides, which are generally used to describe the downhill movement of rock and soil.

Geologists classify landslides into several different types that reflect differences in the type of material and type of movement. The four most common types of landslides are translational, rotational, earth flow, and rock fall. Debris flows are another common type of landslide similar to earth flows, except that the soil and rock particles are coarser. Mudslide is a term that appears in non-technical literature to describe a variety of shallow, rapidly moving earth flows.

Soils

The predominant soil series in the developable portion of the Elk Grove SOIA Area is the San Joaquin soil type, which is classified as moderately well drained, moderately deep over a cemented hardpan, and contains a relatively high percentage of clay minerals. Because these soils are not susceptible to structural failures and are located at shallow depths, they are conducive to urban development. However, shrink-swell potential in the planning area is high, due to the high percentage of claypan present in this soil type (City of Elk Grove 2003). The soil properties are summarized in Table 3.6-3

Table 3.6-3: Soils Properties Summary

Soil Name	Surface Texture	Source Material	Depth to Restrictive Feature	Drainage Class	Constraints
Dierssen	Sandy clay loam, 0-2% slopes	Alluvium derived from granite	31 to 60 inches to duripan	Somewhat poorly drained	Severe
San Joaquin-Galt	Complex leveled, 0-1% slopes	Alluvium derived from granite	20 to 46 inches to duripan	Moderately well drained	Moderate/ Severe
San Joaquin-Urban	Land complex, 0-2% slopes	Alluvium derived from granite	28 to 54 inches to duripan	Moderately well drained	Moderate/ Severe
Bruella	Sandy loam, 0-2% slope	Alluvium derived from granite	More than 80 inches	Well drained	Slight/ Moderate
Clear Lake Clay	Partially drained, 0-2% (frequently flooded)	Alluvium	More than 80 inches	Somewhat poorly drained	Severe
Clear Lake Clay	Hardpan substratum, drained, 0-1% slopes	Alluvium	48 to 64 inches to duripan	Poorly drained	Severe
Columbia	Sandy loam, drained, 0-2% slopes	Alluvium	48 to 64 inches to duripan	Somewhat poorly drained	Moderate/ Severe
Columbia	Sandy loam, clayey substratum, drained, 0-2% slopes	Alluvium	More than 80 inches	Somewhat poorly drained	Moderate/ Severe

Table 3.6-3 (cont.): Soils Properties Summary

Soil Name	Surface Texture	Source Material	Depth to Restrictive Feature	Drainage Class	Constraints
Columbia	Sandy loam, clayey substratum, drained, 0-2% slopes (occasionally flooded)	Alluvium	More than 80 inches	Somewhat poorly drained	Moderate/ Severe
Durixeralfs	0-1% slopes	Alluvium derived from granite	20 to 60 inches to duripan	Well drained	Moderate/ Severe
Galt	Clay, leveled, 0-1% slopes	Alluvium derived from granite	32 to 60 inches to duripan	Moderately well drained	Severe
Galt	Clay, 0-2% slopes	Alluvium derived from granite	32 to 60 inches to duripan	Moderately well drained	Severe
Madera	Loam, 0-2% slopes	Alluvium derived from granite	29 to 60 inches to duripan	Moderately well drained	Moderate/ Severe
San Joaquin	Silt, loam, leveled, 0-1% slopes	Alluvium derived from granite	28 to 54 inches to duripan	Moderately well drained	Moderate/ Severe
San Joaquin	Silt, loam, leveled, 0-3% slopes	Alluvium derived from granite	28 to 54 inches to duripan	Moderately well drained	Moderate/ Severe
San Joaquin	Silt, loam, leveled, 3-8% slopes	Alluvium derived from granite	28 to 54 inches to duripan	Moderately well drained	Moderate/ Severe
San Joaquin-Durixeralfs	Complex, 0-1% slopes	Alluvium derived from granite	28 to 54 inches to duripan	Moderately well drained	Moderate/ Severe
San Joaquin-Galt	Complex, 0-3% slopes	Alluvium derived from granite	28 to 54 inches to duripan	Moderately well drained	Moderate/ Severe
Xerarents-San Joaquin	Complex, 0-1% slopes	Alluvium derived from granite	More than 80 inches	Well drained	Moderate/ Severe
Columbia	Sandy loam, drained, 0-2% slopes, occasionally flooded	Alluvium	More than 80 inches	Somewhat poorly drained	Moderate/ Severe
Kimball	Silt loam, 0-2% slopes	Alluvium derived from granite	More than 80 inches	Well drained	Slight/ Moderate
Kimball	Silt loam, 2-8% slopes	Alluvium derived from granite	More than 80 inches	Well drained	Slight/ Moderate

Table 3.6-3 (cont.): Soils Properties Summary

Soil Name	Surface Texture	Source Material	Depth to Restrictive Feature	Drainage Class	Constraints
Sailboat	Silt loam, drained, 0-2% slopes, occasionally flooded	Alluvium	More than 80 inches	Somewhat poorly drained	Moderate/ Severe
San Joaquin-Xerarents	Complex, leveled, 0-1% slopes	Alluvium derived from granite	28 to 54 inches to duripan	Moderately well drained	Moderate/ Severe
Source: The United States Department of Agriculture Natural Resources Conservation Service, 2010.					

3.6.3 - Regulatory Framework

Federal

Federal Earthquake Hazards Reduction Act

In 1977, the U.S. Congress passed the Earthquake Hazards Reduction Act to reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program. The act established the National Earthquake Hazards Reduction Program (NEHRP). The National Earthquake Hazards Reduction Program Act (NEHRPA) significantly amended this program in 1990 by refining the description of the agency responsibilities, program goals, and objectives.

NEHRP's mission includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improved building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improved mitigation capacity; and accelerated application of research results. The NEHRPA designates the Federal Emergency Management Agency (FEMA) as the lead agency of the program and assigns it several planning, coordinating, and reporting responsibilities. Other NEHRPA agencies include the National Institute of Standards and Technology, National Science Foundation and the USGS.

U.S. Uniform Building Code

The U.S. Uniform Building Code (UBC) provides site development and construction standards. The UBC is widely used throughout the United States, and is generally adopted on a district-by-district or state-by-state basis. The UBC has been modified for California conditions with more detailed and more stringent regulations.

State

California Building Standards Code

The California Building Standards Code establishes building requirements for construction and renovation. The most recent version of the California Building Standards Code was adopted in 2008 2010 by the California Building Standards Commission and took effect January 1, 2010, and it is

based on the International Code Council's Building and Fire Codes. Included in the California Building Standards Code are the Electrical Code, Mechanical Code, Plumbing Code, Energy Code, and Fire Code.

The State of California provides minimum standards for building design through the California Building Standards Code (California Code of Regulations, Title 24). Where no other building codes apply, Chapter 29 regulates excavation, foundations, and retaining walls. Finally, the 2010 California Building Standards Code regulates grading activities, including drainage and erosion control and construction on unstable soils, such as expansive soils and areas subject to liquefaction.

California Seismic Hazards Mapping Act

The California Seismic Hazards Mapping Act of 1990 (California Public Resources Code Section 1690-2699.6) addresses seismic hazards other than surface rupture, such as liquefaction and induced landslides. The Seismic Hazards Mapping Act specifies that the lead agency for a project may withhold development permits until geologic or soils investigations are conducted for specific sites and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soils.

Alquist-Priolo Earthquake Fault Zoning Act

In response to the severe fault rupture damage of structures by the 1971 San Fernando earthquake, the State of California enacted the Alquist-Priolo Earthquake Fault Zoning Act in 1972. This act required the State Geologist to delineate Earthquake Fault Zones along known active faults that have a relatively high potential for ground rupture. Faults that are zoned under the Alquist-Priolo Act must meet the strict definition of being "sufficiently active" and "well-defined" for inclusion as an Earthquake Fault Zones. The Earthquake Fault Zones are revised periodically, and they extend 200 to 500 feet on either side of identified fault traces. No structures for human occupancy may be built across an identified active fault trace. An area of 50 feet on either side of an active fault trace is assumed to be underlain by the fault, unless proven otherwise. Proposed construction in an Earthquake Fault Zone is permitted only following the completion of a fault location report prepared by a California Registered Geologist.

National Pollutant Discharge Elimination System Permit

In California, the State Water Resources Control Board (SWRCB) administers the federal Environmental Protection Agency's promulgated regulations (55 Code of Federal Regulations 47990) requiring the permitting of stormwater-generated pollution under the National Pollutant Discharge Eliminations System (NPDES). In turn, the SWRCB's jurisdiction is administered through Regional Water Quality Control Boards. Pursuant to these federal regulations, an operator must obtain a General Permit under the NPDES Stormwater Program for all construction activities with ground disturbance of one acre or greater. The General Permit requires the implementation of best management practices (BMPs) to reduce pollutant loads into the waters of the State and measures to

reduce sediment and erosion control. In addition, a Stormwater Pollution Protection Plan (SWPPP) must be prepared. The SWPPP addresses water pollution control during construction. SWPPPs require that all stormwater discharges associated with construction activity, where clearing, grading, and excavating results in soil disturbances, must by law be free of site pollutants. Water Quality Order 99-08-DWQ requires permittees to implement specific sampling and analytical procedures to determine whether Best Management Practices (BMPs) implemented on a construction site are (1) preventing further impairment by sediment in storm waters discharged directly into waters listed as impaired for sediment or silt, and (2) preventing other pollutants, that are known or should be known by permittees to occur on construction sites and that are not visually detectable in storm water discharges, from causing or contributing to exceedances of water quality objectives. Further, the order contains information regarding the type of construction covered and not covered by the general permit, notification requirements, and a description of general permit conditions.

Local

City of Elk Grove

The City of Elk Grove General Plan establishes goals and policies to guide both present and future development within the City's jurisdiction. Therefore, the City of Elk Grove's General Plan policies related to geology, soils, or seismicity that may apply to potential future development in the SOIA Area are provided below.

- **Policy SA-25:** The City supports efforts by Federal, State, and other local jurisdictions to investigate local seismic and geological hazards and support those programs that effectively mitigate these hazards.
- **SA-25-Action 1:** Implement the Uniform Building Code to ensure that structures meet all applicable seismic standards.
- **Policy SA-26:** The City shall seek to ensure that new structures are protected from damage caused by geologic and/or soil conditions.
- **SA-26 Action 1:** Require that a geotechnical report or other appropriate analysis be conducted to determine the shrink/swell potential and stability of the soil for public and private construction projects and identifies measures necessary to ensure stable soil conditions.

3.6.4 - Methodology

Michael Brandman Associates (MBA) evaluated potential project impacts on geology and soils through site reconnaissance and review of applicable plans and policies. The City of Elk Grove General Plan and the City of Elk Grove Zoning Code were reviewed to determine applicable policies for the proposed project.

3.6.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, geology, soils, and seismicity impacts resulting from the implementation of the proposed project would be considered significant if the project would:

- a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:
 - i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
 - ii. Strong seismic ground shaking?
 - iii. Seismic-related ground failure, including liquefaction?
 - iv. Landslides?
- b) Result in substantial soil erosion or the loss of topsoil?
- c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?
- d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?
- e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? (Refer to Section 7, Effects Found Not To Be Significant.)

3.6.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Seismic Hazards

Impact GEO-1:	Development of the proposed project would not expose persons or structures to seismic hazards.
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Impact Analysis

This impact evaluates potential exposure of the proposed project to seismic hazards, including fault rupture, strong ground shaking, ground failure and liquefaction, and landslides.

Fault Rupture

There are no Alquist-Priolo Earthquake Fault Zones within the SOIA Area as determined from the County General Plan Safety Element Figure II-4. Several inactive subsurface faults have been identified in the Delta region, ranging in distance from 21 to 94 miles from the SOIA Area. Future development within the SOIA Area may result in the construction and occupation of structures, critical facilities, and pipelines adjacent to known and/or as yet undetected earthquake fault zones. Such development would increase the number of persons and the amount of developed property exposed to fault rupture hazards. To lessen the potential for property loss, injury, or death that could result from rupture(s) of faults during earthquake events, a mitigation measure has been identified below. Implementation of Mitigation Measure GEO-1 would reduce potential impacts associated with fault rupture hazards to a less than significant level. Therefore, indirect impacts would be less than significant.

Strong Ground Shaking

According to the USGS's Probabilistic Hazard Map, ground shaking in Sacramento County is predicted to have a 10-percent probability that a seismic event would produce horizontal ground shaking of 10 to 25 percent within a 50-year period. Using a 10-percent probability of exceedance within 50 years, the maximum-horizontal ground acceleration was calculated for the site at 0.20g. This calculation considered all active earthquake fault zones within a 100-kilometer radius of the site and a return period of 475 years.

However, no physical development is being proposed in conjunction with the SOIA application. Approval of an SOIA by LAFCo indicates that the Commission has designated the revised SOIA Area for future urbanization. Increases in population, and the development of residential and non-residential development that may occur after implementation of the proposed project, may increase the exposure of persons and property to ground shaking hazards. State and local building and grading codes regulate structural design. The California Building Standards Code includes seismic design methodology and requirements. To lessen potentially significant indirect impacts associated with ground shaking, Mitigation Measure GEO-1 would is identified below. Implementation of Mitigation Measure GEO-1 would reduce potential ground shaking impacts to a level of less than significant.

Ground Failure and Liquefaction

Liquefaction occurs when saturated soil loses shear strength and deforms as a result of increased pore water pressure induced by strong ground shaking during an earthquake. As the excess pore pressure dissipates, volume changes are produced within the liquefied soil layer that can manifest at the ground surface as settlement of structures, floating of buried structures, and failure of retaining walls. Soil types most susceptible to liquefaction are saturated, loose, sandy soils. As noted on page 19 of the County General Plan Safety Element, Sacramento County has two areas that have been suggested as posing potential liquefaction problems: the downtown area and the Delta (Sacramento County General Plan, 1993). The soils identified within the SOIA Area do not pose a risk for liquefaction.

Because the known liquefaction areas are not located within the vicinity of the growth areas of the SOIA Area, and the soils identified within the SOIA Area do not pose a risk for liquefaction, direct and indirect project impacts related to liquefaction are expected to be less than significant.

Landslides

There are no substantial slopes on or near the project site. This condition precludes the possibility of landslides inundating the project site. Additionally, the soils identified within the SOIA Area do not pose significant urban development constraints related to landslides. No impacts would occur.

Conclusively, because of the known soil, groundwater and ground shaking conditions within the SOIA Area, the potential for liquefaction, ground lurching, lateral spreading, and lurching is considered to be low. Implementation of mitigation measure GEO-1 would require conformance with the applicable sections of the Uniform Building Code reducing potential seismic hazard impacts to a less than significant level.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM GEO-1 At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove will implement the applicable sections of the Uniform Building Code to ensure that structures within the SOIA Area meet all applicable seismic standards to the satisfaction of LAFCo. Additionally, the City shall require that a geotechnical report or other appropriate analysis be conducted at time of development application submittal to determine the shrink/swell potential and stability of the soil for public and private construction projects and identify measures necessary to ensure stable soil conditions.

Level of Significance After Mitigation

Less than significant impact.

Erosion

Impact GEO-2:	Construction activities associated with the proposed project would not have the potential to create erosion and sedimentation.
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Impact Analysis

This impact evaluates proposed project's potential to create erosion and sedimentation.

The proposed project would result in an amendment and expansion to the existing City of Elk Grove's SOI. The project would indirectly accommodate land uses and population increases through allowing future development of residential and non-residential structures and facilities. This would result in the alteration of existing topography and/or the removal of existing vegetation/topsoil. The

project's indirect potential for soil erosion, by either wind or water, is substantially increased upon the exposure of underlying soils during grading activities or other landform modifications. Future development within the SOIA Area has the potential to increase the risk of erosion and sedimentation and/or siltation of surface water. This may occur due to short-term disturbance of large quantities of earth during construction and/or possible increases in erosion in areas of new construction. All future activities would be subject to preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) under the National Pollutant Discharge Eliminations System (NPDES) Permit for construction activities that would disturb an area of 1 acre or more. The SWPPP must identify potential sources of erosion or sedimentation that may be reasonably expected to affect the quality of stormwater discharges as well as identify and implement Best Management Practices (BMPs) that ensure the reduction of these pollutants during stormwater discharges. Typical BMPs intended to control erosion include sand bags, detention basins, silt fencing, storm drain inlet protection, street sweeping, and monitoring of water bodies. Water Quality Order 99-08-DWQ requires permittees to implement specific sampling and analytical procedures to determine whether Best Management Practices (BMPs) implemented on a construction site are: (1) preventing further impairment by sediment in storm waters discharged directly into waters listed as impaired for sediment or silt, and (2) preventing other pollutants, that are known or should be known by permittees to occur on construction sites and that are not visually detectable in storm water discharges, from causing or contributing to exceedances of water quality objectives. Further, the order contains information regarding the type of construction covered and not covered by the general permit, notification requirements, and a description of general permit conditions. Future annexation and development activities would result in less than significant impacts, because they would be required to comply with Water Quality Order 99-08-DWQ, which would avoid erosion and sedimentation by implementation of the BMPs and monitoring procedures outlined above.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Unstable Geologic Units or Soils

Impact GEO-3:	The proposed project would not expose persons or structures to hazards associated with unstable geologic units or soils.
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Impact Analysis

This impact evaluates the proposed project's potential to expose persons or structures to hazards associated with unstable geologic units or soils.

The proposed project would result in an amendment and expansion to the existing City of Elk Grove's SOI boundary. As described previously, the primary soil and geologic hazards identified with the SOIA Area are related to the potential for strong ground shaking and several subsurface faults. The soil and geologic hazards previously described could cause isolated structural damage to future pavement, bridges, foundations and/or structures; however, these conditions do not pose a significant geologic constraint to the future urban development of the SOI Area. This is because standard engineering requirements and practices that are embodied in the Uniform Building Code (Chapter 18) and 2010 California Building Code (Title 17), which were adopted the City of Elk Grove, will ensure that future development is properly designed to take onsite soil conditions into account. Specific requirements will be developed by an engineering geologist, and will be reviewed and approved by the City, prior to issuance of any grading or building permits. As shown on Exhibit 3.6-1, with the exception of the Dierssen, Clear Lake Clay, and Galt soil series, which include overall severe urban development constraints, the majority of the SOIA Area does not contain specific areas of soil-related constraints. Therefore, development of the SOIA would not result in significant geologic or soils impacts based upon compliance with the comprehensive requirements of the Uniform Building Code and 2010 California Building Code, as adopted and enforced by the City of Elk Grove. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Expansive Soils

Impact GEO-4:	Development of the proposed project would not expose persons or structures to hazards associated with expansive soils.
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Impact Analysis

This impact evaluates the proposed project's potential to expose persons or structures to hazards associated with expansive soils.

The proposed project would result in an amendment and expansion to the existing City of Elk Grove's Sphere of Influence boundary. Expansive soils are those soils with a significant amount of clay particles that have the ability to give up water (shrink) or take on water (swell). When these soils swell, the change in volume exerts significant pressures on loads (such as buildings) that are placed on them. Expansive soils represent approximately one third of all soil types in Sacramento County (Figure II-8) (Sacramento County General Plan, 1993). Generally, the Dierssen, Clear Lake Clay, and Galt soil series feature greater expansive characteristics than other soil types within the SOIA

Area. Implementation of the proposed project may indirectly result in the construction and occupation of structures within areas underlain by expansive soils. As noted above, development of the SOIA would not result in significant geologic or soils impacts based upon compliance with the comprehensive requirements of the Uniform Building Code and 2010 California Building Code, as adopted and enforced by the City of Elk Grove. Accordingly, impacts would be less than significant.

Level of Significance Before Mitigation

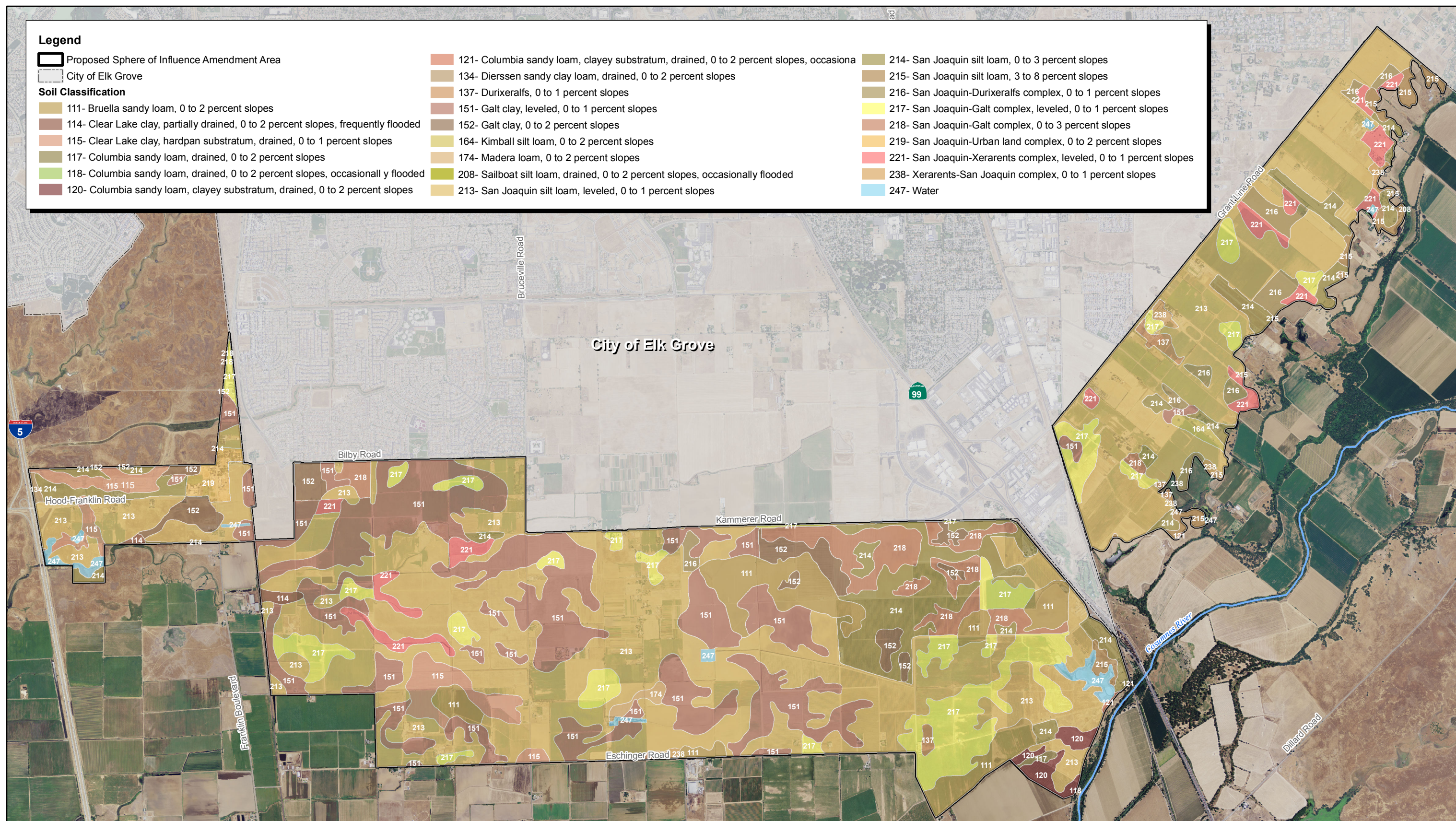
Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.



Legend

Proposed Sphere of Influence Amendment Area
 City of Elk Grove

Soil Classification

111- Bruella sandy loam, 0 to 2 percent slopes
114- Clear Lake clay, partially drained, 0 to 2 percent slopes, frequently flooded
115- Clear Lake clay, hardpan substratum, drained, 0 to 1 percent slopes
117- Columbia sandy loam, drained, 0 to 2 percent slopes
118- Columbia sandy loam, drained, 0 to 2 percent slopes, occasionally flooded
120- Columbia sandy loam, clayey substratum, drained, 0 to 2 percent slopes

121- Columbia sandy loam, clayey substratum, drained, 0 to 2 percent slopes, occasional
134- Dierssen sandy clay loam, drained, 0 to 2 percent slopes
137- Durixeralfs, 0 to 1 percent slopes
151- Galt clay, leveled, 0 to 1 percent slopes
152- Galt clay, 0 to 2 percent slopes
164- Kimball silt loam, 0 to 2 percent slopes
174- Madera loam, 0 to 2 percent slopes
208- Sailboat silt loam, drained, 0 to 2 percent slopes, occasionally flooded
213- San Joaquin silt loam, leveled, 0 to 1 percent slopes

214- San Joaquin silt loam, 0 to 3 percent slopes
215- San Joaquin silt loam, 3 to 8 percent slopes
216- San Joaquin-Durixeralfs complex, 0 to 1 percent slopes
217- San Joaquin-Galt complex, leveled, 0 to 1 percent slopes
218- San Joaquin-Galt complex, 0 to 3 percent slopes
219- San Joaquin-Urban land complex, 0 to 2 percent slopes
221- San Joaquin-Xerarents complex, leveled, 0 to 1 percent slopes
238- Xerarents-San Joaquin complex, 0 to 1 percent slopes
247- Water

Source: Sacramento County NAIP, 2009. USDA Soils Data.

3.7 - Greenhouse Gas Emissions

3.7.1 - Introduction

This section describes the existing greenhouse gas emissions and potential effects from project implementation on the site and its surrounding area. Michael Brandman Associates performed greenhouse gas impact analysis for the proposed project, which included emissions modeling using EMFAC2007 and qualitative assessments of greenhouse gas emissions. Emissions output is provided in Appendix B.

3.7.2 - Environmental Setting

Climate change is a change in the average weather of the earth that is measured by alterations in wind patterns, storms, precipitation, and temperature. These changes are assessed using historical records of temperature changes occurring in the past, such as during previous ice ages. Many of the concerns regarding climate change use this data to extrapolate a level of statistical significance specifically focusing on temperature records from the last 150 years (the Industrial Age) that differ from previous climate changes in rate and magnitude. Climate change is caused by greenhouse gases emitted all around the world from a variety of sources, including the combustion of fuel for transportation and heat, cement manufacturing, and refrigerant emissions.

Greenhouse Gases

Gases that trap heat in the atmosphere are referred to as greenhouse gases. The effect is analogous to the way a greenhouse retains heat. Common greenhouse gases include water vapor, carbon dioxide, methane, nitrous oxides, chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, ozone, and aerosols. Natural processes and human activities emit greenhouse gases. The presence of greenhouse gases in the atmosphere affects the earth's temperature. It is believed that emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

Individual greenhouse gas compounds have varying global warming potential and atmospheric lifetimes. Carbon dioxide, the reference gas for global warming potential, has a global warming potential of one. The global warming potential of a greenhouse gas is a measure of how much a given mass of a greenhouse gas is estimated to contribute to global warming. To describe how much global warming a given type and amount of greenhouse gas may cause, use is made of a metric called the carbon dioxide equivalent. The calculation of the carbon dioxide equivalent is a consistent methodology for comparing greenhouse gas emissions since it normalizes various greenhouse gas emissions to a consistent reference gas, carbon dioxide. For example, methane's warming potential of 21 indicates that methane has a 21 times greater warming affect than carbon dioxide on a molecule per molecule basis. A carbon dioxide equivalent is the mass emissions of an individual greenhouse gas multiplied by its global warming potential.

Greenhouse gases as defined by AB 32 include the following gases: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Select greenhouse gases are summarized in Table 3.7-1.

Table 3.7-1: Greenhouse Gases

Greenhouse Gas	Description and Physical Properties	Sources
Nitrous oxide	Nitrous oxide is also known as laughing gas and is a colorless greenhouse gas. It has a lifetime of 114 years. Its global warming potential is 310.	Microbial processes in soil and water, fuel combustion, and industrial processes.
Methane	Methane is a flammable gas and is the main component of natural gas. It has a lifetime of 12 years. Its global warming potential is 21.	Methane is extracted from geological deposits (natural gas fields). Other sources are landfills, fermentation of manure, decay of organic matter, and cattle.
Carbon dioxide	Carbon dioxide (CO ₂) is an odorless, colorless, natural greenhouse gas. Carbon dioxide's global warming potential is 1. The concentration in 2005 was 379 parts per million (ppm), which is an increase of about 1.4 ppm per year since 1960.	Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood.
Chlorofluorocarbons	These are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. They are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). Global warming potentials range from 3,800 to 8,100.	Chlorofluorocarbons were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone. The Montreal Protocol on Substances that Deplete the Ozone Layer prohibited their production in 1987.
Hydrofluorocarbons	Hydrofluorocarbons are a group of greenhouse gases containing carbon, chlorine, and at least one hydrogen atom. Global warming potentials range from 140 to 11,700.	Hydrofluorocarbons are synthetic manmade chemicals used as a substitute for chlorofluorocarbons in applications such as automobile air conditioners and refrigerants.
Perfluorocarbons	Perfluorocarbons have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface. Because of this, they have long lifetimes, between 10,000 and 50,000 years. Global warming potentials range from 6,500 to 9,200.	Two main sources of perfluorocarbons are primary aluminum production and semiconductor manufacturing.

Table 3.7-1 (cont.): Greenhouse Gases

Greenhouse Gas	Description and Physical Properties	Sources
Sulfur hexafluoride	Sulfur hexafluoride is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. It has a high global warming potential, 23,900.	This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas.
Sources: Compiled from a variety of sources, primarily Intergovernmental Panel on Climate Change 2007a and Intergovernmental Panel on Climate Change 2007b.		

Emissions Inventories and Trends

International, National, and State

Emissions worldwide were approximately 49,000 million metric tons of carbon dioxide equivalents (MMTCO₂e) in 2004 (IPCC 2007b). In 2004, greenhouse gas emissions in the United States (U.S.) were 7,074.4 million MTCO₂e are approximately 6.7 percent of the emissions in the U.S. California is the second largest contributor of greenhouse gases in the U.S. and the sixteenth largest in the world (CEC 2006).

According to the Air Resource Board's (ARB's) recent greenhouse gas inventory for the State, the single largest source of greenhouse gases in California is transportation, contributing 37 percent of the State's total greenhouse gas emissions in 2008. Electricity generation (both in and out of state) is the second largest source, contributing 25 percent of the State's greenhouse gas emissions. The inventory for California's greenhouse gas emissions between 2000 and 2008, by even years, is presented in Table 3.7-2. As shown in Table 3.7-2, aviation is a subcomponent of the Transportation Sector and generated approximately 0.6 percent to 0.5 percent of the state's emissions inventory between 2000 and 2008.

Table 3.7-2: California Greenhouse Gas Inventory 2000-2008

Main Sector ¹	Emissions MMTCO ₂ e				
	2000	2002	2004	2006	2008
Agriculture & Forestry	25.63	28.61	29.01	30.08	28.25
Commercial	12.80	14.44	13.20	13.01	14.69
Electricity Generation (Imports)	44.31	56.00	62.92	51.68	61.58
Electricity Generation (In state)	60.76	51.57	58.09	56.99	55.74
Industrial	104.56	103.57	97.76	97.80	100.03
Not Specified	8.72	10.26	11.85	13.18	14.02
Residential	30.13	29.35	29.34	28.46	28.45

Table 3.7-2 (cont.): California Greenhouse Gas Inventory 2000-2008

Main Sector ¹	Emissions MMTCO ₂ e				
	2000	2002	2004	2006	2008
Transportation	171.13	180.36	181.71	184.11	174.99
Aviation ²	2.68	2.66	2.64	2.68	2.42
Total	458.03	474.15	483.88	475.31	477.74
Notes: MMTCO ₂ e = million metric tons of carbon dioxide equivalent ¹ Excludes military sector, aviation, and international marine bunker fuel. ² Includes only intrastate aviation emissions. Aviation is a subset of the Transportation sector. Source: California Air Resources Board 2010c.					

Local Inventory

In 2009, Sacramento County prepared a year 2005 greenhouse gas emissions inventory for the unincorporated portions of the county, as well as the cities of Citrus Heights, Elk Grove, Folsom, Galt, Isleton, Rancho Cordova, and Sacramento. The County's 2005 inventory is provided in Table 3.7-3. In preparing the 2010 Public Draft Climate Action Plan, the City of Elk Grove updated and revised the 2005 emissions inventory prepared by the County. The City of Elk Grove 2005 inventory is provided in Table 3.7-4.

Table 3.7-3: Unincorporated Sacramento County Greenhouse Gas Inventory 2005

Sector	Emissions MTCO ₂ e	Percent of Inventory
Residential	1,033,142	15.8
Commercial and Industrial	770,025	11.7
Industrial Specific	2,104	0.0
On-Road Transportation	3,610,937	55.1
Off-road Vehicle Use	236,466	3.6
Waste	201,350	3.1
Wastewater Treatment	54,391	0.8
Agriculture	197,132	3.0
High Global Warming Potential Greenhouse Gases	228,768	3.5
Water-Related	22,156	0.3
Sacramento International Airport	200,404	3.1
Total	6,556,875	100.0
Notes: MTCO ₂ e = metric tons of carbon dioxide equivalent Source: Sacramento County Department of Environmental Review and Assessment, 2009a.		

Table 3.7-4: Elk Grove Greenhouse Gas Inventory 2005

Sector	Emissions MMTCO ₂ e	Percent of Inventory
Residential	229,841	31.2
Commercial and Industrial	101,607	13.8
On-Road Transportation	357,309	48.4
Waste	39,791	5.4
Water-Related	4,371	0.6
Agriculture	4,919	0.7
Total	718,534	100.0
Notes: MTCO ₂ e = metric tons of carbon dioxide equivalent Source: City of Elk Grove, 2010.		

The County-prepared inventory showed the City of Elk Grove generated a total of 842,971 MTCO₂e in 2005. The City's revised inventory shows a total of 718,534 MTCO₂e in 2005. Revisions to the City's inventory includes (but is not limited to): revised vehicle miles traveled (VMT), omit off-road equipment and vehicle emissions, omit residential wood burning emissions, omit wastewater treatment and discharge emissions, and omit high global warming potential emissions (such as fugitive refrigerant emissions).

Potential Environmental Effects

The United Nations Intergovernmental Panel on Climate Change constructed several emission trajectories of greenhouse gases needed to stabilize global temperatures and climate change impacts. The Intergovernmental Panel on Climate Change predicted that global mean temperature change from 1990 to 2100, given six scenarios, could range from 1.1 degrees Celsius (°C) to 6.4°C. Regardless of analytical methodology, global average temperatures and sea levels are expected to rise under all scenarios (Intergovernmental Panel on Climate Change 2007a).

In California, climate change may result in consequences such as the following (from California Climate Change Center 2006 and Moser et al. 2009).

- **A reduction in the quality and supply of water from the Sierra snowpack.** If heat-trapping emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. This can lead to challenges in securing adequate water supplies. It can also lead to a potential reduction in hydropower.
- **Increased risk of large wildfires.** If rain increases as temperatures rise, wildfires in the grasslands and chaparral ecosystems of southern California are estimated to increase by approximately 30 percent toward the end of the 21st century because more winter rain will

stimulate the growth of more plant “fuel” available to burn in the fall. In contrast, a hotter, drier climate could promote up to 90 percent more northern California fires by the end of the century by drying out and increasing the flammability of forest vegetation.

- **Reductions in the quality and quantity of certain agricultural products.** The crops and products likely to be adversely affected include wine grapes, fruit, nuts, and milk.
- **Exacerbation of air quality problems.** If temperatures rise to the medium warming range, there could be 75 to 85 percent more days with weather conducive to ozone formation in Los Angeles and the San Joaquin Valley, relative to today’s conditions. This is more than twice the increase expected if rising temperatures remain in the lower warming range. This increase in air quality problems could result in an increase in asthma and other health-related problems.
- **A rise in sea levels resulting in the displacement of coastal businesses and residences.** During the past century, sea levels along California’s coast have risen about seven inches. If heat-trapping emissions continue unabated and temperatures rise into the higher anticipated warming range, sea level is expected to rise an additional 22 to 35 inches by the end of the century. Elevations of this magnitude would inundate coastal areas with salt water, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.
- **An increase temperature and extreme weather events.** Climate change is expected to lead to increases in the frequency, intensity, and duration of extreme heat events and heat waves in California. More heat waves can exacerbate chronic disease or heat-related illness.
- **A decrease in the health and productivity of California’s forests.** In forests, climate change can cause an increase in wildfires, an enhanced insect population, and establishment of non-native species.

Inundation by Sea Level Rise and Increased Flooding Severity

The Pacific Institute, with support from the California Energy Commission, California Department of Transportation, and the Ocean Protection Council, prepared impact maps showing the potential extent of coastal flooding and erosion under one scenario that involved a sea level rise of 1.4 meters (55 inches). The impact maps were prepared for and are available in the document Impacts of Sea-Level Rise on the California Coast (CEC 2009). However, the maps do not extend past the southwestern most portion of Sacramento County (Antioch North map).

This 1.4-meter sea level rise scenario represents the medium to high greenhouse gas emissions scenarios, but does not reflect the worst-case that could occur. The scenario estimates that the 1.4-meter sea-level rise would occur by 2100. The project site is located between approximately 3 meters and 21 meters above mean sea level. Therefore, the project site is located outside of the estimated 1.4-meter sea-level rise inundation area.

As described in Section 2, Project Description, and Section 3.9, Hydrology and Water Quality, the westernmost portions of the proposed SOIA Area lie within the 100-year flood zone as shown on the Federal Emergency Management Agency (FEMA) approved floodplain maps. In addition, the SOIA Area does not lie within 200- or 500-year flood zone. The California Department of Water Resources' Awareness Floodplain Mapping project identifies pertinent flood hazard areas by 2015 for areas that are not mapped under the Federal Agency Management Agency's (FEMA) National Flood Insurance Program (NFIP) with the intent to provide communities and residents an additional tool in understanding potential flood hazards currently not mapped as a regulated floodplain.

Two distinct DWR Awareness Floodplains are identified in the SOIA Area. A minor extension of DWR Awareness Floodplain surrounds the existing agricultural canal located upstream of Elk Grove Creek and south of the intersection of Grant Line Road and Bradshaw Road. In addition, a DWR Awareness Floodplain is located in the westernmost portion of the SOIA Area, extending from the northwestern edge of the FEMA-identified 100-year floodplain towards and to the north of Kammerer Road.

3.7.3 - Regulatory Framework

International and federal agreements have been enacted to deal with climate change issues. The State of California has enacted key legislation in an effort to reduce its contribution to climate change, as discussed below.

International

Climate change is a global issue; therefore, many countries around the world have made an effort to reduce greenhouse gases.

Intergovernmental Panel on Climate Change. In 1988, the United Nations and the World Meteorological Organization established the Intergovernmental Panel on Climate Change to assess the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

United Nations. On March 21, 1994, the United States joined a number of countries around the world in signing the United Nations Framework Convention on Climate Change. Under the Convention, governments gather and share information on greenhouse gas emissions, national policies, and best practices; launch national strategies for addressing greenhouse gas emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

Kyoto Protocol. A particularly notable result of the United Nations Framework Convention on Climate Change efforts is a treaty known as the Kyoto Protocol, which went into effect on February 16, 2005. When countries sign the Kyoto Protocol, they demonstrate their commitment to reduce

their emissions of greenhouse gases or engage in emissions trading. More than 170 countries are currently participating in the Kyoto Protocol. Industrialized countries are required to reduce their greenhouse gas emissions by an average of 5 percent below their 1990 levels by 2012. In 1998, United States Vice President Al Gore symbolically signed the Protocol; however, in order for the Kyoto Protocol to be formally ratified, the United States Congress must approve it. Congress did not do this during the Clinton Administration. Former President George W. Bush did not submit the Protocol to Senate to be ratified based on the exemption granted to China. President Barack Obama has not taken action regarding the Kyoto Protocol because end of the first commitment period of the Kyoto Protocol in 2012.

National

Clean Vehicles. *Massachusetts v. EPA* (Supreme Court Case 05-1120) was argued before the United States Supreme Court on November 29, 2006, in which it was petitioned that the EPA regulate four greenhouse gases, including carbon dioxide, under Section 202(a)(1) of the Clean Air Act. A decision was made on April 2, 2007, in which the Supreme Court held that petitioners have a standing to challenge the EPA and that the EPA has statutory authority to regulate greenhouse gases emissions from new motor vehicles.

Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the United States. On April 1, 2010, the EPA and the Department of Transportation's National Highway Safety Administration announced a joint final rule establishing a national program that would reduce greenhouse gas emissions and improve fuel economy for new cars and trucks sold in the United States.

The first phase of the national program would apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide per mile, equivalent to 35.5 miles per gallon if the automobile industry were to meet this carbon dioxide level solely through fuel economy improvements. Together, these standards would cut carbon dioxide emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016). The EPA and the National Highway Safety Administration will now begin working on a second-phase joint rulemaking to establish national standards for light-duty vehicles for model years 2017 and beyond.

On October 25, 2010, the EPA and the U.S. Department of Transportation proposed the first national standards to reduce greenhouse gas emissions and improve fuel efficiency of heavy-duty trucks and buses. For combination tractors, the agencies are proposing engine and vehicle standards that begin in the 2014 model year and achieve up to a 20 percent reduction in carbon dioxide emissions and fuel

consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10 percent reduction for gasoline vehicles and 15 percent reduction for diesel vehicles by 2018 model year (12 and 17 percent respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the agencies are proposing engine and vehicle standards starting in the 2014 model year, which would achieve up to a 10 percent reduction in fuel consumption and carbon dioxide emissions by 2018 model year.

Mandatory Reporting of Greenhouse Gases. The Consolidated Appropriations Act of 2008, passed in December 2007, requires the establishment of mandatory greenhouse gas reporting requirements. On September 22, 2009, the EPA issued the Final Mandatory Reporting of Greenhouse Gases Rule. The rule requires reporting of greenhouse gas emissions from large sources and suppliers in the United States, and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial greenhouse gases, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of greenhouse gas emissions are required to submit annual reports to the EPA.

Greenhouse Gas Endangerment. On December 7, 2009, the EPA Administrator signed two distinct findings regarding greenhouse gases under Section 202(a) of the Clean Air Act: 1) Current and projected concentrations of the six key well-mixed greenhouse gases—carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride—in the atmosphere threaten the public health and welfare of current and future generations. 2) The combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution, which threatens public health and welfare.

New Source Review. The EPA issued a final rule on May 13, 2010, which establishes thresholds for greenhouse gases that define when permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule “tailors” the requirements of these Clean Air Act permitting programs to limit which facilities will be required to obtain Prevention of Significant Deterioration and Title V permits. In the preamble to the revisions to the federal code of regulations, EPA states:

This rulemaking is necessary because without it the Prevention of Significant Deterioration and Title V requirements would apply, as of January 2, 2011, at the 100 or 250 tons per year levels provided under the Clean Air Act, greatly increasing the number of required permits, imposing undue costs on small sources, overwhelming the resources of permitting authorities, and severely impairing the functioning of the programs. EPA is relieving these resource burdens by phasing in the applicability of these programs to greenhouse gas sources, starting with the largest greenhouse gas emitters. This rule establishes two initial steps of the phase-in. The rule also

commits the agency to take certain actions on future steps addressing smaller sources, but excludes certain smaller sources from Prevention of Significant Deterioration and Title V permitting for greenhouse gas emissions until at least April 30, 2016.

EPA estimates that facilities responsible for nearly 70 percent of the national greenhouse gas emissions from stationary sources will be subject to permitting requirements under this rule. This includes the nation's largest greenhouse gas emitters—power plants, refineries, and cement production facilities.

State

Title 24. Although not originally intended to reduce greenhouse gases, California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. All buildings for which an application for a building permit is submitted on or after January 1, 2011 must follow the 2008 Standards (which became effective January 1, 2010). Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions.

California Green Building Standards. On January 12, 2010, the State Building Standards Commission unanimously adopted updates to the California Green Building Standards Code, which went into effect on January 1, 2011. The Code is a comprehensive and uniform regulatory code for all residential, commercial and school buildings.

The California Green Building Standards Code does not prevent a local jurisdiction from adopting a more stringent code as state law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance provided they provide a minimum 50-percent diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. State building code provides the minimum standard that buildings need to meet in order to be certified for occupancy. Enforcement is generally through the local building official.

The California Green Building Standards Code (code section in parentheses) requires:

- Short-term bicycle parking. If a commercial project is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack (5.106.4.1).

- Long-term bicycle parking. For buildings with over 10 tenant-occupants, provide secure bicycle parking for 5 percent of tenant-occupied motorized vehicle parking capacity, with a minimum of one space (5.106.4.2).
- Designated parking. Provide designated parking in commercial projects for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.6.2 (5.106.5.2).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of nonhazardous materials for recycling.
- Construction waste. A minimum 50-percent diversion of construction and demolition waste from landfills, increasing voluntarily to 65 and 75 percent for new homes and 80-percent for commercial projects. All (100 percent) of trees, stumps, rocks and associated vegetation and soils resulting from land clearing shall be reused or recycled.
- Wastewater reduction. Each building shall reduce the generation of wastewater by one of the following methods:
 1. The installation of water-conserving fixtures or
 2. Utilizing nonpotable water systems (5.303.4).
- Water use savings. 20-percent mandatory reduction in indoor water use with voluntary goal standards for 30, 35, and 40-percent reductions.
- Water meters. Separate water meters for buildings in excess of 50,000 square feet or buildings projected to consume more than 1,000 gallons per day.
- Irrigation efficiency. Moisture-sensing irrigation systems for larger landscaped areas.
- Materials pollution control. Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particleboard.
- Building commissioning. Mandatory inspections of energy systems (i.e. heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies.

Pavley Regulations. California AB 1493, enacted on July 22, 2002, required the ARB to develop and adopt regulations that reduce greenhouse gases emitted by passenger vehicles and light duty trucks. The regulation was stalled by automaker lawsuits and by the EPA's denial of an implementation waiver. On January 21, 2009, the ARB requested that the EPA reconsider its previous waiver denial. On January 26, 2009, President Obama directed that the EPA assess whether the denial of the waiver was appropriate. On June 30, 2009, the EPA granted the waiver request.

The standards phase in during the 2009 through 2016 model years. When fully phased in, the near term (2009-2012) standards will result in about a 22-percent reduction compared with the 2002 fleet,

and the mid-term (2013-2016) standards will result in about a 30-percent reduction. Several technologies stand out as providing significant reductions in emissions at favorable costs. These include discrete variable valve lift or camless valve actuation to optimize valve operation rather than relying on fixed valve timing and lift as has historically been done; turbocharging to boost power and allow for engine downsizing; improved multi-speed transmissions; and improved air conditioning systems that operate optimally, leak less, and/or use an alternative refrigerant.

Executive Order S-3-05. California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following reduction targets for greenhouse gas emissions:

- By 2010, reduce greenhouse gas emissions to 2000 levels.
- By 2020, reduce greenhouse gas emissions to 1990 levels.
- By 2050, reduce greenhouse gas emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be an aggressive, but achievable, mid-term target. The Climate Action Team's Report to the Governor in 2006 contains recommendations and strategies to help ensure the 2020 targets in Executive Order S-3-05 are met (Climate Action Team 2006).

Low Carbon Fuel Standard - Executive Order S-01-07. The Governor signed Executive Order S-01-07 on January 18, 2007. The order mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. In particular, the executive order established a Low Carbon Fuel Standard and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, the ARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. This analysis supporting development of the protocols was included in the State Implementation Plan for alternative fuels (State Alternative Fuels Plan adopted by California Energy Commission on December 24, 2007) and was submitted to ARB for consideration as an "early action" item under AB 32. The ARB adopted the Low Carbon Fuel Standard on April 23, 2009.

SB 1368. In 2006, the State Legislature adopted Senate Bill (SB) 1368, which was subsequently signed into law by the Governor. SB 1368 directs the California Public Utilities Commission to adopt a performance standard for greenhouse gas emissions for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than 5 years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. Because of the carbon content of its fuel source, a coal-fired plant cannot meet this standard because such plants emit roughly twice as much carbon as natural gas, combined cycle plants. Accordingly,

the new law will effectively prevent California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. Thus, SB 1368 will lead to dramatically lower greenhouse gas emissions associated with California's energy demand, as SB 1368 will effectively prohibit California utilities from purchasing power from out-of-state producers that cannot satisfy the performance standard for greenhouse gas emissions required by SB 1368. The California Public Utilities Commission adopted the regulations required by SB 1368 on August 29, 2007.

SB 97 and the CEQA Guidelines Update. Passed in August 2007, SB 97 added Section 21083.05 to the Public Resources Code. The code states "(a) On or before July 1, 2009, the Office of Planning and Research shall prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption. (b) On or before January 1, 2010, the Resources Agency shall certify and adopt guidelines prepared and developed by the Office of Planning and Research pursuant to subdivision (a)." Section 21097 was also added to the Public Resources Code. It provided CEQA protection until January 1, 2010 for transportation projects funded by the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006 or projects funded by the Disaster Preparedness and Flood Prevention Bond Act of 2006, in stating that the failure to adequately analyze the effects of greenhouse gases would not violate CEQA.

On April 13, 2009, the Office of Planning and Research submitted to the Secretary for Natural Resources its recommended amendments to the CEQA Guidelines for addressing greenhouse gas emissions. On February 16, 2010, the Office of Administrative Law approved the Amendments, and filed them with the Secretary of State for inclusion in the California Code of Regulations. The Amendments became effective on March 18, 2010.

The CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of greenhouse gas emissions in CEQA documents. The CEQA Amendments fit within the existing CEQA framework by amending existing CEQA Guidelines to reference climate change.

A new section, CEQA Guidelines Section 15064.4, was added to assist agencies in determining the significance of greenhouse gas emissions. The new section allows agencies the discretion to determine whether a quantitative or qualitative analysis is best for a particular project. However, little guidance is offered on the crucial next step in this assessment process—how to determine whether the project's estimated greenhouse gas emissions are significant or cumulatively considerable.

Also amended were CEQA Guidelines Sections 15126.4 and 15130, which address mitigation measures and cumulative impacts respectively. Greenhouse gas mitigation measures are referenced in general terms, but no specific measures are championed. The revision to the cumulative impact

discussion requirement (Section 15130) simply directs agencies to analyze greenhouse gas emissions in an EIR when a project's incremental contribution of emissions may be cumulatively considerable, however it does not answer the question of when emissions are cumulatively considerable.

Section 15183.5 permits programmatic greenhouse gas analysis and later project-specific tiering, as well as the preparation of Greenhouse Gas Reduction Plans. Compliance with such plans can support a determination that a project's cumulative effect is not cumulatively considerable, according to proposed Section 15183.5(b).

In addition, the amendments revised Appendix F of the CEQA Guidelines, which focuses on Energy Conservation. The sample environmental checklist in Appendix G was amended to include greenhouse gas questions.

AB 32. The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires that greenhouse gases emitted in California be reduced to 1990 levels by the year 2020. "Greenhouse gases" as defined under AB 32 include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. ARB is the state agency charged with monitoring and regulating sources of greenhouse gases. AB 32 states the following:

Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

The ARB Board approved the 1990 greenhouse gas emissions level of 427 million metric tons of carbon dioxide equivalent (MMTCO₂e) on December 6, 2007 (California Air Resources Board 2007). Therefore, emissions generated in California in 2020 are required to be equal to or less than 427 MMTCO₂e. Emissions in 2020 in a "business as usual" scenario are estimated to be 596 MMTCO₂e.

Under AB 32, the ARB published its Final Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California. Discrete early action measures are currently underway or are enforceable by January 1, 2010. The ARB has 44 early action measures that apply to the transportation, commercial, forestry, agriculture, cement, oil and gas, fire suppression, fuels, education, energy efficiency, electricity, and waste sectors. Of these early action measures, nine are considered discrete early action measures, as they are regulatory and enforceable by January 1, 2010. The ARB estimates that the 44 recommendations are expected to result in reductions of at least 42 MMTCO₂e by 2020, representing approximately 25 percent of the 2020 target.

The ARB's Climate Change Scoping Plan (Scoping Plan) contains measures designed to reduce the State's emissions to 1990 levels by the year 2020 (California Air Resources Board 2008). The Scoping Plan identifies recommended measures for multiple greenhouse gas emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 greenhouse gas target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related greenhouse gas emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

In addition, the Scoping Plan differentiates between "capped" and "uncapped" strategies. "Capped" strategies are subject to the proposed cap-and-trade program. The Scoping Plan states that the inclusion of these emissions within the cap-and-trade program will help ensure that the year 2020 emission targets are met despite some degree of uncertainty in the emission reduction estimates for any individual measure. Implementation of the capped strategies is calculated to achieve a sufficient amount of reductions by 2020 to achieve the emission target contained in AB 32. "Uncapped" strategies that will not be subject to the cap-and-trade emissions caps and requirements are provided as a margin of safety by accounting for additional greenhouse gas emission reductions. On March 18, 2011, the San Francisco Superior Court issued a final decision in *Association of Irrigated Residents v. California Air Resources Board* (Case No. CPF-09-509562). While the Court upheld the validity of the ARB Scoping Plan for the implementation of AB 32, the Court enjoined ARB from further rulemaking under AB 32 until ARB amends its CEQA environmental review of the Scoping Plan to address the flaws identified by the Court.

SB 375. Passing the Senate on August 30, 2008, SB 375 was signed by the Governor on September 30, 2008. According to SB 375, the transportation sector is the largest contributor of greenhouse gas

emissions, which emits over 40 percent of the total greenhouse gas emissions in California. SB 375 states, “Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32.” SB 375 does the following: (1) requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing greenhouse gas emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies. Concerning CEQA, SB 375, section 21159.28 states that CEQA findings determinations for certain projects are not required to reference, describe, or discuss (1) growth inducing impacts or (2) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network if the project:

1. Is in an area with an approved sustainable communities strategy or an alternative planning strategy that the ARB accepts as achieving the greenhouse gas emission reduction targets.
2. Is consistent with that strategy (in designation, density, building intensity, and applicable policies).
3. Incorporates the mitigation measures required by an applicable prior environmental document.

Executive Order S-13-08. Executive Order S-13-08 indicates that “climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California’s economy, to the health and welfare of its population and to its natural resources.” Pursuant to the requirements in the order, the 2009 California Climate Adaptation Strategy (California Natural Resources Agency 2009) was adopted, which is the “ . . . first statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States.” Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

SB 1078, SB 107, and Executive Orders S-14-08 and S-21-09. On September 12, 2002, Governor Gray Davis signed SB 1078 requiring California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established a Renewable Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Governor Schwarzenegger also directed the ARB (Executive Order S-21-09) to adopt a regulation by July 31, 2010, requiring the state’s load serving entities to meet a 33 percent renewable energy target by 2020. The ARB Board approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23.

Local

Sacramento County

Climate Action Plan (CAP)

Sacramento County released a Draft Climate Action Plan (CAP) in May 2009. The Draft CAP, also identified as the Phase 1 CAP, contains the greenhouse gas emissions inventory for the entire county and the unincorporated portion of the County, as well as the inventory for County government operations. In addition, the Draft CAP identifies existing and potential actions to reduce greenhouse gas emissions from transportation, energy, water management, waste management and recycling, agriculture, and open space. Finally, the Draft CAP identifies steps the County will take after adoption of the Phase 1 CAP.

The Phase 2 CAP will be the implementation plan for addressing emissions from County government operations and land uses within the unincorporated county. The Phase 2 CAP will be prepared in two distinct parts to address these two sources (County operations and unincorporated county) of greenhouse gas emissions.

City of Elk Grove

General Plan

The City of Elk Grove General Plan establishes goals and policies to guide both present and future development within the City's jurisdiction. Therefore, the City of Elk Grove's General Plan policies that affect the generation of greenhouse gases that may apply to potential future development in the SOIA Area are provided herein. Many of the policies and actions cited in Section 3.3, Air Quality, of this EIR reduce greenhouse gases. In addition, the following policies would be applicable to future development in the SOIA Area, if annexed into the City.

- **Policy PF-5:** The City supports the use of reclaimed water for irrigation wherever feasible.
- **Policy CAQ-1:** Reduce the amount of water used by residential and non-residential uses by encouraging water conservation.
- **CAQ-1-Action 1:** Implement the City's Water Conservation Ordinance.
- **CAQ-1-Action 2:** Actively encourage water conservation by both agricultural and urban water users.
- **CAQ-1-Action 3:** Work with urban and agricultural water purveyors to establish long range conservation plans which set specific conservation objectives and utilize, to the extent possible, a common planning horizon, plan framework and estimating/ forecasting procedures.
- **CAQ-1-Action 4:** Promote the use of drought-tolerant vegetation to minimize water consumption by providing information to developers and designers.

Sustainability Element and Climate Action Plan

The City of Elk Grove has developed a draft Sustainability Element and Climate Action Plan (CAP). A Draft EIR is being developed for both the Sustainability Element and CAP, collectively referred to

as the SECAP. The Draft EIR notice of preparation was available for public comment from June 10, 2011 to July 11, 2011. The purpose of the CAP is to identify how the City will achieve greenhouse gas emission reduction target of 15 percent by the year 2020 and to create a path to obtain 2050 State targets associated with Governor's Order S-03-05. The CAP provides goals and associated measures in the sectors of energy use, transportation, land use, water, and solid waste. In addition, the CAP provides goals and measures for longer-term adaptation to the potential risks associated with climate change. More specifically, the CAP:

- Identifies sources of greenhouse gas emissions from sources within the City's jurisdictional/political boundary and estimates how these emissions may change over time.
- Discusses the various outcomes of reduction efforts and how these reduction efforts can be implemented and advertised.
- Provides energy use, transportation, land use, water use, and solid waste strategies to reduce Elk Grove's greenhouse gas emissions levels to 15 percent below 2005 levels by 2020.
- Provides methods for reducing the City's greenhouse gas emissions consistent with the direction of the State of California through the Global Warming Solutions Act (AB 32), Governor's Order S-03-05, Public Resources Code Section 21083.3(b,d), and CEQA Guidelines Section 15064.4. [The California Environmental Quality Act (CEQA) Guidelines encourage the adoption of policies or programs as a means of addressing comprehensively the cumulative impacts of projects. See State CEQA Guidelines, §15064(h)(3), §15130(d).]
- Provides substantial evidence that the emissions reductions estimated in the CAP are feasible

The SECAP contains an emissions inventory for the community and municipal operations of the City of Elk Grove for year 2005, 2020, and 2025. The City modeled future emissions growth on projected trends in energy use, driving habits, job growth, and population growth in 2020 and 2025. Although emissions projections were based on growth, they were not based on growth within particular geographic areas. Therefore, the SECAP future year inventories may encompass a portion of the growth within the SOIA Area. However, as the land within the SOIA Area exceeds the amount calculated to be required to support projected growth, the SECAP future-year inventories would not cover the entirety of the SOIA Area under the project's land use assumptions.

The SECAP and associated Environmental Impact Report (EIR) are intended to serve as programmatic tiering documents for the purposes of CEQA as allowed under Section 15183.5 of the CEQA Guidelines. A tiering document front-loads the analysis needed for many projects in order to decrease the time and money that would be needed for individual analyses for each project. In the case of the CAP, the City is creating a tiering document that addresses the elements identified at CEQA Guidelines Section 15183.5(b)(1) and establishes the City's consistency with state greenhouse gas legislation such as AB 32 and SB 97 through the year 2020.

SMAQMD

The SMAQMD formally began a Climate Protection Program in March 2006, with a goal to include outreach and education, data collection and analysis, and provide support and leadership for local, state, and national efforts to reduce greenhouse gas emissions. On August 28, 2008, the SMAQMD Board of Directors authorized the District Air Pollution Control Officer to direct staff to begin program development on several enhancements to the Climate Protection Program. Those enhancements include:

1. The creation of a greenhouse gas emissions “bank.”
2. The creation of a program that would facilitate greenhouse gas mitigation for CEQA purposes.
3. An enhanced reporting system.
4. Assurances that climate protection measures do not cause increases in criteria pollutants.

In addition, the SMAQMD joined the CCAR in 2006 and has completed its own emissions inventory for 2005, 2006, and 2007. The SMAQMD held a “Greenhouse Gas and Climate Change Impact” training session April 20, 2009. The training described impact analysis techniques and threshold of significance approaches for climate change impacts.

Sacramento Regional Council of Governments

SACOG has a standing Climate & Air Quality Committee to assess air quality, energy conservation, climate change, and related technologies.

SB 375 Regional Targets

The MPO for the project area is SACOG, which will prepare an SCS as a component of its Metropolitan Transportation Plan, covering the six-county Sacramento Region (El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba). SACOG will participate in the scenario modeling described above. The Metropolitan Transportation Plan (MTP) will document the region’s greenhouse gas emissions, and it will include the plan to meet the regional target. SACOG is responsible for preparing the MTP every 4 years; most recently, it adopted the 2035 MTP in March 2008. SACOG anticipates adopting a new MTP by the end of 2011.

ARB adopted the following greenhouse gas reduction targets for passenger vehicles for 2020 and 2035 for the SACOG region (per capita reduction as measured from the 2005 baseline):

- Target for 2020 = 7 Percent
- Target for 2035 = 16 Percent

Sacramento Area Green Partnership

The Sacramento Area Green Partnership meets quarterly and comprises Sacramento area cities, the County of Sacramento, and various other partners working together on opportunities for regional collaboration regarding climate change and local government. The first work product of the Partnership was a draft Greenhouse Gas Emissions Inventory for Sacramento County.

3.7.4 - Methodology

The SMAQMD updated its CEQA Guide to Air Quality Assessment in 2009, with additional revisions in April and June of 2011. The updated document includes chapters for project-level analysis and the chapter Program-Level Analysis of General and Area Plans. The analysis utilizes the SMAQMD's guidance to the extent practicable, and examines the SOI change in relationship to Appendix G, Environmental Checklist, of the CEQA Guidelines greenhouse gas impact questions.

Operational on-road mobile emissions for the potential future development of the project based on the land use assumptions provided in Section 2.2 were modeled using EMFAC2007.

3.7.5 - Thresholds of Significance

The SMAQMD does not have an adopted threshold of significance for greenhouse gases. According to Appendix G, Environmental Checklist, of the CEQA Guidelines, greenhouse gas emissions impacts resulting from the implementation of the proposed project would be considered significant if the project would:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

3.7.6 - Project Impacts and Mitigation Measures

This section discusses potential indirect impacts associated with the development of the project and provides mitigation measures where appropriate.

Greenhouse Gas Emissions

Impact GHG-1:	The project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
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Impact Analysis

The proposed project would involve the extension of the City of Elk Grove's SOI to include the 7,869-acre project site. As stated in Section 2, land use assumptions were developed for this EIR with the intent to provide a general program level concept of growth that may result from future development in the SOIA Area, and allow LAFCo to understand probable future and potential environmental effects that may result from future anticipated growth.

The Transportation Impact Study prepared by Fehr and Peers calculated that full buildout of the SOIA Area under the assumed conceptual land uses provided in Section 2.2 would result in approximately 218,000 trips per day and 1,389,072 daily vehicle miles traveled (VMT). All calculations are based on the conceptual land uses.

EMFAC2007, BURDEN, was used to calculate future carbon dioxide emissions for the year 2020, 2025 and 2035, consistent with the AB 32 emission reduction goal year, the City's CAP emission reduction target year, and the cumulative analysis scenario provided in the Transportation Impact Study. EMFAC output is provided as Appendix B to this EIR.

EMFAC is not currently used as the basis for ARB's official GHG inventory, which is based on fuel usage information. The current version of EMFAC applies a single CO₂ factor that is unchanged throughout future years and does not account for emission reductions resulting from implementation of recently adopted regulations, such as the Pavley Regulations. In addition, EMFAC does not include reductions of the carbon content of the fuels in future years. Since CO₂ is calculated on carbon content of fuel, it is assumed that the Executive Order S-1-07, the Low Carbon Fuel Standard (issued on January 18, 2007), which that calls for a reduction of at least 10 percent in the carbon intensity of California's transportation fuels by 2020, will be implemented, and all diesel vehicles will be using the lower carbon fuel and the resultant CO₂ emissions will be proportionally reduced. Therefore, EMFAC2007 greenhouse gas forecasts the same emissions estimate for each year, which is an overestimate for future years. The calculated CO₂ emissions from potential future development are provided in Table 3.7-5. The calculated emission reduction from implementation of regulations is provided in Table 3.7-6.

Table 3.7-5: On-Road Mobile CO₂ from SOIA Area Potential Future Development

Analysis Year	Tons CO₂ per Day	Tons CO₂ per Year	MTCO₂e per Year
2020, 2025, 2030	760	277,400	251,657
Notes: MTCO ₂ e = metric tons of carbon dioxide equivalent Source: Michael Brandman Associates, 2011. Appendix B			

Table 3.7-6: Regulatory Emission Reductions for On-Road Mobile CO₂

BAU Inventory (MTCO ₂ e per Year)	Sector % of BAU subject to Regulations	Inventory Subject to Regulation	Regulation Reduction for the Sector (%)	Reductions from Regulations MTCO ₂ e
251,657	On-road passenger vehicles 80% of BAU	201,326	25.3% (Pavley, LCFS, Eff.)	50,935
	Heavy/medium duty vehicles 18% of BAU	45,298	9.1% (LCFS, Eff.)	4,122
Total		246,624	22%	55,058
Notes: LCFS = low carbon fuel standard; Eff. = efficiency regulations BAU = Business as Usual. Consists of EMFAC output. MTCO ₂ e = metric tons of carbon dioxide equivalent Source: Michael Brandman Associates, 2011. Appendix B				

The EMFAC output estimates the assumed buildout of the SOIA Area would result in 251,657 MTCO₂e per year. Implementation of state regulations would reduce emissions by 50,935 MTCO₂e per year. Therefore, potential future development of the SOIA could result in approximately 196,600 MTCO₂e per year of greenhouse gas emissions from mobile sources.

The SECAP's "Business as Usual" scenario for years 2020 and 2025 emissions inventories resulted in the following emissions distribution (rounded to integers):

- Residential: 31 percent of inventory,
- Commercial/Industrial: 18 percent of inventory,
- Transportation: 45 percent of inventory,
- Agricultural: 0 percent of inventory, and
- Waste: 5 percent of inventory.

The total greenhouse gas inventory was calculated for the SOIA Area utilizing the on-road mobile emissions, as provided in Table 3.7-5 and Elk Grove's estimated future-year inventory distribution by emissions source. The resulting emissions inventory is provided in Table 3.7-7.

Table 3.7-7: SOIA Area Calculated Greenhouse Gas Inventory (2020 and 2025)

Sector	Emissions MMTCO ₂ e	
	2020	2025
Residential	169,630	170,944
Commercial and Industrial	98,961	100,613
On-Road Transportation	251,657	251,657

Table 3.7-7 (cont.): SOIA Area Calculated Greenhouse Gas Inventory (2020 and 2025)

Sector	Emissions MMTCO ₂ e	
	2020	2025
Waste	670	—
Water-Related	29,367	29,594
Agriculture	3,708	3,753
Total	553,992	556,561
Notes: MTCO ₂ e = metric tons of carbon dioxide equivalent Source: MBA 2011.		

The majority of the project site is located within the City of Elk Grove General Plan “Planning Area” identified outside of the city limits, as defined in Section 3.10, Land Use and Planning. As discussed in the Regulatory Setting, the City of Elk Grove is currently developing the draft General Plan Sustainability Element and Climate Action Plan (CAP). The purpose of the CAP is to identify how the City will achieve greenhouse gas emission reduction target of 15 percent by the year 2020 and to create a path to obtain 2050 State targets associated with Governor’s Order S-03-05. The Draft CAP includes the City’s calculated 2005 greenhouse gas emissions inventory, and projected future inventory based on the City’s expected population, household, and nonresidential growth.

Because portions of the project site are outside the General Plan “Planning Area,” because comprehensive planning has not been conducted for the project site, the Draft CAP does not account for the future development of the project site.

As stated in Section 2.2, state planning law provides that a city may comprehensively plan for lands outside of its jurisdiction. As stated above, the City would conduct comprehensive planning for the area at an unknown future date. Therefore, mitigation is proposed for the City of Elk Grove to prepare and evaluate a comprehensive plan for development of the project site that is consistent with the City’s proposed Climate Action Plan and greenhouse gas emission reduction goals prior to incorporation of land into the City. Implementation of Mitigation Measure GHG-1 would reduce this impact to less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

- MM GHG-1** Prior to annexation of any or part of the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall amend or augment the City’s greenhouse gas emissions inventory projections to account for development of the SOIA Area. Emission factors used by the City shall be submitted for review and concurrence to

the SMAQMD and the ARB. The City shall assess the potential emission reductions from development of the SOIA Area consistent with the City's Sustainability Element, Climate Action Plan; other applicable General Plan policies; and applicable city, county, and/or state programs that reduce greenhouse gases. The City shall demonstrate that future development of the SOIA Area would be consistent with AB 32, S-3-05, and SB 375 regional emission reduction targets, or other emission reduction targets adopted by the State of California or regional agencies in effect at the time of application for annexation.

Level of Significance After Mitigation

Less than significant impact.

Greenhouse Gas Reduction Plans

Impact GHG-2:	The project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing emissions of greenhouse gases.
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Impact Analysis

The plan for reducing greenhouse gas emissions that is applicable to the project is ARB's Scoping Plan. In addition, the City of Elk Grove is developing a General Plan Sustainability Element and Climate Action Plan.

ARB's Scoping Plan

As discussed in the Regulatory Section, ARB adopted the Climate Change Scoping Plan (Scoping Plan), which outlines actions recommended to obtain that the emission reduction goals contained in AB 32. The Scoping Plan states, "The 2020 goal was established to be an aggressive, but achievable, mid-term target, and the 2050 greenhouse gas emissions reduction goal represents the level scientists believe is necessary to reach levels that will stabilize climate" (ARB 2008, page 4). The year 2020 goal of AB 32 corresponds with the mid-term target established by S-3-05, which aims to reduce California's fair-share contribution of greenhouse gases in 2050 to levels that will stabilize the climate. The measures in the Scoping Plan are intended to be developed and in place by 2012.

The Scoping Plan identifies recommended measures for multiple greenhouse gas emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. Therefore, the majority of measures are not directly applicable or implementable at the project level. Furthermore, no land use changes or specific land use entitlements are proposed at this time.

City of Elk Grove's Draft Climate Action Plan

As discussed above, the purpose of the CAP is to identify how the City will achieve greenhouse gas emission reduction target of 15 percent by the year 2020 and to create a path to obtain 2050 State targets associated with Governor's Order S-03-05. The Draft CAP includes the City's calculated

2005 greenhouse gas emissions inventory, and projected future inventory based on the City's expected population, household, and nonresidential growth.

Because portions of the project site are outside the General Plan "Planning Area," because comprehensive planning has not been conducted for the project site, the Draft CAP does not account for the future development of the project site.

As stated in Section 2.2, state planning law provides that a city may comprehensively plan for lands outside of its jurisdiction. Therefore, mitigation is proposed for the City of Elk Grove to amend or augment the Climate Action Plan to evaluate and reduce emissions from the comprehensive plan for development of the project site would be developed with mitigation measure GHG-1. Implementation of Mitigation Measure GHG-1 would reduce this impact to less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measure GHG-1.

Level of Significance After Mitigation

Less than significant impact.

3.8 - Hazards and Hazardous Materials

3.8.1 - Introduction

This section describes the existing hazards and hazardous materials setting and potential effects from project implementation of the Sphere of Influence Amendment (SOIA) Area. Descriptions and analysis in this section are based on information contained in the Elk Grove Sphere of Influence Customized Report, prepared on October 21, 2010, by Environmental Data Resources (EDR), Inc., attached to this EIR as Appendix C, and on existing regulatory framework.

Hazardous Materials and Hazardous Wastes

A substance is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency, or if it has characteristics defined as hazardous by such an agency. The health effects from exposure to hazardous materials vary based on factors that include the quantity to which the person is exposed, the frequency of exposure, the exposure pathway, and individual susceptibility.

The California Code of Regulations (CCR) defines a hazardous material as a substance that, because of physical or chemical properties, quantity, concentration, or other characteristics, may either (1) cause an increase in mortality or an increase in serious, irreversible, or incapacitating, illness or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of, or otherwise managed (CCR, Title 22, Division 4.5, Chapter 10, Article 2, Section 66260.10).

Hazardous wastes are similarly defined. In particular, hazardous wastes are hazardous materials that no longer have practical use, such as substances that have been discarded, discharged, spilled, contaminated, or are being stored prior to proper disposal. According to Title 22 of the CCR, hazardous materials and hazardous wastes are classified according to four properties: toxicity, ignitability, corrosivity, and reactivity (CCR, Title 22, Chapter 11, Article 3). Toxicity, ignitability, corrosivity, and reactivity are defined in the CCR, Title 22, Sections 66261.20—22261.24.

3.8.2 - Environmental Setting

On October 21, 2010, EDR conducted a search of the regulatory agency databases listed in Table 3.8-1, in order to identify potential hazardous conditions within the proposed sphere of influence amendment area. As indicated above, the complete EDR report can be viewed in its entirety in Appendix C.

Table 3.8-1: Regulatory Agency Databases Searched

Database Type	Definition of Database	Type of Record	Agency	No. of Records within the Proposed Sphere of Influence Amendment Area ^{1, 2}
SSTS	Section 7 of the Federal Insecticide, Fungicide, and Rodenticide Act	Types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed	U.S. EPA	2
ICIS	Integrated Compliance Information System	Supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) Program	—	1
FINDS	Facility Index System	Facility information and “pointers” to other sources that contain more detail	U.S. EPA	2
NPDES	National Pollution Discharge Elimination System	A listing of NPDES permits, including stormwater	—	1
HIST CORTESE	California Office of Emergency Information Sites	State index of properties formerly listed as having hazardous waste based on input from fourteen state databases	California Environmental Protection Agency/ Office of Emergency Information	3
LUST	Leaking Underground Storage Tank Incident Reports	Contain an inventory of reported leaking underground storage tank incidents	State Water Resources Control Board	3

Table 3.8-1 (cont.): Regulatory Agency Databases Searched

Database Type	Definition of Database	Type of Record	Agency	No. of Records within the Proposed Sphere of Influence Amendment Area ^{1, 2}
CA FID UST	Facility Inventory Database	Active and Inactive Underground Storage Tank locations	State Water Resources Control Board	3
HIST UST	Historical Underground Storage Tank Registered Database	Contains archived registered UST sites	State Water Resources Control Board	3
SWEEPS UST	Statewide Environmental Evaluation and Planning System	No longer maintained	Formerly State Water Resources Control Board	3
CHMIRS	California Hazardous Material Incident Report System	Information on reported hazardous material incidents, i.e., accidental releases or spills	California Office of Emergency Services	2
AST	Aboveground Storage Tank	Contains registered ASTs	State Water Resources Control Board	1
CDL	—	Listing of drug lab locations	—	1
HAZNET	Hazardous Waste Information System	A listing of facilities that generate hazardous waste	California Department of Toxic Substance Control	5
EMI	Emissions Inventory Data	Toxics and criteria pollutant emissions data	CARB and local air pollution control agencies	1

Notes:

¹ Some records are not unique and have been counted in multiple databases.

² The physical location of each of these sites is detailed in the EDR report, found in Appendix C.

Source: EDR Report, 2010.

3.8.3 - Regulatory Framework

Pertinent hazardous materials-related regulations that apply to the proposed area of incorporation originate at both the federal and state level, but many are implemented and enforced at the local or regional level. Sacramento County's Environmental Management Department (EMD) manages most hazardous materials regulation and enforcement in the proposed area of incorporation. Sacramento County's EMD defers large cases of hazardous materials contamination or violations of the Central Valley Regional Water Quality Control Board (RWQCB) and the State Department of Toxic Substances Control (DTSC). However, it is common for other agencies to become involved—such as the Sacramento Metropolitan Air Quality Management District in permitting of asbestos abatement,

and federal and state Occupational Safety and Health Administration (OSHA) in preparation of hazardous materials remediation site safety plans—when issues of hazardous materials arise. In addition, the Sacramento Metropolitan Fire District is responsible for hazardous materials emergency first response where a hazardous materials incident imminently threatens life or property.

3.8.4 - Regulatory Framework

Federal

U.S. Environmental Protection Agency

The EPA leads the nation's environmental science, research, education, and assessment efforts. The EPA's mission is to protect human health and to safeguard the natural environment, related to air, water, and land. The EPA works closely with other federal agencies, state and local governments, and Indian tribes to develop and enforce regulations under existing environmental laws. The EPA is primarily responsible for researching and setting national standards for a variety of environmental programs and delegates to states and tribes responsibility for issuing permits, and monitoring and enforcing compliance. When national standards are not met, the EPA can issue sanctions and take other steps to assist the states and tribes in reaching the desired levels of environmental quality. The EPA also works with industries and all levels of government in a wide variety of voluntary pollution prevention programs and energy conservation efforts.

EPA Region 9 has jurisdiction over Elk Grove and the southwestern United States (Arizona, California, Nevada, and Hawaii).

EPA programs related to hazardous materials include:

- Community Right-to-Know Information
- Pesticide Management
- Toxic Release Inventory
- Brownfields (CalSites Database)
- Cleanup Technologies
- Compliance Assistance
- Emergency Response
- Hazardous Waste
- Oil Spills

Resource Conservation and Recovery Act

The 1976 Federal Resource Conservation and Recovery Act (RCRA) and the 1984 RCRA Amendments regulate the treatment, storage, and disposal of hazardous and non-hazardous wastes. The legislation mandated that hazardous wastes be tracked from the point of generation to their ultimate fate in the environment. This includes detailed tracking of hazardous materials during transport and permitting of hazardous material handling facilities.

The 1984 RCRA amendments provided the framework for a regulatory program designed to prevent releases from USTs. The program establishes tank and leak detection standards, including spill and overflow protection devices for new tanks. The tanks must also meet performance standards to ensure that the stored material will not corrode the tanks. Owners and operators of USTs had until December 1998 to meet the new tank standards. As of 2001, an estimated 85 percent of USTs complied with the required standards.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) introduced active federal involvement to emergency response, site remediation, and spill prevention, most notably the Superfund program. The act was intended to be comprehensive in encompassing both the prevention of, and response to, uncontrolled hazardous substances releases. The act deals with environmental response, providing mechanisms for reacting to emergencies and to chronic hazardous material releases. In addition to establishing procedures to prevent and remedy problems, it establishes a system for compensating appropriate individuals and assigning appropriate liability. It is designed to plan for and respond to failure in other regulatory programs and to remedy problems resulting from action taken before the era of comprehensive regulatory protection.

U.S. Department of Transportation

The Hazardous Materials Transportation Act of 1974, as amended, is the basic statute regulating hazardous materials transportation in the United States. This law gives the U.S. Department of Transportation and other agencies the authority to issue and enforce rules and regulations governing the safe transportation of hazardous materials.

State agencies are authorized to designate highways for the transport of hazardous materials. Where highways have not been designated, hazardous materials must be transported on routes that do not go through or near heavily populated areas.

State

California Health and Safety Code

The California Environmental Protection Agency has established rules governing the use of hazardous materials and the management of hazardous wastes. California Health and Safety Code Sections 25531, et seq. incorporate the requirements of Superfund Amendments and Reauthorization Act and the Clean Air Act as they pertain to hazardous materials. Health and Safety Code Section 25534 directs facility owners storing or handling acutely hazardous materials in reportable quantities to develop a Resource Conservation and Recovery Act (RCRA). The RMP must be submitted to the appropriate local authorities, the designated local administering agency, and the EPA for review and approval.

CEQA and the Cortese List

The Cortese List (Hazardous Waste and Substances Site List) is a planning document used by the state, local agencies, and developers to comply with CEQA requirements to consider Government Code Section 5962.5 in evaluating proposed development projects. Section 65962.5 states that the list should contain all hazardous waste facilities subject to corrective action, all hazardous waste property or border zone property designations, all information received on hazardous waste disposals on public land, all hazardous substance release sites listed pursuant to Government Code Section 25356, and all sites that were included in the former Abandonment Site Assessment Program.

California Environmental Protection Agency (Cal EPA)

Government Code Section 65962.5 requires the California Environmental Protection Agency (Cal EPA) to develop a Cortese List at least annually. The Department of Toxic Substances Control is responsible for a portion of the information on the list, and other local and state government agencies are required to provide additional information. Cal EPA operates the Air Resources Board, the Department of Pesticide Regulation, Department of Toxic Substances Control, Integrated Waste Management Board, Office of Environmental Health Hazard Assessment, and the State Water Resources Control Board. The function of each is discussed below.

Air Resources Board (CARB): To promote and protect public health, welfare and ecological resources through the effective and efficient reduction of air pollutants in recognition and consideration of the effects on the economy of the State.

Department of Pesticide Regulation (DPR): Regulates all aspects of pesticide sales and use to protect the public health and the environment for the purpose of evaluating and mitigating impacts of pesticide use, maintaining the safety of the pesticide workplace, ensuring product effectiveness, and encouraging the development and use of reduced risk pest control practices.

Department of Toxic Substances Control (DTSC): The Department's mission is to restore, protect and enhance the environment, to ensure public health, environmental quality and economic vitality, by regulating hazardous waste, conducting and overseeing cleanups, and developing and promoting pollution prevention. DTSC protects residents from exposures to hazardous wastes. DTSC operates programs to:

- Deal with the aftermath of improper hazardous waste management by overseeing site cleanups.
- Prevent releases of hazardous waste by ensuring that those who generate, handle, transport, store, and dispose of wastes do so properly.
- Take enforcement actions against those who fail to manage hazardous wastes appropriately.
- Explore and promote means of preventing pollution, and encourage reuse and recycling.
- Evaluate soil, water and air samples taken at sites, and develop new analytical methods.

Integrated Waste Management Board (IWMB): Protects the public health and safety and the environment through waste prevention, waste diversion, and safe waste processing and disposal. The IWMB is responsible for managing California's solid waste stream. The Board is helping California divert its waste from landfills by:

- Developing waste reduction programs.
- Providing public education and outreach.
- Assisting local governments and businesses.
- Fostering market development for recyclable materials.
- Encouraging used oil recycling.
- Regulating waste management facilities.
- Cleaning up abandoned and illegal dump sites.

Office of Environmental Health Hazard Assessment (OEHHA): OEHHA is responsible for developing and providing risk managers in state and local government agencies with toxicological and medical information relevant to decisions involving public health. OEHHA also works with federal agencies, the scientific community, industry, and the general public on issues of environmental as well as public health.

State Water Resources Control Board (SWRCB): Preserves and enhances the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations. The SWRCB maintains the Leaking Underground Storage Tank Information System (LUTIS) Database, which contains information on registered leaking underground storage tanks (LUSTs) in the State.

California Occupational Safety and Health Agency (CalOSHA)

CalOSHA sets and enforces standards that insure safe and healthy working conditions for California's workers. The Division of Occupational Safety & Health is charged with the jurisdiction and supervision over workplaces in California that are not under federal jurisdiction. CalOSHA regulates issues involving unsafe workplace conditions, worker exposure to chemicals, illness due to workplace exposure, or improper training.

State Regulatory Programs Division (SRPD)

The SRPD oversees the technical implementation of the State's Unified Program; a consolidation of six environmental programs at the local level, and conducts reviews of Unified Program agencies to ensure their programs are consistent statewide, conform to standards, and deliver quality environmental protection at the local level. SRPD also carries out the State's hazardous waste recycling and resource recovery program designed to facilitate recycling and reuse of hazardous waste. SRPD conducts a corrective action oversight program that assures any releases of hazardous constituents at generator facilities that conduct onsite treatment of hazardous waste are safely and

effectively remediated, and oversees the hazardous waste generator and onsite waste treatment surveillance and enforcement program carried out by local Unified Programs.

California Department of Transportation (Caltrans) and California Highway Patrol

The California Vehicle Code Section 31303 requires that hazardous materials be transported via routes with the least overall travel time, and prohibits the transportation of hazardous materials through residential neighborhoods. In California, the California Highway Patrol (CHP) is authorized to designate and enforce route restrictions for the transportation of hazardous materials. To operate in California, all hazardous waste transporters must be registered with the Department of Toxic Substances Control (DTSC). Unless specifically exempted, hazardous waste transporters must comply with the California Highway Patrol Regulations, the California State Fire Marshal Regulations, and the United States Department of Transportation Regulations. In addition, hazardous waste transporters must comply with Division 20, Chapter 6.5, Article 6 and 13 of the California Health and Safety Code, and the Title 22, Division 4.5, Chapter 13 of the California Code of Regulations, both of which are administered by DTSC.

Central Valley Regional Water Quality Control Board (RWQCB)

There are nine Regional Water Quality Control Boards (RWQCBs) throughout the State. The Central Valley RWQCB has jurisdiction over the City of Elk Grove, with offices in Sacramento. Individual RWQCBs function as the lead agencies responsible for identifying, monitoring, and cleaning up LUSTs. Storage of hazardous materials in USTs is regulated by the State Water Resources Control Board (SWRCB), which oversees the nine RWQCBs.

Local

The Sacramento County Environmental Management Department (EMD) is both the local environmental health regulatory agency and the countywide Certified Unified Program Agency. EMD is also the Local Oversight Program for underground storage tank site investigation, cleanup, and closure, and it is the Local Enforcement Agency (LEA) for landfills. The Central Valley Regional Water Quality Control Board (CVRWQCB) also has jurisdiction over the management of surface and groundwater contamination such as the cleanup of spill sites. Finally, the Sacramento Metropolitan Air Quality Management District (SMAQMD) is involved in the assessment of health and environmental hazards associated with both “criteria” and toxic (or hazardous) air pollutants.

City of Elk Grove

Approval by LAFCo of this SOIA does not authorize any change in land use or governance. However, the proposed project would adjust the City of Elk Grove’s SOI and allow the City the opportunity to file an annexation request with LAFCo to annex lands within the SOIA Area. The City of Elk Grove General Plan establishes goals and policies to guide both present and future development within the City’s jurisdiction. Therefore, the City of Elk Grove’s General Plan policies

related to hazards and human health that may apply to potential future development in the SOIA Area are provided below.

- **Policy SA-2:** In considering the potential impact of hazardous facilities on the public and/or adjacent or nearby properties, the City shall consider the hazards posed by reasonably foreseeable events. Evaluation of such hazards shall address the potential for events at facilities to create hazardous physical effects at offsite locations that could result in death, significant injury, or significant property damage. The potential hazardous physical effects of an event need not be considered if the occurrence of an event is not reasonably foreseeable as defined in Policy SA-3. Absent substantial evidence to the contrary, a “hazardous physical effect” from an event shall be a level of exposure to a hazardous physical effect in excess of the levels identified in Policy SA-4.
- **Policy SA-3:** For the purpose of implementing Policy SA-2, the City considers an event to be “reasonably foreseeable” when the probability of the event occurring is as indicated in the table below.

Land Use	Probability of Occurrence per Year
“Agriculture, Light Industrial and Industrial” Uses involving continuous access and the presence of limited number of people but easy evacuation, e.g. open space, warehouses, manufacturing plants, etc.	Between 100 in one million and 10 in one million (10-4 to 10-5)
“Commercial” Uses involving continuous access but of easy evacuation, e.g. commercial uses, offices, etc.	Between 10 in one million and 1 in one million (10-5 to 10-6)
“Residential” All other land uses without restriction including institutional uses, residential areas, etc.	1 in one million and less (10-6)

- **SA-3-Action 1:** As part of the environmental review process for proposed projects, the City shall analyze potential safety-related impacts resulting from or affecting new development which could cause or be affected by reasonably foreseeable events. This analysis shall include the potential for events to occur at the facility, and the potential for hazardous physical effects to result from such events with respect to the hazards listed in Table SA-A.
- **SA-3-Action 2:** The City shall maintain a database which records, in maps and text, the identified offsite hazards from any reasonably foreseeable events at hazardous facilities in Elk Grove, and shall make this information available to the public.
- **Policy SA-4:** The Maximum Acceptable Exposure standards shown in Table SA-A shall be used in determining the appropriateness of either:
 - (1) Placing a use near an existing hazardous facility which could expose the new use to hazardous physical effects, or
 - (2) Siting a hazardous facility that could expose other nearby uses to hazardous physical effects.

Absent substantial evidence to the contrary, the placement of land uses that do not meet the Maximum Acceptable Exposure standards shall be considered to result in a significant, adverse impact for the purposes of CEQA analysis.

- **Policy SA-5:** The City will cooperate with other local, regional, state, and federal agencies, and with rail carriers in an effort to secure the safety of all residents and businesses in Elk Grove.
- **SA-5-Action 1:** Establish an Emergency Operations Center (EOC) to coordinate and direct overall emergency response operations. The establishment of the EOC should be coordinated with the Elk Grove Police Department, appropriate City departments, the Elk Grove CSD Fire District, and the County Sheriff's Department.
- **SA-5-Action 2:** Establish an emergency response organization consisting of representatives from the Elk Grove Police Department, City departments, the Elk Grove CSD Fire Department, County agencies, utility agencies, schools, and the public.
- **SA-5-Action 3:** Participate in State mutual aid agreements with neighboring cities and counties; State and federal emergency relief agencies; and private enterprises such as Red Cross, Salvation Army, and local medical institutions to assist in shelter, relief, and first aid operations. Encourage cooperation among adjacent communities to provide backup fire suppression and law enforcement assistance in emergency situations.
- **SA-5-Action 4:** Participate in the Standard Emergency Management System.
- **SA-5-Action 5:** Comply with the State of California Emergency Services Act.
- **Policy SA-7:** The City of Elk Grove will work to identify and eliminate hazardous waste releases from both private companies and public agencies.
- **Policy SA-8:** Storage of hazardous materials and waste shall be strictly regulated, consistent with state and federal law.
- **SA-8-Action 1:** Regularly review the City's codes to ensure that City regulations reflect the most up-to-date standards for the storage, handling, and use of hazardous and toxic materials.
- **SA-8-Action 2:** Secondary containment and periodic examination shall be required for all storage of hazardous and toxic materials, consistent with the requirements of state or federal law.
- **SA-8-Action 3:** As part of the review and approval of development plans and building permits, ensure that secondary containment is provided for hazardous and toxic materials.
- **SA-8-Action 4:** Prior to site improvements for properties that are suspected or known to contain hazardous materials and sites that are listed on or identified on any hazardous material/waste database search shall require that the site and surrounding area be reviewed, tested, and remediated for potential hazardous materials in accordance with all local, state, and federal regulations.
- **Policy SA-9:** The City shall seek to ensure that all industrial facilities are constructed and operated in accordance with up-to-date safety and environmental protection standards.

- **SA-9-Action 1:** Support continued enforcement of permitting requirements for radioactive materials, and enforce public safety standards for the use of these materials, including the placarding of transport vehicles.
- **Policy SA-10:** Industries which store and process hazardous or toxic materials shall provide a buffer zone between the installation and the property boundaries sufficient to protect public safety. The adequacy of the buffer zone shall be determined by the City of Elk Grove.
- **SA-10-Action 1:** Consider the impact of proposed industrial development projects with respect to transport of hazardous materials within the city. To the extent feasible, uses requiring substantial transport of hazardous materials should be located to direct such traffic away from the city's residential and commercial areas.
- **Policy CI-24:** The City shall consider the recommendations in the Comprehensive Land Use Plans (CLUPs) for airports within or adjacent to Elk Grove in the review of potential land uses or projects.
- **Policy CI-25:** The City shall ensure that new development near airports be designed to protect public safety from airport operations consistent with recommendations and requirements of the Airport Land Use Commission, Caltrans, and the Federal Aviation Administration.

3.8.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, hazards and hazardous materials impacts resulting from the implementation of the proposed project would be considered significant if the project would:

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?
- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
- d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?
- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working the project area? (Refer to Section 7.0 Effects Found Not To Be Significant)

- f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? (Refer to Section 7.0 Effects Found Not To Be Significant)
- g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

3.8.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Transport or Disposal of Hazardous Materials

Impact HAZ-1:	The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
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Impact Analysis

This impact evaluates the proposed project's potential to create hazards caused by the routine transport, use, or disposal of hazardous materials or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

The proposed project itself would not construct or develop any structures or infrastructure and, therefore, would not result in a change that would create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. The proposed project would extend Elk Grove's SOI boundaries. Handling and transport of materials could occur in the SOIA Area from future activities; however, it would not be a result of the proposed project and, therefore, is not within the scope of this EIR.

The proposed project could result in indirect effects associated with reasonably foreseeable urbanization of the SOIA Area. Implementation of future land use development in the SOIA Area could require the demolition of a variety of structures, including residential, commercial, and agricultural buildings. Since these structures may contain lead-based paint and/or asbestos-containing building materials, construction workers could be exposed to these hazardous substances during demolition.

In addition, there is always a potential to encounter fill materials during construction that could contain hazardous materials. These materials could be hazardous to nearby sensitive receptors and construction workers during site grading and excavation. Similarly, grading and construction of future development projects within the SOIA Area could result in the airborne release of naturally

occurring asbestos fibers, which could significantly impact construction workers and nearby residents.

While the database search indicated the location of LUSTs, additional underground tanks could potentially be located within the SOIA Area. Hazardous fill materials could also be encountered during construction. These tanks and fill materials could contain materials that would be hazardous to construction workers if they were to inadvertently encounter them during site excavation and/or grading.

The proposed project would not create a significant hazard to the public or the environment, because all future activities taking place within the SOIA Area would have to comply with applicable federal, state, and local laws pertaining to the safe handling and transport of hazardous materials, including California Division of Occupational Safety and Health (Cal OSHA) requirements. In addition, incorporation of Mitigation Measure HAZ-1 below would serve to mitigate any risks associated with the exposure of individuals to hazardous materials during construction activities. Accordingly, less than significant impacts would occur.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM HAZ-1 Prior to environmental clearance for a development permit for a parcel within the SOIA Area, the County or City of Elk Grove (pursuant to City of Elk Grove General Plan, SA-8, Action 4) will require that a Phase I site assessment be completed by a qualified professional (e.g., a California registered environmental assessor). The study will identify current and historical land uses or conditions that may have resulted in a release of hazardous materials into the environment, or impact the proposed development of the site. The assessment will be performed in conformance with standards adopted by American Society for Testing Materials (ASTM) for Phase I site assessments. The Phase I site assessment shall identify any limitations to development that are due to the presence of hazardous materials in the vicinity of the subject site, and present recommendations for further investigation of the site, if necessary.

Level of Significance After Mitigation

Less than significant impact.

Accident Conditions Involving Release of Hazardous Materials

Impact HAZ-2: **The project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment.**

Impact Analysis

This impact evaluates the proposed project's potential to create hazards caused by accident conditions involving release of hazardous materials. Implementation of the SOIA could indirectly result in hazardous impacts within the SOIA Area. It is likely that implementation of the SOIA would lead to the development of hundreds of new buildings, and the rural, open space, agricultural character of the area could reasonably be foreseen to change to that of an urbanized environment. Given the known agricultural nature of the SOIA Area, it is highly likely there are concentrations of pesticides in excess of residential ESLs in the soils within the SOIA Area, and as a result, there is a potential for future residents to be exposed to hazardous materials in concentrations that are potentially hazardous to human health.

Several federal, state, and county agencies are currently responsible for regulating hazardous materials generation, use, and disposal. The proposed project would not result in any greater need to regulate hazardous materials, hazardous wastes, accidental spills, or contaminated properties. Nor would the ownership of the properties identified in this section change or become the responsibility of City of Elk Grove.

Furthermore, the project does not include the use, storage, or transport of hazardous materials and/or substances. In this context, the proposed project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. No significant hazard would be created beyond the existing current conditions in the proposed SOIA. Sacramento County has hazard materials plans and policies in place, and the proposed SOIA would act within the existing framework until the City of Elk Grove annexes the SOIA Area into the City of Elk Grove. While the project may result in a change that would have a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, incorporation of Mitigation Measure HAZ-1 above, as well as federal, state, and local laws related to hazardous substances, would render any impacts less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measure HAZ-1.

Level of Significance After Mitigation

Less than significant impact.

Hazardous Materials Located Near Schools

Impact HAZ-3: The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.

Impact Analysis

This impact evaluates the proposed project's potential to emit hazardous substances near a school.

The project does not involve the creation, relocation, or changes to operation of any facilities that could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. The act of amending the City of Elk Grove's SOI would not create any additional emissions or result in the handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school beyond the current existing conditions. Franklin Elementary School is the only school located within the proposed SOIA Area in the westernmost portion. Because of the distance and nature of the proposed project, no impacts are anticipated.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

No impact.

Hazardous Materials Site Listing

Impact HAZ-4: The project would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would not create a significant hazard to the public or the environment.

Impact Analysis

This impact evaluates the proposed project's potential to be located on a hazardous materials site.

The SOIA Area contains one parcel of land that is listed as an RCRA generator of hazardous wastes according to the EPA's Envirofacts database (EPA 2010). The proposed SOIA Area does not contain parcels of land that are listed on the DTSC's Hazardous Waste and Substances List (DTSC 2010) or the EPA's Superfund National Priorities List (EPA 2010). Pursuant to the CEQA, DTSC maintains a Hazardous Waste and Substances Sites List (Cortese List, Government Code Section 65962.5). As part of the Cortese list, DTSC also tracks "Calsites"—mitigation or Brownfield sites that are subject to Annual Workplans and/or are listed as Backlog sites, and confirmed release sites that are not currently being worked on by DTSC. Before placing a site in the backlog, DTSC ensures that all necessary actions have been taken to protect the public and environment from any immediate hazard

posed by the site. There are currently no sites listed on the DTSC Cortese List in the County of Sacramento or any area surrounding the project site; therefore, no impact would occur.

As provided in the setting discussion, the SOIA Area includes numerous sites identified on various agency databases (see Table 3.8-1 for a more comprehensive list). However, the project does not involve the physical disruption of these existing sites. As a result, it is reasonable to conclude that the project would not create or increase existing hazards to the public or the environment compared with existing conditions in the area of incorporation. While the proposed project could result in indirect effects regarding exposure to identified hazardous sites associated with reasonably foreseeable urbanization and ground-disturbing activities of the SOIA Area, implementation of Mitigation Measure HAZ-1 above would render any impacts less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measure HAZ-1.

Level of Significance After Mitigation

Less than significant impact.

Interference With Emergency Plans

Impact HAZ-5:	The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
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Impact Analysis

This impact evaluates the proposed project's potential to impair or physically interfere with an emergency response plan or emergency evacuation plan.

Currently, three sets of plans are maintained by the Emergency Operations Center, including supporting documentation to a master preparedness plan known as the Multi-Hazard Functional Plan. The format of this document is in accordance with guidelines established by the Governor's Office of Emergency Services. Essentially, the Multi-Hazard Functional Plan consolidates all hazard-specific plans prepared by several agencies throughout the County into a single document.

The proposed SOIA Area is currently covered under the County's Multi-Hazard Functional Plan. It is likely that implementation of the SOIA would lead to the development of hundreds of new buildings, and the rural, open space, agricultural character of the area could reasonably be foreseen to change to that of an urbanized environment. The indirect urban development foreseeable associated with the proposed SOIA would not impair implementation of, or physically interfere with, any emergency response/evacuation plans, because the project will not close or modify any roadways that would be

used for such purposes. Further, future streets included within SOIA will comply with the County/City's design standards pertaining to emergency access.

The expansion of SOI boundary would not require the County to provide its own emergency response plan/emergency evacuation plan. Municipal or contract staff would create their own Multi-Hazard Functional Plan, or they would work with the County to implement a new or an existing Multi-Hazard Functional Plan. The project would not impair implementation of or physically interfere with the adopted emergency response plan or emergency evacuation plan; rather, the project provides for implementation and adoption of such plans.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

No impact.

Wildland Fires

Impact HAZ-6:	The project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.
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Impact Analysis

Wildland fires are those fires that pose a threat to the more rural areas of the County. Grass fires and peat fires are the two main types of wildland fires of concern in Sacramento County. Grass fires are an annual threat in the unincorporated area of the County, especially in recreational areas such as the American River Parkway. Peat fires are unique to the Delta where peat is subject to spontaneous combustion. Once started, these fires become very difficult to control. Peat can still burn some distance underground, even when the upper layers of peat are saturated with water over an extended period of time. Once the ground has dried out, a peat fire may return to the surface. Urbanized areas do not have fire hazards associated with high levels of vegetation.

CalFire defines wildland, wildland fires, and wildland urban interface as follows:

- Wildland: Uncultivated land, other than fallow, neglected or maintained for such purposes as wood or range-forage production, wildlife, recreation, protective watershed cover, or wilderness.
- Wildland Fire: Any fire occurring on undeveloped land.
- Wildland Urban Interface: The geographical point where flammable vegetation meets manmade structures.

The proposed SOIA Area includes areas deemed “wildlands”; however, these areas are not located in a Fire Hazard Severity Zone as identified by CalFire. It is likely that implementation of the SOIA would lead to the development of hundreds of new buildings, and the rural, open space, agricultural character of the area could reasonably be foreseen to change to that of an urbanized environment. The SOIA Area does not include the development of hillsides above the 15 percent slope line or within Fire Hazard Severity Zones. The risks to people and structures from a wildland fire on hillsides would not be significant, because (1) adequate fire protection will be available, (2) structures will utilize fire-resistant building materials (e.g., Class “A” roofing materials), and (3) the street and circulation system will comply with County/City design standards pertaining to emergency access.

The proposed SOIA Area is almost completely undeveloped, and the proposed project would not create any new areas of undeveloped land or flammable vegetation defined as wildland beyond what currently exists. The project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands, since the SOIA Area is not located in a Fire Hazard Severity Zone. Thus, any impacts related to project implementation would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Exposure to Electric and Magnetic Fields

Impact HAZ-7:	The project would not expose people to electric and magnetic fields from nearby high-voltage lines.
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Impact Analysis

Electric and magnetic fields (EMFs) are invisible lines of force that surround any electrical device that is plugged in and turned on. EMFs are made up of waves of electric and magnetic energy moving together (radiating) through space. Electric fields are produced by electric charges and magnetic fields are produced by the flow of current through wires or electrical devices. EMFs are commonly associated with power lines. A person standing directly under a high-voltage transmission line may feel a mild shock when touching something that conducts electricity. These sensations are caused by the strong electric fields from the high-voltage electricity in the lines. They occur only at close range because the electric fields rapidly become weaker as the distance from the line increases.

High-voltage transmission lines cross the SOIA Area east of State Route 99 and south of Grant Line Road. No federal agency has yet set extremely low frequency EMF standards for transmission lines;

therefore, no established threshold exists. Presently, no state, county, or city has provisions or codes regulating development near major transmission lines or substations. The State Department of Education developed distance setback requirements from high-voltage transmission lines for educational facilities. These setback distances are as follows: 100 feet from a 50-kilovolt (Kv) to 133 Kv line; 150 feet from a 220-Kv to 230-Kv line; and 350 feet from a 500-Kv to 550-Kv line. However, the State Department of Education revised its policy in 2003 and now allows school districts to encroach within these setbacks, based upon specific findings made in an EMF Management Plan.

The City of Elk Grove or Sacramento County does not have any setback requirements in place related to EMF. CEQA advises that a project's impact is significant if it creates a potential public health hazard. In an effort to deal with the uncertainty of EMF, several utility companies and some government jurisdictions have addressed the EMF issue through "prudent avoidance." Prudent avoidance serves to limit public exposure to EMF through planning and design measures involving relatively small investments of money and effort. The California State Board of Education standard for schools (typically the most rigorous standard) is to set buildings back 100 feet from the transmission line right-of-way.

As stated previously, no land use plan is proposed in conjunction with the SOIA application. The proposed project could result in indirect effects and exposure to EMF associated with reasonably foreseeable urbanization and ground-disturbing activities of the SOIA Area. However, with the adoption of "prudent avoidance," serving to limit public exposure to EMF with 100-foot setbacks from transmission line right-of-ways, any impacts resulting from EMF would be considered less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

3.9 - Hydrology and Water Quality

3.9.1 - Introduction

This section describes the existing hydrology and water quality setting and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on the Sacramento County General Plan, the Water Quality Control Plan (Basin Plan) for the Sacramento River and San Joaquin River Basins, the Local Floodplain Management Plan for the County of Sacramento (2001), the Elk Grove General Plan Environmental Impact Report (2003), the Sacramento County General Plan Update Environmental Impact Report (2009), the Sacramento River Basinwide Management Plan (2003), and the Zone 40 2010 Draft Urban Water Management Plan (2011).

3.9.2 - Environmental Setting

Regional Hydrology

The proposed Sphere of Influence Amendment (SOIA) Area is primarily located in the Sacramento River Basin. The region covers approximately 27,000 square miles, which includes 400 miles of river spanning from Lake Shasta to the Sacramento-San Joaquin Delta convergence. The Sacramento River serves as the central spine of the Sacramento River hydrologic region, draining the area from Modoc County in Northern California, the west side of the Sacramento Valley, the west slope of the Sierra Nevada Mountains, to the Delta. Within the Sacramento River Basin are sub-basins or smaller watersheds that drain into the tributaries of the Sacramento River. The American River watershed is a sub-basin of the Sacramento River watershed. The American River originates in the Tahoe and El Dorado national forests and flows into the Folsom Lake Reservoir, which holds approximately 1 million acre-feet of water. The majority of Sacramento County is within the Sacramento River basin; however, southwestern Sacramento County contains Delta waterways, which interconnect the Sacramento, San Joaquin, and Mokelumne rivers.

The portion of the SOIA Area east of State Route 99 (SR-99) and south of Grant Line Road lies within the San Joaquin River Basin. The San Joaquin River Basin drains a region that extends across the Central Valley to the Coast Ranges, between the Cosumnes River to the north and the San Joaquin River to the South. The Cosumnes River watershed is a sub-basin of the San Joaquin River watershed. The two main tributaries to the Cosumnes River are Deer Creek and Laguna Creek.

Both the Sacramento River and Laguna Creek have been altered with the addition of levees to accommodate development and reduce flooding potential. The Cosumnes River, which forms the southeastern border of the SOIA Area, is the last free-flowing, undammed river on the western slope of the Sierra Nevada. Exhibit 3.9-1 shows the regional hydrology of Sacramento County.

Localized Drainage

The SOI Amendment area currently requires minimal storm drainage services, as the area remains primarily agricultural. The main surface hydrological features in the SOIA Area are the Sacramento River, the Cosumnes River, and Deer Creek. Based on aerial and topographic evaluations, all surface flows on portion of SOIA Area west of SR-99 move generally from east to west and ultimately drain into Beach Stone Lakes.

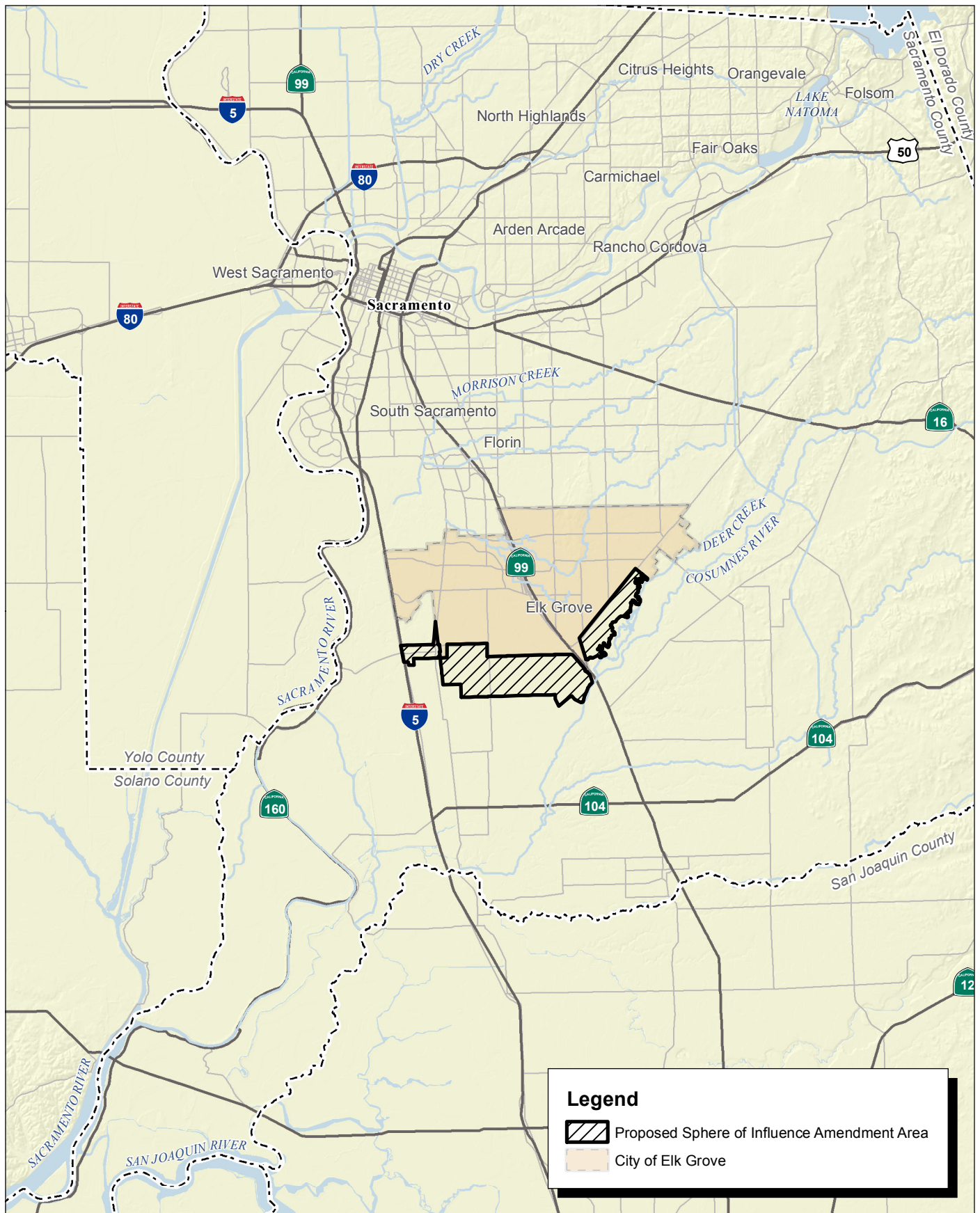
The Beach-Stone Lakes Basin is the area is bounded by the Southern Pacific Railroad on the west, Lambert Road on the south, the Western Pacific Railroad on the east, and Morrison Creek on the north. Point Pleasant is a subarea located within the Beach-Stone Lakes Basin. Flooding typically occurs in the Beach-Stone Lakes basin every year, with severe floods occurring about once every 3 years. Flooding and drainage problems in the Beach-Stone Lakes basin are primarily a result of inadequate channel capacities during periods of heavy rainfall, of backwater flooding from the Mokelumne River, and of the restricted outlet structure at Lambert Road (SRCSD, 2000). As stated by the County of Sacramento Municipal Services Agency, the CALFED project designed to reduce flooding of the area, the North Delta project, will not significantly abate the flood threat in this area.

The Beach-Stone Lakes basin receives runoff from approximately 49 square miles of local urban and rural tributary areas and ultimately discharges through the Lambert Road structure into Snodgrass Slough, a tributary of the Sacramento-San Joaquin Delta. Historically the Beach-Stone Lakes basin was an overflow area of the Sacramento River.

Portions of SOIA Area east of SR-99 drains into Deer Creek. Since essentially all of the natural drainage courses in the area have been altered by agricultural activities, surface water flows are channeled into agricultural and roadside ditches. Based on the National Wetland Inventory (NWI), the SOIA Area may contain approximately 162 acres of freshwater emergent wetlands and approximately 45 acres of freshwater ponds.

Water Consumption

The project site primarily contains agricultural uses consisting of fallow/row crops/nursery, orchards, vineyard, dairy, and livestock operations. Few structures exist within the project site, and these are limited to barns, rural housing, storage sheds, and related structures. The average water consumption of common crops in the SOIA Area is provided in Table 3.9-1. The average water consumption for urban land uses are provided in Table 3.9-2.



Source: Census 2000 Data, The CaSIL, Sacramento County GIS 2009 & MBA GIS 2011.



Michael Brandman Associates

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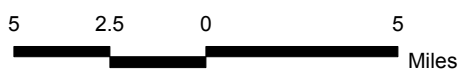


Exhibit 3.9-1 Regional Hydrology

SACRAMENTO LAFCO • ELK GROVE SPHERE OF INFLUENCE AMENDMENT
ENVIRONMENTAL IMPACT REPORT

Table 3.9-1: Annual Average Water Consumption by Crop

Crop	Annual Consumption per Acre	
	Acre-Feet	Gallons
Table Grapes	2.26	734,795
Corn ¹	2.14	698,397
Stone Fruit	2.81	914,013
Note: ¹ April planting. Source: University of California, Davis, 2005.		

Table 3.9-2: Annual Average Water Consumption by Land Use

Sector Water Use	Consumption Rate (gallons) ¹	
	Per Capita per Day	Per Capita per Year
Residential (Single- and Multi-family)	174	63,510
Commercial and Institutional	25	9,125
Industrial	21	7,665
Note: ¹ Water consumption rates for the Sacramento River Hydrologic Region, 2005. Source: California Department of Water Resources et al., 2010.		

Surface Water Resources and Quality

Surface Water Resources

Surface water resources in the proposed SOIA Area include the Morrison Creek Stream Group and the Deer Creek-Cosumnes Corridor. The Morrison Creek Stream Group includes Elder, Elk Grove, Laguna (including its tributaries), Morrison, Strawberry, and Whitehouse creeks. The main sources of surface water supply in the area are runoff from precipitation and snowmelt from the Sierra Nevada Mountains (Elk Grove 2003).

Surface Water Quality

As described in Section 2, Project Description, the proposed SOIA Area is a primarily used for agriculture, with few structures limited to barns, rural housing, and storage sheds. A small portion of the area is developed with relatively suburban uses, and Sunset Sky ranch Airport (Elk Grove Airport), a private airport (closed effective July 1, 2010), lies in the eastern portion of the project area. Both non-storm (nuisance) and stormwater discharge influence surface water quality. Nuisance runoff includes surface drainage from residential and commercial land uses, including landscape irrigation, surface cleaning, and other similar activities.

Stormwater flow in an agricultural area often includes contaminants collected from the use of pesticides and fertilizers. The portion of the Sacramento River that lies west of the SOIA Area (running from Red Bluff to the Delta), Elder Creek, Elk Grove Creek, and Morrison Creek are listed as impaired water bodies on the California Clean Water Act Section 303(d) list. In addition, the Cosumnes River and Deer Creek are listed as impaired water bodies on the California Clean Water Act Section 303(d) list. The SOIA Area lies in both the lower American River watershed and the Mokelumne River Watershed. Water quality conditions are affected to a large degree by a combination of urban, industrial, and agricultural land uses. The known agricultural contaminants and conditions that affect water quality in the watershed are chlorpyrifos, Diazinon, PCBs, and toxicity from unknown sources (RWQCB 2008). The South Fork of the American River is listed on the 2006 Section 303(d) list for mercury from an unknown source in the reach of the river just below Slab Creek Reservoir to Folsom Lake. The reach of the Lower American River from Nimbus Dam to the confluence of the Sacramento River also is listed for mercury (State Water Board 2006). This same reach of the lower American River is listed for unknown toxicity from an unknown source (State Water Board 2006). The Cosumnes River is listed on the 2006 303(d) list for exotic species from an unknown source. Deer Creek is listed for iron from an unknown source.

There are relatively few water quality concerns in the Cosumnes River. The only known concern in the lower reaches of the river pertains to bioaccumulation of methyl mercury. Methyl mercury may be mobilized and transported by irrigation return flows; however, it is not directly connected to irrigated agricultural operations. The Cosumnes River is not on the 2006 Section 303(d) list for any stressors and is not significantly affected by irrigated agriculture. Because of its excellent water quality, the Cosumnes River has been used in studies as a reference for unaffected water quality.

Non-Point Pollution Sources

Non-point source (NPS) pollution is defined as pollution that cannot be traced back to a single origin or source such as a discharge pipe or smokestack. Agricultural activities that can cause NPS pollution include grazing, plowing, irrigation, and the application of pesticides and fertilizers. As water moves across the surface of the ground, it collects both human and naturally occurring pollutants, eventually carrying the pollutants into the watershed.

Agricultural non-point source pollution is the leading cause of impairment to surveyed rivers and lakes and the third-largest source of impairment to surveyed estuaries (EPA 2005).

Groundwater Resources and Quality

Groundwater Resources

The City of Elk Grove and surrounding areas, which include the SOIA Area, overlie the Sacramento Valley aquifer system. The groundwater resources in the SOIA Area are contained in a two-aquifer system—an unconfined upper (shallow) aquifer and a semi-confined lower (deep) aquifer. The two aquifers are separated by a semi-confining clay barrier, which allows for the potential vertical

movement of groundwater between the two aquifers. The vertical movement of groundwater between the two aquifers could occur if heavy pumping from one aquifer reduced the pressure within the system, allowing water flow into the other aquifer, thereby recharging the groundwater system. While vertical movement between the two aquifers is possible, the main sources of aquifer recharge are from stream recharge from the Cosumnes and Sacramento rivers, subsurface inflows, and rainfall and applied water percolation. Although high to moderate recharge capabilities are found in a large area on both sides of the Cosumnes River and a small portion around the Sacramento River, the majority of the SOIA Area has poor groundwater recharging capabilities.

Regionally, water has been overdrafted in parts of the County of Sacramento since the 1940s. Significant groundwater overdraft problems have been identified in three areas of Sacramento County, including Elk Grove. Groundwater levels in Elk Grove were calculated in the spring of 1992 and were found to be 70 feet below the original level (SCGP 2003). Land subsidence can occur in areas where groundwater overdraft is present as a result of structural changes to soils from dewatering. Although the groundwater of Sacramento County has been historically overdrafted, there has been no reported land subsidence associated with groundwater withdrawal in the proposed SOIA Area or in any other geologically similar areas in California.

Groundwater Quality.

Fresh water is defined as water with less than 1,000 milligrams per liter dissolved solids concentrations and groundwater quality varies depending on the depth and permeability of rocks that underlie the aquifer. Fresh water is available throughout the Sacramento Valley and is generally lower in dissolved solid concentrations than in other areas in the Central Valley.

The majority of the land within the proposed SOIA Area is used for agricultural purposes and, therefore, contributes to the groundwater quality and recharge potential in the area. Generally, groundwater quality is affected by both naturally occurring and human-made constituents. The largest source of pollution near the proposed SOIA Area is from agricultural operations. Groundwater in agricultural areas can become excessively saline from dissolved salts left behind after the evaporation of sprayed irrigation water. Excessive concentrations of nitrates from the leaching of nitrogen fertilizer can also be of concern in agricultural areas. According to the United States Environmental Protection Agency (EPA), the maximum allowable level of nitrates in drinking water is 10 milligrams per liter; nitrate levels as low as 5 milligrams per liter can damage certain crops. Nitrate concentrations exceeding 5 milligrams per liter are found sporadically in portions of the SOIA Area, an area mainly limited to shallow areas of the aquifer (Elk Grove 2003).

Flooding and Flood Control

Flooding

Flooding is defined as an overflowing of normally dry land, often after heavy rain. When the capacities of streams and storm drainage facilities are exceeded, flooding often occurs. The

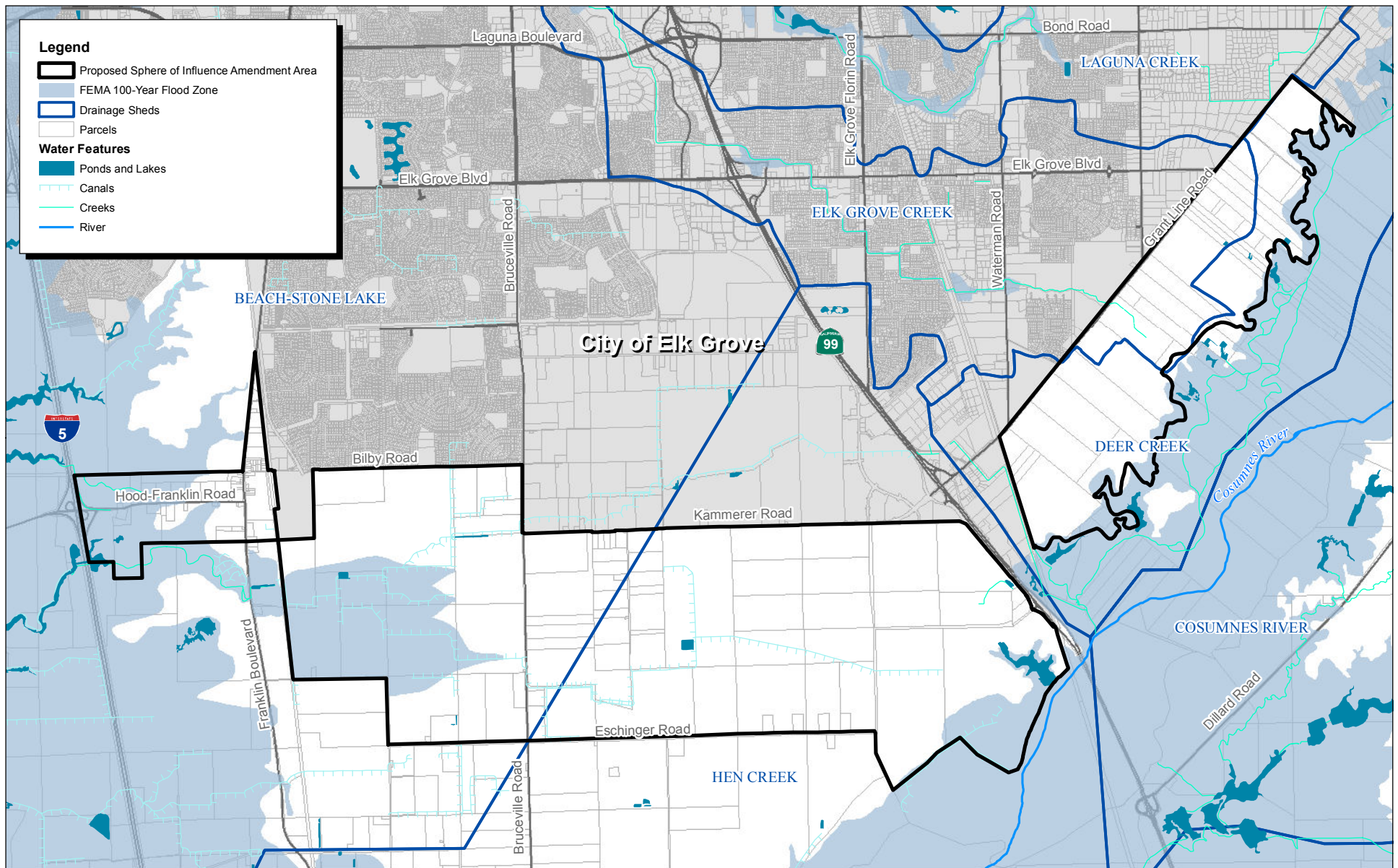
Sacramento area has historically been challenged with flooding. Before the 1900s, flooding due to winter storms occurred regularly in the Sacramento Valley. In addition, mining activity increased the severity of flooding, which was due to decreased soil water capacity, channel sedimentation, and construction of levees derived from excess mine tailings.

In more recent times, the Sacramento River has been reinforced with an extensive system of dams, levees, pumping stations, overflow weirs, and other flood control structures. Development of the flood control system has greatly diminished the extent of flood hazard areas. However, there are areas surrounding the Sacramento River and Laguna Creek that are inside of the Federal Emergency Management Agency's (FEMA's) 500-year and 100-year floodplains. In October 2007, Governor Arnold Schwarzenegger signed into law Senate Bill 5 (SB 5), which requires the Department of Water Resources (DWR) to develop preliminary maps by July 1, 2008 for the 100- and 200-year floodplains located within the Sacramento-San Joaquin Valley. Pursuant to the SB 5, DWR prepared the preliminary 100- and 200-year maps for 32 counties and 91 cities located within the Sacramento-San Joaquin Valley. Portions of the western SOIA Area lie within the 100-year floodplain. Exhibit 3.9-2 shows the flood hazard areas. By default, those portions within the 100-year flood plain are also located within the 200-year and 500-year floodplains. However, there is currently insufficient mapping to delineate additional lands within the SOIA Area that may be within the 200-year and 500-year floodplains.

Flood Control

Flood issues in the SOIA Area are mainly associated with Laguna Creek (and its tributaries) and the Cosumnes River. Flooding is particularly prevalent in the eastern portion of the SOIA Area where major drainage systems have not been built and stormwater flows in natural channels or small ditches that are frequently exceeded. As stated above, flooding typically occurs in the Beach-Stone Lakes basin every year, with severe floods occurring about once every 3 years. The Cosumnes River is a free-flowing, undammed river and presents a major flood hazard along the eastern and southern portions of the planning area (Sacramento County 2004).

The Sacramento River Flood Control System provides flood protection to the proposed SOIA Area and consists of the Fremont and Sacramento weirs, the Yolo Bypass Channel, and levees along the Sacramento and Lower American rivers, Natomas East Main Drain, Arcade Creek, Natomas Cross Channel and the Sacramento Bypass channels. The amount of water flowing through levee systems on the Sacramento River is controlled by the reserve overflow area of the Yolo Bypass.



Source: County of Sacramento and City of Elk Grove GIS Data, 2009. FEMA Q3 Data.

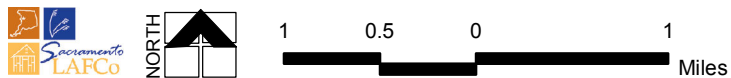


Exhibit 3.9-2 FEMA Designated Flood Hazard Zones

3.9.3 - Regulatory Framework

Federal

Clean Water Act

Section 303 of the 1972 Federal Clean Water Act (CWA) requires states to adopt water quality standards for all surface waters of the United States. Water quality standards are typically numeric, although narrative criteria based upon biomonitoring methods may be employed where numerical standards cannot be established or where they are needed to supplement numerical standards. (See a description of State Porter-Cologne Water Quality Control Act, below.) Standards are based on the designated beneficial use(s) of the water body. Where multiple uses exist, water quality standards must protect the most sensitive use.

Section 402 of the CWA mandates that certain types of construction activity comply with the requirements of the National Pollutant Discharge Elimination System (NPDES) stormwater program. The Phase II Rule, issued in 1999, requires that construction activities that disturb land equal to or greater than 1 acre require permitting under the NPDES program. In California, permitting occurs under the General Permit for Stormwater Discharges Associated with Construction Activity, issued to the SWRCB, implemented, and enforced by the nine RWQCBs. Effective February 14, 2011, all dischargers whose project includes clearing, grading, or stockpiling activities expected to disturb 1 or more acres of soil are required to obtain compliance under the NPDES Construction General Permit Order 2009-0009-DWQ and 2010-0014-DWQ, which amends Order Number 2009-0009-DWQ.

This General Permit requires all dischargers, where construction activity disturbs 1 or more acres, to take the following measures:

1. Develop and implement a Stormwater Pollution Prevention Plan (SWPPP) to include a site map(s) of existing and proposed building and roadway footprints, drainage patterns and stormwater collection and discharge points, and pre- and post-project topography.
2. Describe types and placement of Best Management Practices (BMPs) in the SWPPP that will be used to protect stormwater quality.
3. Provide a visual and chemical (if non-visible pollutants are expected) monitoring program for implementation upon BMP failure; and
4. Provide a sediment monitoring plan if the area discharges directly to a water body listed on the 303(d) list for sediment.

To obtain coverage, the landowner must file a Notice of Intent (NOI) with the SWRCB. The notice is required to include the requirements listed above. When project construction is completed, the landowner must file a notice of termination.

The law requires that a permit (Section 404) be obtained from the United States Army Corps of Engineers (USACE) for any dredge or fill materials into wetlands or waters of the United States.

Floodplain Regulations

Executive Order 11988 for Floodplain Management (May 24, 1977) directs all federal agencies to evaluate potential effects of any actions it may take in the floodplain and to avoid all adverse impacts associated with modifications to floodplains. It also directs federal agencies to avoid floodplain development whenever there is a practicable alternative and to restore and preserve the natural and beneficial values served by the floodplains.

Federal Emergency Management Agency

FEMA oversees floodplains and administers the National Flood Insurance Program adopted under the National Flood Insurance Act of 1968. The program makes federally subsidized flood insurance available to property owners within communities that participate in the program. Areas of special flood hazard (those subject to inundation by a 100-year flood) are identified by FEMA through regulatory flood maps titled Flood Insurance Rate Maps. The National Flood Insurance Program mandates that development cannot occur within the regulatory floodplain (typically the 100-year floodplain) if that development results in an increase of more than 1 foot in flood elevation. In addition, development is not allowed in delineated floodways within the regulatory floodplain.

United States Army Corps of Engineers

The USACE constructs and operates regional scale flood protection systems in cooperation with state and local agencies. The USACE is responsible for the Lower San Joaquin River Flood Control Project built in the 1960s.

Special Districts

Reclamation and Levee Districts are special districts responsible for reclaiming and/or maintaining land subject to frequent flooding via levee and dike systems within urban and rural areas. The USACE was responsible for constructing much of the levee system in the early to mid-1900s, but then turned it over to the local Reclamation and Levee Districts for maintenance. Reclamation and Levee Districts are responsible for preventing flooding within their jurisdiction by maintaining levees and related facilities such as pump stations. Reclamation and Levee Districts are authorized to operate through DWR and USACE.

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1969 authorized the SWRCB to provide comprehensive protection for California's waters through water allocation and water quality protection. The SWRCB implements the requirement of the Clean Water Act Section 303, indicating that water quality standards have to be set for certain waters by adopting water quality control plans under the Porter-Cologne Act.

The Porter-Cologne Act established the responsibilities and authorities of the nine RWQCBs, which include preparing water quality plans for areas in the region, identifying water quality objectives, and issuing NPDES permits and Waste Discharge Requirements (WDRs). Water quality objectives are defined as limits or levels of water quality constituents and characteristics established for reasonable protection of beneficial uses or prevention of nuisance. The Porter-Cologne Act was later amended to provide the authority delegated from the EPA to issue NPDES permits.

The Central Valley RWQCB's Basin Plan states the beneficial uses of specific water bodies and the levels of quality that must be met and maintained to protect those uses. Regional plan objectives and discharge requirements are implemented through the issuance of WDRs or NPDES permits.

Section 303(d) of the CWA requires that the SWRCB identify surface water bodies within California that do not meet established water quality standards. Once identified, the affected water body is included in the SWRCB's "303(d) Listing of Impaired Water Bodies," and a comprehensive program must then be developed to limit the amount of pollutant discharges into that water body. This program includes the establishment of "total maximum daily loads" (TMDL) for pollutant discharges into the designated water body. The most recent 303(d) listing for California was approved by the EPA in 2006.

Construction Site Runoff Management

The SWRCB has adopted an NPDES for stormwater discharges associated with construction activity (General Permit). The Central Valley RWQCB administers the NPDES stormwater permitting program in the proposed incorporation area. Construction activities of 1 acre or more are subject to the permitting requirements of the NPDES General Permit and are required to submit an NOI to the Central Valley RWQCB prior to the beginning of construction. The General Permit requires preparation and implementation of an SWPPP prior to the start of construction. Implementation of the SWPPP begins with the start of construction. Upon completion of construction, the project's applicant must submit a Notice of Termination to the Central Valley RWQCB to indicate that construction is completed. Note that no construction is proposed as a part of the proposed incorporation.

Municipal Stormwater

The federal CWA requires NPDES permits for municipal separate storm and sewer (MS4). The purpose of the NPDES program is to establish a comprehensive program to manage areawide urban stormwater and reduce pollution of surface waters to the maximum extent possible. Sacramento County submitted and received an MS4 permit under Phase I of the MS4 implementation (Order No. R5-2002-0206) for all unincorporated areas of the County. The MS4 Permit requires the County to develop programs to control pollutants in urban stormwater runoff and evaluate the impacts of such discharges on local receiving waters.

The City of Elk Grove became a joint participant with Sacramento County's NPDES. The permit was renewed in December 2002; it allows the City to discharge urban runoff from MS4s in its municipal jurisdictions. The permit requires that the City impose water quality and watershed protection measures for all development projects. The NPDES also requires a permit for every new construction project that implements the following measures:

- Eliminate or reduce non-stormwater discharges to stormwater systems and other waters of the nation;
- Develop and implement a stormwater pollution prevention plan (SWPPP); and
- Perform inspections of stormwater control structures and pollution prevention measures.

California Department of Water Resources

The California Department of Water Resources (DWR) is a state agency that constructs and operates regional-scale flood protection systems in partnership with USACE and local agencies. DWR provides technical, financial, and emergency response assistance related to flood hazard and safety to local agencies and evaluates maintenance of federal project levees by local reclamation and levee districts (SJC 2009).

DWR initiated various studies in support of implementing repairs and improvements to the State Plan of Flood Control in 2008. DWR is developing technical information to assist cities and counties with developing flood protection standards for new development that will be tied to the Central Valley Flood Protection Plan to become effective in 2012. Once adopted, new urban development within a flood hazard zone will be required to show that it is protected from a 1 in 200 chance of flooding. Under Assembly Bill 156, DWR prepared Levee Flood Protection Zone Maps for areas protected by the state-federal project levees in the Central Valley. DWR is also providing Best Available Maps for planning purposes to show the 100- and 200-year floodplains based on best available information. Both types of maps that include the project area are completed and available for public viewing.

Assembly Bill 5 and Senate Bill 17

Central Valley Flood Protection Board

In 2007, Assembly Bill 5 (AB 5) renamed the Reclamation Board as the Central Valley Flood Protection Board (CVFPB) and established the CVFPB as independent of DWR. CVFPB's directive is to control flooding along the Sacramento and San Joaquin rivers in cooperation with the USACE, to coordinate the establishment, operation, and maintenance of flood control infrastructure with various agencies and to maintain the integrity of the existing flood control system and floodways through authorization of encroachment permits. SB 17 similarly renamed the agency and directed the DWR to prepare and the CVFPB to adopt a State Plan of Flood Control (SJC 2009).

Other provisions to be implemented by DWR under AB 5 that may have relevance to this project include:

- Inspect all project levees, determine whether there are any deficiencies or risks of failure, make recommendations for improvements, and provide in a flood control system status report.
- Prepare maps of levee protection zones by December 31, 2008 and update the maps periodically.
- Notify all landowners whose property are fully or partially within a zone protected by a levee by September 2010 about the risks associated with flooding and provide information regarding flood insurance.
- Impose requirements on local jurisdictions to upgrade levees that protect an area where more than 1,000 people live before any funds are spent and after July 2008, the local levee maintenance agency and the city or county with jurisdiction over the affected area must sign an agreement to prepare a safety plan within 2 years. DWR is to take over maintenance of any levees it determines are not being maintained according to regulations.

Relevant provisions under SB 17 to be implemented by DWR and CVFPB include:

- Collaborate with local jurisdictions and provide them with flood information and technical assistance.
- Propose updated requirements for construction in areas protected by flood protection facilities and will include requirements for buildings in areas where flood levels during 200-year events are expected to exceed 3 feet.
- Develop preliminary 100- and 200-year floodplain maps based on best available information for lands protected by levees contained in the State Plan of Flood Control and provide those maps to local jurisdictions for planning purposes.
- Prepare the Central Valley Flood Protection Plan for approval by July 2012 and update the plan every 5 years.
- Implement flood protection improvements in urban areas before the Central Valley Flood Protection Plan is completed.

Senate Bill 5

Another key flood management bill recently enacted is SB 5, which requires Sacramento County to update its General Plan within 2 years after the CVFPB adopts the Central Valley Flood Protection Plan to contain the following:

- Location of State Plan of Flood Control facilities, other flood management facilities, and flood hazard zones

- Feasible implementation measures designed to carry out the goals for protection of lives and property
- Amend zoning ordinances to be consistent with the General Plan within 36 months of adoption of the Central Valley Flood Protection Plan

SB 5 prohibits a city or county within the Central Valley Flood Protection Plan area from approving a development agreement, a discretionary permit or entitlement, or a tentative map or parcel map for any property within a flood hazard zone unless the city or county finds, based on substantial evidence, one of the following:

- The property is protected by flood management facilities to urban levels of flood protection;
- The city or county has imposed conditions on the development that will protect the property to Central Valley Flood Protection Plan standards or;
- The local flood management agency has made adequate progress on the construction of a flood protection system that will result in flood protection equal or better than standards of the Central Valley Flood Protection Plan.

SB 5 also requires that the urban level of flood protection be achieved for urban and urbanizing areas by 2025.

Assembly Bill 70

Assembly Bill 70 (AB 70) states that local jurisdictions that approve new development in previously undeveloped areas protected by a state flood control project will share liability with the State for any flood damage that occurs to properties in new developments, unless reasonable precautions are taken to protect the development (SJC 2009).

FloodSAFE California

FloodSAFE California is a program launched in 2006 by DWR to guide the development of regional flood management plans to better identify and address flood hazards and to improve integrated flood management systems statewide with an emphasis on the Central Valley.

California Dam Safety Act

The State of California Dam Safety Act requires submittal of inundation maps to the California Office of Emergency Services (OES) for any dams for which total failure would result in loss of life or personal injury. This law also requires local jurisdictions to adopt emergency procedures for the evacuation and control of populated areas below such dams. The San Joaquin County OES has a 2003 Dam Failure Plan that includes descriptions of the dams, anticipated direction, timing and depths of floodwaters and responsibilities of the jurisdictions that would be affected (SJC 2009).

Local

Sacramento Area Flood Control Agency (SAFCA)

The Sacramento Area Flood Control Agency (SAFCA) was formed in 1989 to address the Sacramento area's vulnerability to catastrophic flooding. This vulnerability was exposed during the record flood of 1986 when Folsom Dam exceeded its normal flood control storage capacity and several area levees nearly collapsed under the strain of the storm. In response, the City of Sacramento, the County of Sacramento, the County of Sutter, the American River Flood Control District, and Reclamation District 1000 created SAFCA through a Joint Exercise of Powers Agreement to provide the Sacramento region with increased flood protection along the American and Sacramento rivers.

City of Elk Grove

The City of Elk Grove General Plan establishes goals and policies to guide both present and future development within the City's jurisdiction. Therefore, the City of Elk Grove's General Plan policies related to directly or indirectly to air quality that may apply to potential future development in the SOIA Area are provided below: The General Plan contains the following policies related directly or indirectly to hydrology and water quality that are applicable to potential future development in the SOIA Area:

- **Policy CAQ-1:** Reduce the amount of water used by residential and non-residential uses by encouraging water conservation.
- **CAQ-1-Action 1:** Implement the City's Water Conservation Ordinance.
- **CAQ-1-Action 2:** Actively encourage water conservation by both agricultural and urban water users.
- **CAQ-1-Action 3:** Work with urban and agricultural water purveyors to establish long range conservation plans which set specific conservation objectives and utilize, to the extent possible, a common planning horizon, plan framework and estimating/ forecasting procedures.
- **CAQ-1-Action 4:** Promote the use of drought-tolerant vegetation to minimize water consumption by providing information to developers and designers.
- **Policy CAQ-5:** Roads and structures shall be designed, built and landscaped so as to minimize erosion during and after construction.
- **Policy CAQ-12:** The City shall seek to ensure that the quality of groundwater and surface water is protected to the extent possible.
- **CAQ-12-Action 1:** Continue to cooperate with the County, other cities, and the Regional Water Quality Control Board regarding compliance with the NPDES permit system, and support other water quality improvement projects in order to maintain compliance with the Basin Plan.
- **CAQ-12-Action 2:** Implement the City's NPDES permit on all public and private development projects and activities.

- **CAQ-12-Action 3:** Collect information on design, construction, and operation techniques which help prevent water pollution, and provide this information to the public and the development community.
- **Policy CAQ-13:** Implement the City's NPDES permit through the review and approval of development projects and other activities regulated by the permit.
- **Policy CAQ-14:** The city shall seek to minimize the amount of impervious surfaces and directly connected impervious surfaces in areas of new development and redevelopment and use onsite infiltration of runoff in areas with appropriate soils where the infiltration of storm water would not pose a potential threat to groundwater quality.
- **Policy CAQ-15:** The City shall encourage water supply service providers and County Sanitation District 1 to design water supply and recycled water supply facilities in a manner that avoids and/or minimizes significant environmental effects. The City shall specifically encourage the Sacramento County Water Agency to design well facilities and operation to minimize surface flow effects to the Cosumnes River.
- **Policy CAQ-16:** Future land uses that are anticipated to utilize hazardous materials or waste shall be required to provide adequate containment facilities to ensure that surface water and groundwater resources are protected from accidental releases. This shall include double containment, levees to contain spills, and monitoring wells for underground storage tanks, as required by local, state and federal standards.
- **Policy 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.
- **Policy CAQ-18:** Post-development peak storm water runoff discharge rates and velocities shall be designed to prevent or reduce downstream erosion, and to protect stream habitat.
- **Policy CAQ-19:** Encourage the retention of natural stream corridors, and the creation of natural stream channels where improvements to drainage capacity are required.
- **CAQ-19-Action 1:** Re-vegetation using native plant species shall be encouraged; use of non-native species shall be discouraged. Use of invasive species shall be prohibited.
- **CAQ-19-Action 2:** The City shall permit stream channel realignment only:
 - When necessary to eliminate flood hazards, after alternatives to provide flood capacity while protecting the natural alignment have been shown to be infeasible; or
 - To protect and preserve natural features and vegetation which would otherwise be removed; or
 - If the existing channel has been significantly disrupted by agricultural improvements or other man-made changes.
- **CAQ-19-Action 3:** The City shall require, to the maximum extent practical, retention of topographic diversity and variation when channels are realigned or modified, including:
 - "Self-sustaining" meander characteristics,
 - Berms,

- Naturalized side slope, and
- Varied channel bottom elevation, consistent with the characteristics of the watershed, public safety, and other site-specific considerations.
- **CAQ-19-Action 4:** Where existing streams support riparian vegetation, evaluate options for constructing secondary flood control channels or other facilities for flood control and water quality purposes.
- **CAQ-19-Action 5:** Channel lowering of existing natural streams shall occur only after consideration of alternatives (including surface drainage systems which do not require channel lowering) and only when it is necessary to accommodate the gravity drainage of storm runoff and/or accommodate floodflows under existing bridge structures.
- **CAQ-19-Action 6:** All storm drainage improvements on natural streams shall be designed where feasible to maintain water flows necessary to protect and enhance existing fish habitat, native riparian vegetation, water quality, and/or ground water recharge.
- **CAQ-19-Action 7:** Improvements in watercourses shall be designed for low maintenance, and to accommodate peak flows with vegetation (including mitigation plantings) in the channel. Channel modifications shall retain marsh and riparian vegetation whenever possible.
- **CO-19-Action 8:** Development design shall maximize the total floodplain frontage that is open to public view. Development adjacent to stream corridors shall be encouraged to provide a public street paralleling at least one side of the corridor with vertical curbs, gutters, foot path, street lighting, and post and cable barriers to prevent vehicular entry.
- **CAQ-19-Action 9:** Trails along stream corridors shall be located to minimize wildlife impacts and shall be restricted to non-motorized traffic.
- **CAQ-19-Action 10:** Except where approved by the City as part of the development of a public or private development project, no grading, clearing, tree cutting, debris disposal or any other similar action shall be allowed in stream corridors except for normal channel maintenance.
- **Policy CAQ-21:** Development adjacent to a natural stream(s) shall provide a “stream buffer zone” along the stream.

“Natural streams” shall be generally considered to consist of the following, subject to site-specific review by the City:

- Deer Creek
- Elk Grove Creek
- Laguna Creek and its tributaries
- Morrison Creek
- Strawberry Creek
- White House Creek

The following are examples of desired features for this transition zone; the specific design for each transition zone shall be approved on a case-by-case basis by the City.

Stream buffer zones should generally measure at least 50 (fifty) feet from the stream centerline (total width of 100) feet or more, depending on the characteristics of the stream, and shall include:

1. Sufficient width for a mowed firebreak (where necessary), access for channel maintenance and flood control, and for planned passive recreation uses.
 2. Sufficient width to provide for:
 - a. Quality and quantity of existing and created habitat,
 - b. Presence of species as well as species sensitivity to human disturbance,
 - c. Areas for regeneration of vegetation,
 - d. Vegetative filtration for water quality,
 - e. Corridor for wildlife habitat linkage,
 - f. Protection from runoff and other impacts of urban uses adjacent to the corridor
 - g. Trails and greenbelts.
 3. The stream buffer zone should not include above ground water quality treatment structures designed to meet pollutant discharge requirements.
- **Policy SA-12:** The City opposes the construction of flood control facilities that would alter or reduce flows in the Cosumnes River and supports retention of the Cosumnes River floodplain in non-urban uses consistent with location in an area subject to flooding.
 - **Policy SA-13:** The City shall require that all new projects not result in new or increased flooding impacts on adjoining parcels on upstream and downstream areas.
 - **Policy SA-14:** The City shall give priority to the designation of appropriate land uses in areas subject to flooding to reduce risks to life and property. Construction of new flood control projects shall have a lower priority, unless land use controls (such as limiting new development in flood-prone areas) is not sufficient to acceptable levels.
 - **Policy SA-15:** Development shall not be permitted on land subject to flooding during a 100-year event, based on the most recent floodplain mapping prepared by the Federal Emergency Management Agency (FEMA) or updated mapping acceptable to the City of Elk Grove. Potential development in areas subject to flooding may be clustered onto portions of a site which are not subject to flooding, consistent with other policies of this General Plan.
 - **Policy SA-16:** A buildable area outside the 100-year floodplain must be present on every residential lot sufficient to accommodate a residence and associated structures. Fill may be placed to create a buildable area only if approved by the City and in accordance with all other applicable policies and regulations. The use of fill in the 100-year floodplain to create buildable area is strongly discouraged, and shall be subject to review to determine potential impacts on wildlife, habitat, and flooding on other parcels.
 - **Policy SA-17:** Vehicular access to the buildable area of all parcels must be at or above the 10-year flood elevation.
 - **Policy SA-18:** Creation of lots whose access will be inundated by flows resulting from a 10-year or greater storm shall not be allowed. Bridges or similar structures may be used to

provide access over creeks or inundated areas, subject to applicable local, state, and federal regulations.

- **Policy SA-19:** Discourage the number of crossings of natural creeks in order to reduce potential flooding and access problems.
- **SA-19-Action 1:** Lots or parcels which will contain two or more buildable areas on both sides of a creek or floodplain shall be discouraged.
- **Policy SA-20:** Parcels should not be created on which the presence of easements, floodplain, marsh or riparian habitat, or other features would leave insufficient land to build and operate structures. This policy shall not apply to open space lots specifically created for dedication to the City or another appropriate party for habitat protection, flood control, drainage, or wetland maintenance.
- **Policy SA-21:** Where necessary due to clear dangers to life or property, the City will support the construction of flood control projects.
- **SA-21-Action 1:** The City will participate through the Sacramento Area Flood Control Agency in obtaining federal authorization for construction of a backbone flood control project along the Sacramento River and the immediate connection of local internal streams to this river.
- **SA-21-Action 2:** The City will continue local efforts that encourage implementation of the Federal Flood Insurance Program.
- **SA-21-Action 3:** The City will participate with the City of Sacramento, the Army Corps of Engineers and other Federal, State and local governments and agencies to develop policies to finance, construct, and plan flood improvements to eliminate flooding in Elk Grove.
- **Policy SA-22:** New and modified bridge structures shall not cause an increase in water surface elevations of the 100-year floodplain exceeding one foot, unless analysis clearly indicates that the physical and/or economic use of upstream property will not be adversely affected.
- **Policy SA-23:** The City shall require all new urban development projects to incorporate runoff control measures to minimize peak flows of runoff and/or assist in financing or otherwise implementing Comprehensive Drainage Plans.
- **SA-23-Action 1:** As part of the review of development projects, ensure that runoff control measures are planned and provided.
- **Policy SA-24:** Drainage facilities should be properly maintained to ensure their proper operation during storms.
- **Policy PF-3:** Water supply and delivery systems shall be available in time to meet the demand created by new development, or shall be assured through the use of bonds or other sureties to the City's satisfaction.
- **PF-3-Action 1:** The following shall be required for all development projects, excluding subdivisions:
 - An assured water supply and delivery system shall be available at the time of project approval. The water agency providing service to the project may provide several

alternative methods of supply and/or delivery, provided that each is capable individually of providing water to the project.

- All required water infrastructure for the project shall be in place at the time of project approval, or shall be assured through the use of bonds or other sureties to the City's satisfaction. Water infrastructure may be phased to coincide with the phased development of large-scale projects.
- **PF-3-Action 2:** The following shall be required for all subdivisions to the extent permitted by state law:
 - Proposed water supply and delivery systems shall be identified at the time of tentative map approval to the satisfaction of the City. The water agency providing service to the project may provide several alternative methods of supply and/or delivery, provided that each is capable individually of providing water to the project.
 - The agency providing water service to the subdivision shall demonstrate prior to the approval of the Final Map by the City that sufficient capacity shall be available to accommodate the subdivision plus existing development, and other approved projects in the same service area, and other projects that have received commitments for water service.
 - Offsite and onsite water infrastructure sufficient to provide adequate water to the subdivision shall be in place prior to the approval of the Final Map or their financing shall be assured to the satisfaction of the City, consistent with the requirements of the Subdivision Map Act.
 - Offsite and onsite water distribution systems required to serve the subdivision shall be in place and contain water at sufficient quantity and pressure prior to the issuance of any building permits. Model homes may be exempted from this policy as determined appropriate by the City, and subject to approval by the City.
- **Policy PF-4:** The City shall require new utility infrastructure for electrical, natural gas and other infrastructure services avoid sensitive resources, be located so as to not be visually obtrusive, and, if possible, be located within roadway rights-of-ways or existing utility easements.
- **Policy PF-5:** The City supports the use of reclaimed water for irrigation wherever feasible.
- **Policy PF-6:** The City shall seek to protect the quality and quantity of groundwater resources, including those which serve households and businesses which rely on private wells.
- **Policy PF-12:** To reduce the potential for health problems and groundwater contamination resulting from the use of septic systems, the City shall take the following actions:
 - **PF-12-Action 1:** The City shall prepare and implement a public information campaign aimed at homeowners in areas with septic systems on the proper design, use, and care of septic systems.

- **PF-12-Action 2:** The City shall consider adopting Plumbing Code revisions to allow the use of updated technologies which offer an alternative to septic systems for the treatment of sewage on individual sites.

3.9.4 - Methodology

Regional and localized hydrology were reviewed for the SOIA Area, including available floodplain maps, localized drainage facilities, and groundwater data. In addition, the regional floodplain and basin management plans were reviewed.

3.9.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, hydrology and water quality impacts resulting from the implementation of the proposed project would be considered significant if the project would:

- a) Violate any water quality standards or waste discharge requirements?
- b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?
- c) Substantially alter the existing drainage pattern of area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or offsite?
- d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or offsite?
- e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?
- f) Otherwise substantially degrade water quality?
- g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?
- h) Place within a 100-year flood hazard area structures, which would impede or redirect flood flows?
- i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?
- j) Inundation by seiche, tsunami, or mudflow? (Refer to Section 7, Effects Found Not To Be Significant.)

3.9.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Water Quality Standards and Requirements

Impact HYD-1:	The project would not violate any water quality standards or waste discharge requirements.
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Impact Analysis

This impact evaluates water quality impacts. The proposed project proposes expansion of the City of Elk Grove's existing SOI boundary to include approximately 7,869 acres of unincorporated county land.

Approval of SOIA by LAFCo indicates that the Commission has designated the revised SOIA Area for future urbanization. The land use assumptions discussed in Section 2, Project Description, indicate that potential future growth of the SOIA Area may increase amount of waste discharge and may impact water quality. The project may indirectly result in stormwater volume increases within the SOIA Area because of the conversion of pervious surfaces to impervious surfaces.

Currently, agricultural runoff water flows from the project site. This runoff potentially contains nitrogen, phosphorus, fertilizers, pesticides, and sediment, as is evidenced by the unnaturally overgrown river channel. Hydrocarbons, grease, oil, and heavy metals from automobiles are typical runoff pollutants generated from impervious road, driveway, and parking lot surfaces. Building roofs also generate hydrocarbons from atmospheric deposition, and heavy metals from roofing materials. In addition, pesticides, and nutrients (from fertilizers and other landscape maintenance products) detergents, coliform bacteria (from pet waste), and trash are all common stormwater pollutants that can be expected from the proposed development. Although contaminants expected as a result of urban development would be partially offset by decreased agricultural runoff, indirect foreseeable water quality impacts from the proposed development would be significant.

The City of Elk Grove's Water Resources Division is responsible for drainage, flood control, stormwater quality, and long-term water and urban runoff planning within the City and would also serve any portion of the SOIA Area annexed in the future. Any construction project that will result in the disturbance of more than 1 acre is required by the SWRCB to obtain an NPDES Construction General Permit Order 2010-0014-DWQ permit prior to project initiation. As part of the NPDES permit, the project applicant must prepare and implement an SWPPP. The SWPPP must identify potential sources of pollution that are reasonably expected to affect the quality of stormwater discharges and identify, locate, and implement BMPs to ensure reduction of these pollutants during storm events. The SWPPP must include a monitoring plan for either visual or chemical monitoring depending upon the types of pollutants expected. In addition, project applicant must submit a

stormwater quality control plan for review and approval that would demonstrate adequate water quality protection during operational activities.

Mitigation Measure HYD-1 is recommended to ensure that future annexation and development activities would result in less than significant impacts.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM HYD-1 Prior to annexation of any or part of the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall demonstrate implementation of the following measures to LAFCo:

1. A Master Stormwater Pollution Prevention Plan (SWPPP) shall be prepared and submitted to the RWQCB consistent with the requirements of Construction General Permit 2009-0009-DWQ or any successor regulation that identifies specific actions and Best Management Practices (BMPs) to prevent stormwater pollution during construction activities. The SWPPP shall identify a practical sequence for BMP implementation, monitoring, and maintenance; site restoration; contingency measures; responsible parties; and agency contacts.
2. A Master Stormwater Quality Control Plan consistent with the City's Municipal Stormwater Discharge (MS4) NPDES requirements shall be submitted to the RWQCB for review and approval. The plan shall include both regional and detailed drainage plans and identify expected, site-specific pollutants and required measures to treat those pollutants before they reach the Morrison Creek stream group, Deer Creek, the Cosumnes River, or any tributaries downstream.

Level of Significance After Mitigation

Less than significant impact.

Groundwater Supplies and Recharge

Impact HYD-2:	The project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted).
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Impact Analysis

This impact evaluates potential impacts on groundwater supplies and recharge. The State of California is not authorized by the California Water Code to manage groundwater. California

landowners have a correlative right to extract as much groundwater as they can put to beneficial use. In some groundwater basins, this right has been defined by the courts. Groundwater management programs have usually been developed on an ad hoc basis in response to local initiative through local agencies, adjudication, and districts formed through special legislation.

Efficient recharge from precipitation depends on a variety of conditions including large areas of permeable surfaces free from oil and grease, and relatively slow flow of water across that surface so that infiltration of water into groundwater basins can occur. The most significant groundwater recharge in Sacramento County occurs along the stream channels of the American and Cosumnes rivers. The porous soils of the Cosumnes River floodplain, the gravels of the old American River channel, and the black sands of the Mehrten formation where exposed by stream channels also provide additional important recharge. The County's Draft 2009 General Plan Conservation Element Figure-4 identifies the proposed SOIA Area as a poor area for groundwater recharge. In addition, the project site is offset from the Cosumnes River by intervening flood zones and, therefore, is anticipated to exclude any groundwater recharge areas. However, the project area currently experiences some groundwater recharge from precipitation and infiltration in the existing agricultural fields and undeveloped areas.

The proposed project proposes expansion of the City of Elk Grove's existing SOI boundary to include approximately 7,869 acres of unincorporated county land. The land use assumptions discussed in Section 2, Project Description indicate that anticipated future growth of the SOIA Area will increase amount impervious surfaces and reduce groundwater recharge. Impacts to groundwater resources would occur from extracting groundwater from the basin for use by the project and by reducing groundwater recharge with the construction of impervious development. Increased development reduces the amount of permeable surfaces suitable for recharge, increases runoff and the subsequent flow of water in streams, and increases the amount of oil and grease and other non-point source pollutants that enter streambeds and other recharge areas. The extraction of groundwater without recharge can lead to land subsidence that can necessitate the construction of levees, dikes, and flood control facilities to protect properties from flooding.

The conversion of land from agricultural to urban uses, including jobs and housing, may increase water demands. Therefore, increased volumes of water could be extracted from the Groundwater Sub-basin as a result of indirect impacts from the project. Further, urban development would reduce groundwater recharge by creating more impervious surfaces, eliminating septic systems, and reducing irrigation, which returns water to the aquifer.

The SOIA Area lies within the Central Sacramento County Groundwater Basin (Central Basin). The Sacramento Central Groundwater Authority (Authority)—through a Joint Powers Agreement (JPA) signed by the cities of Elk Grove, Folsom, Rancho Cordova, and Sacramento, and the County of

Sacramento—manages the Central Basin. The Central Basin is not adjudicated and is not considered to be in overdraft according the DWR Bulletin 118 (DWR, 2011).

Existing water demands from the Groundwater Sub-basin are unknown. Ultimate water demands within the entire Groundwater Sub-basin will be dependant on the type, density, intensity, and components of future projects within the SOIA Area, and forecasts the potential demand volume would vary according to the range of assumptions that may be used to forecast demand. However, as shown in the Environmental Setting, common agricultural crops consume between approximately 700,000 gallons and 915,000 gallons per acre per year. The per-acre consumption of residential land uses would depend on the total number of units and average persons-per-household. However, residential land uses within the region consume an average of 63,510 gallons per capita per year. Future development indirectly resulting from the proposed project may result in an increased consumption volume over what is currently drawn from the groundwater basin. It is logical to assume that future urban uses may include landscaping, detention ponds, and open channel swale that would maintain local recharge capabilities. Therefore, this is a potentially significant indirect impact. Mitigation Measure HYD-2 is recommended to ensure that future annexation and development activities would result in less than significant impacts.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM HYD-2 Prior to annexation of any or part of the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove demonstrate provide a Plan for Services that demonstrates that sufficient, sustainable potable water supplies adequate for projected demand needs are available and would not result in depletion of groundwater quantities greater than that under the without project baseline.

Level of Significance After Mitigation

Less than significant impact.

Drainage

Impact HYD-3:	The proposed project would not increase impervious surface coverage, which may result in increased stormwater runoff volumes and peak flows.
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Impact Analysis

This impact addresses the potential for development activities to increase runoff and susceptibility to downstream flooding and/or erosion that is due to increased volumes or peak flows.

No immediate, direct impacts would occur to the existing drainage conditions. The land use assumptions discussed in Section 2, Project Description, indicate that anticipated future growth of the SOIA Area would increase the amount of impervious surfaces and may alter drainage patterns

resulting in increased stormwater runoff. Because the project may result in an indirect and reasonably foreseeable substantial increase in impervious surfaces, impacts would be potentially significant. Therefore, Mitigation Measure HYD-3 is recommended to ensure that future annexation and development activities would result in less than significant impacts. Implementation of Mitigation Measure HYD-3 would avoid and minimize the potential impact and would result in a less than significant impact.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM HYD-3 Prior to annexation of any or part of the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall prepare a Master Drainage Plan for the SOIA Area, and require site-specific drainage plans for future projects to conform to requirements of the master drainage plan. Individual projects shall prepare a detailed drainage plan that demonstrates attainment of pre-project runoff requirements prior to release at the outlet canal and describes the volume reduction measures and treatment controls used to reach attainment. The drainage plan shall identify all expected flows from the project area and the location, size, and type of facilities used to retain and treat the runoff volumes and peak flows to meet pre-project conditions. The Master Drainage Plan shall also include the geotechnical report verifying groundwater elevation for the regional basins.

Level of Significance After Mitigation

Less than significant impact.

Flood Hazards

Impact HYD-4:	The proposed project would not place structures within a 100-year flood hazard area that may have the potential to divert flood flows or to be subjected to flood hazard.
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Impact Analysis

This impact evaluates the potential for the proposed project to locate structures within a flood hazard area. Westernmost portions of the proposed SOIA Area lie within the 100-year flood zone. As such, those areas are also located with in the 200-year and 500-year floodplain.

The land use assumptions discussed in Section 2, Project Description, indicate that anticipated future growth of the SOIA Area may place structures in a 100-year flood zone.

Because the project may result in an indirect and reasonably foreseeable urbanization of the SOIA Area, impacts would be potentially significant. Mitigation Measure HYD-4a is recommended to

ensure that future annexation and development activities would result in less than significant impacts for placing structures within a 100-year floodplain.

In addition, the project may result in an increase in impervious surfaces, as discussed in Impact HYD-3. Therefore, the project may indirectly result in an exacerbation of future flooding by increasing potential flood heights downstream. Increased impervious surfaces may affect downstream areas, especially the Beach-Stone Lakes basin and the Pleasant Point sub-area. As discussed in the Environmental Setting, flooding typically occurs in the Beach-Stone Lakes basin every year, with severe floods occurring about once every 3 years. Mitigation Measure HYD-4b is recommended to ensure that future annexation and development activities would result in less than significant impacts to downstream locations in respect to diverting flood flows.

Implementation of Mitigation Measures HYD-4a and HYD-4b would reduce the potential effect to less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM HYD-4a Prior to annexation of any or part of the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall prepare a local plan of flood protection that shows the following for land within the SOIA Area: identification of all types of flood hazards (levee failure inundation, 100-year storm flooding, 200-year storm flooding and 500-year storm flooding), and locations of flood management facilities. The City will not approve any discretionary permit or entitlement, or any ministerial permit that would result in the construction of a new residence; any tentative map, or any parcel map for which a tentative map was not required; or enter into development agreement for projects located within a 200-year flood zone, unless the City makes one of the following findings based on substantial evidence (as stated in Section 65865.5 of the California Government Code):

1. The facilities of the State Plan of Flood Control or other flood management facilities protect the property to the urban level of flood protection in urban and urbanizing areas or the national Federal Emergency Management Agency standard of flood protection in nonurbanized areas.
2. The City has imposed conditions on the development agreement that will protect the property to the urban level of flood protection in urban and urbanizing areas or the Federal Emergency Management Agency standard of flood protection in nonurbanized areas.
3. The local flood management agency has made adequate progress on the construction of a flood protection system that will result in flood protection

equal to or greater than the urban level of flood protection in urban or urbanizing areas or will meet the Federal Emergency Management Agency standard of flood protection in nonurbanized areas for property located within a flood hazard zone, intended to be protected by the system.

MM HYD-4b Prior to annexation of any or part of the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall demonstrate for land within the 100-year floodplain (to be identified by hydraulic and hydrologic modeling), that development will not result in an increase in floodwater surface elevations within or downstream of the SOIA Area.

Level of Significance After Mitigation

Less than significant impact.

Levee or Dam Failure

Impact HYD-5: The proposed project would not expose people or structures to a significant risk of loss, injury, or death involving flooding as a result of the failure of a levee or dam.

Impact Analysis

This impact addresses flooding from levee or dam failure.

There are four major and two minor dams that, if they fail, may impact the people and resources of Sacramento County. The major dams are the Shasta Dam on the Sacramento River, the Oroville Dam on the Feather River, the Comanche Dam on the Mokelumne River, and the Folsom Dam on the American River. The minor dams include the Nimbus and Rancho Seco.

Folsom Dam (including the earth-filled dikes) would have the greatest impact on the population of Sacramento County should it fail. The floodwaters from this system would affect the cities of Sacramento and Folsom and the surrounding unincorporated area. The westernmost portion of the proposed SOIA Area, adjacent to and west of Franklin Boulevard, lies within the impacted area. The 2009 Draft County of Sacramento General Plan Safety Element Background Report states that the Flood Operations Branch, Department of Water Resources, State of California, believes that the American River Channel will not flood unless the levees fail or there is a catastrophic release. The Sacramento Municipal Utility District (SMUD) inundation map indicates that a failure of the Rancho Seco Dam would flow to the Laguna Creek Basin and stop approximately at Stockton Boulevard. Failure of Shasta Dam would affect populations south along the Sacramento River basin to about Knights Landing, where any flooding activities are projected to lessen and lose momentum. An Oroville Dam failure would impact populations southwest along the Feather River basin to about the Yolo Bypass. Sacramento County would not be affected unless all dams fail at once. A failure at Comanche Dam would affect the Delta and possibly slow the flow of other rivers through the Delta.

The General Plan further notes that the Bureau of Reclamation indicated the water would stop short of the Sacramento-San Joaquin County line at Interstate 5.

The proposed SOIA would not result in physical development that would result in new impacts due to levee or dam failure. Because of adherence to federal and state dam safety and structural requirements, the likelihood of dam failure is considered extremely low. In addition, in response to the risk, the FloodSAFE California program is guiding development of regional flood management plans to improve integrated flood management systems, particularly in the Central Valley. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

3.10 - Land Use and Planning

3.10.1 - Introduction

This section describes the existing land uses and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on review of the Sacramento County General Plan; the Sacramento County Zoning Ordinance Code; the Sacramento County Elk Grove Community Plan; the Sacramento County Laguna Community Plan; the City of Elk Grove General Plan; LAFCo Policies, Standards, and Procedures Guidelines; the Stone Lakes National Wildlife Refuge Comprehensive Conservation Plan; the Sacramento Delta Land Use and Resource Plan; and the Draft South Sacramento Habitat Conservation Plan.

3.10.2 - Environmental Setting

Regional Setting

The Sphere of Influence Amendment (SOIA) Area is located adjacent to the southern and southeastern boundary of the Elk Grove City Limits within an unincorporated area of Sacramento County, California (Refer to Exhibit 2-1). Sacramento County is located adjacent to the Sacramento Delta within the transition area between the Sacramento and San Joaquin valleys. The San Francisco Bay is located beyond the Sacramento Delta to the west and the Sierra Nevada Mountains and foothills are located to the east. Areas north of the SOIA Area and Elk Grove are dominated by the unincorporated urban areas of Sacramento County, the City of Sacramento and surrounding cities and communities. Areas to the south are dominated by the Dry Creek and Consumes River floodplain, agriculture, and open space.

Local Setting

The City of Elk Grove Planning Area, as identified in Figure 1 of the Elk Grove General Plan (2003), includes land within the incorporated City limits of Elk Grove and unincorporated areas of Sacramento County surrounding the City (Exhibit 3.10-1). The City of Elk Grove's Sphere of Influence (SOI) boundaries are currently coterminous with the city limits. The Elk Grove General Plan provides land use planning for the City and the larger Planning Area. The Planning Area is intended to be an area in which the City has an interest in guiding land use decisions by the County of Sacramento, and is envisioned as the area into which the incorporated city boundaries may eventually expand. The County of Sacramento's Urban Service Boundary and Urban Policy Area are illustrated in Exhibit 3.10-2 as they relate to the proposed SOIA Area.

Existing Land Uses

The proposed SOIA Area consists of 7,869 acres. The Sacramento County General Plan establishes land use designations within the SOIA Area (Exhibit 2-7). The existing land uses within the SOIA Area are primarily agricultural. Other land uses include residential, industrial, commercial, open space, floodplains, and undeveloped lands (City of Elk Grove 2008, rev. 2010). Table 3.10-1 and

Land Use

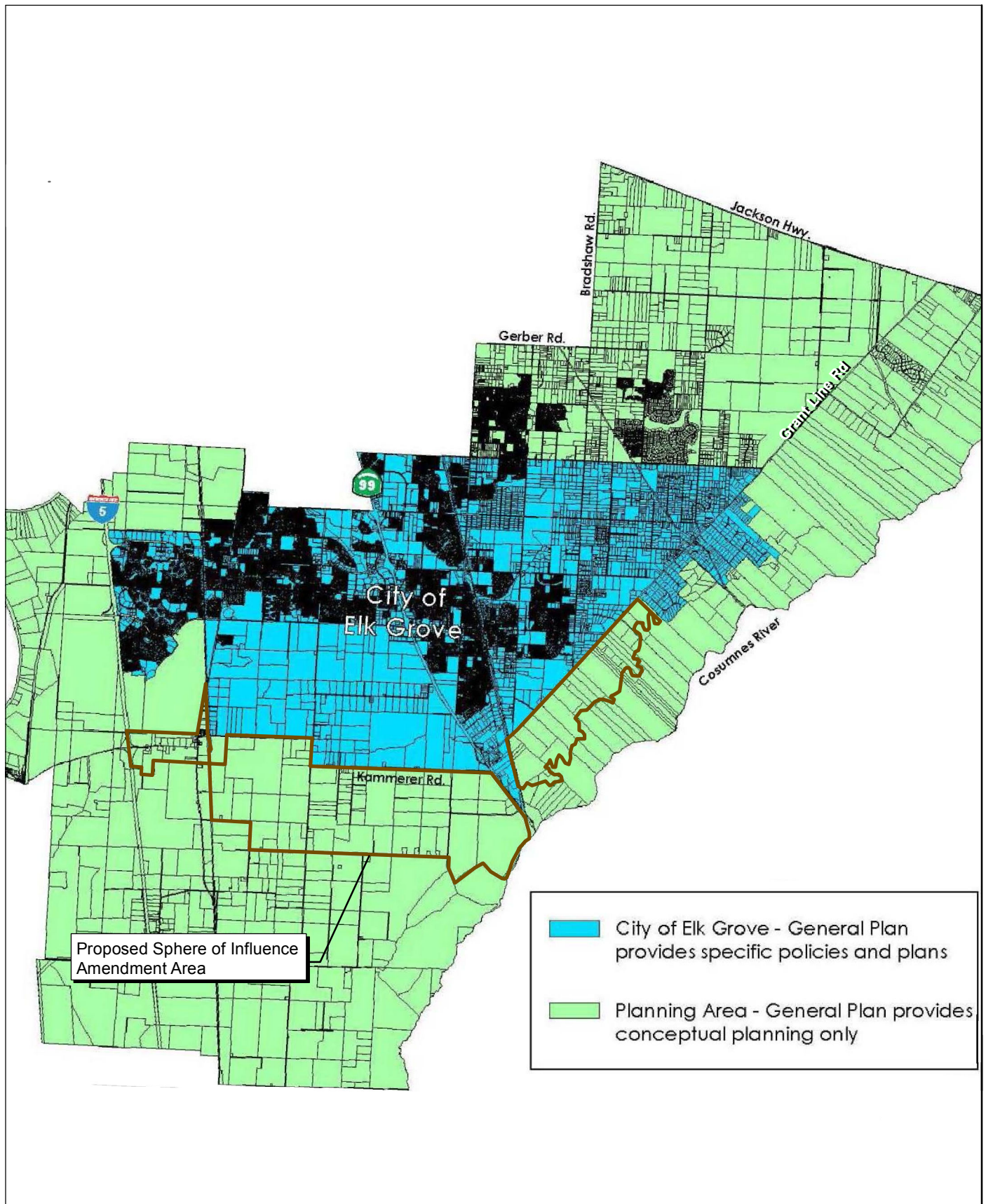
Table 3.10-2 include the current land use and zoning designations, as defined by Sacramento County, within the SOIA Area.

Table 3.10-1: Land Use Designations within the SOIA Area

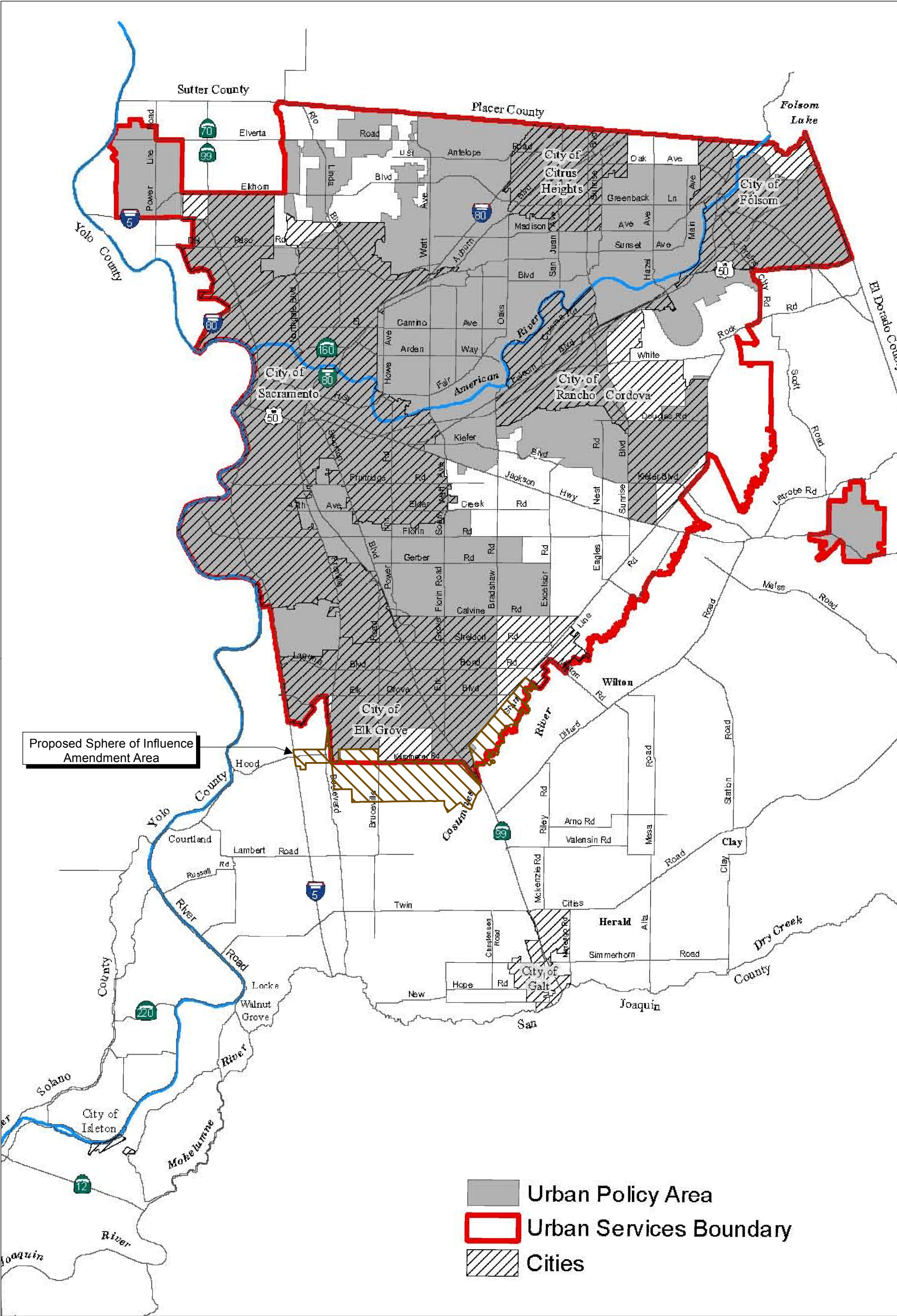
Sacramento County Land Use Designation	Acreage within SOIA
Agricultural Cropland	5,645
Agricultural Cropland – Resource Conservation Area	463
Agricultural-Residential	27
Commercial/Office	14
General Agriculture (20 acre minimum parcel size)	1,521
Intensive Industrial	34
Low Density Residential	87
Natural Preserve	78
Total	7,869
Source: City of Elk Grove 2008, rev. 2010.	

Table 3.10-2: Zoning Designations within the SOIA Area

Sacramento County General Zoning Designation	Acreage within SOIA
A2 (Interim Agricultural Zone – 2 acre minimum parcel size)	53
AG20 (Permanent Agricultural Zone – 20 acre minimum parcel size)	302
AG40 (Permanent Agricultural Zone – 40 acre minimum parcel size)	53
AG80 (Permanent Agricultural Zone – 80 acre minimum parcel size)	7,328
AR2 (Agricultural/Residential Zone – 2 acre minimum parcel size)	18
AR10 (Agricultural/Residential Zone – 10 acre minimum parcel size)	50
LC (Limited Commercial Zone)	8
M2 (Heavy Industrial Zone)	20
R1A (Single Family Zone – 5,200 square foot minimum lot size)	35
RR (Recreation Reserve Zone)	2
Total	7,869
Source: City of Elk Grove 2008, rev. 2010.	



Source: City of Elk Grove.



Source: County of Sacramento Planning & Community Development Department.

Surrounding Land Uses

Land uses surrounding the SOIA Area consist of residential, industrial, and commercial areas, open space areas, rural residences, and large areas of agriculture.

West

Stone Lakes National Wildlife Refuge, consisting of natural habitats and agricultural resources, forms the western boundary of the project site. The Stone Lakes National Wildlife Refuge lies within the Community of Delta that lies west of the project site. Land uses within the Refuge include aquatic habitat, annual grasslands, seasonal wetlands, pastures, oak woodlands, and agricultural uses.

Agricultural uses occupy the area immediately adjacent to the proposed SOIA's western boundary. County of Sacramento land use designations west of the project site include Agricultural Cropland and Resource Conservation Area.

North

The project site is bounded by the City of Elk Grove to the north. Residential uses dominate the eastern portion of the City and agricultural uses occur in the western portion of the City, to the north of the SOIA boundary. City of Elk Grove land use designations north of the project site include Commercial, Medium Density Residential, Southeast Policy Area, Low Density Residential, and Estate Residential. Proposed projects within the Southeast Policy Area include Sterling Meadows, which consists of 984 single-family homes and 200 multi-family units, and a mall.

East

The community of Cosumnes and the unincorporated communities of Wilton and Sheldon lie to the east of the project site. Both Wilton and Sheldon are primarily rural in character and rural residential development on large lots is typical of the communities. Rural residential and agricultural uses exist immediately east of the project boundary. The Cosumnes River and Dry Creek with the associated FEMA 100-year floodplain form the eastern boundary. County of Sacramento land use designations east of the project site include Agricultural Cropland and Natural Preserve.

South

The unincorporated communities of Bruceville and Point Pleasant lie to the south of the proposed SOIA boundary. Land uses in this area are similar to the adjacent agricultural land uses within the project site. County of Sacramento land use designations south of the project site include Agricultural Cropland.

3.10.3 - Regulatory Framework

Federal

Stone Lakes National Wildlife Refuge Comprehensive Conservation Plan

The Stone Lakes National Wildlife Refuge (Refuge) is located approximately 10 miles south of the City of Sacramento, straddling Interstate 5 (I-5) from the town of Freeport south to Lost Slough. The Refuge conserves and enhances a range of Sacramento-San Joaquin Delta and Central Valley habitats

and the fish, wildlife, and plants they support. The Refuge reduces further habitat fragmentation and buffers the effects of urbanization on agricultural lands and adjacent natural areas within the Delta region. The Refuge's Comprehensive Conservation Plan was prepared to guide the management of fish, wildlife, plants, and other natural resources and visitor use on the Refuge (U.S. Fish and Wildlife Service 2007). The SOIA Area is located directly adjacent to the Refuge's western boundary near the Hood Franklin/I-5 interchange. While the Refuge's Comprehensive Conservation Plan does not contain policies specific to the SOIA Area, several policies are generally applicable to the proposed project:

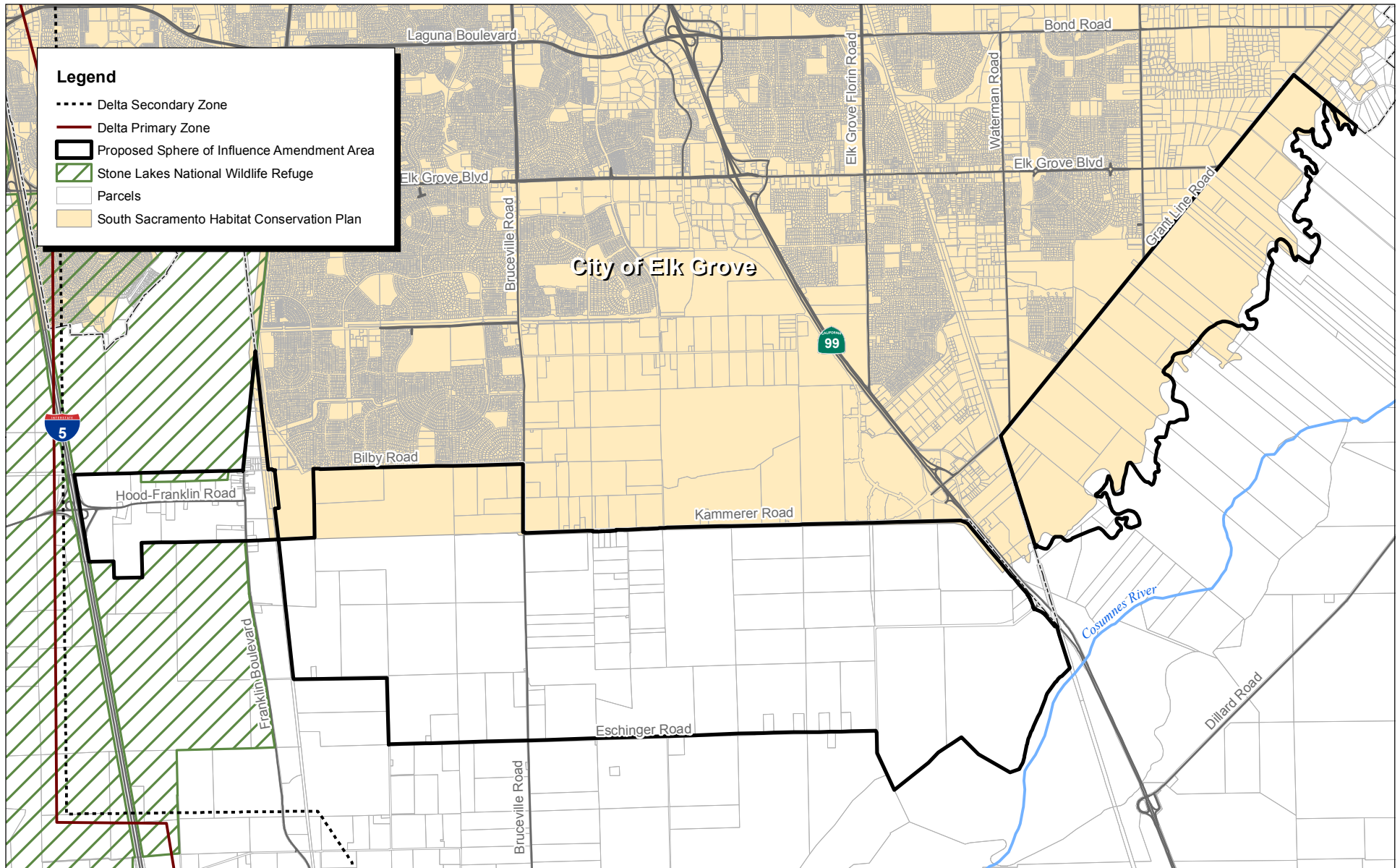
- **Objective 1.L – Strategy 6:** Continue to participate actively in regional land use planning by State, county, and municipal entities that may affect Refuge resources or complement Refuge conservations goals.
- **Objective 1.N – Strategy 4:** Develop strategies to work with local landowners, businesses and neighborhood organizations within the watershed to educate and reduce quantities of pesticides and runoff entering the Refuge.
- **Objective 2.A – Strategy 4:** Develop and host workshops to provide private landowners with information about USDA, NRCS, other Federal, State, and private grant and incentive programs aimed at maintaining small grain fields for crane forage and protecting or enhancing other habitats important for wintering crane within a five-mile radius of the Refuge.

The Stone Lakes National Wildlife Refuge Comprehensive Conservation Plan, Sacramento Delta Land Use and Resource Plan, and Draft South Sacramento Habitat Conservation Plan include areas within or adjacent to the proposed SOIA Area, as shown in Exhibit 3.10-3. As shown in the exhibit, the SOIA Area is not in the Delta primary or secondary zones.

State

Cortese-Knox-Hertzberg Local Government Reorganization Act

The Cortese-Knox-Hertzberg Local Government Reorganization Act (Act) of 2000 establishes procedures for the establishment, updating, or amendment of an SOI. The Sacramento Local Agency Formation Commission (LAFCo) is the agency responsible for the approval of the proposed Elk Grove SOIA and is responsible for implementing the Act. The Act's purpose (Section 56301) is the discouragement of urban sprawl and the encouragement of the orderly formation of local agencies based upon local conditions and circumstances. Section 56425 of the Act grants LAFCo the authority to carry out its purposes and responsibilities for planning and shaping the logical and orderly development and coordination of local governmental agencies to advantageously provide for the present and future needs of the County and its communities.



Source: County of Sacramento, City of Elk Grove, 2009. USFWS National Cadastral Data, 2011.



Michael Brandman Associates

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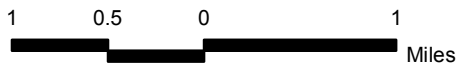


Exhibit 3.10-3 Conservation Areas

The Commission shall develop and determine the SOI of each local governmental agency within the county to promote the logical and orderly development of areas within the sphere, consistent with written policies, procedures, and guidelines adopted by the Commission.

Specific policy elements established by the act are as follows:

- To encourage orderly growth and development patterns (Section 56001);
- To shape the development of local agencies so as to advantageously provide for the present and future needs of each county and its communities (Section 56301); and
- To guide development away from open space and prime agricultural land uses unless such action would not promote planned, orderly, and efficient development (Section 56377).

Sacramento Delta Land Use and Resource Plan

The Delta Protection Act of 1992 (Act) established the Delta Protection Commission, a State entity to plan for and guide the conservation and enhancement of the natural resources of the Delta, while sustaining agriculture and meeting increased recreational demand. The Act defined a Primary Zone, which comprises the principal jurisdiction of the Delta Protection Commission. The Secondary Zone is the area outside the Primary Zone and within the “Legal Delta.” The Secondary Zone is not within the planning area of the Delta Protection Commissions (Delta Protection Commission 2010). The proposed SOIA Area is located adjacent to the Primary and Secondary zones of the Delta.

Local

Sacramento LAFCo

The Legislature has charged the LAFCo with carrying out changes in governmental organization to promote specified legislative policies now codified in the Act. LAFCo has both the local and countywide perspective necessary to implement the policies of the Act. Decisions relating to the most efficient form of local government and the preservation of agricultural land inherently involve the balancing of potentially competing interests of jurisdictions, because applications for change of organization may involve the interests of the County, a city, and one or more special districts. Sacramento LAFCo has developed standards and guidelines in its Policies, Standards, and Procedures Guidelines (discussed later in this section) that aid in the implementation of the Act.

County of Sacramento General Plan

In California, land use planning is primarily the responsibility of local government. The State requires that each California city and county adopt a General Plan that establishes goals, policies, and implementation measures for long-term development, for protection from environmental hazards, for neighborhood preservation, and for the conservation of identified natural resources, while also accommodating urban development. The County of Sacramento General Plan was adopted in 1993.

The County is currently in the process of updating its General Plan document. The 2030 Sacramento County General Plan was recommended for adoption at the May 27, 2010 Board of Supervisors hearing, and a series of ongoing hearings are currently underway to finalize approval. Because the 2030 Sacramento County General Plan is not yet adopted, elements and policies of the current, adopted General Plan that are pertinent to the proposed SOIA Area are summarized below.

Land Use Element

The goal of the General Plan Land Use Element is to encourage “. . . an orderly pattern of land use that concentrates urban development, enhances community character and identity through the creation and maintenance of neighborhoods, is functionally linked with transit, and protects the County’s natural, environmental, and agricultural resources.” The General Plan contains an Urban Growth Management Strategy with the intent of directing “Sacramento County towards an urban character by focusing policy upon a specific area where growth will occur, the Urban Policy Area (UPA), within a larger ultimate growth area delimited by an Urban Services Boundary (USB).”

Within the UPA, the General Plan directs how growth will occur through (1) redeveloping portions of the developed urban area and building out vacant urban areas, and (2) developing new urban growth areas and building out existing Agricultural-Residential land uses in urbanizing areas.

Strategies, goals, and objectives of the Plan pertinent to the proposed SOIA Area are discussed below.

Urban Service Boundary

The General Plan designates a USB to indicate the ultimate boundary of the urban area in the unincorporated area of Sacramento County. The General Plan states the following:

The Urban Service Boundary indicates the ultimate boundary of the urban area in the unincorporated County. This boundary, which is based upon natural and environmental constraints to urban growth, is intended to be a permanent boundary not subject to modification except under extraordinary circumstances. The USB should be used by urban infrastructure providers for developing very long-range master plans which can be implemented over time as the urbanized area expands (Sacramento County 1993).

As shown in Exhibit 3.10-2, the proposed SOIA Area west of State Route 99 (SR-99) is located directly south of the USB’s southernmost boundary, while a majority of the SOIA Area east of SR-99 is located within the USB.

Urban Policy Area

The County of Sacramento also designates an Urban Policy Area (UPA), which is intended to indicate geographic areas where urban development is expected to occur during the projected buildout of the General Plan (year 2013). The UPA is intended to provide a 20-year supply of developable

land sufficient to accommodate projected growth. The UPA also includes additional land to ensure an appropriate supply. The General Plan states:

The Urban Policy Area defines the area expected to receive urban levels of public infrastructure and services within the 20-year planning period. Defining the Urban Policy Area is of key importance in the provision of urban services and infrastructure to the unincorporated County, as it provides the geographic basis for infrastructure master plans, particularly for public water and sewerage, which require large capital investment and relatively long lead time for the installation of capital improvements (Sacramento County 1993).

The entirety of the proposed SOIA Area falls outside the UPA.

Sacramento County Ordinance Code

The Sacramento County Ordinances and Codes provide regulation of land and structures in order to promote health, safety, and welfare of the public, and to insure the orderly development of the County. The Sacramento Zoning Code describes where specific allowed uses, such as residential development, may be located.

Sacramento County Elk Grove Community Plan

The Sacramento County Board of Supervisors adopted the Elk Grove Community Plan in 1978. This document served as a guide for the future development of the Elk Grove area. This area covered approximately 26,500 acres, and included a portion of the current City of Elk Grove as well as portions of the currently defined Planning Area and proposed SOIA Area. The Elk Grove Community Plan was prepared to serve as a guide for future growth and development of the Elk Grove area. The plan included community goals, objectives, development policies, and a recommended pattern of future land uses based on community attitudes and aspirations (Elk Grove 2003).

Sacramento County Laguna Community Plan

The Laguna Community Plan was adopted in December 1978 by the Sacramento County Board of Supervisors. This area covers approximately 18 square miles, between I-5, SR-99, Sheldon Road, and Elk Grove Boulevard. The Laguna Community Plan provided a policy framework for conservation and development within the Laguna community (Elk Grove 2003).

City of Elk Grove General Plan

The City of Elk Grove General Plan is a broad framework for planning the future of Elk Grove. It is the official policy statement of the City Council to guide the private and public development of the City in a manner to gain the maximum social and economic benefit to the citizens.

The Elk Grove General Plan addresses a Planning Area outside the city limits in which the proposed SOIA Area is located. The Planning Area is larger than the proposed SOIA Area and represents the area that the City envisions may ultimately be included either in its Sphere of Influence or in the incorporated city limits (as shown on Figure 1 of the Elk Grove General Plan). While the City has no jurisdiction over the determination of land uses in the Planning Area, it can advise Sacramento County on land use policy within the Planning Area. While the Elk Grove General Plan provides a statement of the uses the City desires in the Planning Area, those statements are purely advisory.

The General Plan envisions the potential for converting agricultural land uses to urban land uses within the General Plan's Urban Study Areas located east of Grant Line Road and South of Kammerer Road. The majority of the proposed SOIA Area is located within the Elk Grove's General Plan Urban Study Areas (refer to Figure LU-2 of the Elk Grove General Plan).

South Sacramento Habitat Conservation Plan

The Draft South Sacramento Habitat Conservation Plan provides a regional approach to balancing development in concert with conservation and protection of habitat, open space, and agricultural lands. It protects 30 species of plants and wildlife, including 10 that are listed as threatened or endangered under the federal Endangered Species Act, the California Endangered Species Act, or both. The South Sacramento Habitat Conservation Plan also protects vernal pool, wetland, and stream habitats that are subject to the federal Clean Water Act and California's Porter-Cologne Water Quality Control Act. The South Sacramento Habitat Conservation Plan area lies between U.S. Highway 50 to the north, the Sacramento River levee and County Road J11 to the west, the Sacramento County line with El Dorado and Amador counties to the east, and the San Joaquin County line to the south, but it excludes the City of Sacramento, City of Folsom and its SOI area, lands of the Miwok tribe, and the community of Rancho Murrieta (County of Sacramento, et al. 2010).

3.10.4 - Methodology

Michael Brandman Associates (MBA) evaluated the potential for land use impacts through the review of applicable land use policy documents. MBA reviewed the Sacramento County General Plan, the Sacramento County Ordinance Code, the Stone Lakes National Wildlife Refuge Comprehensive Conservation Plan, the South Sacramento Habitat Conservation Plan, and the Sacramento Delta Land Use and Resource Plan to identify applicable policies and provisions that pertain to the proposed project.

3.10.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, land use impacts resulting from the implementation of the proposed project would be considered significant if the project would:

- a) Physically divide an established community;
- b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or,
- c) Conflict with any applicable habitat conservation plan or natural communities conservation plan.

Impacts related to the conversion of open space resources to urban uses are also analyzed in Impact LU-4.

3.10.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Division of an Established Community

Impact LU-1: **The project would not physically divide an established community.**

Impact Analysis

The proposed project would extend Elk Grove's SOI boundaries as shown on Exhibit 2-2. Several small communities are located adjacent or proximate to the proposed SOIA Area, including Bruceville, Old Town Franklin, Point Pleasant, Sheldon and Wilton (Refer to Exhibit 2-6). Bruceville and Point Pleasant are south of the proposed SOIA Area and would not be affected by the SOIA. Old Town Franklin is immediately adjacent to the City and would be completely included within the SOIA Area. Implementation of the SOIA would place Old Town Franklin into the City SOI but would not result in any actions that may divide the community. Wilton and Sheldon are located across the Cosumnes River, outside of the proposed SOIA Area, and would not be included in the proposed SOIA Area. As such, the SOIA is consistent with the LAFCo policy requiring that an SOIA shall not split neighborhoods or divide an existing identifiable community of interest and no impact would occur.

Level of Significance Before Mitigation

No impact.

Land Use

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

No impact.

Conflict with Applicable Plans, Policies, or Regulations

Impact LU-2:	The project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.
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Impact Analysis

The SOIA Area is included in the following regulatory land use documents:

- Sacramento County General Plan and Ordinance Code
- Sacramento County Elk Grove Community Plan and Laguna Community Plan
- LAFCo Policies, Standards, and Procedures Guidelines

General Plan Consistency Analysis

County of Sacramento

There are no proposed changes in land use or zoning within the proposed SOIA Area. The SOIA Area is located outside the Sacramento County General Plan's Urban Policy Area. The SOIA Area located south of Kammerer Road and west of SR-99 is outside of the County's Urban Service boundary. Land use designations and zoning are unchanged, and will remain consistent with the Sacramento County General Plan. Collaborative land use planning between the City of Elk Grove and Sacramento County for the SOIA Area may commence at an undetermined future time after the proposed SOI is established. Current land uses are anticipated to remain the same until such land planning occurs. As such, the proposed project would not change any existing land use or zoning designations and does not include the construction or development of any structures or infrastructure. Although there would be no direct physical impacts from the proposed project, it would result in the possibility of annexation and potential future development. Table 3.10-3 provides General Plan consistency determination with the County of Sacramento General Plan. Appendix D discusses other policies that were evaluated for consistency and would be more applicable once a definitive land use plan is proposed within the SOIA Area.

Table 3.10-3: Sacramento County General Plan Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
Land Use	LU-7	The County shall not approve land use projects which are for noncontiguous development, i.e. leapfrog.	Consistent: The proposed project is consistent with this policy, as future urbanization of the project area by the City of Elk Grove would require annexation and will be evaluated separately under CEQA for development patterns.
	LU-9	Specific plans may be prepared for subareas of an urban growth area for the purpose of prioritizing development opportunities. In such cases, the Plan shall have defensible boundaries and address development of all lands within them.	Consistent: The proposed project is consistent with this policy, as future urbanization of the project area will be evaluated separately under CEQA. Development patterns would be established through implementation of appropriate tools such as specific plans or master plans.
	LU-73	The County shall consult with state and federal regulatory and resource agencies during initial review of development projects to identify potential environmental conflicts and establish, if appropriate, concurrent application processing schedules.	Consistent: Any future development within the SOIA Area would comply with CEQA review that requires consultation with applicable regulatory agencies based on the type of development activity and impacts identified.
	LU-75	Except as permitted by LU-42, the County shall not accept applications to amend the General Plan Land Use Diagram from a designation in Column A to a designation in Column B for property located outside of the Urban Policy Area but within the Urban Service Boundary unless: <ul style="list-style-type: none"> • The property adjoins property designated for urban land uses and its shape and extent comprise a logical extension of infrastructure and services; and • There is clear evidence that infrastructure capacity and service availability exist or can be easily extended to the property; and 	Consistent: The proposed project does not include a General Plan Amendment application. Any future development would be subject to CEQA review and address any land use conflict with the County General Plan.

Table 3.10-3 (cont.): Sacramento County General Plan Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
		<p>The Board finds that the unincorporated area land supply within the Urban Policy Area contains an insufficient land supply to accommodate a 15 year supply of growth; or</p> <ul style="list-style-type: none"> The Board determines that the property represents a minor and logical extension of the Urban Policy Area for the purpose of preparation of a Specific Plan or other development request. 	
Circulation	CI-2	Sacramento County shall conduct land use and transportation planning with a regional perspective.	Consistent: The proposed project does not result in any new land use designations or uses that would impact regional transportation. No physical development is being proposed at this time and no project applications have been submitted. However, future development would be subject to CEQA review and address land use and transportation impacts with a regional perspective to the extent feasible.
	CI-7	Sacramento County shall support market-based incentives and disincentives that promote the use of transportation alternatives.	Consistent: Any future development within the SOIA Area would evaluate opportunities for alternate transportation.
Open Space	OS-1	Permanently protect, as open space, areas of natural resource value, including wetlands preserves, riparian corridors, woodlands, and floodplains.	Consistent: The proposed project is consistent with this policy, as no development is being proposed that would impact open space areas, areas of natural resource including wetlands preserves, riparian corridors, woodlands, and floodplains. Approximately 87 percent of the project area is outside the FEMA 100-year floodplain except for the portions of the western SOIA Area. Future urbanization of the project area by the City of Elk Grove would require annexation and will be evaluated separately under CEQA. Any floodplain issues would be addressed at that time.

Table 3.10-3 (cont.): Sacramento County General Plan Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
Safety	SA-1	The County shall require geotechnical reports and impose the appropriate mitigation measures for new development located in seismic and geologically sensitive areas.	Consistent: Future development of the SOIA Area would be subject to CEQA review and require preparation of geotechnical report to comply with applicable seismic code. Refer to Section 3.6, Geology and Soils for further discussion.
	SA-3	The County shall support efforts by Federal, State, and other local jurisdictions to investigate local seismic and geological hazards and support those programs that effectively mitigate these hazards.	Consistent: Future development of the SOIA Area would be subject to CEQA review and address impacts from geologic and seismic conditions. Refer to Section 3.6, Geology and Soils for further discussion.
	SA-5	A comprehensive drainage plan shall be prepared for urbanizing streams and their tributaries prior to any development within the 100-year floodplain defined by full watershed development without channel modifications. The plan shall: a. Determine the future 100-year flood elevations associated with planned and full development of the watershed; b. Determine the future 100-year floodplain boundaries for both flood elevations (planned and full development) based on minimum 2-foot contour intervals; c. Assess the feasibility of gravity drainage into the existing flowline of the stream; d. Assess the feasibility of alternative means of drainage into the stream; e. Identify potential locations for sedimentation ponds and other stormwater treatment facilities; f. Determine the minimum lowering of the stream bottom necessary and develop a channel design consistent with General Plan policies; g. Determine the location and extent of marsh, vernal pool and riparian habitat; and h. Develop measures for protecting and mitigating natural habitat.	Consistent: The proposed project is consistent with this policy. Future projects would be evaluated on a case-by-case basis pursuant to CEQA and address impacts within 100-year flood zone and require preparation of a drainage plan. Refer to Section 3.9, Hydrology and Water Quality for further discussion.

Table 3.10-3 (cont.): Sacramento County General Plan Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
		i. Develop measures to ensure vector abatement control. This policy is not applicable to downstream portions of urbanizing creeks identified as infill areas in Public Works Department policies for which the County does not intend to prepare master drainage plans.	
	SA-13	The County shall regulate, through zoning and other ordinances, land use and development in all areas subject to potential flooding and prohibit urban uses on unprotected flood land.	Consistent: The proposed project is consistent with this policy, as no development is being proposed that would impact open space areas, areas of natural resource value, including wetlands preserves, riparian corridors, woodlands, and floodplains. Approximately 87 percent of the proposed project area is outside the FEMA 100-year floodplain except for the portions of the western SOIA Area. Future urbanization of the project area by the City of Elk Grove would require annexation and will be evaluated separately under CEQA. Any floodplain issues would be addressed at that time.
Air Quality	AQ-4	Support AQMD's development of improved ambient air quality monitoring capabilities and the establishment of standards, thresholds and rules to more adequately address the air quality impacts of proposed project plans and proposals.	Consistent: The proposed project is consistent with this policy as any future development would be required to comply with AQMD's regulations and would be subject to CEQA review.
	AQ-5	Require the use of Best Available Control Technology (BACT) to reduce air pollution emissions.	Consistent: The proposed project is consistent with this policy as any future development would be subject to CEQA review and evaluate use of BACT to reduce air pollution.
	AQ-7	Support the use of demand management and pricing controls as near-term measures for attaining Air Quality Attainment Plan goals and policies.	Consistent: The proposed project is consistent with this policy, as any future development would be required to attain Air Quality Attainment Plan goals and policies.
	AQ-19	Identify the air quality impacts of development proposals to avoid	Consistent: The proposed project is consistent with this policy as any

Table 3.10-3 (cont.): Sacramento County General Plan Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
		significant adverse impacts and require appropriate mitigation measures or offset fees.	future development would be subject to CEQA review and evaluate air quality impacts.
	AQ-20	Submit development proposals to AQMD for review and comment in compliance with CEQA prior to consideration by the appropriate decision making body.	Consistent: The proposed project is consistent with this policy, as any future CEQA documents would be available to the Sacramento Metropolitan Air Quality Management District for review pursuant to CEQA.
	AQ-36	Coordinate air quality planning efforts with other local, regional, and state agencies.	Consistent: The proposed project is consistent with this policy, as any future CEQA documents would include discussion of air quality impacts that would result from the proposed project in coordination with other applicable agencies. Refer to Section 3.3, Air Quality for further discussion.
	AQ-38	A conformity analysis shall be conducted to assure that transportation plans, programs, and projects will not impair efforts to meet air quality standards.	Consistent: The proposed project is consistent with this policy, as any future CEQA documents would include discussion of air quality impacts that would result from the proposed project. Refer to Section 3.3, Air Quality for further discussion.
Public Facilities	PF-2	Municipal and industrial development within the Urban Service Boundary but outside of existing water purveyors' service areas shall be served by either annexation to an existing public agency providing water service or by creation or extension of a benefit zone of the SCWA.	Consistent: The proposed project is consistent with this policy as future urbanization and development within the SOIA Area may require service to be provided by the Sacramento County Water Agency. Refer to Section 3.16, Utilities and Service Systems for further discussion.
	PF-3	Public water agencies shall comply with General Plan policies prior to annexation of additional service areas.	Consistent: The proposed project is consistent with this policy as future urbanization and development within the SOIA Area may require service to be provided by the Sacramento County Water Agency. It is logical to assume that water agencies would comply with the applicable jurisdiction's general plan policies. Refer to Section 3.16, Utilities and Service Systems for further discussion.

Table 3.10-3 (cont.): Sacramento County General Plan Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
Hazardous Materials	HM-8	Continue the effort to prevent ground water and soil contamination.	Consistent: The proposed project is consistent with this policy as it acknowledges that future urbanization and development within the SOIA Area would be subject to local and federal regulations regarding leaking of hazardous materials and water and soil contamination. Refer to Section 3.8, Hazards and Hazardous Materials for further discussion.
	HM-9	Continue the effort to prevent surface water contamination.	Consistent: The proposed project is consistent with this policy as it acknowledges that future urbanization and development within the SOIA Area would be subject to local and federal regulations regarding leaking of hazardous materials and water contamination. Refer to Section 3.8, Hazards and Hazardous Materials for further discussion.
	HM-10	Reduce the occurrences of hazardous material accidents and the subsequent need for incident response by developing and implementing effective prevention strategies.	Consistent: The proposed project is consistent with this policy as it acknowledges that future urbanization and development within the SOIA Area would be subject to CEQA review and implement feasible measures to prevent accidents.
	HM-11	Protect residents and sensitive facilities from incidents which may occur during the transport of hazardous materials in the County.	Consistent: The proposed project is consistent with this policy as it acknowledges that future urbanization and development within the SOIA Area would be subject to local and federal regulations regarding hazardous materials. Refer to Section 3.8, Hazards and Hazardous Materials for further discussion.
	HM-12	Continue the effort through the Sacramento Metropolitan Air Quality Management District (AQMD) to inventory and reduce toxic air contaminants as emission standards are developed.	Consistent: The proposed project is consistent with this policy as any future development would be required to comply with AQMD's regulations and would be subject to CEQA review.
	HM-14	Support local enforcement of hazardous materials regulations.	Consistent: The proposed project is consistent with this policy as it acknowledges that future urbanization

Table 3.10-3 (cont.): Sacramento County General Plan Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
			and development within the SOIA Area would be subject to local and federal regulations regarding hazardous materials. Refer to Section 3.8, Hazards and Hazardous Materials for further discussion.
Agricultural	AG-1	The County shall protect prime farmlands and lands with intensive agricultural investments from urban encroachments.	Inconsistent: The proposed SOIA Area primarily consists of lands designated as Important Farmland. Approval of the proposed project in itself would not result in loss of farmland. However, it acknowledges that future urbanization would result in conversion of agricultural lands and constitutes a significant impact. Refer to Section 3.2, Agricultural Resources for further discussion.
	AG-5	Mitigate loss of prime farmlands or lands with intensive agricultural investments through CEQA requirements to provide in-kind protection of nearby farmland.	Inconsistent: The proposed project is inconsistent with this policy, as it could result in the loss of prime farmlands. Refer to Section 3.2, Agricultural Resources for further discussion.
	AG-19	County encourages the preservation of prime agricultural land as open space, including opposing any residential or commercial development for the Cosumnes River or Deer Creek riparian areas that are not compatible with agricultural use.	Inconsistent: The proposed project is inconsistent with this policy, as it could impact agricultural lands. Refer to Section 3.2, Agricultural Resources for further discussion.
Conservation	CO-1	Long range plans for accommodating population and economic growth shall not be based on the assumption of additional [water] supplies from future storage facilities on the Sacramento, American or Cosumnes River unless the projects are approved and funding secured.	Consistent: The proposed project is consistent with this policy as it acknowledges that City of Elk Grove in collaboration with County of Sacramento will begin comprehensive planning at an undetermined time pursuant to approval of the SOIA. No physical development is proposed at this time.
	CO-2	In new growth areas, until such time as the water plan being developed by the City-County Office of Metropolitan Water Planning (CCOMWP) provides for an alternative contracting authority, the Sacramento County Water Agency (SCWA) shall be the primary	Consistent: The proposed project is consistent with this policy as it acknowledges that the SOIA Area would likely be served by the Sacramento County Water Agency (SCWA). Refer to Section 3.16, Utilities and Service Systems for further discussion

Table 3.10-3 (cont.): Sacramento County General Plan Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
		contracting agency with the United States Bureau of Reclamation to obtain additional surface water for delivery to new growth areas in the unincorporated area, where the SCWA will be the purveyor.	
	CO-9	Community and specific plans shall specify urban runoff control strategies and requirements, consistent with Master Drainage Plans and Public Work's urban runoff management program, for development in newly urbanizing areas and identify sites where retention and treatment are warranted consistent with discharge permit requirement and county-wide runoff measures.	Consistent: Future development of the SOIA Area would be subject to CEQA review and address impacts from runoff. Refer to Section 3.9, Hydrology and Water Quality for further discussion.
	CO-26	Modify the yield estimates of ground water supply as supported by available data and, working in conjunction with area water purveyors, revise conjunctive use and other water supply policies as necessary during five-year General Plan updates.	Consistent: The City of Elk Grove has completed a Municipal Services Review to identify logical service providers for the proposed SOIA Area. Please note that all future development will be subject to CEQA to ensure that growth occurs in a logical manner and does not result in significant impacts.
	CO-27	Maintain agricultural zoning, and existing agricultural uses, in primary aquifer recharge areas identified as having a moderate to very high recharge capability (Figure 1). Rezone applications for categories other than agricultural within one quarter mile of ground water recharge capability boundaries shall supply hydrologic data pertinent to recharge capability before the rezoning application shall be considered complete.	Consistent: The proposed project is consistent with this policy, as it does not lie within an area of primary aquifer recharge. Refer to Section 3.2, Agricultural Resources for further discussion.
	CO-28	Discourage urban land uses in unincorporated areas with moderate to very high ground water recharge capability.	Consistent: The proposed project is consistent with this policy, as it does not lie within an area of primary aquifer recharge. Refer to Section 3.9, Hydrology and Water Quality for further discussion.

Table 3.10-3 (cont.): Sacramento County General Plan Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
	CO-29	Discourage any nonagricultural land use in unincorporated areas with moderate to very high ground water recharge capability which could allow the percolation of pollutants into the ground water table.	Consistent: The proposed project is consistent with this policy, as it does not lie within an area of primary aquifer recharge. Refer to Section 3.9, Hydrology and Water Quality for further discussion
	CO-33	Implement the “Memorandum of Understanding Regarding Urban Water Conservation in California” in those areas where the County provides water service. Encourage all urban water purveyors in Sacramento County to execute and implement the MOU.	Consistent: The proposed project acknowledges that SCWA would be the likely provider for the proposed SOIA Area. CEQA review for any future development would coordinate with the water agency and follow procedures as determined by the agency. Refer to Section 3.16, Public Utilities and Service Systems for further discussion
	CO-54	Direct development away from prime or statewide importance soils or otherwise provide for mitigation that slows the loss of additional farmland conversion to other uses.	Inconsistent: The proposed project could potentially result in conversion of prime or statewide farmland. Refer to Section 3.2, Agricultural Resources for further discussion.
	CO-55	Direct development away from prime or statewide importance soils or otherwise provide for mitigation that slows the loss of additional farmland conversion to other uses. Projects resulting in the conversion of more than fifty (50) acres of prime or statewide in importance farmland shall be deemed to have a significant environmental effect, as defined by CEQA.	Consistent: The proposed project acknowledges that future urbanization may result in conversion of agricultural lands and constitutes a significant impact. Refer to Section 3.2, Agricultural Resources for further discussion.
	CO-60	Marshland and riparian areas of special significance shall be designated as natural preserves on the General Plan.	Consistent: The proposed SOIA Area is not identified as marshland or natural preserve on the County General Plan. Future development would address project specific impacts on biological resources and implement mitigation measures pursuant to CEQA.
	CO-63	Community Plans and specific plans shall include a complete inventory of seasonal and permanent marshland, riparian habitat, and riparian woodland.	Consistent: The proposed project is consistent with this policy and acknowledges that future development would address project specific impacts on biological resources. Refer to Section 3.4, Biological Resources for further discussion.

Table 3.10-3 (cont.): Sacramento County General Plan Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
	CO-66	Encroachments within the designated floodway of Sacramento waterways shall be consistent with policies to protect marsh and riparian areas.	Consistent: The proposed project is consistent with this policy and acknowledges that future development would address project specific impacts on marsh and riparian areas within waterways. Refer to Section 3.4, Biological Resources for further discussion.
	CO-69	Review projects for potential to restore marsh/riparian woodlands, considering effects on vernal pools, ground water, flooding, and proposed fill or removal of marsh and riparian habitat.	Consistent: The proposed project is consistent with this policy and acknowledges that future development would address project specific impacts on biological resources. Refer to Section 3.4, Biological Resources for further discussion.
	CO-70	Public or private projects involving filling or removal of marsh/riparian habitat shall be mitigated outside of natural preserves where onsite mitigation is not desirable or appropriate shall be mitigated through the purchase of mitigation credits for restored wetlands/riparian areas at no net loss.	Consistent: Future development would be subject to CEQA review and address project specific impacts on wetlands. Refer to Section 3.4, Biological Resources for further discussion.
	CO-82	Establish criteria and guidelines addressing the need for siting and management of natural preserves. At a minimum, the following should be considered: <ul style="list-style-type: none"> • Resource(s) to be lost, restored and/or replaced, functional values, • Mitigation alternatives, including mitigation banks. 	Consistent: The proposed project is consistent with this policy and acknowledges that future development would address project specific impacts on biological resources and implement mitigation measures pursuant to CEQA. Refer to Section 3.4, Biological Resources for further discussion.
	CO-102	The County will provide information to applicants with projects in potential wetland areas and provide coordination assistance with the Army Corps of Engineers in order to facilitate the development review and Section 404 permit review processes.	Consistent: Based on National Wetlands Inventory Maps, wetlands are identified in the proposed SOIA Area. The proposed project is consistent with this policy and acknowledges that future development would address project specific impacts on wetlands. Refer to Section 3.4, Biological Resources for further discussion.

Table 3.10-3 (cont.): Sacramento County General Plan Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
	CO-103	Allow no fill in the 100-year floodplain as delineated by currently effective FEMA Flood Insurance Rate Maps or subsequent comprehensive drainage plans adopted by the County unless the fill would cause no increase in flood surface elevation; in the absence of a floodway master plan the resulting floodplain would not be less than 600 feet in width or actual width of the floodplain, whichever is less, except at road crossings; depth of fill would not exceed two feet, except as may be specified for drainage swales in a comprehensive drainage plan; the proposed fill area is not necessary to serve as a detention basin for stormwater runoff; and no wetlands as defined by the U.S. Army Corps of Engineers exist within the proposed fill area.	Consistent: Approximately 13 percent of the SOIA Area lies within FEMA 100-year floodplain. Future development of the SOIA Area would be subject to CEQA to ensure that impacts due to flooding are not significant.
	CO-147	Identify suitable habitat for threatened and endangered species through the Community and Specific Plan process.	Consistent: The proposed project is consistent with this policy and acknowledges that future development would address project specific impacts on sensitive species pursuant to CEQA. Refer to Section 3.4, Biological Resources for further discussion.
	CO-148	Habitat conservation plans shall be adopted by the county for any listed species that are year-round inhabitants of the county, are subject to significant cumulative impacts from development, and are not otherwise adequately protected by designated systems of riparian corridors, vernal pool and wetland preserves and mitigation banks, or other nature preserves or wildlife refuges.	Consistent: The proposed project is consistent with this policy and future developments would comply with the South Sacramento Habitat Conservation Plan (SSHCP), once adopted, or other applicable documentation as feasible. Please note that the South Sacramento Habitat Conservation Plan (SSHCP) is in the process of development and environmental review and has not been adopted as of this writing.
	CO-156	Refer projects with identified archeological and cultural resources to the Cultural Resources Committee to determine significance of resource and recommend appropriate means of protection and mitigation. The	Consistent: The proposed project is consistent with this policy and acknowledges that future development activities would implement procedures to protect archaeological and cultural resources

Table 3.10-3 (cont.): Sacramento County General Plan Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
		Committee shall coordinate with the Native American Heritage Commission in developing recommendations.	pursuant to CEQA. Refer to Section 3.5, Cultural Resources for further discussion.
	CO-157	Significant archaeologic, prehistoric, or historic sites shall be protected as open space for potential future excavation.	Consistent: The proposed project is consistent with this policy and acknowledges that future development activities would implement procedures to protect archaeological and cultural resources pursuant to CEQA. Refer to Section 3.5, Cultural Resources for further discussion.
	CO-158	Native American burial sites encountered during preapproved survey or during construction shall, whenever possible, remain in situ. Excavation and reburial shall occur when in situ preservation is not possible or when the archaeologic significance of the site merits excavation and recording procedure. Onsite reinterment shall have priority. The project developer shall provide the burden of proof that off site reinterment is the only feasible alternative. Reinterment shall be the responsibility of local tribal representatives.	Consistent: The proposed project is consistent with this policy and acknowledges that future development activities would implement procedures to protect native burial sites pursuant to CEQA. Refer to Section 3.5, Cultural Resources for further discussion.
	CO-161	As a condition of approval of discretionary permits, a procedure shall be included to cover the potential discovery of archaeological resources during development or construction.	Consistent: The proposed project is consistent with this policy and acknowledges that future development activities would implement procedures to protect archaeological and cultural resources pursuant to CEQA. Refer to Section 3.5, Cultural Resources for further discussion.
	CO-162	As a condition of approval for discretionary projects which are in areas of cultural resource sensitivity, the following procedure shall be included to cover the potential discovery of archeological resource during development or construction: Should any cultural resources, such as structural features, unusual	Consistent: The proposed project is consistent with this policy and acknowledges that future development activities would implement procedures to protect archaeological and cultural resources pursuant to CEQA. Refer to Section 3.5, Cultural Resources for further discussion.

Table 3.10-3 (cont.): Sacramento County General Plan Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
		<p>amounts of bone or shell, artifacts, human remains, or architectural remains be encountered during any development activities, work shall be suspended and the Sacramento County Department of Environmental Review and Assessment shall be immediately notified.</p> <p>At that time, the Department of Environmental Review and Assessment will coordinate any necessary investigation of the site with appropriate specialists, as needed. The project proponent shall be required to implement any mitigation deemed necessary for the protection of the cultural resources. In addition, pursuant to Section 5097.98 of the State Public Resources Code and Section 7050.5 of the State Health and Safety Code, in the event of the discovery of human remains, all work is to stop and the County Coroner shall be immediately notified. If the remains are determined to be Native American, guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains.</p>	
Source: Sacramento County General Plan, 1993.			

Elk Grove General Plan

The City's General Plan designates portions of the proposed SOIA Area as Urban Study Areas (refer to Figure LU-2 of the Elk Grove General Plan). The Urban Study Area designation envisions those areas in which future growth, to some extent, could occur. The General Plan does not identify a formal land use plan for these areas but lays out policies to guide the study of future development in cooperation with the public and other agencies and parties. No specific land use designation or pre-zoning are proposed or required at this point. No pre-zoning is associated with this proposed SOI Amendment. Pre-zoning is required prior to annexation of the area. There are no changes proposed to existing land uses for the SOI Area. Land uses will remain consistent with the County's land use designations. Future studies would determine the extent to which anticipated future growth should

occur and in what form growth should be permitted, including any proposed land uses. Comprehensive land use planning for the area may commence after the SOI is amended. Current land uses are anticipated to remain the same until such land planning occurs, and a pre-zoning and annexation application may be approved.

The land use assumptions discussed in Section 2, Project Description indicate that future urbanization of the project area would result in urban land uses that do not conform to agricultural land use designations. Table 3.10-4 provides a General Plan consistency determination with the City of Elk Grove General Plan. Appendix D discusses other policies that were evaluated for consistency and would be more applicable once a definitive land use plan is proposed within the SOIA Area.

Table 3.10-4: City of Elk Grove General Plan Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
Circulation	CI-1	Circulation planning for all modes of travel (vehicle, transit, bicycle, pedestrian, etc.) shall be coordinated with efforts to reduce air pollution.	Consistent: The proposed project is consistent with this policy as any future city development within the proposed SOIA Area would be subject to an independent CEQA review and analysis of alternative modes of transportation.
	CI-4	Specific Plans, Special Planning Areas, and development projects shall be designed to promote pedestrian movement through direct, safe, and pleasant routes that connect destinations inside and outside the plan or project area.	Consistent: The proposed project is consistent with this policy as any future city development within the proposed SOIA Area would be subject to an independent CEQA review and address pedestrian connectivity.
	CI-8	The City shall encourage the extension of bus rapid transit and/or light rail service to the planned office and retail areas north of Kammerer Road and west of Hwy 99.	Likely Consistent: The proposed project is likely consistent with this policy as any future development within the proposed SOIA Area would be subject to an independent CEQA review and annexation process and address availability of public transit. Future projects would coordinate with City of Elk Grove transit agency (e-tran) as feasible.
	CI-13	The City shall require that all roadways and intersections in Elk Grove operate at a minimum Level of Service "D" at all times.	Likely Consistent: The proposed project is likely consistent with this policy. Any future development within the proposed SOIA Area would be subject to an independent CEQA review and will be required to prepare a traffic impact analysis that would address Level of Service.

Table 3.10-4 (cont.): City of Elk Grove General Plan Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
	CI-15	Development projects shall be required to provide funding or to construct roadway/intersection improvements to implement the City's Circulation Master Plan. The payment of established traffic impact or similar fees shall be considered to provide compliance with the requirements of this policy with regard to those facilities included in the fee program, provided that the City finds that the fee adequately funds all required roadway and intersection improvements. If payment of established fees is used to provide compliance with this policy, the City may also require the payment of additional fees if necessary to cover the fair share cost of facilities not included in the fee program.	Consistent: The proposed project is consistent with this policy. Any future development within the proposed SOIA Area would be subject to an independent CEQA review and mitigate impacts through payment of impact fees in accordance with the City's "impact fee ordinance."
Conservation and Air Quality Element	CAQ-2	The loss of agricultural productivity on lands designated for urban uses within the city limits as of January 2004 is accepted as a consequence of the development of Elk Grove. As discussed in the Land Use Element, the City's land use concept for the Planning Area outside the 2004 city limits anticipates the retention of significant areas of agricultural production outside the current city limits.	Consistent: The proposed project is consistent with this policy. The City of Elk Grove would begin comprehensive planning of the SOIA Area at an undetermined future time, and expansion of Sphere of Influence is a logical step towards that goal.
	CAQ-3	The City of Elk Grove considers the only mitigation for the loss of agricultural land to consist of the creation of new agricultural land in the Sacramento region equal in area, productivity, and other characteristics to the area that would be lost due to development. The protection of existing agricultural land through the purchase of fee title or easements is not considered by the City to provide mitigation, since programs of this type result in a net loss of farmland.	Likely Consistent: The proposed project is likely consistent with this policy, based upon implementation of Mitigation Measure AG-1. Refer to Section 3.2, Agricultural Resources for further discussion.

Table 3.10-4 (cont.): City of Elk Grove General Plan Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
	CAQ-9	Wetlands, vernal pools, marshland and riparian (streamside) areas are considered to be 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, re-vegetation and restoration onsite or creation of riparian habitat corridors.	Consistent: The proposed project is consistent with this policy and acknowledges that future development would prepare project specific biological resources analysis that would address project specific impacts and mitigation on wetlands and riparian areas. Refer to Section 3.4, Biological Resources for further discussion.
	CAQ-10	Consider the adoption of habitat conservation plans for rare, threatened, or endangered species.	Consistent: The proposed project is consistent with this policy and future developments would comply with the Draft South Sacramento Habitat Conservation Plan (SSHCP) as feasible. Please note that the South Sacramento Habitat Conservation Plan (SSHCP) is in the process of development and environmental review and has not been adopted as of this writing.
	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 occurring based on City biological resource mapping and data provided in the General Plan EIR or other technical material that 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, endangered, or otherwise protected under local, state, and/or federal policies, regulations or laws.	Consistent: The proposed project is consistent with this policy and acknowledges that future development would address project specific impacts on biological resources. Refer to Section 3.4, Biological Resources for further discussion.
	CAQ-12	The City shall seek to ensure that the quality of groundwater and surface water is protected to the extent possible.	Consistent: The proposed project is consistent with this policy. Future development would be subject to its own CEQA review and would address water quality. Refer to Section 3.9, Hydrology and Water Quality for further discussion.

Table 3.10-4 (cont.): City of Elk Grove General Plan Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
	CAQ-13	Implement the City's NPDES permit through the review and approval of development projects and other activities regulated by the permit.	Consistent: The proposed project is consistent with this policy. Future development would be subject to its own CEQA review and project activities would implement the City's NPDES permit when feasible. Refer to Section 3.9, Hydrology and Water Quality for further discussion.
	CAQ-14	The city shall seek to minimize the amount of impervious surfaces and directly connected impervious surfaces in areas of new development and redevelopment and use onsite infiltration of runoff in areas with appropriate soils where the infiltration of storm water would not pose a potential threat to groundwater quality.	Consistent: The proposed project is consistent with this policy. Future development would be subject to its own CEQA review and would address water quality. Refer to Section 3.9, Hydrology and Water Quality for further discussion.
	CAQ-20	Fill may not be placed in any 100-year floodplain as delineated by currently effective FEMA Flood Insurance Rate Maps or subsequent comprehensive drainage plans unless specifically approved by the City. No fill shall be permitted in wetland areas unless approved by the City and appropriate state and federal agencies.	Consistent: The proposed project is consistent with this policy. Future projects would be evaluated on a case-by-case basis pursuant to CEQA and address impacts within 100-year flood zone. Refer to Section 3.9, Hydrology and Water Quality for further discussion.
	CAQ-26	It is the policy of the City of Elk Grove to minimize air pollutant emissions from all City facilities and operations to the extent feasible and consistent with the City's need to provide a high level of public service.	Consistent: The proposed project is consistent with this policy. Future projects would be evaluated on a case-by-case basis pursuant to CEQA and address air quality impacts. Refer to Section 3.3, Air Quality for further discussion.
	CAQ-30	All new development projects which have the potential to result in substantial air quality impacts shall incorporate design, construction, and/or operational features to result in a reduction in emissions equal to 15 percent compared to an "unmitigated baseline" project. An "unmitigated baseline project" is a development project which is built and/or operated without the implementation of trip-reduction, energy conservation, or	Consistent: The proposed project is consistent with this policy. Future projects would be evaluated on a case-by-case basis pursuant to CEQA and address air quality impacts. Refer to Section 3.3, Air Quality for further discussion.

Table 3.10-4 (cont.): City of Elk Grove General Plan Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
		similar features, including any such features which may be required by the Zoning Code or other applicable codes.	
	CAQ-32	As part of the environmental review of projects, the City shall identify the air quality impacts of development proposals to avoid significant adverse impacts and require appropriate mitigation measures, potentially including—in the case of projects which may conflict with applicable air quality plans—emission reductions in addition to those required by Policy CAQ-30.	Consistent: The proposed project is consistent with this policy. Future projects would be evaluated on a case-by-case basis pursuant to CEQA and address air quality impacts. Refer to Section 3.3, Air Quality for further discussion.
Historic Resources Element	HR-1	Encourage the preservation and enhancement of existing historical and archaeological resources in the City.	Consistent: The proposed project is consistent with this policy and acknowledges that future development activities would implement mitigation measures to protect archaeological and cultural resources pursuant to CEQA. Refer to Section 3.5, Cultural Resources for further discussion.
	HR-3	Encourage restoration, renovation, and/or rehabilitation of all historic structures.	Consistent: The proposed project is consistent with this policy and acknowledges that future development activities would implement mitigation measures to protect historic resources pursuant to CEQA. Refer to Section 3.5, Cultural Resources for further discussion.
	HR-6	Protect and preserve prehistoric and historic archaeological resources throughout the City.	Consistent: The proposed project is consistent with this policy and acknowledges that future development activities would implement mitigation measures to protect archaeological and cultural resources pursuant to CEQA. Refer to Section 3.5, Cultural Resources for further discussion.
Housing	H-1	Maintain an adequate supply of appropriately zoned land with available or planned public services and infrastructure to accommodate the City's projected housing needs for all income levels and for special needs groups. The acreage of	Consistent: The proposed project is consistent with this policy. The City of Elk Grove would begin comprehensive planning of the SOIA Area at an undetermined future time and expansion of Sphere of Influence is a logical step towards that.

Table 3.10-4 (cont.): City of Elk Grove General Plan Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
		appropriately zoned land needed to meet housing needs will be updated annually, based on construction of housing units (tallied by income group and special needs group) and loss of sites through rezoning, in accordance with Action 10	
	H-17	Review the Housing Element to determine the appropriateness of the document to current conditions.	Consistent: The City of Elk Grove would review its Housing Element pursuant to Government Code (Sections 65580-65590).
Land Use	LU-1	The City of Elk Grove recognizes the value of using the City's land use authority to regulate the use of land within the city, the uses which can take place upon lands in Elk Grove, the arrangement of public and private buildings, and the design of public and private development in order to create an attractive, vibrant community which fulfills the goals expressed in this General Plan.	Consistent: The proposed project is consistent with this policy as it acknowledges that City of Elk Grove in collaboration with County of Sacramento may begin comprehensive land use planning at an undetermined time pursuant to approval of the SOIA.
	LU-2	The City's Land Use Policy Map (figure LU-1) illustrates the planned land uses for lands within Elk Grove and the Planning Area outside the city limits. The following land use categories and definitions shall be used in the assignment of zoning categories and in the review of proposed projects. (Note: The "Former GP Designation" reflects the land use designation[s] from the previous General Plan which most closely correspond to the designations used in this General Plan. This is provided for informational purposes only.)	Consistent: The proposed SOIA Area lies within the City of Elk Grove's planning area. City of Elk Grove in collaboration with County of Sacramento may begin comprehensive planning at an undetermined time pursuant to approval of the SOIA. Any land use designations would be assigned at that time and are anticipated to be consistent with the City's General Plan.
	LU-3	The following table illustrates the Zoning Districts, which implement the land use categories shown on the Land Use Policy Map of this General Plan.	Consistent: City of Elk Grove in collaboration with County of Sacramento may begin comprehensive planning at an undetermined time pursuant to approval of the SOIA. Any rezoning designation consistent with the proposed land use designations would be assigned at that time.

Table 3.10-4 (cont.): City of Elk Grove General Plan Consistency Analysis

Element	Policy		Consistency Determination																																				
	No.	Text																																					
		<table><tr><th>Land Use Category</th><th>Zoning Districts</th></tr><tr><td>Commercial</td><td>AC, LC, GC, SC, TC</td></tr><tr><td>Office</td><td>BP, MP</td></tr><tr><td>Office/Multi-Family</td><td>BP, MP, (MF) overlay</td></tr><tr><td>Commercial/Office</td><td>AC, LC, GC, SC, TC, C-O, BP, MP</td></tr><tr><td>Commercial/Office/Multi-Family</td><td>AC, LC, GC, SC, TC C-O, BP, MP, (MF) overlay</td></tr><tr><td>Light Industry</td><td>MP, M1</td></tr><tr><td>Heavy Industry</td><td>M2</td></tr><tr><td>Public and Quasi-Public</td><td>Any zoning district</td></tr><tr><td>Public Schools</td><td>Any agricultural, residential, or office zoning district; LC and C-O zoning districts</td></tr><tr><td>Public Parks</td><td>Any agricultural or residential zoning districts; O zoning district, LC, GC and C-O zoning Districts</td></tr><tr><td>Public and Private Open Space/ Recreation</td><td>O zoning district; any agricultural and residential zoning district; C-O zoning district</td></tr><tr><td>Institutional</td><td>AG-20 and AG-80 zoning districts; any residential zoning district; MP, BP, and M-1 zoning districts</td></tr><tr><td>Rural Residential</td><td>AR-10, AR-5, AR-2</td></tr><tr><td>Estate Residential</td><td>AR-1, RD-1, RD-2, RD-3, RD-4</td></tr><tr><td>Low Density Residential</td><td>RD-4, RD-5, RD-6, RD-7</td></tr><tr><td>Medium Density Residential</td><td>RD-10, RD-15</td></tr><tr><td>High Density</td><td>RD-20, RD-25, RD-30</td></tr></table>	Land Use Category	Zoning Districts	Commercial	AC, LC, GC, SC, TC	Office	BP, MP	Office/Multi-Family	BP, MP, (MF) overlay	Commercial/Office	AC, LC, GC, SC, TC, C-O, BP, MP	Commercial/Office/Multi-Family	AC, LC, GC, SC, TC C-O, BP, MP, (MF) overlay	Light Industry	MP, M1	Heavy Industry	M2	Public and Quasi-Public	Any zoning district	Public Schools	Any agricultural, residential, or office zoning district; LC and C-O zoning districts	Public Parks	Any agricultural or residential zoning districts; O zoning district, LC, GC and C-O zoning Districts	Public and Private Open Space/ Recreation	O zoning district; any agricultural and residential zoning district; C-O zoning district	Institutional	AG-20 and AG-80 zoning districts; any residential zoning district; MP, BP, and M-1 zoning districts	Rural Residential	AR-10, AR-5, AR-2	Estate Residential	AR-1, RD-1, RD-2, RD-3, RD-4	Low Density Residential	RD-4, RD-5, RD-6, RD-7	Medium Density Residential	RD-10, RD-15	High Density	RD-20, RD-25, RD-30	
	Land Use Category	Zoning Districts																																					
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Table 3.10-4 (cont.): City of Elk Grove General Plan Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
		Residential	
		Rural Agriculture	
		General Agriculture	
		Urban study area	
		Private Streets	
		Transit Oriented Development (TOD)	
		The "O" (Recreation) zone is a consistent zoning district in all land use categories.	
	LU-4	All land use approvals, including, but not limited to: <ul style="list-style-type: none"> • Zoning, • Planning documents (such as Specific • Plans and Special Planning Areas), • Tentative Maps, • Conditional Use Permits, • Etc., shall be required to conform with the General Plan.	Consistent: City of Elk Grove in collaboration with County of Sacramento may begin comprehensive planning at an undetermined time pursuant to approval of the SOIA. Any proposed development would be required to demonstrate consistency with the General Plan.
	LU-10	The City should seek to designate sufficient land in all employment-generating categories to provide a minimum 1:1 correspondence between Elk Grove's working population and jobs in categories matching their employment level.	Consistent: The SOIA Area is envisioned to accommodate future growth and assist the City in achieving a jobs-to-housing balance.
	LU-12	The Land Use Policy Map for the Planning Area (Figure LU-2) provides conceptual land use policy for the area outside the current incorporated boundaries of Elk Grove. This policy is intended as a statement of the City's long-term vision for this area; these lands remain under the jurisdiction of Sacramento County. Except where	Consistent: No land use policies or designations are proposed in conjunction with the SOIA application. The SOIA Area conforms to Sacramento County General Plan land use designations.

Table 3.10-4 (cont.): City of Elk Grove General Plan Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
		specifically indicated, the City's land use policy for areas outside the city limits reflects the County of Sacramento's land use policy as it existed on December 31, 2002.	
	LU-13	The City will work with the Sacramento Local Agency Formation Commission to establish and update a Sphere of Influence, which reflects the City's near-term goals for potential additions to the corporate boundaries.	Consistent: The proposed SOIA is consistent, because the City of Elk Grove will coordinate with LAFCO consistent with Policy LU-13.
	LU-14	<p>The City shall apply the following policies to potential annexations: Annexations should conform to an orderly expansion of city boundaries within planned urban growth areas and provide for a contiguous development pattern. Annexations should include a comprehensive land use plan for the affected territory, including Pre-zoning and a plan for infrastructure financing and phasing. Annexations should:</p> <ul style="list-style-type: none"> • Constitute fiscally sound additions to the existing City. • Be consistent with State law and Local Agency Formation Commission policies, standards and criteria • Preserve neighborhood identities. • Ensure the provision of adequate municipal services. • Be consistent with General Plan and Community Plan land use policies. • Incorporate Smart Growth criteria for sustainable economic growth while maintaining environmental integrity, and providing for social equity. • Promote fiscally sound, efficient service boundaries. 	Consistent: Future development of the SOIA Area would require annexation by the City of Elk Grove and include comprehensive land use planning. Please note that all these activities will be subject to CEQA to ensure that growth occurs in a logical manner and does not result in significant impacts.

Table 3.10-4 (cont.): City of Elk Grove General Plan Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
	LU-15	The City shall encourage annexations initiated by landowner/residents, which are consistent with the City's policies.	Consistent. Multiple landowners are in support of the proposed SOIA and have requested to be included within the City's SOL.
	LU-16	<p>The areas designated in the Planning Area as "Urban Study Areas" are envisioned as areas in which urbanization to some extent could occur, generally in compliance with the following criteria:</p> <ul style="list-style-type: none"> • Development should be limited to areas outside of the 100-year flood-plain. • Development should take place in compliance with the goals and policies of this General Plan. • Any study of potential land uses in these areas should be accomplished in cooperation with the County of Sacramento, the Sacramento Local Agency Formation Commission, and other agencies and parties with ownership or jurisdiction of lands in and near the study area. • Any study of land uses in these areas should be accompanied by an environmental evaluation of the potential impacts of development. • Prior to the completion of land use studies, the City's policy is that County of Sacramento land use designations in effect as of December 31, 2002, are retained. 	Consistent: No city land use designations are proposed in conjunction with the SOIA application. The SOIA Area conforms to Sacramento County General Plan land use designations. Future city development of the SOIA Area would require annexation by the City of Elk Grove and includes comprehensive land use planning. Please note that all these activities will be subject to CEQA to ensure that growth occurs in a logical manner and does not result in significant impacts.
	LU-17	Implement a comprehensive and city-wide strategy for the preservation of open space, habitat and agriculture, both inside and outside the City's existing city limits.	Consistent: Future city development of the SOIA Area would require annexation by the City of Elk Grove and include comprehensive land use planning. Please note that all these activities will be subject to CEQA to ensure that growth occurs in a logical manner and does not result in significant impacts.

Table 3.10-4 (cont.): City of Elk Grove General Plan Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
Noise	NO-1	New development of the uses listed in Table NO-C shall conform with the noise levels contained in that Table. All indoor and outdoor areas shall be located, constructed, and/or shielded from noise sources in order to achieve compliance with the City's noise standards.	Consistent: Future city development of the SOIA Area would require annexation by the City of Elk Grove and include comprehensive land use planning. Please note that all these activities will be subject to CEQA to ensure that growth occurs in a logical manner and does not result in significant impacts.
	NO-3	Noise created by new proposed non-transportation noise sources shall be mitigated so as not to exceed the noise level standards of Table NO-A as measured immediately within the property line of lands designated for noise-sensitive uses.	Consistent: Future city development of the SOIA Area would require annexation by the City of Elk Grove and include comprehensive land use planning. Please note that all these activities will be subject to CEQA to ensure that growth occurs in a logical manner and does not result in significant impacts.
	NO-5	Noise created by the construction of new transportation noise sources (such as new roadways or new light rail service) shall be mitigated so as not to exceed the levels specified in Table NO-C at outdoor activity areas or interior spaces of existing noise-sensitive land uses. Please see Policy NO-6 for discussion of improvements to existing roadways.	Consistent: Future city development of the SOIA Area would require annexation by the City of Elk Grove and include comprehensive land use planning. Please note that all these activities will be subject to CEQA to ensure that growth occurs in a logical manner and does not result in significant impacts.
Parks Trail and Open Space	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.	Consistent: Future city development of the SOIA Area would require annexation by the City of Elk Grove and include comprehensive land use planning. Please note that all these activities will be subject to CEQA to ensure that growth occurs in a logical manner and does not result in significant impacts.
Public Facilities and Finance	PF-1	Except when prohibited by state law, the City shall require that sufficient capacity in all public services and facilities will be available on time to maintain desired service levels and avoid capacity shortages, traffic congestion, or other negative effects on safety and quality of life.	Consistent: Future city development of the SOIA Area would require annexation by the City of Elk Grove and include comprehensive land use planning. The City of Elk Grove has completed a Municipal Services Review to identify likely service providers for the proposed SOIA Area.

Table 3.10-4 (cont.): City of Elk Grove General Plan Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
	PF-2	The City shall coordinate with outside service agencies—including water and sewer providers, the Elk Grove Community Services District, and the Elk Grove Unified School District—during the review of plans and development projects.	Consistent: Future city development of the SOIA Area would require annexation by the City of Elk Grove and include comprehensive land use planning. The City of Elk Grove has completed a Municipal Services Review to identify likely service providers for the proposed SOIA Area. Please note that all future development will be subject to CEQA to ensure that growth occurs in a logical manner and does not result in significant impacts.
	PF-3	Water supply and delivery systems shall be available in time to meet the demand created by new development, or shall be assured through the use of bonds or other sureties to the City’s satisfaction.	Consistent: The Municipal Services Review identifies SCWA as the likely municipal water service provider for future growth in the SOIA Area. SCWA would need to plan for and extend infrastructure and services to fully serve the entire SOIA Area.
	PF-8	Sewage conveyance and treatment capacity shall be available in time to meet the demand created by new development, or shall be assured through the use of bonds or other sureties to the City’s satisfaction.	Consistent: The Municipal Services Review identifies the Sacramento Area Sewer District (SASD) and the Sacramento Regional County Sanitation District (SRCSD) as the most likely regional wastewater collection and treatment service providers for residents in the SOIA Area. The City of Elk Grove would need to annex the SOI Amendment area to the SASD and SRCSD service area in order to receive regional wastewater treatment services. Please note that all these activities will be subject to CEQA to ensure that growth occurs in a logical manner and does not result in significant impacts.
	PF-15	The City shall cooperate with the County of Sacramento in the planning and implementation of future library facilities and facility expansions in Elk Grove.	Consistent: Sacramento Public Library Authority (SPL) would provide service to the SOIA Area. Refer to Section 3.14, Public Services for further information.
	PF-19	Public facilities should be phased in a logical manner which avoids “leapfrog” development and	Consistent: The proposed project is consistent with this policy. The City of Elk Grove would begin

Table 3.10-4 (cont.): City of Elk Grove General Plan Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
		encourages the orderly development of roadways, water and sewer, and other public facilities. The City shall not provide public financing or assistance for projects that do not comply with the planned phasing of public facilities. Interim facilities may be used only if specifically approved by the City Council.	comprehensive planning of the SOIA Area at an undetermined future time.
	PF-21	New development shall fund its fair share portion of its impacts to all public facilities and infrastructure as provided for in state law.	Consistent: The proposed project is consistent with this policy. Any future city development within the proposed SOIA Area would be subject to an independent CEQA review and mitigate impacts through payment of impact fees in accordance with City's impact fee ordinance.
	PF-23	The City will coordinate with independent public service providers, including schools, parks and recreation, reclamation, water, transit, electric and other service districts, in developing financial and service planning strategies.	Consistent: The proposed project is consistent with this policy. The City of Elk Grove may comprehensively plan for urbanization of the SOIA Area at an undetermined future time and coordinate with appropriate agencies for provision of services.
Safety	SA-1	The City will seek to maintain acceptable levels of risk of injury, death, and property damage resulting from reasonably foreseeable safety hazards in Elk Grove.	Consistent: Future city development of the SOIA Area would require annexation by the City of Elk Grove and include comprehensive land use planning. Please note that all future development will be subject to CEQA to address safety concerns and ensure that growth does not result in significant impacts.
	SA-5	The City will cooperate with other local, regional, state, and federal agencies, and with rail carriers in an effort to secure the safety of all residents and businesses in Elk Grove.	Consistent: Future city development of the SOIA Area would require annexation by the City of Elk Grove and will be subject to CEQA to ensure that projects comply with applicable agencies' regulations.
	SA-11	Support continued coordination with the State Office of Emergency Services, the State Department of Toxic Substances Control, the State Highway Patrol, the Sacramento County Department of Environmental Health Services, the Elk Grove CSD Fire District, the	Consistent: Future city development of the SOIA Area would require annexation by the City of Elk Grove and include comprehensive land use planning. Please note that all future development will be subject to CEQA to ensure that projects comply with applicable regulatory measures.

Table 3.10-4 (cont.): City of Elk Grove General Plan Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
		Sheriff's Department, and other appropriate agencies in hazardous materials route planning and incident response.	
	SA-13	The City shall require that all new projects not result in new or increased flooding impacts on adjoining parcels on upstream and downstream areas.	Consistent: Future city development of the SOIA Area would require annexation by the City of Elk Grove and subject to CEQA review. This would ensure that projects would not result in significant impacts. Refer to Section 3.9, Hydrology and Water Quality for further discussion.
	SA-14	The City shall give priority to the designation of appropriate land uses in areas subject to flooding to reduce risks to life and property. Construction of new flood control projects shall have a lower priority, unless land use controls (such as limiting new development in flood-prone areas) is not sufficient to reduce hazards to life and property to acceptable levels.	Consistent: Future city development of the SOIA Area would require annexation by the City of Elk Grove and include comprehensive land use planning. Please note that all future development will be subject to CEQA to ensure that impacts are not significant.
	SA-15	Development shall not be permitted on land subject to flooding during a 100-year event, based on the most recent floodplain mapping prepared by the Federal Emergency Management Agency (FEMA) or updated mapping acceptable to the City of Elk Grove. Potential development in areas subject to flooding may be clustered onto portions of a site which are not subject to flooding, consistent with other policies of this General Plan.	Consistent: Approximately 13 percent of the SOIA Area lies within FEMA 100-year floodplain. Future development of the SOIA Area would be subject to CEQA to ensure that impacts due to flooding are not significant.
	SA-23	The City shall require all new urban development projects to incorporate runoff control measures to minimize peak flows of runoff and/or assist in financing or otherwise implementing Comprehensive Drainage Plans.	Consistent: Future city development of the SOIA Area would be subject to CEQA review and address impacts from runoff. Refer to Section 3.9, Hydrology and Water Quality for further discussion.
	SA-25	The City supports efforts by Federal, State, and other local jurisdictions to investigate local seismic and geological hazards and support those	Consistent: Future city development of the SOIA Area would be subject to CEQA review and comply with applicable seismic code, as required

Table 3.10-4 (cont.): City of Elk Grove General Plan Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
		programs that effectively mitigate these hazards.	by the recommended mitigation measures. Refer to Section 3.6, Geology and Soils for further discussion.
	SA-26	The City shall seek to ensure that new structures are protected from damage caused by geologic and/or soil conditions.	Consistent: Future city development of the SOIA Area would be subject to CEQA review and address impacts from geologic and seismic conditions, as required by the recommended mitigation measures. Refer to Section 3.6, Geology and Soils for further discussion.
	SA-32	Cooperate with the Elk Grove Community Services District (EGCSD) Fire Department to reduce fire hazards, assist in fire suppression, and promote fire safety in Elk Grove.	Consistent: The proposed project is consistent with this policy, as any future city development within the proposed SOIA Area would be subject to an independent CEQA review and annexation process and would be served by Elk Grove Community Services District (EGCSD) Fire Department.
Source: City of Elk Grove General Plan, 2003.			

Sacramento LAFCO Policies, Standards, and Procedures Guidelines

As outlined in the Elk Grove's SOIA Application (City of Elk Grove 2008 Application, rev. 2010), and shown in the analysis below, the proposed SOIA complies with LAFCo's specific policies and standards for amendments to an SOI with the exception of Policy IV.E.1 regarding the conversion of farmland to urban uses. As discussed in Section 3.2, Agricultural Resources, since approval of an SOIA by LAFCo indicates that the Commission has designated the revised SOIA Area for future urbanization, impacts related to permanent conversion of agricultural uses to urban uses would be potentially significant. Implementation of Mitigation Measure AG-1 would reduce the conversion of farmland, but impacts would remain significant and unavoidable.

As listed in Chapter 4, General Standards of the LAFCo Policies, Standards, and Procedures Manual, LAFCo will approve SOIA requests only if the proposal is consistent with the General Plan and applicable Specific Plans of the applicable planning jurisdiction. In this case, the applicable planning jurisdiction is the City of Elk Grove.

California Government Code Section 56668 sets forth criteria for evaluation of annexation projects. This statute establishes factors that LAFCo agencies must use in reviewing annexation proposals. Any future city urban development would require annexation by the City of Elk Grove and would be

subject to this statute and evaluated for consistency at that time. Table 3.10-5 provide consistency determination with the LAFCo policies.

Table 3.10-5: Sacramento LAFCo Policy Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
III. LAFCo General Policies	1	The LAFCo will encourage participation in its decision-making process. LAFCo will contact community members through community councils, give published notice, and, where LAFCo determines appropriate, give mailed notice to the owners of property within 500 feet of a project site.	Consistent: The proposed project is consistent with this policy, as the Draft EIR will be circulated for public review to interested public and private agencies pursuant to CEQA.
	2	The LAFCo will encourage communication on actions among the County, cities, and special districts.	Consistent: The proposed project is consistent with this policy. It acknowledges that future urbanization may occur under a draft Memorandum of Understanding between the County of Sacramento and the City of Elk Grove.
	4	The CEQA requires that LAFCo assess the environmental consequences of its actions and decisions, and take actions to avoid or minimize a project's adverse environmental impacts, if feasible, or approve a project despite significant effects because it finds overriding considerations exist. To comply with CEQA, the LAFCo will take one or more of the following actions: a. At its discretion, approve a project without changes if environmental impacts are insignificant; b. Require an applicant to modify a project; c. Establish mitigating measures as a condition of its approval of the proposal; d. Deny the proposal because of unacceptable adverse environmental impacts; e. Approve the project despite its significant effects by making findings of overriding concern.	Consistent: The Draft EIR is prepared pursuant to CEQA to analyze environmental impacts associated with the proposed project. Any future city development would require annexation by the City of Elk Grove and would be subject to LAFCo policies for annexation. All these regulatory procedures would ensure consistency with this policy.
	7	LAFCo will favorably consider those applications which improve the balance between jobs and housing.	Consistent: The SOIA Area is envisioned to accommodate future growth and assist City in achieving a job housing balance.

Table 3.10-5 (cont.): Sacramento LAFCo Policy Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
	B.3	For purposes of this standard, the proposal shall be deemed consistent if the proposed use is consistent with the applicable General Plan designation and text, the applicable General Plan is legally adequate and internally consistent and the anticipated types of services to be provided are appropriate to the land use designated for the area.	Consistent: Future city development of the SOIA Area would require annexation by the City of Elk Grove and include comprehensive land use planning and rezoning consistent with the City's General Plan.
	A.3	The LAFCo will require that any agency making a proposal for action through LAFCo must have an updated Master Service Element of its Spheres of Influence Plan. The LAFCo will approve a proposal only if the proposed service provider is the most efficient provider of services with an acceptable cost, as demonstrated in the provider's Master Service Element.	Consistent: The proposed project is consistent with this policy. The City of Elk Grove may begin comprehensive planning of the SOIA Area at an undetermined future time and expansion of the Sphere of Influence is a reasonable policy decision towards that goal. The City has prepared a Municipal Services Review that identifies logical service providers for the SOIA Area.
	B.1	LAFCo will approve changes of organization or reorganization only if the proposal is consistent with the General Plan and applicable Specific Plans of the applicable planning jurisdiction.	Consistent: Future city development of the SOIA Area would require annexation by the City of Elk Grove and include comprehensive land use planning and consistency with the City's General Plan.
	B.2	For purposes of the above policy, the applicable planning jurisdiction is as follows: a. For annexations to a city, the applicable jurisdiction is the city to which annexation is proposed; b. For applications for annexation to or detachment from a district all of whose territory lies within an adopted Sphere of Influence of a city, the General Plans of the city; c. For an application for annexation to a special district for lands outside an adopted city Sphere of Influence, the Sacramento County General Plan. d. For an application for annexation or detachment from a district whose territory lies in both the city and the unincorporated area of the county, the General Plan of	Consistent: Future city development of the SOIA Area would require annexation by the City of Elk Grove and include comprehensive land use planning and rezoning consistent with the City's General Plan.

Table 3.10-5 (cont.): Sacramento LAFCo Policy Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
		the city unless the project lies outside of the city's Sphere of Influence; and e. For applications for incorporations, this standard is inapplicable.	
	C.1	LAFCo will not accept as complete any application for a proposal unless it includes boundaries that are definite, certain, and fully described.	Consistent: The proposed project is consistent with this policy and includes areas south of Bilby Road, Kammerer Road, and Grant Line Road, extending south to Eschinger Road and Cosumnes River; east towards Cosumnes River and just past Freeman Road; and west towards I-5 and the Union Pacific Railroad tracks.
	C.3	The LAFCo will not approve applications with boundaries which: a. neighborhoods or divide an existing identifiable community, commercial district, or other areas having a social or economic identity; b. Result in islands, corridors or peninsulas of incorporated or unincorporated territory or otherwise cause or further the distortion of existing boundaries; c. Are drawn for the exclusive purpose of encompassing revenue-producing territories; d. Create areas for which it is difficult to provide services; or e. Split parcels.	Consistent: The proposed project is consistent with this policy. The proposed SOIA boundaries extend the existing City's SOI boundary's further east, west, and south and would not divide or create islands.
	D.1	LAFCo will approve a proposal for a change of organization or reorganization only if the Commission finds that the proposal is revenue neutral at the time the proposal comes before the Commission. A proposal is deemed revenue neutral if: a. The proposal ensures that the amount of revenue transferred from an agency or agencies currently providing services in the subject territory to the proposed service-providing agency equals	Consistent: Future city developments would be subject to CEQA and would be required to pay their fair share of development fee in accordance with City's impact fee ordinance.

Table 3.10-5 (cont.): Sacramento LAFCo Policy Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
		<p>the expense which the current service provider bears in providing the services to be transferred.</p> <p>b. In the event the expense to the current service provider exceeds the amount or revenue transferred, the current service provider and the new service providing agency agree to revenue transfer provisions to compensate for the imbalance. Such provisions may include, but are not limited to tax-sharing, lump-sum payments and payments over a fixed period of time.</p> <p>c. Where revenue neutrality is not possible because of the requirements of state law or these standards, LAFCo shall impose all feasible conditions available to reduce any revenue in balance or it may deny the proposal.</p> <p>d. property tax exchange agreement has been reached pursuant to the Revenue and Taxation Code by the agencies participating in the change of organization or reorganization as required by law.</p> <p>e. Appendix E of the LAFCo's policies and standards provides additional information related to the financial guidelines for evaluating incorporation proposals.</p>	
	E.1	<p>LAFCo will approve a change of organization or reorganization which will result in the conversion of prime agricultural land in open space use to other uses only if the Commission finds that the proposal will lead to the planned, orderly and efficient development of an area. For purposes of this standard, a proposal leads to the planned, orderly and efficient development of an area only if all of the following criteria are met:</p> <p>a. The land subject to the change of organization or reorganization is</p>	<p>Inconsistent: The proposed project is inconsistent with this policy, as it could result in the loss of prime farmlands. Refer to Section 3.2, Agricultural Resources for further discussion.</p>

Table 3.10-5 (cont.): Sacramento LAFCo Policy Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
		<p>contiguous to either lands developed with an urban use or lands which have received all discretionary approvals for urban development.</p> <p>b. The proposed development of the subject lands is consistent with the Spheres of Influence Plan, including the Master Services Element of the affected agency or agencies.</p> <p>c. Development of all or a substantial portion of the subject land is likely to occur within five years. In the case of very large developments, annexation should be phased whenever feasible. If the Commission finds phasing infeasible for the specific reasons, it may approve annexation if all or a substantial portion of the subject land is likely to develop within a reasonable period of time.</p> <p>d. Insufficient vacant non-prime lands exists within the applicable Spheres of Influence that are planned, accessible, and developable for the same general type of use.</p> <p>e. The proposal will have no significant adverse effect on the physical and economic integrity of other agricultural lands. In making this determination, LAFCo will consider the following factors:</p> <ul style="list-style-type: none"> • The agricultural significance of the subject and adjacent areas relative to other agricultural lands in the region. • The use of the subject and the adjacent areas. • Whether public facilities related to the proposal would be sized or situated so as to facilitate the conversion of adjacent or nearby agricultural land, or will be extended 	

Table 3.10-5 (cont.): Sacramento LAFCo Policy Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
		<p>through or adjacent to, any other agricultural lands which lie between the project site and existing facilities.</p> <ul style="list-style-type: none"> • Whether natural or man-made barriers serve to buffer adjacent or nearby agricultural land from the effects of the proposed development. • Applicable provisions of the General Plan open space and land use elements, applicable growth-management policies, or other statutory provisions designed to protect agriculture. 	
	F.1	<p>In general, LAFCo will function as a Lead Agency in situations where:</p> <ol style="list-style-type: none"> LAFCo is the first agency in time to act; The primary decision relates to a change of organization or reorganization or sphere of influence; The applicant agency is unable to act as the Lead Agency; or There are no underlying land use approvals involved. 	<p>Consistent: The proposed project is consistent with this policy as Sacramento LAFCo is the lead agency for the proposed project.</p>
	F.2	<p>The Executive Officer shall have the authority to prepare or cause to be prepared the appropriate environmental documentation. LAFCo will not act upon any proposal for a change of organization until environmental documentation has been completed which adequately addresses the requirements of CEQA. The Executive Officer of LAFCo shall serve as LAFCo's Environmental Coordinator and shall make an environmental determination per the requirements of CEQA.</p>	<p>Consistent: The Draft EIR is prepared in compliance with CEQA regulatory requirements. LAFCo is the lead agency and has the authority to approve, modify and approve, or deny the project.</p>

Table 3.10-5 (cont.): Sacramento LAFCo Policy Consistency Analysis

Element	Policy		Consistency Determination
	No.	Text	
	F.5	An EIR completed on a project subject LAFCo review shall contain a discussion of the following topics: a. County-wide or cumulative impacts which concern LAFCo. b. Where the EIR identifies significant effects, a description of the range of reasonable alternatives to the project, or to the location of the project, which could feasibly attain the basic objectives of the project. The range of alternatives to be considered shall include, at a minimum, the “no-action” alternative, alternative boundary locations, and a discussion of using other agencies to provide the facility or service proposed to be provided as a result of the proposed change of organization or reorganization.	Consistent: The proposed project is consistent with this policy. Refer to Section 4, Cumulative Effects and Section 5.0, Alternatives Analysis for further discussion.
Source: Sacramento LAFCo Policy, Standards and Procedures Manual.			

County of Sacramento Elk Grove Community Plan and Laguna Community Plan

The Elk Grove and Laguna Community plans were prepared by Sacramento County and, therefore, are consistent with the Sacramento County General Plan, and since the proposed project would maintain Sacramento County General Plan Land Use designations, the project would not conflict with applicable policies in either Community Plan. The Elk Grove General Plan Draft EIR considered the Elk Grove and Laguna Community plans in the land use and plan consistency analysis (Elk Grove 2003). The Elk Grove General Plan Draft EIR did not find that the Elk Grove General Plan or its planning area (in which the SOIA Area is located) was inconsistent with the Elk Grove or Laguna Community plans. Accordingly, the proposed SOIA would not be inconsistent with the Elk Grove or Laguna Community plans.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measure AG-1.

Level of Significance After Mitigation

Significant and unavoidable impact.

Conservation Plan Consistency

Impact LU-3:	The project would not conflict with any applicable habitat conservation plan or natural community conservation plan.
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Impact Analysis

The Stone Lakes National Wildlife Refuge Comprehensive Conservation Plan, Sacramento Delta Land Use and Resource Plan, and Draft South Sacramento Habitat Conservation Plan include areas within or adjacent to the proposed SOIA Area, as shown in Exhibit 3.10-3. Each plan is discussed below.

Stone Lakes National Wildlife Refuge

The proposed SOIA Area's western boundary is located directly adjacent to a portion of the Refuge's eastern boundary. The proposed SOIA boundaries have been delineated to avoid inclusion of areas that are a part of the Stone Lakes Natural Wildlife Refuge. As shown in Exhibit 3.10-2, the SOIA Area would not encroach onto the refuge boundaries. Moreover, the proposed project would not violate any of the Comprehensive Conservation Plan policies identified above. As such, the proposed project would not conflict with the refuge's Comprehensive Conservation Plan.

Sacramento Delta Land Use and Resource Plan

The Sacramento Delta Land Use and Resource Plan protects the Sacramento Delta's Primary Zone and expresses concern regarding the potential for urbanization and projects in the Secondary Zone to impact the Primary Zone. The eastern boundary of the Delta's Primary and Secondary Zones generally follow I-5 near the proposed SOIA Area. The SOIA Area is not located within the Primary or Secondary Zone of the Sacramento Delta. As such, the SOIA Area would not be in conflict with the Sacramento Delta Land Use and Resource Plan.

South Sacramento Habitat Conservation Plan (Draft)

The proposed SOIA Area is located completely within the South Sacramento Habitat Conservation Plan (SSHCP). The western and center portions of the SOIA Areas are located outside of the SSHCP's designated Urban Development Area, while the eastern SOIA Area is located within the Urban Development Area. The proposed SOIA Area has been included and considered in the HCP as shown in Figure 4-1 of the HCP. As shown in Figure 4-7 of the HCP, the SOIA Area does not include any areas protected by easement, fee title, policy, or mitigation bank. However, because portions of the SOIA Area are located outside of the SSHCP's designated Urban Development Area, the proposed project could potentially conflict with the South Sacramento HCP. Implementation of Mitigation Measure LU-3 would reduce potential impacts to special habitats and endangered species to a less than significant level.

In summary, the proposed SOIA, if approved, could result in future urbanization of the project site. Accordingly, this could result in potential conflicts with applicable habitat or natural community plans within the proposed SOIA Area. As discussed above, implementation of Mitigation Measure LU-3 would reduce such potential conflicts to a less than significant level.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM LU-3 At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall either demonstrate participation in the South Sacramento County Habitat Conservation Plan or provide mitigation consistent with the requirements of state and federal regulatory authorities regarding impacts to special habitats and endangered species. If the proposed SOIA project is inconsistent with the South Sacramento County Habitat Conservation Plan, the City shall seek to have the Plan amended. The City shall continue to mitigate impacts on special habitats and endangered species in consultation with applicable federal and state agencies prior to adoption of the South Sacramento County Habitat Conservation Plan.

Level of Significance After Mitigation

Less than significant impact.

Open Space Resources Conversion

Impact LU-4: The project would convert open space resources to urban uses.

Impact Analysis

This impact will evaluate the potential for the proposed project to convert open space resources to urban uses.

The proposed SOIA would expand the City's SOI boundary to include open space resources including 78 acres of lands classified as natural preserve. The land use assumptions discussed in Section 2.0, Project Description, consider the SOIA Area to be potentially developed with urban uses that would result in the preservation of 987 acres of open space. However, the proposed project by itself precludes direct development proposals or proposed changes to General Plan land use designations or zoning classifications that would have the potential to convert open space resources; therefore, direct conversion of open space resources would not occur. Since approval of an SOIA by LAFCo indicates that the Commission has designated the revised SOIA Area for future urbanization, impacts related to permanent conversion of open space uses to urban uses would be potentially significant. Implementation of Mitigation Measure AG-1 would reduce the conversion of open space resources, but impacts would remain significant and unavoidable.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measure AG-1.

Level of Significance After Mitigation

Significant and unavoidable impact.

3.11 - Mineral Resources

3.11.1 - Introduction

This section describes and evaluates potential environmental impacts to mineral resources resulting from the proposed City of Elk Grove Sphere of Influence Amendment (SOIA). The Notice of Preparation identified the Mineral Resources topical issue for evaluation (Sacramento Local Agency Formation Commission 2010).

Mineral resources in Sacramento County include natural gas, petroleum, sand, gravel, clay, gold, silver, peat, topsoil, and lignite. Only aggregates (that is, sand and gravel) and natural gas are in production.

3.11.2 - Environmental Setting

The project site primarily contains agricultural uses with rural housing, light industrial, commercial, and public facilities. There are no mineral resource extraction activities within the project site or close to the site.

Sacramento County's primary remaining aggregate deposits are located in the Old American River channel south of Rancho Cordova. Additional Portland cement concrete (PCC) grade aggregate exists in the floodplain and channel of Cosumnes River. State Geologists indicated that the quality of aggregates is mined along with topsoil at Wilton Road, and aggregate producers have purchased at least one tract in the Cosumnes flood plain. All of the sand and gravel mined in Sacramento County is used for construction. Three major and several smaller aggregate producers are located in Sacramento County, with the larger producers located in the central portion of the County. Clay is surface-mined in at least two locations and topsoil from one location on the Cosumnes River. The natural gas production areas are primarily located the Delta's Rio Vista Field southwest of the project site.

3.11.3 - Regulatory Setting

State

Surface Mining and Reclamation Act

The Surface Mining and Reclamation Act of 1975 (SMARA) guides the continued mining of minerals and provides for the protection and subsequent beneficial use of the mined and reclaimed lands (California 2010a).

Consistent with the mandatory requirements of SMARA, Sacramento County created mineral resource policies and incorporated them into the General Plan Conservation Element. In addition, the Open Space Element delineated the extent of mineral resources in Sacramento County. Implementing the General Plan, the Sacramento County Zoning Code contains the Surface Mining Combining Land Use Zone (SM). This zone is designed to protect the mineral resources of Sacramento

County from incompatible land use, to manage these mineral resources, to assure the County an adequate supply of these resources with due consideration for the environment, and to provide for the restoration of mined lands for future use. A conditional use permit would be required for surface mining operations or regulation through the procedures of an existing special planning area zoning designation.

The SM Combining Zone may be combined with 14 zones. Of these, four zones occur within the project site.

Local

County of Sacramento

The County of Sacramento General Plan establishes goals and policies to guide both present and future development within the County's jurisdiction. The proposed SOIA project does not include any development at this time; therefore, determination of any specific policies for future projects would be premature. However, a general discussion of policies is included below to provide guidance to any future development within the SOIA boundaries.

- **Policy CO-41:** Apply the aggregate resources combining land use category to additional areas as subsequent studies determine them to contain mineral resources which are feasible and appropriate for mining. The aggregate resources combining land use category shall not be a prerequisite to (SM) surface mining combining zoning or regulation through the procedures of an existing special planning area zoning designation in conjunction with proposed surface mining.
- **Policy CO-42:** Sewer interceptor and trunk alignments shall be routed to avoid areas planned for aggregate resource mining to the extent practical. Where such alignments are impractical, they shall be designed to minimize aggregate resources which would be precluded from mining, and make reasonable attempt to preserve the future use of mined areas for flood control or recharge purposes.
- **Policy CO-48:** Due to predicted shortages of aggregates in Sacramento County, mining of mineral resources within the Urban Services Boundary (USB) is encouraged, where consistent with Habitat Conservation Plans or other County initiated conservation programs and where such mining does not preclude successful completion of these plans, to avoid the potential loss of these mineral resources as a result of potential urban development. This policy is not intended to preclude mining outside of the USB.

City of Elk Grove

The City of Elk Grove General Plan was also reviewed but does not contain any specific policies concerning mineral resources.

3.11.4 - Methodology

The 1993 Sacramento County General Plan and DEIR for the 2030 General Plan Update were reviewed for applicable policies and existing mineral resource sites that apply to the project site. Analysis of impacts to mineral resources was limited to aggregates and natural gas because only these two mineral resource groups are currently extracted within Sacramento County.

The analysis excluded changes in General Plan land use designations or zoning classifications, including pre-zoning, because neither of these changes is proposed or necessary for project implementation.

3.11.5 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether impacts to mineral resources are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

- a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?
- b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

3.11.6 - Project Impacts and Mitigation Measures

This section assesses the effects that implementation of the proposed project could have on mineral resources. The analysis considers the potential impacts in existing extraction activities and known resource areas.

Loss of Known Mineral Resource

Impact MIN-1:	The project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State.
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Impact Analysis

Aggregates. The Conservation Element delineated areas designated by the State Geologist as Prime Aggregate Resource Areas (ARA). The California Mineral Land Classification System classifies ARAs as Mineral Resource Zone 2; this zone is identified by areas of identified mineral resource significance (California 2010b). These ARAs are located in the central portion of the County and not within or adjacent to the project site. Therefore, project implementation would not result in the loss of a known ARA.

The Open Space Element delineated the boundaries of the Sacramento-Fairfield Production-Consumption Region, which partially overlies the project site. The portion of the P-C Region overlying the project site is identified as containing aggregate resources that cannot be evaluated from available data. Under the California Mineral Land Classification System, this equates to Mineral

Resource Zone 3, a zone identified by areas of undetermined mineral resource significance and, specifically, Mineral Resource Zone 3b. Mineral Resource Zone 3a represents known mineral occurrence, whereas Mineral Resource Zone 3b is broadly defined as areas containing inferred mineral deposits that may qualify as mineral resources. Because of the project site is classified as Mineral Resource Zone 3b, impacts to the loss of known aggregate mineral resources would be less than significant.

The entire project site is identified as open space, which is defined as any land or water area essentially unimproved and devoted to the managed production of resources, that include areas containing major mineral deposits (Sacramento County 1993b).

The Open Space Element further delineates the remaining open space containing significant aggregate deposits and ARAs. This area does not overlay the project site. Therefore, no impacts to known aggregate resources within open space would result from implementation of the SOIA project.

Clay. The Conservation Element separately delineates Potential Clay Deposits (Ione Formation Series) and Potential Kaolin Clay Deposits in the easterly portion of the County. The project site does not contain either of the two types of clay deposits; therefore, project implementation would not result in the loss of a known clay mineral resource.

Natural Gas. The Conservation Element delineates “Known Gas Regions” within the County. The majority of these regions occur in the southwest portion of the County in the Delta’s Rio Vista Field, with isolated regions occurring in the west-central and northwest portions of the County. The Open Space Element provides locations for Known Gas Deposits that approximately correspond to the mapped Known Gas Regions. The project site does not contain either a Known Gas Region or a Known Gas Deposit. One small, isolated Known Gas Region occurs approximately 2 miles north of the project site near the Elk Grove Boulevard and Franklin Boulevard intersection. Because the Known Gas Regions and Deposits are located outside the project site boundary, loss of the availability of a known natural gas deposit mineral resource would not result from implementation of the proposed SOIA project.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Loss of Mineral Resource Recovery Site

Impact MIN-2: **The project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.**

Impact Analysis

No active mining or natural gas extraction operations are located within the project site boundary. As discussed under Impact MIN-1 above, the General Plan does not designate any locally important mineral resource recovery sites within the project site. Therefore, loss of a locally important mineral resource recovery site resulting from impacts to an existing operation would not result from implementation of the proposed SOIA project.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

3.12 - Noise

3.12.1 - Introduction

This section describes the existing noise setting and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on information contained in the Noise Analysis, prepared in July 2011 by Bollard Acoustical Consultants, Inc. (BAC). The noise report is included in this EIR as Appendix E.

3.12.2 - Environmental Setting

Noise Fundamentals

Noise is defined as unwanted sound. Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm, or when it has adverse effects on health. Sound is produced by the vibration of sound pressure waves in the air. Sound pressure levels are used to measure the intensity of sound and are described in terms of decibels. The decibel (dB) is a logarithmic unit that expresses the ratio of the sound pressure level being measured to a standard reference level. A-weighted decibels (dBA) approximate the subjective response of the human ear to a broad frequency noise source by discriminating between very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies that are audible to the human ear. The scale value of zero is the threshold of human hearing.

Noise Descriptors

Community noise is commonly described in terms of the “ambient” noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}), which corresponds to a steady-state, A-weighted sound level containing the same total energy as a time-varying signal over a given time period (usually 1-hour). The L_{eq} is the foundation of the composite noise descriptor, L_{dn} , and shows very good correlation with community response to noise.

The Day-Night Average Level (L_{dn}) is based on the average noise level over a 24-hour day, with a +10 decibel weighting applied to noise occurring during nighttime hours (10 p.m.-7 a.m.). The nighttime penalty is based on the assumption that people react to nighttime noise exposures as though they are twice as loud as daytime exposures. Because the L_{dn} represents a 24-hour average, it tends to disguise short-term variations in the noise environment.

Noise has often been cited as being a health problem, not in terms of actual physiological damages such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise arise from interference with human activities such as sleep, speech, recreation, and tasks demanding concentration or coordination. When community noise interferes with human activities or contributes to stress, public annoyance with the noise source

increases, and the acceptability of the environment for people decreases. This result is the bases for land use planning policies preventing exposures to excessive community noise levels.

In addition to the A-weighted noise level, other factors should be considered in establishing criteria for noise sensitive land uses. For example, sounds with noticeable tonal content such as whistles, horns, droning or high-pitched sounds may be more annoying than the A-weighted sound level alone suggests. Many noise standards apply a penalty or correction of 5 dBA to such sounds. The effects of unusual tonal content are generally more of a concern at nighttime when residents may notice the sound in contrast to low levels of ambient/background noise.

Because many rural residential areas experience very low noise levels, residents may express concern about the loss of “peace and quiet” due to the introduction of a sound that was not previously audible. In very quiet environments, the introduction of virtually any change in local activities will cause an increase in noise levels. A change in noise level and the loss of “peace and quiet” is the inevitable result of land use or activity changes in such areas. Audibility of a new noise source and/or increases in noise levels within recognized acceptable limits are not usually considered significant noise impacts, but these concerns should be addressed and considered in the planning and environmental review processes.

Noise Mitigation Fundamentals

Any noise problem may be considered as being composed of three basic elements: the noise source, a transmission path, and a receiver. The appropriate acoustical treatment for a given project should consider the nature of the noise source and the sensitivity of the receiver. The problem should be defined in terms of appropriate criteria (L_{dn} , L_{eq} , or L_{max}), the location of the sensitive receiver (inside or outside), and when the problem occurs (daytime or nighttime). Noise control techniques should then be selected to provide an acceptable noise environment for the receiving property while remaining consistent with local aesthetic standards and practical structural and economic limits. Fundamental noise control techniques include the following:

Use of Setbacks

Noise exposure may be reduced by increasing the distance between the noise sources and receiving use. Setback areas can take the form of open space, frontage roads, recreational areas, storage yards, etc. The available noise attenuation from this technique is limited by the characteristics of the noise source, but is generally about 4 to 6 dB per doubling of distance from the source.

Use of Barriers

Shielding by barriers can be obtained by placing walls, berms or other structures, such as buildings, between the noise source and the receiver. The effectiveness of a barrier depends upon blocking line-of-sight between the source and receiver, and is improved with increasing the distance the sound must travel to pass over the barrier as compared to a straight line from source to receiver. The difference

between the distance over a barrier and a straight line between source and receiver is called the “path length difference,” and is the basis for calculating barrier noise reduction.

Barrier effectiveness depends upon the relative heights of the source, barrier, and receiver. In general, barriers are most effective when placed close to either the receiver or the source. An intermediate barrier location yields a smaller path-length-difference for a given increase in barrier height than does a location closer to either source or receiver.

For maximum effectiveness, barriers must be continuous and relatively airtight along their length and height. To ensure that sound transmission through the barrier is insignificant, barrier mass should be about 4 pounds per square foot, although a lesser mass may be acceptable if the barrier material provides sufficient transmission loss. Satisfaction of the above criteria requires substantial and well-fitted barrier materials, placed to intercept line of sight to all significant noise sources. Earth, in the form of berms or the face of a depressed area, is also an effective barrier material.

The attenuation provided by a barrier depends upon the frequency content of the source. Generally, higher frequencies are attenuated (reduced) more readily than lower frequencies. This results because a given barrier height is relatively large compared to the shorter wavelengths of high frequency sounds, while relatively small compared to the longer wavelengths of the frequency sounds. The effective center frequency for traffic noise is usually considered to be 550 Hz. Railroad engines, cars, and horns emit noise with differing frequency content, so the effectiveness of a barrier will vary for each of these sources. Frequency analyses are necessary to properly calculate barrier effectiveness for noise from sources other than highway traffic.

There are practical limits to the noise reduction provided by barriers. For highway traffic noise, a 5- to 10-dB noise reduction may often be reasonably attained. A 15-dB noise reduction is sometimes possible, but a 20-dB noise reduction is extremely difficult to achieve. Barriers usually are provided in the form of walls, berms, or berm/wall combinations. The use of an earth berm in lieu of a solid wall may provide up to 3 dB additional attenuation over that attained by a solid wall alone, due to the absorption provided by the earth. Berm/wall combinations offer slightly better acoustical performance than solid walls, and are often preferred for aesthetic reasons.

Site Design

Buildings can be placed on a project site to shield other structures or areas, to remove them from noise-impacted areas, and to prevent an increase in noise level caused by reflections. The use of one building to shield another can significantly reduce overall project noise control costs, particularly if the shielding structure is insensitive to noise. As an example, carports or garages can be used to form or complement a barrier shielding adjacent dwellings or an outdoor activity area. Similarly, one residential unit can be placed to shield another so that noise reduction measures are needed for only the building closest to the noise source. Placement of outdoor activity areas within the shielded portion of a building complex, such as a central courtyard, can be an effective method of providing a

quiet retreat in an otherwise noisy environment. Patios or balconies should be placed on the side of a building opposite the noise source, and “wing walls” can be added to buildings or patios to help shield sensitive uses.

Another option in site design is the placement of relatively insensitive land uses, such as commercial or storage areas, between the noise source and a more sensitive portion of the project. Examples include development of a commercial strip along a busy arterial to block noise affecting a residential area, or providing recreational vehicle storage or travel trailer parking along the noise-impacted edge of a mobile home park. If existing topography or development adjacent to the project site provides some shielding, as in the case of an existing berm, knoll or building, sensitive structures or activity areas may be placed behind those features to reduce noise control costs.

Site design should also avoid creating reflecting surfaces that may increase onsite noise levels. For example, two buildings placed at an angle facing a noise source may cause noise levels within that angle to increase by up to 3 dB. The open end of U-shaped buildings should point away from noise sources for the same reason. Landscaping walls or noise barriers located within a development may inadvertently reflect noise back to a noise-sensitive area unless carefully located. Avoidance of these problems while attaining an aesthetic site design requires close coordination between local agencies, the project engineer and architect, and the noise consultant.

Building Design

When structures have been located to provide maximum noise reduction by barriers or site design, noise reduction measures may still be required to achieve an acceptable interior noise environment. The cost of such measures may be reduced by placement of interior dwelling unit features. For example, bedrooms, living rooms, family rooms and other noise-sensitive portions of a dwelling can be located on the side of the unit farthest from the noise source.

Bathrooms, closets, stairwells, and food preparation areas are relatively insensitive to exterior noise sources, and can be placed on the noisy side of a unit. When such techniques are employed, noise reduction requirements for the building facade can be significantly reduced, although the architect must take care to isolate the noise-impacted areas by the use of partitions or doors.

In some cases, external building facades can influence reflected noise levels affecting adjacent buildings. This is primarily a problem where high-rise buildings are proposed, and the effect is most evident in urban areas, where an “urban canyon” may be created. Bell-shaped or irregular building facades and attention to the orientation of the building can reduce this effect.

Noise Reduction by Building Facades

When interior noise levels are of concern in a noisy environment, noise reduction may be obtained through acoustical design of building facades. Standard residential construction practices provide 10- to 15-dB noise reduction for building facades with open windows, and approximately 25-dB noise

reduction when windows are closed. Thus, a 25-dB exterior-to-interior noise reduction can be obtained by the requirement that building design include adequate ventilation systems, allowing windows on a noise-impacted facade to remain closed under any weather condition.

Where greater noise reduction is required, acoustical treatment of the building facade is necessary. Reduction of relative window area is the most effective control technique, followed by providing acoustical glazing (thicker glass or increased air space between panes) in low air infiltration rate frames, use of fixed (non-movable) acoustical glazing, or the elimination of windows. Noise transmitted through walls can be reduced by increasing wall mass (using stucco or brick in lieu of wood siding), isolating wall members by the use of double- or staggered-stud walls, or mounting interior walls on resilient channels. Noise control for exterior doorways is provided by reducing door area, using solid-core doors, and by acoustically sealing door perimeters with suitable gaskets. Roof treatments may include the use of plywood sheathing under roofing materials.

Whichever noise control techniques are employed, it is essential that attention be given to installation of weatherstripping and caulking of joints. Openings for attic or subfloor ventilation may also require acoustical treatment; tight-fitting fireplace dampers and glass doors may be needed in aircraft noise-impacted areas.

Design of acoustical treatment for building facades should be based upon analysis of the level and frequency content of the noise source. The transmission loss of each building component should be defined, and the composite noise reduction for the complete facade calculated, accounting for absorption in the receiving room. A one-third octave band analysis is a definitive method of calculating the A-weighted noise reduction of a facade.

A common measure of transmission loss is the Sound Transmission Class (STC). STC ratings are not directly comparable to A-weighted noise reduction, and must be corrected for the spectral content of the noise source. Requirements for transmission loss analyses are outlined by Title 24 of the California Code of Regulations.

Use of Vegetation

Trees and other vegetation are often thought to provide significant noise attenuation. However, approximately 100 feet of dense foliage (so that no visual path extends through the foliage) is required to achieve a 5-dB attenuation of traffic noise. Thus, the use of vegetation as a noise barrier should not be considered a practical method of noise control unless large tracts of dense foliage are part of the existing landscape.

Vegetation can be used to acoustically “soften” intervening ground between a noise source and receiver, increasing ground absorption of sound and thus increasing the attenuation of sound with distance. Planting of trees and shrubs is also of aesthetic and psychological value, and may reduce adverse public reaction to a noise source by removing the source from view, even though noise levels

will be largely unaffected. It should be noted, however, that trees planted on the top of a noise control berm can actually degrade the acoustical performance of the barrier slightly. This effect can occur when high-frequency sounds are diffracted (bent) by foliage and directed downward over a barrier.

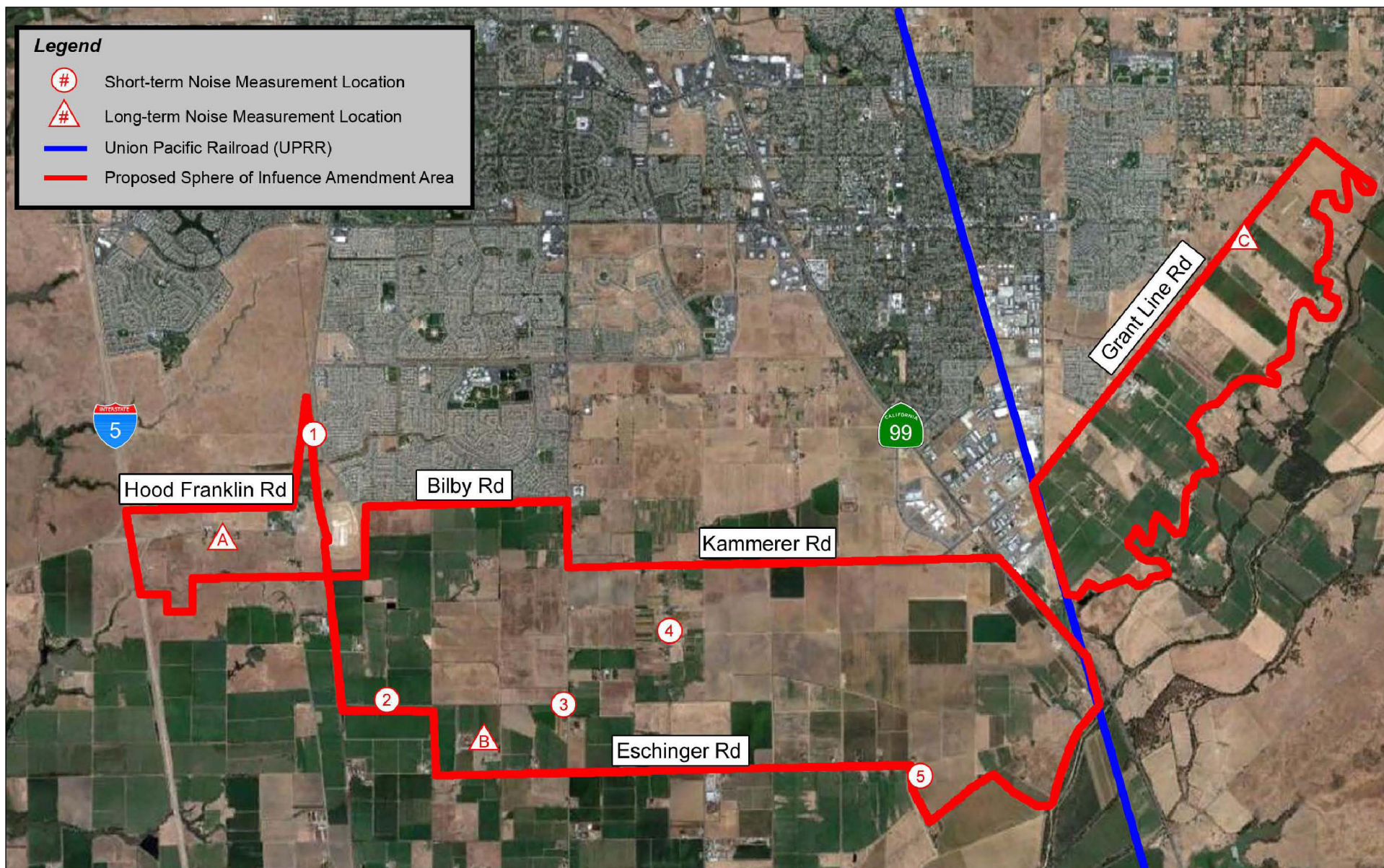
In summary, the effects of vegetation upon noise transmission are minor, and are primarily limited to increased absorption of high frequency sounds and to reducing adverse public reaction to the noise by providing aesthetic benefits.

Existing Noise Levels

The major noise sources in the Elk Grove Sphere of Influence Amendment (SOIA) include traffic on Interstate 5 (I-5), State Route 99 (SR-99), local traffic on major arterials, and railroad operations on the Union Pacific Railroad (UPRR) and Burlington Northern Santa Fe (BNSF) railroad tracks. The project area primarily contains such agricultural uses as fallow/row crops/nursery, orchards, vineyard, and dairy and livestock operations. Few structures exist within the project site, and these are limited to barns, rural housing, storage sheds, and related structures. A small area surrounding the intersections of Hood Franklin Road/County Road J8 and Bilby Road/County Road J8 is developed with relatively suburban uses. This area is identified as the Old Town Franklin community. The existing land uses in this community can be described as a mix of rural housing, light industrial, commercial, and public facilities. Franklin Cemetery is located at the intersection of Franklin Boulevard and Hood Franklin Road.

Community Noise Survey

To quantify existing noise levels in the quieter parts of the SOIA, a community noise survey was performed at eight locations. These survey locations were chosen to provide adequate representation of the entire project area. Three of the eight locations were monitored over a continuous 24-hour period, while the other five locations were each monitored for two short-term periods during daytime and nighttime hours. The community noise survey noise measurement locations are illustrated in Exhibit 3.12-1. The results of the community noise survey are provided in Table 3.12-1. The complete results of the continuous noise surveys are provided in tabular and graphical formats in Appendix E.



Source: Bollard Acoustical Consultants

Table 3.12-1: Community Noise Measurement Survey Results

Site	Location	Time Period	L _{eq}	L _{max}	L _{dn}	Noise Sources
1	Franklin Ranch Pet Hospital & Hotel (Back Parking Lot)	Daytime	45	58	50	Distant/Local Traffic, A/C Overflights, Natural
		Afternoon	43	51		
		Nighttime	43	53		
2	Ranch Gate on Core Road	Daytime	54	79	57	Natural Sources. Traffic on Core Road, A/C
		Afternoon	49	72		
		Nighttime	50	71		
3	Sacramento Municipal Utility District Gas Pipeline Valve Site (#8)	Daytime	53	71	54	Traffic on Bruceville Road, A/C, Natural Noises
		Afternoon	53	75		
		Nighttime	45	63		
4	10760 & 10759 Rau Road	Daytime	52	72	56	Local Traffic, Natural Sounds, Community, A/C
		Afternoon	53	71		
		Nighttime	49	73		
5	Corner Near Greenbelt Carriers Site	Daytime	48	61	51	Local Traffic, AG
		Afternoon	53	71		
		Nighttime	35	46		
A	3460 Hood-Franklin Road	Daytime	53	67	59	—
		Nighttime	53	64		
B	6225 Eschinger Road	Daytime	51	71	52	—
		Nighttime	44	64		
C	9675 Grant Line Road (Backyard)	Daytime	53	68	57	—
		Nighttime	51	67		
Notes: L _{dn} values for short-term measurement sites (Sites 1-5) were estimated based on average measured values. Two measurement sessions were completed during daytime hours for these sites to better assess daytime noise exposure – one in the morning and one in the afternoon. L _{dn} for long-term measurement sites (Sites A-C) were calculated based on measured Hourly L _{eq} data. Source: Bollard Acoustical Consultants, Inc. 2011.						

Roadway Noise

The Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA-RD-77-108) with the Calveno vehicle noise emission curves was used to predict traffic noise levels within the Elk Grove SOIA. The FHWA-RD-77-108 Model is considered acceptable for the development of general traffic noise predictions.

A diversity of local roadways and facilities exist within or adjacent to the SOIA Area. The major roads serving the area include Bilby Road, Kammerer Road, Hood-Franklin Road, Grant Line Road,

Eschinger Road, and Bruceville Road. Hood-Franklin Road, Kammerer Road, and Grant Line Road provide direct access to I-5 and SR-99. No new roads or road improvements are proposed as part of this application. The SOIA Area currently requires minimal circulation and roadway services, as the area remains primarily agricultural. Since no specific land use plan has been defined, existing uses are expected to remain unchanged. Existing service providers are expected to continue the current service level. Addition of the SOI Amendment area would cause no additional, immediate demand for circulation service and roadway infrastructure. However, as discussed below, future urbanization activities within the SOIA could result in increased traffic noise along roadways used by project-generated traffic

The FHWA Model was used with existing traffic data to develop L_{dn} contours for these roadways as well as other smaller roadways in the City. The FHWA Model input data for the studied roadways is provided in Appendix E. The predicted L_{dn} at a reference distance of 100 feet and the distances from the centerlines of the major roadways to the 60-, 65-, and 70-dB L_{dn} contours are summarized in Table 3.12-2.

Table 3.12-2: Existing Traffic Noise Levels and Contour Distances

#	Roadway	Segment Description	L_{dn} @ 100 feet	Distance to L_{dn} Contours (ft)		
				70 dB	65 dB	60 dB
1	Lambert Boulevard	Bruceville Road (West) to Bruceville Road (East)	55	10	22	48
2	Franklin Boulevard	Core Road to Hood Franklin	57	14	30	65
3	Hood Franklin	I-5 to Franklin Boulevard	63	34	72	156
4	Bilby Road	Franklin Boulevard to Willard Parkway	62	31	67	145
5	Dillard Road	State Route 99 to Riley Road	62	31	66	143
6	Grant Line Road	Wilton Road to Calvin Road	68	71	152	328
7	Grant Line Road	Elk Grove Boulevard to Wilton Road	67	66	142	306
8	Grant Line Road	Bradshaw Road to Elk Grove Boulevard	65	50	107	230
9	Grant Line Road	State Route 99 to Bradshaw Road	68	70	151	326
10	Waterman Road	Grant Line Road to Elk Grove Boulevard	63	35	75	162
11	Elk Grove Boulevard	Elk Grove Florin Road to Bradshaw Road	66	55	118	253
12	Elk Grove Boulevard	State Route 99 to Elk Grove Florin Road	70	107	230	495

Table 3.12-2 (cont.): Existing Traffic Noise Levels and Contour Distances

#	Roadway	Segment Description	L _{dn} @ 100 feet	Distance to L _{dn} Contours (ft)		
				70 dB	65 dB	60 dB
13	Elk Grove Boulevard	Laguna Springs Drive to State Route 99	70	94	202	435
14	Elk Grove Florin	East Stockton Boulevard to Elk Grove Boulevard	61	25	54	117
15	Elk Grove Boulevard	I-5 to Franklin Boulevard	68	79	170	366
16	Elk Grove Boulevard	Franklin Boulevard to Bruceville Road	69	91	196	421
17	Bradshaw Road	Grant Line Road to Bond Road	63	33	72	155
18	Interstate 5	Laguna Boulevard to Meadowview Road	81	527	1136	2448
19	Interstate 5	Elk Grove Boulevard to Laguna Boulevard	79	415	895	1927
20	Interstate 5	Hood Franklin Road to Elk Grove Boulevard	78	359	773	1665
21	Interstate 5	Twin Cities Road to Hood Franklin Road	78	330	711	1531
22	State Route 99	Arno Road to Dillard Road	77	308	663	1429
23	State Route 99	Dillard Road to Grant Line Road	77	292	630	1357
24	State Route 99	Grant Line Road to Elk Grove Boulevard	78	329	710	1529
25	Kammerer Road	Bruceville Road to Hood Franklin Road	56	12	27	57
26	Bruceville Road	Lambert Road to Point Pleasant Road	57	15	31	68
27	Bruceville Road	Eshinger Road to Kammerer Road	59	18	39	84
28	Bruceville Road	Poppy Ridge Road to Whitelock Parkway	61	26	57	122
29	Bruceville Road	Whitelock Parkway to Terrazzo Drive	70	94	202	434
Source: Bollard Acoustical Consulting, Inc. 2011.						

Airport Noise

Sunset Skyranch Airport, also known as Elk Grove Airport, was located near the intersection of Grant Line Road and Bradshaw Road, just outside the city limits of Elk Grove. The airport was privately

owned and operated but is now closed. As a result, the SOIA is no longer influenced by noise from this airport.

Franklin Field is located on Bruceville Road approximately 2.6 miles south of the SOIA. Franklin Field is a visual flight rated (VFR) airport having two perpendicular runways: a north/south runway (18-36) that is 3,295 feet long and 60 feet wide, and an east/west runway (9-27) which is 31,000 feet long and 60 wide. A 650-foot by 250-foot run-up apron and a tie-down apron (430 feet by 120 feet) exist. A wind cone and segmented circle are maintained to assist pilots. There are 42 tie-down spaces, 23 from transient aircraft. There are also four T-hangars. No fixed-base operator exists. The sole use of Franklin Field is by general aviation aircraft, both single and multi-engine types, for training and touch-and-go activity. Crop dusters also use the facility during the planting and spraying season. The noise contours for Franklin Field are reproduced in Appendix E.

Railroad Noise

There are two sets of railroad tracks operated within the SOIA. The Union Pacific Railroad (UPRR) tracks run from north to south near Franklin Boulevard near the western boundary of the SOIA. The Burlington Northern and Santa Fe Railroad (BNSF) tracks run from north to south through the SOIA near SR-99.

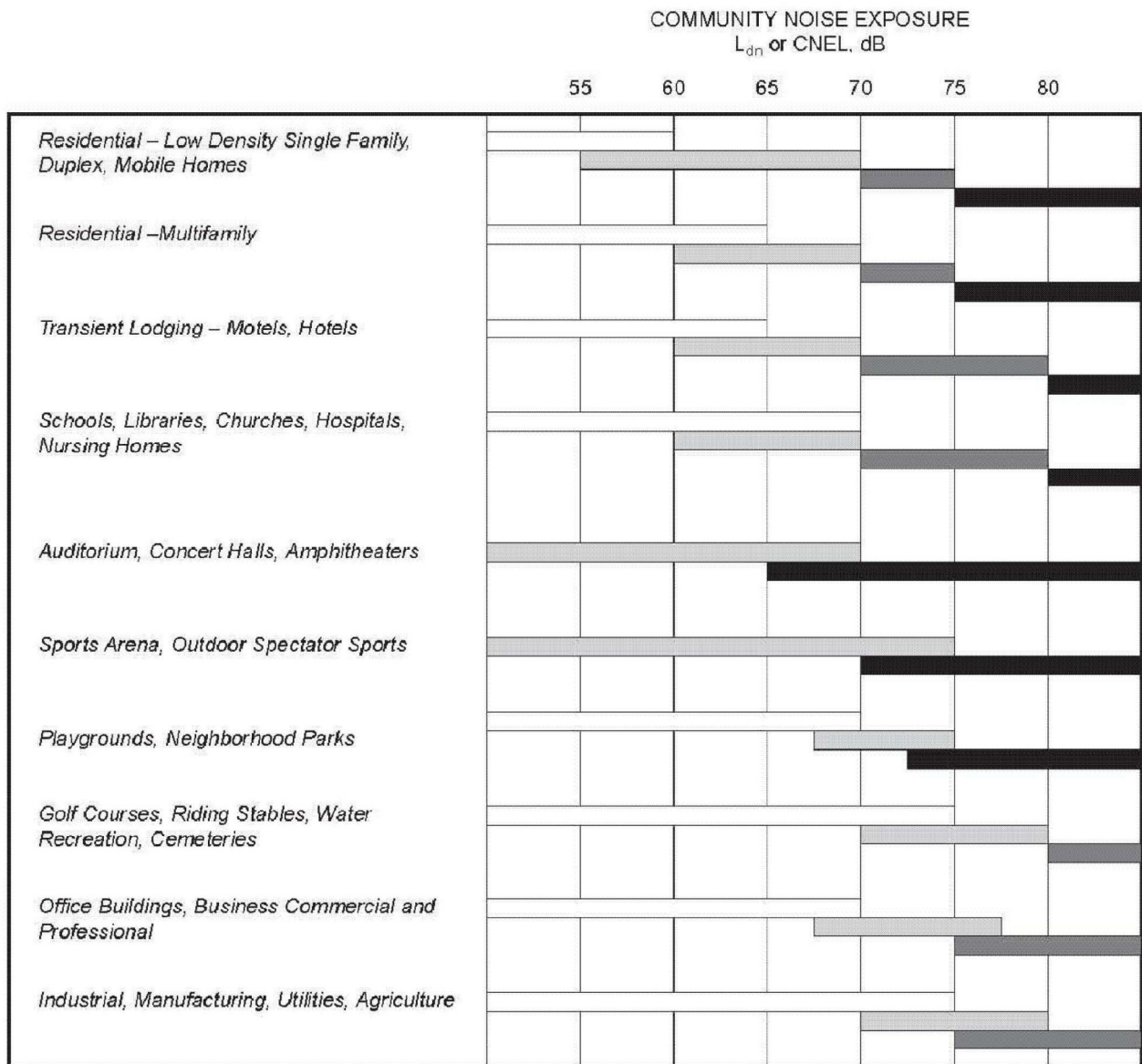
As part of the City of Elk Grove General Plan Noise Element preparation, continuous noise monitoring of railroad activity was conducted on both the UPRR and BNSF tracks. The results were compared to similar data more recently collected in the area. Although daily train usage of these tracks varies, based upon the noise monitoring results it was determined that approximately twenty trains per day are operated along each set of tracks. The Sound Exposure Level (SEL) of individual trains was recorded along with the duration and maximum noise level during the monitoring program. The aggregate of the data collected indicates that at a distance of 100 feet, the average train operating on these tracks will produce an SEL of approximately 105 dB when using the warning horn, and approximately 100 dB without using the horn. Trains are generally required to sound warning horns within 800 feet of at-grade crossings.

To determine the L_{dn} value associated with railroad operations, the following formula was used:

$$L_{dn} = SEL + 10 \log N_{eq} - 49.4 \text{ dB, where:}$$

SEL is the mean measured SEL of the train events (105 with horn and 100 without), N_{eq} is the sum of the day plus 10 times the number of nighttime (10 p.m. to 7 a.m.) train events, and 49.4 is 10 times the logarithm of the number of seconds per day.

Based upon this information, the L_{dn} at a distance of 100 feet due to activity on these tracks is approximately 75 dB and 70 dB with and without use of the horn, respectively. Using this information, the distances to railroad noise level contours were calculated and presented in Table 3.12-3.



LEGEND:



NORMALLY ACCEPTABLE

Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.



NORMALLY UNACCEPTABLE

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and need noise insulation features included in the design.



CONDITIONALLY ACCEPTABLE

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.



CLEARLY UNACCEPTABLE

New construction or development should generally not be undertaken.

Source: California Department of Health. *Guidelines for the Preparation and Content of Noise Elements of the General Plan*. November, 1990.

Source: California Department of Health, 1990.



Michael Brandman Associates

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Table 3.12-3: Estimated Distances to Railroad Noise Contours (feet)

UPRR & BNSF Tracks	60 dB L _{dn}	65 dB L _{dn}	70 dB L _{dn}
Without Horn	464	215	100
With Horn	1000	464	215
Source: Bollard Acoustical Consulting, Inc. 2011.			

3.12.3 - Regulatory Framework

State

Noise Standards

Established in 1973, the California Department of Health Services Office of Noise Control was instrumental in developing regularity tools to control and abate noise for use by local agencies. One significant model is the “Land Use Compatibility for Community Noise Environments Matrix,” which allows the local jurisdiction to clearly delineate compatibility of sensitive uses with various incremental levels of noise, which is shown above in Exhibit 3.12-2.

Title 24, Chapter 1, Article 4 of the California Administrative Code (California Noise Insulation Standards) requires noise insulation in new hotels, motels, apartment houses, and dwellings (other than single-family detached housing) that provides an annual average noise level of no more than 45 dBA CNEL. When such structures are located within a 60-dBA CNEL (or greater) noise contour, an acoustical analysis is required to ensure that interior levels do not exceed the 45-dBA CNEL annual threshold. In addition, Title 21, Chapter 6, Article 1 of the California Administrative Code requires that all habitable rooms, hospitals, convalescent homes, and places of worship shall have an interior CNEL of 45 dB or less due to aircraft noise.

Government Code Section 65302 mandates that the legislative body of each county and city in California adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable.

Single-Event Noise Descriptors

Noise is rarely regulated by SEL descriptors. As previously discussed, the SEL descriptor represents the acoustic energy of a single event normalized to a 1-second event duration, while L_{dn} and CNEL represent the weighted average of the intensity of noise over a 24-hour period, with adjustments for nighttime noise sensitivity.

However, the courts have indirectly recognized SEL limits for unique circumstances such as sleep disturbance from aircraft overflights (e.g., *Berkeley Keep Jets Over the Bay Com. V. Bd of Port Comrs. of Oakland*, 91 Cal. App. 4th 1344 [2001]). In the Berkeley decision, the court held that

impacts to sleep disturbance should be analyzed using the SEL descriptor, in addition to analyzing the L_{dn} or CNEL noise impacts. The ruling did not recommend a specific SEL noise threshold for sleep disturbance. A threshold for sleep disturbance is not absolute, since a high degree of variability exists from one person to another. As a result, no government agencies have suggested what frequencies of awakenings are acceptable. For these reasons, the Federal Interagency Committee on Noise and the California Airport and Land Use Planning Handbook continue to use L_{dn} or CNEL as the primary tool for land use compatibility planning and do not establish SEL standards. Since the L_{dn} and CNEL represent the cumulative exposure to all single events—that is, the exposure of all SELs taken together, weighed to add penalties for nighttime occurrences and averaged over a 24-hour period—the L_{dn} and CNEL-based standards already account for the individual impacts associated with SELs.

Vibration Standards

Title 14 of the California Administrative Code Section 15000 requires that all state and local agencies implement the California Environmental Quality Act (CEQA) Guidelines, which requires the analysis of exposure of persons to excessive groundborne vibration. However, no statute has been adopted by the state that quantifies the level at which excessive groundborne vibration occurs.

Caltrans issued the Transportation- and Construction-Induced Vibration Guidance Manual in 2004. The manual provides practical guidance to Caltrans engineers, planners, and consultants who must address vibration issues associated with the construction, operation, and maintenance of Caltrans projects. However, this manual is also used as a reference point by many lead agencies and CEQA practitioners throughout California, as it provides numeric thresholds for vibration impacts. Thresholds are established for continuous (construction-related) and transient (transportation-related) sources of vibration, which found that the human response becomes distinctly perceptible at 0.25 inch per second PPV for transient sources and 0.04 inch per second PPV for continuous sources.

Local

City of Elk Grove

The General Plan establishes the following policies associated with noise that are relevant to the proposed project:

- **Policy NO-1:** New development of the uses listed in Table NO-C (Table 3.12-4) shall conform with the noise levels contained in that Table. All indoor and outdoor areas shall be located, constructed, and/or shielded from noise sources in order to achieve compliance with the City's noise standards.

Table 3.12-4: Maximum Allowable Noise Exposure Transportation Noise Sources

Land Use	Outdoor Activity Areas ¹ L _{dn} /CNEL, dB	Interior Spaces	
		L _{dn} /CNEL, dB	L _{eq} , dB ²
Residential	60 ³	45	—
Residential subject to noise from railroad tracks, aircraft overflights, or similar noise sources which produce clearly identifiable, discrete noise events (the passing of a single train, as opposed to relatively steady noise sources such as roadways)	60 ³	40 ⁵	—
Transient Lodging	60 ⁴	45	—
Hospitals, Nursing Homes	60 ³	45	—
Theaters, Auditoriums, Music Halls	—	—	35
Churches, Meeting Halls	60 ³	—	40
Office Buildings	—	—	45
Schools, Libraries, Museums	—	—	45
Playgrounds, Neighborhood Parks	70	—	—
<p>1. Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use. Where it is not practical to mitigate exterior noise levels at patio or balconies of apartment complexes, a common area such as a pool or recreation area may be designated as the outdoor activity area.</p> <p>2. As determined for a typical worst-case hour during periods of use.</p> <p>3. Where it is not possible to reduce noise in outdoor activity areas to 60 dB L_{dn}/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB L_{dn}/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.</p> <p>4. In the case of hotel/motel facilities or other transient lodging, outdoor activity areas such as pool areas may not be included in the project design. In these cases, only the interior noise level criterion will apply.</p> <p>5. The intent of this noise standard is to provide increased protection against sleep disturbance for residences located near railroad tracks.</p> <p>Source: Elk Grove General Plan, 2009.</p>			

- **Policy NO-2:** Where noise-sensitive land uses are proposed in areas exposed to existing or projected exterior noise levels exceeding the levels specified in Table NO-C or the performance standards of Table NO-A (Table 3.12-5), an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.

The types of uses which may typically produce the noise sources addressed below include, but are not limited to: industrial facilities including pump stations, trucking operations, tire shops, auto maintenance shops, metal fabricating shops, shopping centers, drive-up windows, car washes, loading docks, public works projects, batch plants, bottling and canning plants,

recycling centers, electric generating stations, race tracks, landfills, sand and gravel operations, and athletic fields.

Table 3.12-5: Noise Level Performance Standards for New Projects Affected by or Including Non-Transportation Noise Sources

Part 1: Performance Standards for Typical Stationary Noise Sources		
Noise Level Descriptor	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Hourly L_{eq} , dB	55	45
The standards above will apply generally to noise sources that are not tonal, impulsive, or repetitive in nature. Typical noise sources in this category would include HVAC systems, cooling towers, fans, blowers, etc.		
Part 2: Performance Standards for Stationary Noise Sources Which Are Tonal, Impulsive, Repetitive, or Consist Primarily of Speech or Music		
Noise Level Descriptor	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Hourly L_{eq} , dB	50	40
Notes: The standards in Part 2 apply to noises which are tonal in nature, impulsive or repetitive, or which consist primarily of speech or music (e.g., humming sounds, outdoor speaker systems, etc.). Typical noise sources in this category include pile drivers, drive-through speaker boxes, punch presses, steam valves, and transformer stations. These noise level standards in Parts 1 and 2 above do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings). The City may impose noise level standards that are more or less restrictive than those specified above based upon determination of existing low or high ambient noise levels.		

- **Policy NO-3:** Noise created by new proposed non-transportation noise sources shall be mitigated so as not to exceed the noise level standards of Table NO-A (Table 3.12-5) as measured immediately within the property line of lands designated for noise-sensitive uses.
- **Policy NO-4:** Where proposed non-residential land uses are likely to produce noise levels exceeding the performance standards of Table NO-A (Table 3.12-5) at existing or planned noise-sensitive uses, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design. The requirements for the content of an acoustical analysis are shown in Table NO-B (Table 3.12-6).

Table 3.12-6: Requirements for Acoustical Analysis

All acoustical analysis prepared pursuant to this Noise Element shall: <ol style="list-style-type: none"> Be the financial responsibility of the applicant. Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics. Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions and the predominant noise sources. Estimate existing and projected cumulative (20 years) noise levels in terms of L_{dn} or CNEL and/or the standards of Table NO-A, and compare those levels to the adopted policies of the Noise Element. Recommend appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element, giving preference to proper site planning and design over mitigation measures that require the construction of noise barriers or structural modifications to buildings which contain noise-sensitive land uses.
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Table 3.12-6 (cont.): Requirements for Acoustical Analysis

- | |
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| <ul style="list-style-type: none">F. In cases where a sound wall is proposed, the potential impacts associated with noise reflecting off the wall and toward other properties or sensitive uses shall be evaluated.G. Estimate noise exposure after the prescribed mitigation measures have been implemented.H. Describe a post-project assessment program that could be used to evaluate the effectiveness of the proposed mitigation measures. |
|--|

- **Policy NO-5:** Noise created by the construction of new transportation noise sources (such as new roadways or new light rail service) shall be mitigated so as not to exceed the levels specified in Table NO-C (Table 3.12-4) at outdoor activity areas or interior spaces of existing noise sensitive land uses. Please see Policy NO-6 for discussion of improvements to existing roadways.
- **Policy NO-6:** It is anticipated that roadway improvement projects (such as widening of existing roadways) will be needed to accommodate build-out of the General Plan. Therefore, existing noise-sensitive uses
 - Where existing traffic noise levels are less than 60 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a +5 dB L_{dn} increase in noise levels due to roadway improvement projects will be considered significant; and
 - Where existing traffic noise levels range between 60 and 65 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a +3 dB L_{dn} increase in noise levels due to roadway improvement projects will be considered significant; and
 - Where existing traffic noise levels are greater than 65 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a +1.5 dB L_{dn} increase in noise levels due to roadway improvement projects will be considered significant.
- **Policy NO-7:** The City shall not require the installation of soundwalls in front yard areas to reduce noise to acceptable levels in residential areas which were originally constructed without soundwalls. The City shall emphasize other methods to reduce noise levels in these situations.
- **Policy NO-8:** Where noise mitigation measures are required to achieve the standards of Tables NO-A (Table 3.12-5) and NO-C (Table 3.12-4), the emphasis of such measures shall be placed upon site planning and project design. The use of noise barriers shall be considered a means of achieving the noise standards only after all other practical design-related noise mitigation measures—including the use of distance from noise sources—have been integrated into the project.
- **Policy NO-9:** Where soundwalls or noise barriers are constructed, the City shall strongly encourage and may require the use of a combination of berms and walls to reduce the apparent height of the wall and produce a more aesthetically appealing streetscape.

3.12.4 - Methodology

Michael Brandman Associates evaluated the proposed project's noise impacts through noise measurements and modeling of project noise impacts. Because this Draft Environmental Impact Report considers the impacts associated with potential future urbanization within the SOIA Area, the following methodology was employed for the impact analysis. Noise impacts were identified for new noise-sensitive developments located within areas affected by substantial existing or future noise sources (aircraft, automobile or truck traffic, railroad lines, etc.). Noise impacts were also identified for noise-producing projects proposed near existing or proposed noise-sensitive areas. Finally, noise impacts were evaluated by comparing potential traffic noise generation associated with SOIA Area development relative to existing conditions. The analysis assumes that all new development would comply with City noise standards identified in the Regulatory Setting section of this report. The analysis is described below.

Analysis of Future Traffic Noise Levels

The FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77-108), with CALVENO noise emission levels, was used to predict traffic noise levels within the SOIA. Table 3.12-7 shows the predicted L_{dn} values at a reference distance of 100 feet from the roadway centerlines. Table 3.12-7 also shows the existing traffic noise levels and the degree by which existing levels will increase upon General Plan buildout. The complete listing of FHWA model inputs and results are provided in Appendix E.

Table 3.12-7: Predicted Traffic Noise Level and Project-Related Traffic Noise Level Increases

Road	Segment	L_{dn} @ 100 Feet					
		Existing	Existing Plus Project	Change	Cumulative	Cumulative Plus Project	Change
Lambert Boulevard	Bruceville Road (West) to Bruceville Road (East)	55	62	7	55	63	8
Franklin Boulevard	Core Road to Hood Franklin	57	70	13	57	61	4
Hood Franklin Road	I-5 to Franklin Boulevard	63	66	3	66	70	4
Bilby Road	Franklin Boulevard to Willard Parkway	62	66	4	65	66	1
Dillard Road	State Route 99 to Riley Road	62	64	2	62	62	0
Grant Line Road	Wilton Road to Calvine Road	68	68	0	70	71	1
Grant Line Road	Elk Grove Boulevard to Wilton Road	67	69	2	70	71	1

Table 3.12-7 (cont.): Predicted Traffic Noise Level and Project-Related Traffic Noise Level Increases

Road	Segment	L _{dn} @ 100 Feet					
		Existing	Existing Plus Project	Change	Cumulative	Cumulative Plus Project	Change
Grant Line Road	Bradshaw Road to Elk Grove Boulevard	65	67	2	69	69	0
Grant Line Road	State Route 99 to Bradshaw Road	68	70	2	70	72	2
Waterman Road	Grant Line Road to Elk Grove Boulevard	63	66	3	65	68	3
Elk Grove Boulevard	Elk Grove Florin Road to Bradshaw Road	66	67	1	69	69	0
Elk Grove Boulevard	State Route 99 to Elk Grove Florin Road	70	71	1	71	72	1
Elk Grove Boulevard	Laguna Springs Drive to State Route 99	70	71	1	71	71	0
Elk Grove Florin Boulevard	East Stockton Boulevard to Elk Grove Boulevard	61	64	3	61	63	2
Elk Grove Boulevard	I-5 to Franklin Boulevard	68	69	1	68	68	0
Elk Grove Boulevard	Franklin Boulevard to Bruceville Road	69	70	1	70	70	0
Bradshaw Road	Grant Line Road to Bond Road	63	66	3	65	68	3
Interstate 5	Laguna Boulevard to Meadowview Road	81	81	0	81	82	1
Interstate 5	Elk Grove Boulevard to Laguna Boulevard	79	80	1	80	81	1
Interstate 5	Hood Franklin Road to Elk Grove Boulevard	78	79	1	79	80	1
Interstate 5	Twin Cities Road to Hood Franklin Road	78	78	0	79	79	0
State Route 99	Arno Road to Dillard Road	77	77	0	78	78	0
State Route 99	Dillard Road to Grant Line Road	77	77	0	78	78	0

Table 3.12-7 (cont.): Predicted Traffic Noise Level and Project-Related Traffic Noise Level Increases

Road	Segment	L _{dn} @ 100 Feet					
		Existing	Existing Plus Project	Change	Cumulative	Cumulative Plus Project	Change
State Route 99	Grant Line Road to Elk Grove Boulevard	78	79	1	79	79	0
Kammerer Road	Bruceville Road to Hood Franklin Road	56	66	10	62	68	6
Bruceville Road	Lambert Road to Point Pleasant Road	57	63	6	57	63	6
Bruceville Road	Eshinger Road to Kammerer Road	59	70	11	59	69	10
Bruceville Road	Poppy Ridge Road to Whitelock Parkway	61	69	8	61	68	7
Bruceville Road	Whitelock Parkway to Terrazzo Drive	70	70	0	70	71	1
Note: Shaded cells represent significant, project-related traffic noise increases. Source: Bollard Acoustical Consultants, Inc., 2011							

3.12.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, noise impacts resulting from the implementation of the proposed project would be considered significant if the project would result in:

- a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
- b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?
- c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?
- d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?
- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose

people residing or working in the project area to excessive noise levels? (Refer to Section 7.0 Effects Found Not To Be Significant.)

- f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? (Refer to Section 7.0 Effects Found Not To Be Significant.)

Based on studies of test subject's reactions to changes in environmental noise levels, the Federal Interagency Commission on Noise (FICON) developed the following recommendations for thresholds to be used in assessing the significance of project-related noise-level increases for transportation noise sources. Where background noise levels without the project would be less than 60 dB L_{dn} , a 5-dB or greater noise level increase due to the project is considered significant. Where background noise levels without the project would range from 60 to 65 dB L_{dn} , a 3-dB or greater noise level increase due to the project is considered significant. Finally, where background noise levels without the project would exceed 65 dB L_{dn} , a 1.5-dB or greater noise level increase due to the project is considered significant. This graduated scale is based on findings that people in quieter noise environments would tolerate larger increases in noise levels without adverse effects, whereas people already exposed to elevated noise levels exhibited adverse reactions to noise for smaller increases.

3.12.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Onsite Roadway Noise

Impact NOI-1:	Development within the SOIA Area would increase existing traffic noise levels at noise-sensitive land uses.
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Impact Analysis

Future urbanization within the SOIA Area may result in increased traffic noise along roadways used by project-generated traffic. As indicated in Table 3.12-7, the traffic noise increases associated with such development would range from 0 to 13 dB L_{dn} relative to existing conditions. As shown in Section 3.15, Transportation/Traffic the project's indirect increases in traffic would exceed the project thresholds of significance on 13 roadway segments. As a result, this impact is considered significant. While repaving of the affected segments using open-graded asphalt, rubberized asphalt, or similar material could reduce traffic noise levels by 4 dB, thereby reducing this impact to a level of insignificance along some segments, this measure would not provide the required degree of noise reduction to fully mitigate this impact along all affected roadway segments. In addition, because of driveway access requirements and other physical constraints, the construction of solid noise barriers at the existing residences located along these impacted sections is similarly considered infeasible. As a result, this impact is considered significant and unavoidable.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

No feasible mitigation measure is available.

Level of Significance After Mitigation

Significant and unavoidable impact.

Future Sensitive Receptors

Impact NOI-2:	The proposed project would not expose future sensitive receptors to elevated noise levels from both transportation and non-transportation noise sources.
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Impact Analysis

Although there are no specific proposals for noise-sensitive or noise-generating development within the SOIA Area, future development within the SOIA Area may result in the exposure of noise-sensitive land uses to noise levels in excess of the City of Elk Grove Noise Element standards. For example, development of residential uses within the railroad noise contour distances shown in Table 3.12-3 or adjacent to the major roadways identified in Table 3.12-7 would result in exceedance of the City's noise standards.

Noise mitigation measures required of future noise-sensitive or noise-generating land uses proposed within the SOIA Area would vary. General noise mitigation options are described in the Environmental Setting section of this report. Detailed mitigation requirements will depend on several variables, including project design, sensitivity or noise-generating potential of the project, site grading, natural and man-made shielding, proximity to noise sources or sensitive receptors, and other factors. The City of Elk Grove Noise Element policies and implementation measures were specifically developed to anticipate such impacts and to require the preparation of noise studies in such cases so that appropriate noise mitigation is included with each project. Because the City's General Plan Noise Element Policies NO-1 through NO-9 require that a project's noise generation or exposure does not exceed the City's noise standards at sensitive receptors, this impact is self-mitigating. As a result, this impact is considered less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

3.13 - Population and Housing

3.13.1 - Introduction

This section describes the existing population and housing and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on information provided by U.S. Census Bureau, the California Department of Finance, and the Sacramento Area Council of Governments (SACOG).

3.13.2 - Environmental Setting

Population

The 2010 Census estimated Sacramento County's population at 1,418,788, representing a 16-percent increase from 2000 (California Department of Finance 2011). Unincorporated areas of Sacramento County are estimated to contain a population of 554,554 (California Department of Finance 2011). As shown in Table 3.13-1, future growth within Sacramento County is expected to result in a population of more than 2.1 million in 2050.

Table 3.13-1: Sacramento County Projected Population Growth

	2020	2030	2040	2050
Sacramento County	1,622,306	1,803,872	1,989,221	2,176,508
Source: California Department of Finance, 2011.				

The City of Elk Grove is estimated to have a 2010 population of 153,015, a 102-percent increase since its incorporation in 2000, at which time its population was estimated by the California Department of Finance to be 59,984 (California Department of Finance 2011). Based on SACOG's Metropolitan Transportation Plan 2035 Land Use Allocation, Elk Grove will reach a population of 192,889 in 2035 (SACOG 2008). Population estimates within the Sphere of Influence Amendment (SOIA) Area are difficult to determine because U.S. Census blocks do not correspond well with the proposed SOIA boundaries.

Housing

The 2000 U.S. Census estimated that 474,814 housing units were located in Sacramento County. As of the 2010 U.S. Census, there were an estimated 513,945 housing units located in Sacramento County representing an 8.2-percent increase in housing (U.S. Census Bureau 2011).

According to the Sacramento County General Plan Housing Element, the 2000 housing vacancy rate was 4 percent or 21,212 units, of which 9,367 were located in unincorporated areas of the County.

Population and Housing

The 2009 American Community Survey indicated that the City of Elk Grove had approximately 42,214 housing units, of which 40,211 were occupied and 2,003 were vacant at the time of the survey (U.S. Census Bureau 2009).

SACOG's Metropolitan Transportation Plan 2035 Draft Land Use Allocations estimated that the number of employees in Elk Grove would more than double, and the number of housing units could almost double by the year 2035. This is equivalent to a 4.3-percent annual growth in employment and 2.7-percent annual growth in housing over the next 30-year period. Table 3.13-2 and Table 3.13-3 provide employment and household growth assumptions that were generated by Fehr and Peers using the land use assumptions from Section 2, Project Description, for the purpose of estimating potential impacts associated with traffic generation for the project.

Table 3.13-2: Growth Assumptions for the SOIA Area – Employment

Non Retail				Retail
Office	Medical	Education	Manufacturing	
14,086	1,170	457	15,821	3,967
Source: Fehr and Peers, 2011.				

Table 3.13-3: Growth Assumptions for the SOIA Area – Households and Enrollment

Households	K-12 Enrollment
20,685	11,428
Source: Fehr and Peers, 2011.	

3.13.3 - Regulatory Framework

Local

Sacramento LAFCo Policies, Standards, and Procedures

Sacramento LAFCo has developed standards and guidelines in its Plans, Policies, and Procedures Manual that aide in the implementation of the Cortese-Knox-Hertzberg Act. The following Sacramento LAFCo policies, standards, and procedures relate to population and housing:

Chapter 4, Section F

4. In preparing an Initial Study for the project subject to LAFCo review, the LAFCo will generally consider the project to have the potential to significantly affect the environment if the project has substantial growth-inducing potential because it would result in:
 - (1) Extending a major roadway into an undeveloped area;
 - (2) Extending a sewer trunk line to a substantial area not currently served;
 - (3) Extending water service to a substantial area not currently served;

- (4) Providing electric service to a substantial area not currently served;
- (5) Providing or requiring flood control or other public facility which will protect the public safety so as to permit new development in an area substantially larger than the proposed project;
- (6) Providing any other public service or facility to a substantial area which could not grow without such service; and
- (7) Encouraging or fostering growth in a substantial area.

City of Elk Grove General Plan Housing Element

The Housing Element of the Elk Grove General Plan identifies and analyzes the existing and projected housing needs for all income groups and implements actions with measurable performance objectives to address those needs. The Housing Element goal is to promote an adequate supply of decent, safe, and affordable housing to meet the needs of all residents of the City without regard to race, color, age, sex, religion, national origin, family status, or disability. Applicable policies are listed below.

- **Policy H-1:** Maintain an adequate supply of appropriately zoned land with available or planned public services and infrastructure to accommodate the City's projected housing needs for all income levels and for special needs groups. The acreage of appropriately zoned land needed to meet housing needs will be updated annually, based on construction of housing units (tallied by income group and special needs group) and loss of sites through rezoning, in accordance with Action 10.
- **Policy H-17:** Review the Housing Element to determine the appropriateness of the document to current conditions.

3.13.4 - Methodology

Impacts on population and housing were assessed by reviewing existing and anticipated population and housing projections provided by the U.S. Census Bureau, the California Department of Finance, and SACOG. The proposed project's impacts were evaluated by determining their consistency with these estimates and projections.

3.13.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, population and housing impacts resulting from the implementation of the proposed project would be considered significant if the project would:

- a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

- b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? (Refer to Section 7, Effects Found Not To Be Significant.)
- c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? (Refer to Section 7, Effects Found Not To Be Significant.)

3.13.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Population Growth

Impact POP-1:	The project would not induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
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Impact Analysis

Housing

The proposed SOIA does not include the construction of new homes or businesses, or the extension of roads, utilities, or other infrastructure. The proposed SOIA would not result in a change in existing zoning or land use designation, and therefore would not allow an increase in development density. Expansion of proposed SOI boundary could represent the first step in the development of the areas as acknowledged by Sacramento LAFCo. The proposed SOIA Area is located within the City of Elk Grove's Planning Area; therefore, the proposed SOIA Area was considered as part of the Elk Grove General Plan EIR.

Growth Inducement

The proposed SOIA may indirectly affect population growth in the SOIA Area through the potential for future urbanization of the SOIA. New employees from commercial and industrial development and new population from residential development represent 'direct' forms of growth. These direct forms of growth have a secondary effect of expanding the size of local markets and inducing additional economic activity in the area. Examples of development that would indirectly facilitate growth include the installation of new roadways or the construction or expansion of water delivery/treatment facilities. Potential growth-inducing impacts resulting from the extension of circulation facilities and expansion of utility infrastructure are addressed in Sections 3.16 (Transportation and Traffic) and 3.16 (Utilities and Service Systems), respectively. The projected population is based on an extrapolation of the land use categories and density assumptions described in Section 2, Project Description.

Under the City's expected growth rate, the buildable land within the existing City limits will not provide for all anticipated growth. SACOG projections indicate that employment land uses could more than double and housing land uses could almost double during the planning period analyzed (City of Elk Grove LAFCo SOIA Application). Implementing the proposed SOIA would provide a

potential area for growth. Approval of the proposed SOIA would not guarantee development of the area, but would allow for the City of Elk Grove to plan for and guide development in that area in coordination with Sacramento County.

The City of Elk Grove and County of Sacramento general plans require that the jobs/housing balance be applied on a city-/countywide basis, since residents do not often live close to their jobs. While the proposed project land use assumptions include the mixing of land uses, the number of jobs and dwelling units remains consistent with the City's and County's general plans. In addition, because the project includes more jobs than housing, it would have, by definition, a beneficial effect on the jobs/housing balance and would provide additional opportunities for the City/County to improve the jobs-to-housing ratio.

However, it is reasonably foreseeable that the approval of the SOIA would result in substantial population growth in the SOIA Area by proposing new homes and businesses. By inducing population growth, the project could have an adverse effect on the City's ability to provide infrastructure and public services. For this reason, prerequisite conditions, or "triggers," should be established for future development of the SOIA Area that must be met before the City Council can adopt a Planned Community designation, and any residential zoning approvals for property in the SOIA Area. These triggers are to ensure that the City's fiscal condition is stable, predictable, and adequate in the long term to serve the proposed development without detrimental impact to services for the rest of the City.

The environmental impacts associated with a substantial increase in population, including land use compatibility, traffic, noise, and air quality, biology, and hydrology are described in Sections 3.10, 3.15, 3.12, 3.3, 3.4, and 3.9 of this EIR. The proposed project could provide the opportunity to place jobs south of Elk Grove, thereby improving the "reverse commute" situation in the City. The project could provide opportunity to include housing close to jobs, which promotes an internalization of vehicle trips within the City of Elk Grove. The construction of housing south of Elk Grove could also reduce commute travel time and distances for some persons who would otherwise commute from farther away.

In summary, the proposed project would maintain existing land use designations and zoning and would not result on the construction of new homes, businesses, roads, or utilities. Therefore, the proposed project would not directly induce substantial population growth and impacts; however, the project may indirectly induce substantial population growth. With the implementation of Mitigation Measure POP-1 below, impacts created by the proposed project would be reduced by assuring that future annexations are consistent with the Metropolitan Transportation Plan. However, even with mitigation, the proposed project could lead to eventual development of the area and direct and indirect population growth, rendering impacts significant and unavoidable.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM POP-1 At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove will consult with the Sacramento Area Council of Governments (SACOG) regarding the Regional Blueprint and consistency with the Metropolitan Transportation Plan.

Level of Significance After Mitigation

Significant and unavoidable impact.

3.14 - Public Services

3.14.1 - Introduction

This section describes the existing public services and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on information provided by the City of Elk Grove Sphere of Influence Amendment Area Municipal Service Review, the 2010 County of Sacramento General Plan EIR, aerial photographs, and applicable state laws.

Fire Protection and Emergency Medical Services

The Cosumnes Community Service District (CCSD), Fire Department provides fire protection and emergency medical services to a 157-square-mile area encompassing the City of Elk Grove, the City of Galt, and areas of unincorporated south Sacramento County. The Fire Department is headquartered at 10573 East Stockton Boulevard, Elk Grove.

The CCSD operates eight fire stations serving the cities of Elk Grove and Galt, as well as areas of unincorporated Sacramento County. Six of these fire stations are located in the City of Elk Grove (summarized in Table 3.14-1 and shown on Exhibit 3.14-1), with two additional stations in the City of Galt, and a state-of-the-art fire training facility.

Table 3.14-1: Fire Station Summary

Fire Station No. (Location)	Location	Distance to Kammerer Road/ Bruceville Road (miles) ¹
71 (Elk Grove)	8760 Elk Grove Boulevard	3.35
72 (East Franklin)	10035 Atkins Drive	1.75
73 (East Elk Grove)	9607 Bond Road	5.52
74 (Laguna Creek)	6501 Laguna Park Drive	3.25
75 (Lakeside)	2300 Maritime Drive	4.50
76 (Elk Grove - West Vineyard)	8545 Sheldon Road	4.85
Note: ¹ This intersection has been used to provide a reference point. Considering the large SOIA Area, distance from a specific parcel may vary. Source: Cosumnes Community Service District Fire Department, 2010.		

Service Response

The Fire Department responds to various emergencies dispatched throughout the community including fires, vehicle collisions, hazardous materials spills, and medical and public assistance calls. The Department has over 150 sworn personnel in the Operations Division, which has units devoted to Fire Suppression, Training, and Emergency Medical Services. The Department currently staffs eight engine companies, one ladder truck company, four ambulances, and a command vehicle each day on a 24-hour basis. Also in the Elk Grove area, six grass engines and other specialty apparatus are

staffed using these personnel as seasons and emergency circumstances dictate their use. Specialty apparatus includes one heavy foam unit, a heavy rescue vehicle, a mass decontamination trailer, a mass casualty incident trailer, a swift water rescue boat, and four flood boats.

The Department provides ambulance transportation and pre-hospital care for the cities of Elk Grove and Galt. The Department employs over 80 paramedics and over 60 emergency medical technicians (EMTs). Four medic units operate around the clock and are based in East Elk Grove, Laguna, East Franklin, Central Elk Grove; two more are based in Galt.

Service Standards

CCSD is currently handling more emergency response calls than the state average, due to substantial growth and increases in traffic volumes and traffic congestion. CCSD has established a response time goal of arriving on scene in 6 minutes or less, 90 percent of the time in the urbanized portions of the City. Additionally, CCSD has adopted a standard response time of 12 minutes or less, 90 percent of the time in the rural areas. A majority of the Sphere of Influence Amendment (SOIA) Area is considered rural.

The Cosumnes Community Service District has been given an Insurance Services Office (ISO) rating of 3 in “watered” areas and 9 in “unwatered” areas, such as the existing SOIA Area. The ISO rating is the recognized classification for a fire department or district’s ability to defend against major fires. According to the ISO, newly developing urban areas should have a fire station opened within 1.5 miles of all commercial development and 2.5 miles from all residential development when “buildout” exceeds 20 percent of the planned area. A rating of 10 generally indicates no protection, whereas an ISO rating of 1 indicates high firefighting capability. A majority of the SOIA Area is considered “unwatered.”

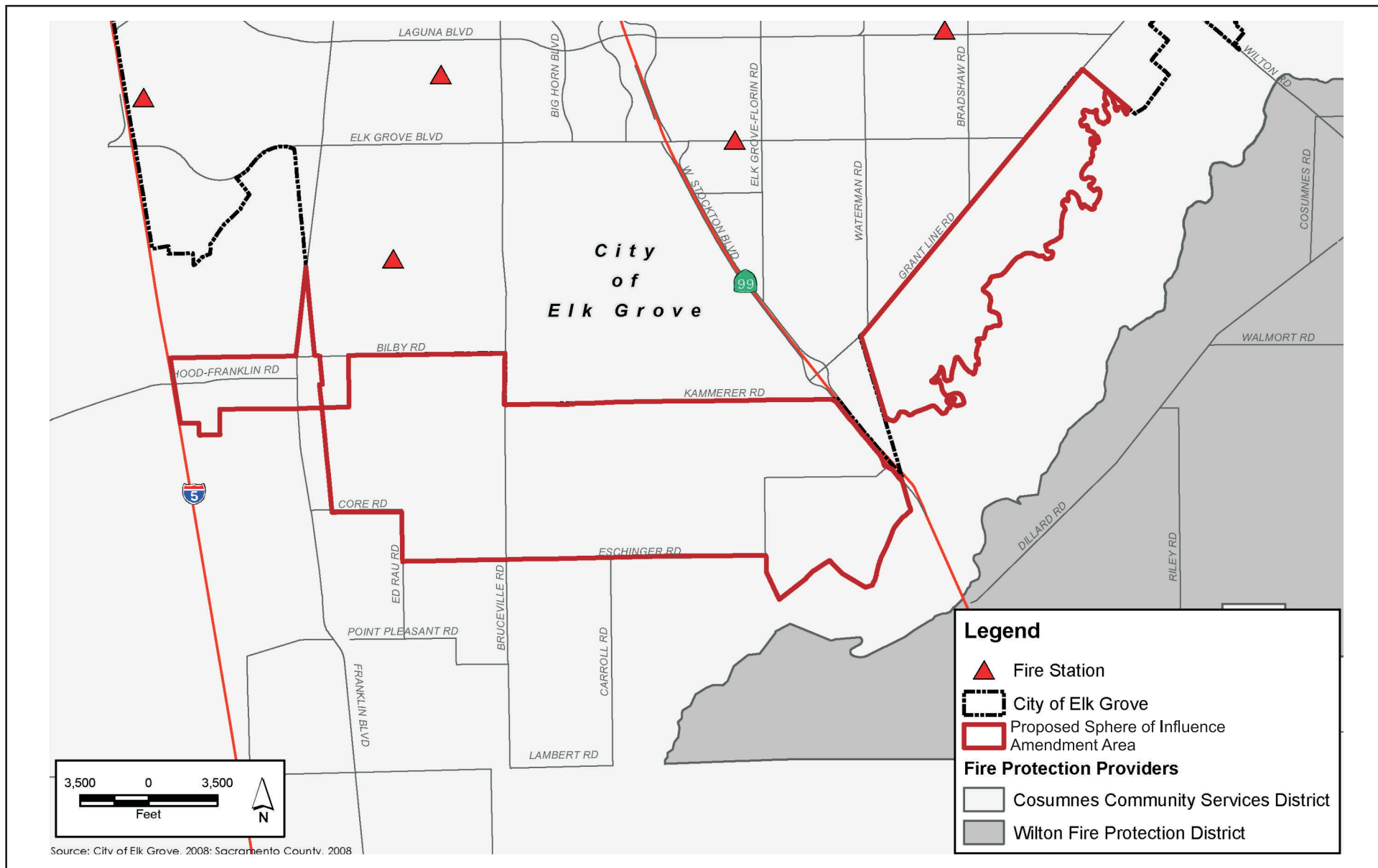
Mutual Aid

Fire and emergency services in Sacramento County have developed a Joint Powers Authority (JPA) for a unified dispatch system. Under the JPA, the closest unit available is dispatched to an incident and fire district boundaries are not an issue when an incident occurs.

The Sacramento Regional Fire/EMS Communications Center, a Joint Powers Authority, comprises the following units, shown in Table 3.14-2:

Table 3.14-2: Joint Powers Authority Units

Fire Units	ISO Class Rating
Sacramento Fire Department	2
Sacramento Metropolitan Fire District	3
Cosumnes Community Service District, Fire Department	3
Folsom Fire Department	3



Source: City of Elk Grove, 2008. Sacramento County, 2008.



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Exhibit 3.14-1 Fire Protection Service Providers

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The ISO Class Ratings listed above are for their respective service areas with established water distribution systems and hydrants.

Police Protection

Sacramento County Sheriff's Department

The SOIA Area is currently served by the Sacramento County Sheriff's Department (SCSD), which provides specialized law enforcement services to the County and local police protection to both the incorporated and unincorporated areas. Specialized law enforcement includes providing court security services, operating a system of jails for pretrial and sentenced inmates, and operating a training complex. Local police protection includes response to calls and trouble spots, investigations, surveillance, and routine patrolling.

There are six patrol districts in the unincorporated area of the County covering approximately 880 square miles. Approximately four patrol cars serve each patrol district. The SCSD consists of roughly 1,236 sworn officers, including 226 patrol officers.

Patrol Services operate the SCSD towing and parking enforcement, and community resources and service centers. The patrol function is staffed 24 hours each day and is broken up into three different ten-hour shifts.

City of Elk Grove Police Department

The City of Elk Grove's Police Department (EGPD) also provides certain law enforcement services to the SOIA Area through a mutual aid agreement. The EGPD provides comprehensive police services throughout the City, including emergency and routine call response, follow-up investigations of crime, traffic enforcement, specialized anti-gang initiatives, and other crime prevention activities. During the fiscal year (FY) 2009-2010, EGPD's staffing consisted of 125 sworn positions and 74 non-sworn positions. This is equivalent to a staffing ratio of 0.9 sworn officer per 1,000 residents, a number similar to other, comparable, agencies in the region.

The Police Department operates out of one police station, located at 8400 Laguna Palms Way, part of the City Hall complex. As part of this facility, EGPD operates a Community Service Center to report non-urgent or ongoing crimes, to have crime reports taken, and to take fingerprints and process other, routine requests for information. The Department handles approximately 100,000 service calls per year with a goal of handling Priority One calls (those involving a violent crime in-progress or other life-threatening emergency) within 5 minutes. During FY 2009-2010, EGPD's actual average Priority One response time was 5.5 minutes.

Schools

The Elk Grove Unified School District (EGUSD) provides K-12 education to the City of Elk Grove and the SOIA Area. EGUSD is the fifth-largest school district in California and the largest in Northern California. Located in southern Sacramento County, the district covers 320 square miles.

The district has 64 schools: 39 elementary schools, nine middle schools, nine high schools, four alternative education schools, an adult school, a special education school, and one charter school.

Parks

The Cosumnes Community Services District (CCSD) is the current authorized parks and recreation service provider in the proposed SOIA Area. However, there are no parks and recreation services provided within the SOIA Area, as there is little demand for such services. The CCSD also provides parks and recreation services to the City, except in those parks located in the Laguna Ridge Specific Plan (LRSP), for which the City of Elk Grove and CCSD have an agreement joint ownership of all parks in the LRSP. In addition, the City will solely own and maintain the future Civic Center Community Park located in the LRSP. Exhibit 3.14-2 shows the current boundaries of the nearby parks and recreation service providers.

The CCSD and the City of Elk Grove (cooperatively and individually) have existing facilities either constructed or planned immediately north of the SOIA Area. This includes parks, open space, trails, community centers, specialized recreation facilities, and maintenance facilities that serve the park and recreation needs of the various communities where the facilities are located. These facilities are sized to serve the population of the existing/planned community.

City of Elk Grove

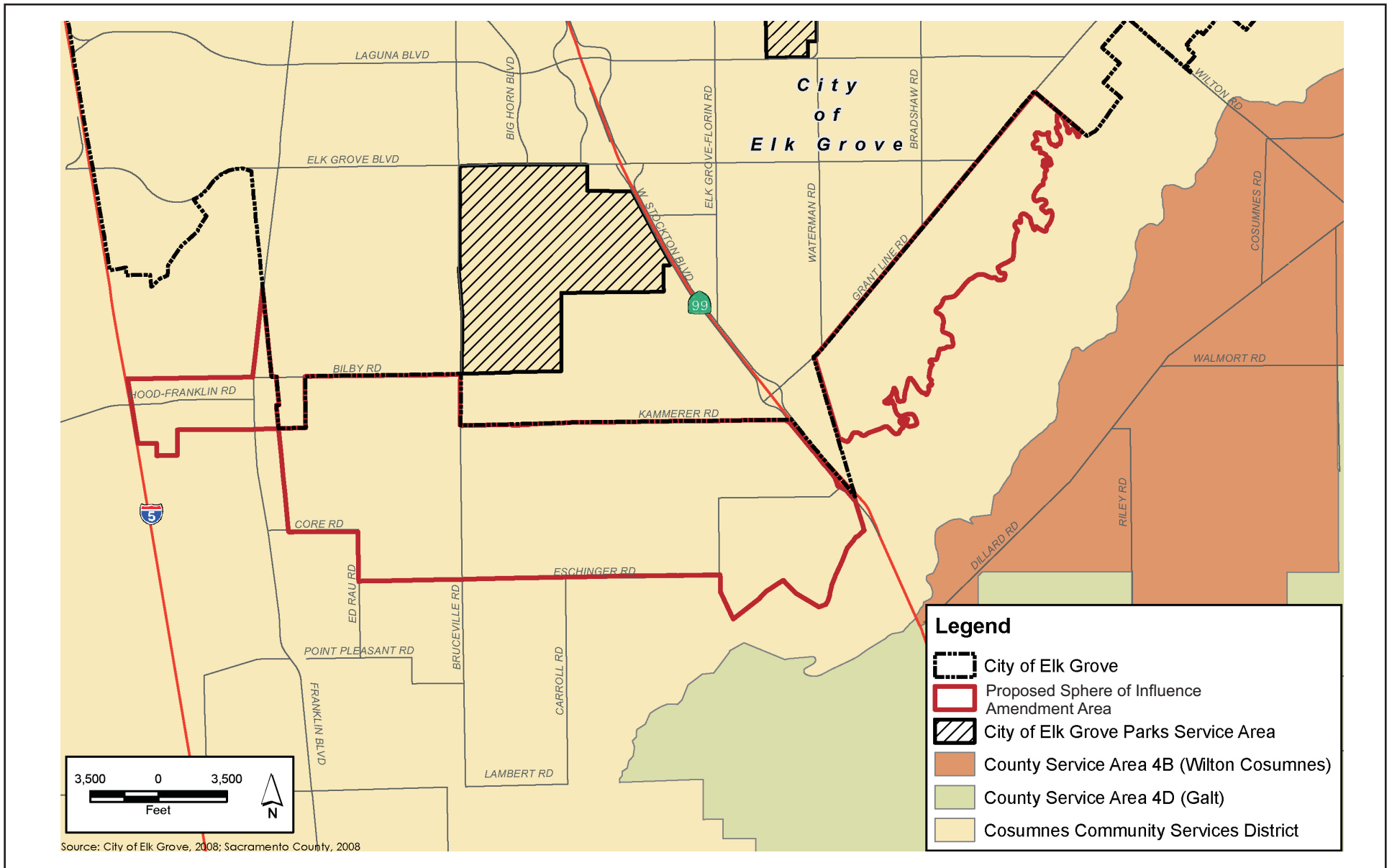
The City of Elk Grove is authorized to provide parks and recreational services within the City. As previously mentioned, the City will construct the future Civic Center Community Park, which will be jointly constructed with the City's future Civic Center located in the LRSP.

Cosumnes Community Services District

The Cosumnes Community Services District (CCSD) provides parks and recreation to the cities of Elk Grove and Galt, as well as unincorporated areas in the region. The CCSD encompasses roughly 157 square miles and an estimated population of 169,100 people, of which 144,000 are in the Elk Grove area. CCSD currently operates over 85 parks, two community centers, four recreation centers, and two aquatic complexes. CCSD also provides many recreation programs and activities to residents within the district. CCSD is active in planning and constructing park sites and recreational facilities to meet service demands. CCSD follows a 10-step process to plan, design, and construct park projects.

On average, it requires 2 years and 3 months to complete a small park project, 3 years and 6 months for larger projects.

CCSD has established a Parks Master Plan to plan for future parks and recreational facilities over the next 10- to 15-year period. The Parks and Recreation Master Plan focuses on land, facilities, and program needs, including a complete analysis of all district operational policy and funding mechanisms.



Source: City of Elk Grove, 2008. Sacramento County, 2008.



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Exhibit 3.14-2 Parks and Recreation Service Providers

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Library Services

Sacramento Public Library Authority

The Sacramento Public Library Authority (SPL) is a joint powers agency of the County and the City of Elk Grove. The SPL operates 27 branches and bookmobiles to provide a variety of library services to residents of the City of Elk Grove and Sacramento County, serving over 1,374,000 residents. The Library's total collection houses approximately 2,000,000 volumes of print, including books and periodicals, in addition to providing over 100,000 audio-visual items—an average of approximately 1.62 library holdings per capita.

The SPL has conducted adequate, long-range planning to assess current needs and for planning future library facilities. SPL has established a Library Facilities Master Plan, which utilizes population projections to project future service needs in an area. Libraries are typically planned and built to accommodate increasing populations in the area, and may include expansion potential on existing sites.

Currently, no library services are provided within the SOIA Area. As the SOIA Area is currently undeveloped, there is little to no demand for library services. There are two library branches near the SOIA Area, the Elk Grove branch and the Franklin Community branch, both of which are located within the current City limits.

The Elk Grove Library, located at 8900 Elk Grove Boulevard, serves Elk Grove east of State Route 99 (SR-99). The library is located at the entrance to Old Town Elk Grove, near a number of schools and along two major thoroughfares for the eastern side of the City. The 13,785-square foot, City-owned, two-story building opened in December 2008 and includes a group study room, a community meeting room, and public access computers. In 2007, the Elk Grove City Council approved a 10-year lease agreement with the Sacramento Public Library Authority to staff and operate the library. The branch is expected to serve a population of approximately 70,000.

The Franklin Community Library, located at 10055 Franklin High Road, serves Elk Grove west of SR-99. The 19,621-square-foot branch, jointly operated by Elk Grove Unified School District and SPL, was built in 2002. The branch is conveniently co-located with Toby Johnson Middle School and Franklin High School. The branch is expected to serve a population of approximately 70,000.

Animal Control

Sacramento County Animal Care and Regulation

Sacramento County's Animal Care and Regulation provides animal control services for the unincorporated areas of Sacramento County and to cities that contract with the County for service. The County's Animal Care facility, located at 4290 Bradshaw Road, receives more than 18,000 animals a year. The County cares for, licenses, and regulates animals, and it prevents rabies. It also investigates, quarantines, and helps prosecute cases of vicious and dangerous animals, as well as

animal cruelty. It patrols for, impounds, and—whenever possible—finds homes for the thousands of unwanted animals. The County is a member of the Humane Society of the United States.

City of Elk Grove Animal Services

The City of Elk Grove's Animal Services Division provides animal control services for the entire City. The Division currently has four Animal Services Officers. Services include investigating public nuisance, investigating bite reports, licensing, pick-up, and checking on the humane conditions of animals.

The City has formed a partnership with the Sacramento Society for Prevention of Cruelty to Animals (SPCA) to provide animal care services for the City of Elk Grove. The SPCA, a non-profit organization established to ensure the humane treatment of all animals, has a nearby animal shelter located at 6201 Florin-Perkins Road in Sacramento, to provide sheltering for stray animals.

The SPCA's facility is the closest to the SOIA Area.

Code Enforcement

Sacramento County Code Enforcement Division

Sacramento County's Code Enforcement Division is organized under three geographical teams to enforce housing, zoning, and vehicle abatement. Services that the Division provides include boarding of structures, removal of junk and rubbish, abatement of junk vehicles, civil and criminal citations, and demolition of dangerous buildings.

City of Elk Grove, Community Enhancement & Code Compliance

The City of Elk Grove's Code Enforcement provides code enforcement services to residents within the City. The Division focuses on concerns and service requests regarding unsafe, unsanitary, or blighted conditions within dwellings and neighborhoods throughout Elk Grove. The five Community Enhancement Officers work closely with other departments and service providers to maintain high community standards and address violations of the Elk Grove Municipal Zoning and Housing Ordinances.

The Division has been able to meet its service request response goals with five Code Enforcement Officers. The Division strives to respond to new service requests within 24 working hours and maintain a response level of 100 percent for all new service requests within the 24-hour period. In 2009, all service requests received a 24-hour next-business-day or same-day response, within stated goals. Division staff responded to and resolved 3,929 new service request cases in 2009. In addition, the Division achieves a 63-percent voluntary compliance within 30 days of contact with the property owner.

3.14.2 - Regulatory Framework

State

California Building Standards Code

Title 24 of the California Code of Regulations, also known as the California Building Standards Code, is a compilation of three types of building standards from three different origins:

- Building standards that have been adopted by state agencies without change from building standards contained in national and international model codes.
- Building standards that have been adopted and adapted from the national and international model code standards to meet California conditions.
- Building standards, authorized by the California legislature, that constitute extensive additions not covered by the model codes that have been adopted to address particular California concerns.

Title 24, California's Energy Efficiency Standards for Residential and Nonresidential Buildings

Title 24, Part 6, of the California Code of Regulations establishes California's Energy Efficiency Standards for Residential and Nonresidential Buildings. The standards were updated in 2005 and amended in 2008. The 2008 standards set a goal of reducing growth in electricity use by 561.2 gigawatt-hours per year (GWh/y) and growth in natural gas use by 19 million therms per year (therms/y). The savings attributable to new nonresidential buildings are 151.2 GWh/y of electricity savings and 3.3 million therms. For nonresidential buildings, the standards establish minimum energy efficiency requirements related to building envelope, mechanical systems (e.g., heating, ventilation, and air conditioning [HVAC]; and water heating systems), indoor and outdoor lighting, and illuminated signs.

California Green Building Standards Code

The California Green Building Standard Code was adopted January 12, 2009. The purpose of this code is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories:

- Planning and design
- Energy efficiency
- Water efficiency and conservation
- Material conservation and resource efficiency
- Environmental air quality

The Code addresses exterior envelope, water efficiency, and material conservation components. The aim is to reduce energy usage in non-residential buildings by 20 percent by 2015 and help meet

reductions contemplated in AB 32. With the 2008 Building Code, a 15-percent energy reduction over 2007 edition is expected. Compliance became mandatory on January 1, 2011.

California Occupational Safety and Health Administration

In accordance with California Code of Regulations, Title 8 Sections 1270 “Fire Prevention” and 6773 “Fire Protection and Fire Equipment,” the California Occupational Safety and Health Administration (Cal OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include but are not limited to guidelines on the handling of highly combustible materials; fire hosing sizing requirements; restrictions on the use of compressed air; access roads; and the testing, maintenance and use of all fire fighting and emergency medical equipment.

Uniform Fire Code

The Uniform Fire Code (UFC) contains regulations relating to construction, maintenance, and use of buildings. Topics addressed in the code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The UFC contains specialized technical regulations related to fire and life safety.

California Health and Safety Code

State fire regulations are set forth in Sections 13000, et seq. of the California Health and Safety Code, which includes regulations for building standards (as set forth in the California Building Code); fire protection and notification systems; fire protection devices such as extinguishers and smoke alarms; high-rise building and childcare facility standards; and fire suppression training.

Quimby Act

The Quimby Act (California Government Code Section 66477) was established by the California legislature in 1965 to preserve open space and parkland in the rapidly urbanizing areas of the State. This legislation was in response to California’s increased rate of urbanization and the need to preserve open space and provide parks and recreation facilities for California’s growing communities. The Quimby Act authorizes local governments to establish ordinances requiring developers of new subdivisions to dedicate land for parks, pay an in-lieu fee, or perform a combination of the two.

The Quimby Act provides two standards for the dedication of land for use as parkland. If the existing area of parkland in a community is greater than three acres per 1,000 persons, then the community may require dedication based on a standard of up to 5 acres per 1,000 persons residing in the subdivision. If the existing amount of parkland in a community is less than 3 acres per 1,000 persons, then the community may require dedication based on a standard of only 3 acres per 1,000 persons residing in the subdivision. The Quimby Act requires a city or county to adopt standards for

recreational facilities in its General Plan recreation element if it is to adopt a parkland dedication/fee ordinance.

Both the County and the City collect Quimby Act in-lieu fees. These fees contribute to a fund that would be used to acquire properties for parkland. The City's standards for parkland dedication under the Quimby Act are provided in the discussion of local regulations below.

Leroy F. Greene School Facilities Act of 1998

The Leroy F. Greene School Facilities Act of 1998, also known as Senate Bill No. 50 (SB 50) established a state program to provide per-pupil funding for new construction and modernization of existing school facilities. The passage of Proposition 1A in 1998 allowed SB-50 to be fully implemented.

SB 50 limited the power of cities and counties to require mitigation of school facilities as a condition of approving new development and authorized school districts to assess fees (at various levels) to directly offset the costs associated with increased capacity as a result of new development.

Office of Public School Construction and the State Allocation Board

The State Allocation Board (SAB) is responsible for determining the allocation of state resources used for the new construction and modernization of local public school facilities. The SAB is also responsible for the administration of the State School Facility Program, the State Relocatable Classroom Program, and the Deferred Maintenance Program. The SAB is the policy-level body for the programs administered by the Office of Public School Construction (OPSC). The OPSC, as staff to the SAB, implements and administers the School Facility Program and other programs of the SAB. The OPSC also has the responsibility of verifying that all applicant school districts meet specific criteria based on the type of funding which is being requested.

There have been four Kindergarten-University Public Education Facilities Bond Acts passed by voters (Proposition 1A, 47, 44 and 1D) that allocated billions of dollars in general obligation bonds for K-12 facilities through the School Facility Program. These funds help assist school districts with overcrowding, accommodating future enrollment growth and repairing and modernization of older facilities.

California Education Code

The California Education Code authorizes the California Department of Education to develop site selection standards for school districts. The California Department of Education School Facilities Planning Division has prepared a School Site Selection and Approval Guide that provides criteria for location appropriate school sites in the State of California.

Site selection is determined based on a screening and ranking procedure. The criteria, in order of importance, are listed below:

Public Services

- | | | |
|---------------|-------------------|---------------------|
| • Safety | • Accessibility | • Utilities |
| • Location | • Public Services | • Cost |
| • Environment | • Topography | • Availability |
| • Soils | • Size and Shape | • Public Acceptance |

Local

City of Elk Grove

Approval by LAFCo of this SOIA does not authorize any change in land use or governance. However, the proposed project would adjust the City of Elk Grove's SOI and allow the City the opportunity to file an annexation request with LAFCo to annex lands within the SOIA Area. The City of Elk Grove General Plan establishes goals and policies to guide both present and future development within the City's jurisdiction. Therefore, the City of Elk Grove's General Plan policies relevant to public services are provided below.

Parks

- **Policy 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.

Public Facilities and Finance

- **Policy PF-1:** Except when prohibited by state law, the City shall require that sufficient capacity in all public services and facilities will be available on time to maintain desired service levels and avoid capacity shortages, traffic congestion, or other negative effects on safety and quality of life.
- **Policy PF-2:** The City shall coordinate with outside service agencies—including water and sewer providers, the Elk Grove Community Services District, and the Elk Grove Unified School District—during the review of plans and development projects.
- **Policy PF-7:** The City shall require that water flow and pressure be provided at sufficient levels to meet domestic, commercial, and firefighting needs.
- **Policy PF-15:** The City shall cooperate with the County of Sacramento in the planning and implementation of future library facilities and facility expansions in Elk Grove.
- **Policy PF-16:** Specific Plans shall identify all existing and planned school sites and should include guidelines and conceptual examples for incorporating new schools into overall neighborhood design.
- **Policy PF-19:** Public facilities should be phased in a logical manner which avoids “leapfrog” development and encourages the orderly development of roadways, water and sewer, and other public facilities. The City shall not provide public financing or assistance for projects that do not comply with the planned phasing of public facilities. Interim facilities may be used only if specifically approved by the City Council.

- **Policy PF-21:** New development shall fund its fair share portion of its impacts to all public facilities and infrastructure as provided for in state law.
- **Policy PF-23:** The City will coordinate with independent public service providers, including schools, parks and recreation, reclamation, water, transit, electric and other service districts, in developing financial and service planning strategies.

Safety

- **Policy SA-1:** The City will seek to maintain acceptable levels of risk of injury, death, and property damage resulting from reasonably foreseeable safety hazards in Elk Grove.
- **Policy SA-5:** The City will cooperate with other local, regional, state, and federal agencies, and with rail carriers in an effort to secure the safety of all residents and businesses in Elk Grove.
- **Policy SA-32:** Cooperate with the Elk Grove Community Services District (EGCSD) Fire Department to reduce fire hazards, assist in fire suppression, and promote fire safety in Elk Grove.

Sacramento LAFCo Policies, Standards, and Procedures

LAFCo has developed standards and guidelines in its Plans, Policies, and Procedures Manual that aid in the implementation of the CKH Act. The following Sacramento LAFCo policies, standards and procedures, relate to Public Services:

Chapter III, LAFCo General Policies

- **Policy 3:** The LAFCo will favorably consider proposals that result in the provision of urban services in densely developed and populated areas.
- **Policy 4:** The LAFCo will favorably consider proposals that will provide urban services in areas with high growth potential rather than areas with limited potential for future growth.
- **Policy 6:** LAFCo will favorably consider those applications that do not shift the cost for services and infrastructure benefits to other service areas.
 - Are already in existence;
 - Are capable of coordinating service delivery over a relatively large area;
 - Provide more than one type of service to the territory which they serve.

Chapter V, Section H, Sphere of Influence Plans

- **Policy 2:** The Sphere of Influence Master Services Element must be current before additions to a Sphere of Influence will be approved by LAFCo.
- **Policy 4:** Amendment proposals must be consistent with the updated Sphere of Influence and Master Services Element.
- **Policy 8:** No amendments to a Sphere of Influence Plan will be approved unless a Master Services Element of the Sphere of Influence Plan exists that has been prepared by a local agency and adopted by LAFCo if required.'

- **Policy 10:** The LAFCo will approve a proposed amendment to a Sphere of Influence only if the subject agency will be the most logical and prospectively most efficient provider of services to the subject territory.

Chapter V, Section I, Amendments to Sphere of Influence

- **Policy 5:** On or before January 1, 1992, all cities, sewer districts, water districts, community service districts and multi-purpose districts shall have a Master Service Element approved by LAFCo. Copies of the proposed Element shall be submitted to the County, to adjacent jurisdictions, and adjacent service providers.
- **Policy 6:** LAFCo shall accept and adopt a Master Service Element or other Sphere of Influence Plan if the Sphere of Influence Plan as amended contains all of the components required by these standards; that the projections of areas and levels of service contained therein are accurate, adequate and complete; and the Sphere of Influence Plan complies with CEQA. If LAFCo rejects a proposed Sphere of Influence amendment or proposed Master Services Element, the Commission shall state the reasons therefore, direct staff to provide assistance on requests to correct deficiencies, and upon re-submittal promptly reconsider the amendment or element.

Cosumnes Community Services District Parks Master Plan

The Cosumnes Community Services District Parks Master Plan was initially approved by the CCSO in 2008, and the City gave final approval in 2010. The Park Master Plan takes a systemwide approach to address recreation needs in the Elk Grove community and provides infrastructure direction for all areas in the CCSO/City service area. The CCSO had coordinated efforts with the City to update the Master Plan and ensure the document's vision, standards, and strategies meet the needs of both agencies.

Sacramento Public Library Authority Facility Master Plan 2007–2025

The Sacramento Public Library Authority has developed a tiered, three-level approach to planning standards that incorporates a Threshold, a Target, and a Prime standard. The current Threshold requirement is 0.40 square foot of library space per 1,000 residents.

3.14.3 - Methodology

Michael Brandman Associates evaluated potential impacts on public services through review of the existing County of Sacramento General Plan, the City of Elk Grove Sphere of Influence Amendment Area Municipal Service Review, aerial photographs, and applicable state laws. The Municipal Service Review (MSR) is required to amend the City's Sphere of Influence (SOI). The MSR evaluated the City's and other service provider's ability to extend and provide adequate municipal services to the SOI Amendment area upon anticipated future growth. While no growth is going to occur now, it is reasonably to occur in the future. As a result, potential service providers and issues were identified to inform LAFCo and various service providers of what is known and what is likely to occur.

3.14.4 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, public services impacts resulting from the implementation of the proposed project would be considered significant if the project would:

Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

- a) Fire Protection?
- b) Police Protection?
- c) Schools?
- d) Parks?
- e) Other public facilities?

3.14.5 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Fire Protection and Emergency Medical Services

Impact PSU-1:	The proposed project would not result in a need for new or expanded fire facilities or adverse impacts on fire protection.
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Impact Analysis

This impact assesses whether the proposed project would result in a need for new or expanded fire protection and emergency medical service facilities.

The CCSD's Fire Department provides fire protection and emergency medical service to the SOIA Area. CCSD would not need to amend its boundaries in order to fully serve anticipated future growth, as CCSD would remain the most logical provider of fire protection and emergency medical response services within the SOIA Area.

The land use assumptions discussed in Section 2, Project Description, describe an assumption-based growth projection for the SOIA that will lead to an indirect increase in the need for higher levels of fire protection, including additional staffing, vehicles, and facilities. In addition, should portions of the SOIA Area be annexed in the future into the City of Elk Grove, the City's General Plan also includes goals and policies that ensure future development does not adversely impact fire protection services. Specifically, policies PF-1, PF-7, and SA-32 would ensure adequate fire protection capacity. In addition, payment of a development impact fee is required of new development by

municipalities such as the City of Elk Grove for the purpose of providing new or expanded public capital facilities required to serve that development.

The increase in residential population and employment opportunities that may result from future development of the SOIA Area and resulting demand for fire protection and emergency medical services is considered a significant impact. However, compliance with Mitigation Measures PSU-1a and 1b below would reduce any impacts to a less than significant level by assuring that adequate water supply is available for fire protection and the City and CCSD Fire Department have coordinated.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM PSU-1a Prior to submittal of any application to annex territory within the Sphere of Influence Amendment(SOIA) Area, the City of Elk Grove will provide a Plan for Services that demonstrates that the water purveyor, if a public agency, has requested that the SOIA Area be within its Sphere of Influence; that such purveyor has prepared or approved an infrastructure plan and funding program to ensure compliance with Federal Clean Water Act standards; and that sufficient, sustainable, potable water supplies adequate for projected needs are available to accommodate the buildout of the annexation territory, with no adverse impact to existing ratepayers.

MM PSU-1b Prior to submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove will provide a Plan for Services that demonstrates that CCSD and the City of Elk Grove have coordinated that the SOIA Area be within their respective Spheres of Influence and that such providers have prepared or approved a service plan and funding program to ensure that sufficient fire services are available to accommodate the buildout of the annexation territory, with no adverse impact to fire protection services of current and future residents.

Level of Significance After Mitigation

Less than significant impact.

Police Protection

Impact PSU-2: The proposed project would not result in a need for new or expanded police facilities or adverse impacts on police protection.

Impact Analysis

This impact assesses whether the proposed project would result in a need for new or expanded police protection facilities.

The Sacramento County Sheriff's Department serves the SOIA Area. The City of Elk Grove's Police Department also provides certain law enforcement services through a mutual aid agreement. The SOIA Area contains primarily agricultural land uses and therefore requires minimal law enforcement services. The proposed SOIA includes no specific land use plan; existing land uses are expected to remain the same. Existing service providers are expected to continue the current service level. The SOIA project would not cause any additional, immediate demand for law enforcement service. However, the proposed project could result in the urbanization of the SOIA Area with potential indirect impacts discussed below.

The land use assumptions discussed in Section 2, Project Description indicate that possible future growth in the SOIA Area could require an enhanced level of law enforcement services. Possible improvements could include the construction of an additional police substation, hiring of additional officers, and the purchase of additional police cars and equipment. However, the degree of change to service ratios or an estimation of how many new facilities or equipment would be needed is not reasonably foreseeable at this time.

The City's Police Department would be the most appropriate law enforcement service provider for the all or portions of the SOIA Area upon future growth of the area and annexation by the City of Elk Grove. The Department has indicated that it is able to increase services and adequately serve the area as the demand arises from anticipated growth. Police services provided by the City's Police Department are expected to result in improved service in the SOIA Area, because of the shorter response times from a police station located closer to the area. Payment of a development impact fee is a common practice required by local governments of new development for the purpose of providing new or expanded public capital facilities required to serve that development.

The Sacramento County Sheriff's Department provides adequate police protection to the SOIA Area. In the future, the SOIA Area may be served by the City of Elk Grove's Police Department.

The ability of the Sheriff's Department and Police Department to support the needs of future growth is dependent upon its financial ability to hire additional sworn personnel. In addition, a growing population would require that the Sheriff's Department secure sites and construct detention facilities on a timely basis. However, based on the existing policies contained within the Sacramento County General Plan, there is certainty that the SOIA would not have adverse impacts on police protection. Moreover, should portions of the SOIA Area be annexed in the future into the City of Elk Grove, the City's General Plan includes goals and policies that ensure future development does not adversely impact police protection services.

The increase in residential population and employment opportunities that may result from future development of the SOIA Area and resulting demand for police protection is considered a significant

impact. However, compliance with Mitigation Measure PSU-2 below would reduce any impacts to a less than significant level by assuring that the City is prepared to meet police protection needs.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM PSU-2 Prior to submittal of any application to annex territory within the Sphere of Influence Amendment Area, the City of Elk Grove will provide a Plan for Services that demonstrates that the City of Elk Grove has prepared or approved a service plan and funding program to ensure that sufficient police services are available to accommodate the buildout of the annexation territory, with no adverse impact to police protection services for current and future residents.

Level of Significance After Mitigation

Less than significant impact.

Schools

Impact PSU-3: The proposed project would not result in a need for new or expanded school facilities or adverse impacts on education.

Impact Analysis

This impact assesses whether the proposed project would result in a need for new or expanded school facilities.

The Elk Grove Unified School District currently provides K-12 educational services to the SOIA Area. The land use assumptions discussed in Section 2, Project Description, indicate that anticipated future growth of the SOIA Area could have a potentially significant impact on public schools if the project created the need for expanding existing schools or constructing new public schools to maintain adequate service levels, and the school district either had not adopted impact fees pursuant to state law or failed to collect such fees at the time a building permit was requested by the developer. Projected K-12 enrollment for the SOIA Area is calculated to be 11,428 students, based on the land use assumptions contained within Section 2, Project Description (Fehrs and Peers, 2011).

Payment of a development impact fee to the Elk Grove Unified School District for the purpose of providing new or expanded public capital facilities required to serve new development. Should portions of the SOIA Area be annexed in the future into the City of Elk Grove, the City's General Plan includes goals and policies that ensure future development does not adversely impact school services.

The SOIA would not change the current school demand in the SOIA Area. The Elk Grove Unified School District will continue to serve the area at its existing level of service. Although future

development within the SOIA Area envisioned under the proposed project could impact schools, compliance with City of Elk Grove General Plan Policy PF-16, requiring developments to incorporate new schools their overall designs, would render any impacts to school facilities created by the increase in residential population resulting from potential future development of the SOIA Area less than significant, by assuring that adequate school facilities are provided for current and future residents.

Level of Significance Before Mitigation

Less than significant impact

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Parks

Impact PSU-4:	The proposed project would not result in a need for new or expanded park, trail, or community facilities or adverse impacts on related services.
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Impact Analysis

This impact assesses whether the proposed project would result in a need for new or expanded park and recreation facilities.

The SOIA Area contains primarily agricultural land uses and currently demands minimal parks and recreation services. While the addition of the SOIA Area would cause no immediate demand for parks and recreational services, the proposed project may result in indirect impacts to parks with the urbanization of the SOIA Area. Potential indirect impacts are discussed below.

The land use assumptions discussed in Section 2, Project Description, indicate that anticipated future growth of the SOIA Area will increase demand for parks and community facilities. Expansion of the City's SOI into the SOIA Area will provide direction to the responsible parks and recreation service providers about the location and extent of the City's growth. This will allow the provider to conduct long-term planning to ensure adequate services and infrastructure are available. Both the City and CCSD are capable of providing parks and recreational services to the SOIA Area to serve anticipated growth and can be the logical service providers. The parks and recreation service provider would need to develop facilities based on the needs of the community.

Should portions of the SOIA Area be annexed in the future into the City of Elk Grove, the City's General Plan includes goals and policies that ensure future development does not adversely impact parks. Specifically, Policy PF-123 requires the adequate provision of parkland or payment of in-lieu

fees to ensure adequate park services are available. Compliance with this policy would render any indirect impacts created by future development of the SOIA Area less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Libraries

Impact PSU-5:	The proposed project would not result in a need for new or expanded library facilities or adverse impacts on related services.
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Impact Analysis

This impact assesses whether the proposed project would result in a need for new or expanded library facilities.

The Sacramento Public Library Authority (SPL) continually plans for future library service needs. SPL's Library Facilities Master Plan defines the new facilities needed through the year 2025, based on current demands and projected population growth. The Master Plan states that SPL expects significant growth in the southern and northeastern parts of the City of Elk Grove. Although the current Master Plan does not locate any library facilities within the SOIA Area, three new branches are being planned within the City. Two of those new branches are anticipated to be located near the SOIA Area, in the southern and western edges of the City. Short-term plans call for a new library in the southwest portion of the City by 2015. SPL staff has stated that master planning of library services for this area will occur as more definitive information is available.

The proposed project would not result in any immediate land use changes. Should portions of the SOIA Area be annexed in the future into the City of Elk Grove, the City's General Plan also includes goals and policies that ensure future development does not adversely impact library services.

The SOIA Area will remain unserved until sufficient demand for library services arises in the area. Currently, there is little to no demand for library services, and as such, no library services are being provided in the area. Should portions of the SOIA Area be annexed in the future into the City of Elk Grove, the City's General Plan includes goals and policies that ensure future development does not adversely impact library services. Specifically, Policy PF-15 requires the City to cooperate with the City of Sacramento in the planning and implementation of future library facilities and facility expansions in Elk Grove. Compliance with this policy would assure the demands for library services

are systematically met throughout the SOIA Area and would render any indirect impacts created by future development of the SOIA Area less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Animal Control

Impact PSU-6:	The proposed project would not result in the need for new or expanded animal control facilities or adverse impacts on related services.
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Impact Analysis

This impact assesses whether the proposed project would result in a need for new or animal control facilities.

The SOIA Area contains primarily agricultural land uses and, as such, requires minimal animal control services. Addition of the SOIA Area would cause no additional immediate demand for animal control services. Sacramento County will continue to provide adequate animal control services to the SOIA Area.

The SOIA Area contains primarily agricultural land uses and currently demands minimal animal control services. While the addition of the SOIA Area would cause no immediate demand for animal control services, the proposed project may result in indirect impacts resulting from anticipated future growth. Anticipated future growth of the SOIA Area will increase demand for animal control services, as residents come into contact with pets and other animals.

The City of Elk Grove, Animal Services provides adequate animal control services within the City of Elk Grove. The SOIA Area will remain unserved by City of Elk Grove, Animal Services until sufficient demand for animal control services arises in the area. Currently, there is little to no demand for animal control services, and as such, no animal control services are being provided in the area. Should portions of the SOIA Area be annexed in the future into the City of Elk Grove, compliance with General Plan Policy PF-1, requiring sufficient public services capacity availability, would render any impacts to animal control created by the increase in residential population resulting from potential future development of the SOIA Area less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Code Enforcement

Impact PSU-7:	The proposed project would not result in the need for new or expanded code enforcement services.
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Impact Analysis

This impact assesses whether the proposed project would result in a need for new or expanded code enforcement services.

The SOIA Area contains primarily agricultural land uses and currently demands minimal code enforcement services. Sacramento County currently provides adequate code enforcement services to the SOIA Area. While the addition of the SOIA Area would cause no immediate demand for code enforcement services, the proposed project may result in indirect impacts resulting from anticipated future growth. In particular, future growth of the SOIA Area would increase the demand for code enforcement compliance as structures are completed. New growth could add additional demand for code enforcement staff to ensure compliance with various state and local codes and ordinances applicable to the community. Demand for code enforcement services typically increases many years after initial development as buildings become dangerous, substandard, blighted, or vacant.

The SOIA Area will remain unserved by City of Elk Grove's code enforcement services until sufficient demand for such services arises in the area. Currently, there is little to no demand for code enforcement services, and as such, no code enforcement services are being provided in the area. Should portions of the SOIA Area be annexed in the future into the City of Elk Grove, compliance with General Plan Policy PF-1, requiring sufficient public services capacity availability, would render any impacts to code enforcement issues created by the increase in residential population resulting from potential future development of the SOIA Area less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

3.15 - Transportation/Traffic

3.15.1 - Introduction

This section describes the existing transportation setting and potential effects from proposed project and assumed land use scenario within the project area. Descriptions and analysis in this section are based on information contained in the Transportation Impact Analysis, prepared in July 2011 by Fehr & Peers and included in this EIR as Appendix F.

3.15.2 - Environmental Setting

The project area is generally located south-southwest of the existing City boundaries (Exhibit 2-1) close to the community of Franklin-Laguna. Roadways are the primary existing transportation facilities within the SOIA Area. The existing roadway network consists of freeways, thoroughfares, arterials, collectors, and rural roadways. Roads within the SOIA Area are primarily rural. Railroads and related facilities are also present and are generally used for movement of goods. A description of the major transportation facilities, major roadway segments, current traffic volumes, and alternative transportation modes is provided below.

Study Area

The following 24 roadway and seven freeway segments were selected for analysis based on their proximity to the project sites, their expected usage by project traffic, and the project's expected travel characteristics.

Roadway Segments

1. Elk Grove Boulevard – Interstate 5 (I-5) to Franklin Boulevard
2. Elk Grove Boulevard – Franklin Boulevard to Bruceville Road
3. Elk Grove Boulevard – Bruceville Road to SR-99
4. Elk Grove Boulevard – SR-99 to Elk Grove-Florin Road
5. Elk Grove Boulevard – Elk Grove-Florin Road to Bradshaw Road
6. Grant Line Road – SR-99 to Bradshaw Road
7. Grant Line Road – Bradshaw Road to Elk Grove Boulevard
8. Grant Line Road – Elk Grove Boulevard to Wilton Road
9. Grant Line Road – Wilton Road to Calvin Road
10. Hood-Franklin Road – I-5 to Franklin Boulevard
11. Bilby Road – Franklin Boulevard to Bruceville Road
12. Kammerer Road – Bruceville Road to West Stockton Boulevard
13. Eschinger Road – Bruceville Road to SR-99
14. Dillard Road – State Route 99 (SR-99) to Wilton Road
15. Lambert Road – I-5 to Bruceville Road
16. Franklin Boulevard – Elk Grove Boulevard to Whitelock Parkway
17. Franklin Boulevard – Lambert Road to Hood-Franklin Road

18. Bruceville Road – Elk Grove Boulevard to Whitelock Parkway
19. Bruceville Road – Whitelock Parkway to Kammerer Road
20. Bruceville Road – Kammerer Road to Eschinger Road
21. Bruceville Road – Eschinger Road to Lambert Road
22. Elk Grove-Florin Road – East Stockton Boulevard to Elk Grove Boulevard
23. Waterman Road – Elk Grove Boulevard to Grant Line Road
24. Bradshaw Road – Elk Grove Boulevard to Grant Line Road

Freeway Segments

1. I-5 – North of Laguna Boulevard
2. I-5 – Laguna Boulevard to Elk Grove Boulevard
3. I-5 – Elk Grove Boulevard to Hood-Franklin Road
4. I-5 – Hood-Franklin Road to Twin Cities Road
5. SR-99 – Twin Cities Road to Dillard Road
6. SR-99 – Dillard Road to Grant Line Road
7. SR-99 – Grant Line Road to Elk Grove Boulevard

Level of Service

Level of service (LOS) is a qualitative measure describing the operating condition of intersections and roadways. LOS ranges from A through F, which represents driving conditions from best to worst, respectively. In general, LOS A represents free-flow conditions with no congestion, and LOS F represents severe congestion and delay under stop-and-go conditions.

Roadway and Freeway Segments

Roadway and freeway segments were analyzed by comparing average daily traffic volumes to the capacity thresholds presented in Table 3.15-1. The capacity thresholds for arterials and rural facilities are from the Sacramento County, Traffic Impact Analysis Guidelines, July 2004. The capacity thresholds for freeways are from the City's Traffic Impact Analysis Guidelines, July 2000. These thresholds are used to identify the need for new or upgraded facilities.

In most cases, the results are representative of observed conditions. However, analysis results may not be representative of peak travel conditions where the presence of closely spaced intersections on arterial roadways or bottlenecks on freeway segments result in vehicle queuing and reduced travel speeds. As appropriate, these conditions are noted and discussed.

Table 3.15-1: Level of Service Definitions for Study Roadways¹

Facility Type	Number of Lanes	Maximum Daily Volume				
		LOS A	LOS B	LOS C	LOS D	LOS E
Arterial, Low Access Control ²	2	9,000	10,500	12,000	13,500	15,000
	4	18,000	21,000	24,000	27,000	30,000
	6	27,000	31,500	36,000	40,500	45,000
Arterial, Moderate Access Control ³	2	10,800	12,600	14,400	16,200	18,000
	4	21,600	25,200	28,800	32,400	36,000
	6	32,400	37,800	43,200	48,600	54,000
Arterial, High Access Control ⁴	2	12,000	14,000	16,000	18,000	20,000
	4	24,000	28,000	32,000	36,000	40,000
	6	36,000	42,000	48,000	54,000	60,000
Rural, 2-Lane Highway	2	2,400	4,800	7,900	13,500	22,900
Rural 2-Lane Road, 24 feet-36 feet of pavement, paved shoulders	2	2,200	4,300	7,100	12,200	20,000
Rural 2-Lane Road, 24 feet-36 feet of pavement, no shoulders	2	1,800	3,600	5,900	10,100	17,000
Freeway ⁵	4	28,000	43,200	61,600	74,400	80,000
	6	42,000	64,800	92,400	111,600	120,000
	8	56,000	86,400	123,200	148,800	160,000
Notes: ¹ Both number of lanes and daily volume thresholds are two-way totals. ² Low access control roads generally have frequent driveways and speeds of 25 to 35 mph. ³ Medium access control roads generally have limited driveways and speeds of 30 to 35 mph. ⁴ High access control roads generally have no driveways and speeds of 35 to 50 mph. ⁵ Freeway capacities from City of Elk Grove Traffic Impact Analysis Guidelines. Sources: Sacramento County Traffic Impact Analysis Guidelines, 2004; City of Elk Grove Traffic Impact Analysis Guidelines, 2000; Fehr & Peers, 2011.						

Existing Conditions

This chapter describes the existing transportation system and traffic operations near the project site. In general, the existing physical and operating characteristics of the roadway system, transit system, and bicycle/pedestrian system are described in this section to provide a context for understanding the severity of impacts caused by the proposed project and future annexation and urbanization activities that could be experienced in the SOIA Area. Exhibit 3.15-1 shows the existing average daily traffic volumes.

Roadway System

Implementation of the proposed project will most directly affect roadways in the County of Sacramento and the City of Elk Grove. SR-99 and I-5 will also serve the project.

State Route 99 (SR-99)

SR-99 is a north-south freeway within the study area with interchanges at Laguna Boulevard, Elk Grove Boulevard, Grant Line Road, and Dillard Road. It consists of two lanes in each direction from south of Grant Line Road to just south of Elk Grove Boulevard, where a high occupancy vehicle (HOV) lane is added in each direction. The full access SR-99/Grant Line Road interchange at the partial SR-99/Eschinger Road interchange (SB access only) would provide direct freeway access to the SOIA Area.

Interstate 5 (I-5)

I-5 is a north-south freeway within the study area with interchanges at Hood-Franklin Road, Elk Grove Boulevard, and Laguna Boulevard. It consists of two lanes in each direction south of Laguna Boulevard and three lanes in each direction north of Laguna Boulevard. The full access I-5/Hood-Franklin Road interchange would provide direct freeway access to the SOIA Area.

Elk Grove Boulevard

Elk Grove Boulevard is a major east-west roadway that extends from I-5 to Grant Line Road. Through the study area, Elk Grove Boulevard is generally a six-lane roadway from I-5 to SR-99, a four-lane roadway from SR-99 to Elk Grove-Florin Road. East of Elk-Grove Florin Road, Elk Grove Boulevard narrows to two-lanes.

Grant Line Road

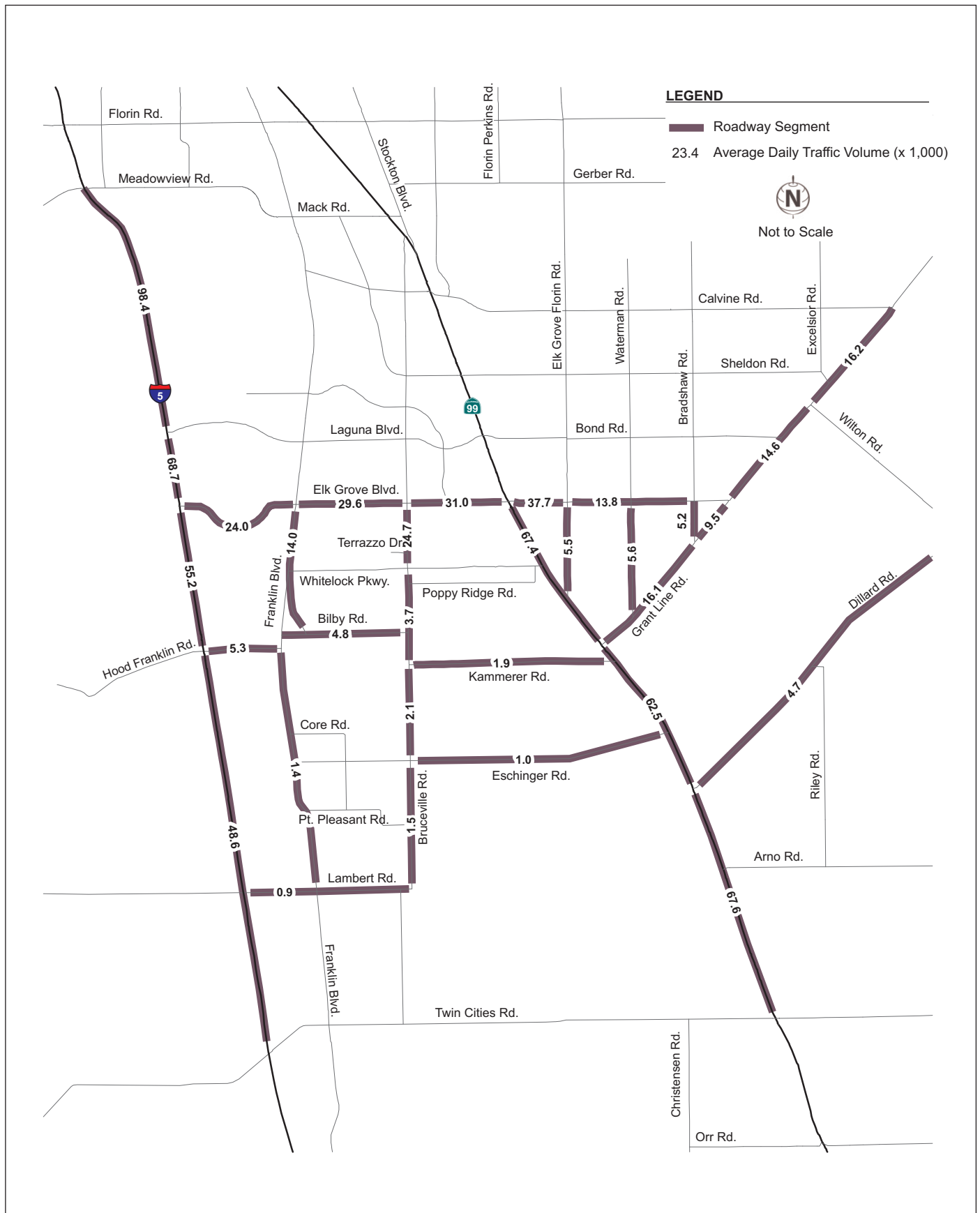
Grant Line Road is a major north-south arterial that extends from SR-99 to White Rock Road in unincorporated Sacramento County. Grant Line Road has a Type L-9 partial cloverleaf interchange at SR-99 with a six-lane overcrossing that can accommodate eight through lanes. Grant Line Road transitions to two-lanes east of SR-99.

Hood-Franklin Road

Hood-Franklin Road is an east-west two-lane rural roadway that extends from Franklin Boulevard/River Road in the West. It provides access from the project area to I-5. Hood-Franklin Road is located outside the County's Urban Services Boundary. Hood-Franklin Road has a Type L-9 partial cloverleaf interchange at I-5 with a two-lane overcrossing.

Bilby Road

Bilby Road is an east-west two-lane collector roadway that extends from Franklin Boulevard to Bruceville Road in the East.



Source: Fehr and Peers



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Exhibit 3.15-1 Average Daily Traffic Volumes-Existing Conditions

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Kammerer Road

Kammerer Road is an east-west roadway that extends from SR-99 to Bruceville Road. Kammerer Road has six lanes between SR-99 and Lent Ranch Parkway and narrows to a two-lane facility to the west.

Eschinger Road

Eschinger Road is an east-west two-lane roadway between SR-99 and Bruceville Road. Eschinger is located outside the County's Urban Services Boundary.

Dillard Road

Dillard Road is an east-west two-lane rural roadway that extends from SR-99 in the West to Jackson Road in the East. Dillard road is located outside the County's Urban Services Boundary.

Lambert Road

Lambert Road is an east-west two-lane rural roadway that extends from Bruceville Road west to River Road. Lambert Road is located outside the County's Urban Services Boundary.

Franklin Boulevard

Franklin Boulevard is a north-south roadway that extends from Twin Cities Road (south of the project) to the City of Sacramento in the North. It is a two-lane rural road between Lambert Road and Hood-Franklin Road and is outside the County's Urban Services Boundary. In the City of Elk Grove, Franklin Boulevard is two lanes to Whitelock Parkway and a four-lane road between Whitelock Parkway and Elk Grove Boulevard.

Bruceville Road

Bruceville Road is a north-south roadway that extends from Desmond Road in southern Sacramento County north to Valley Hi Drive. From Lambert Road to Kammerer Road, Bruceville Road is a two-lane rural roadway and is outside the County's Urban Services Boundary. In the City of Elk Grove, Bruceville Road is two lanes between Kammerer Road and Whitelock Parkway it is a two-lane arterial. North of Whitelock Parkway, Bruceville Road is four lanes.

Waterman Road

Waterman Road is a north-south two-lane roadway between Grant Line Road and Elk Grove Boulevard in the study area.

Bradshaw Road

Bradshaw Road is a north-south two-lane roadway between Grant Line Road and Elk Grove Boulevard in the study area.

This section describes the traffic conditions on the existing roadway and freeway segments.

Roadway and Freeway Segment Operations

Table 3.15-2 and Table 3.15-3 summarize study roadway and freeway segment operations under existing conditions, respectively, and include the following information for each study roadway segment:

- Daily roadway capacity
- Daily traffic volume (two-way total)
- Volume-to-capacity ratio
- LOS

As shown in Table 3.15-2, most of the study roadway segments operate acceptably, except for Elk Grove Boulevard between SR-99 to Elk Grove-Florin Road, which operates at LOS F. In addition, the segment of Elk Grove Boulevard between SR-99 and Bruceville Road experiences congested conditions during the evening peak hour that are characterized by significant vehicle queuing. The congestion on this segment is due primarily to the closely spaced ramp-terminal intersection at the SR-99/Elk Grove Boulevard interchange and several closely spaced intersections and driveways.

As shown in Table 3.15-3, all of the freeway segments operate acceptably at LOS E or better, based on daily traffic volumes. However, bottlenecks on SR-99 north of Elk Grove Boulevard causes vehicle queue spillback that can impact northbound SR-99 near Elk Grove Boulevard during the morning peak hour.

Table 3.15-2: Roadway Segment Level of Service – Existing Conditions

Roadway Segment	Daily Capacity ¹	Existing Conditions		
		Daily Volume ²	V/C Ratio	LOS
Elk Grove Boulevard – I-5 to Franklin Boulevard	54,000	24,000	0.44	A
Elk Grove Boulevard – Franklin Boulevard to Bruceville Road	54,000	29,600	0.55	A
Elk Grove Boulevard – Bruceville Road to SR-99	54,000	31,028	0.57	A
Elk Grove Boulevard – SR-99 to Elk Grove-Florin Road	36,000	37,700	1.05	F
Elk Grove Boulevard – Elk Grove-Florin Road to Bradshaw Road	18,000	13,800	0.77	C
Grant Line Road – SR-99 to Bradshaw Road	18,000	16,081	0.89	D
Grant Line Road – Bradshaw Road to Elk Grove Boulevard	18,000	9,525	0.53	A
Grant Line Road – Elk Grove Boulevard to Wilton Road	18,000	14,627	0.81	D

Table 3.15-2 (cont.): Roadway Segment Level of Service – Existing Conditions

Roadway Segment	Daily Capacity ¹	Existing Conditions		
		Daily Volume ²	V/C Ratio	LOS
Grant Line Road – Wilton Road to Calvine Road	18,000	16,200	0.90	D
Hood-Franklin Road – I-5 to Franklin Boulevard	20,000	5,295	0.26	C
Bilby Road – Franklin Boulevard to Bruceville Road	18,000	4,771	0.26	A
Kammerer Road – Bruceville Road to West Stockton Boulevard	17,000	1,900	0.11	B
Eschinger Road – Bruceville Road to SR-99	17,000	1,000	0.06	A
Dillard Road – SR-99 to Wilton Road	17,000	4,676	0.28	C
Lambert Road – I-5 to Bruceville Road	17,000	898	0.05	A
Franklin Boulevard – Elk Grove Boulevard to Whitelock Parkway	36,000	14,000	0.39	C
Franklin Boulevard – Hood-Franklin Road to Lambert Road	20,000	1,435	0.07	A
Bruceville Road – Elk Grove Boulevard to Whitelock Parkway	36,000	24,700	0.69	A
Bruceville Road – Whitelock Parkway to Kammerer Road	18,000	3,700	0.21	A
Bruceville Road – Kammerer Road to Eschinger Road	17,000	2,100	0.12	B
Bruceville Road – Eschinger Road to Lambert Road	17,000	1,500	0.09	A
Elk Grove Florin Road – East Stockton Boulevard to Elk Grove Boulevard	18,000	5,504	0.31	A
Waterman Road – Elk Grove Boulevard to Grant Line Road	18,000	5,630	0.31	A
Bradshaw Road – Elk Grove Boulevard to Grant Line Road	18,000	5,247	0.29	A
Notes: ¹ The capacity of each roadway is based on the number of lanes and the facility type. ² Daily traffic volumes are mid-week from 2009 and 2010 from City of Elk Grove and County of Sacramento. Bold text indicates unacceptable LOS. Source: Fehr & Peers, 2011; City of Elk Grove, 2010; County of Sacramento, 2010.				

Table 3.15-3: Freeway Segment Level of Service – Existing Conditions

Roadway Segment	Daily Capacity ¹	Existing Conditions		
		Daily Volume ²	V/C Ratio	LOS
I-5 – North of Laguna Boulevard	120,000	98,361	0.82	D
I-5 – Laguna Boulevard to Elk Grove Boulevard	80,000	68,724	0.86	D
I-5 – Elk Grove Boulevard to Hood-Franklin Road	80,000	55,199	0.69	C
I-5 – Hood-Franklin Road to Twin Cities Road	80,000	48,642	0.61	C
SR-99 – Twin Cities Road to Dillard Road	80,000	67,570	0.84	D
SR-99 – Dillard Road to Grant Line Road	80,000	62,520	0.78	D
SR-99 – Grant Line Road to Elk Grove Boulevard	80,000	67,395	0.84	D
Notes: ¹ The capacity of each roadway is based on the number of lanes and the facility type. ² Daily traffic volumes are mid-week from Caltrans for 2011. Bold text indicates unacceptable LOS. Source: Fehr & Peers, 2011				

Bicycles and Pedestrians

In the study area, the nearest dedicated bicycle and pedestrian facilities are limited to improved frontages in the City, with the closest facilities near the SR-99/Grant Line Road interchange. These facilities include pedestrian sidewalks, traffic signal controlled crosswalks, Class II on-street bike lanes, and street lighting. Roadways in the SOIA Area are shared use facilities with no dedicated pedestrian or bicycle facilities, which is consistent with the predominantly agricultural land use.

Public Transit

The City operates e-tran to provide transit service to its residents. E-tran provides the following services:

- Fixed-route local bus service (e-tran) within the City
- Commuter service to Sacramento, Galt, and Lodi
- Connections to Sacramento Regional Transit District light rail transit stations on the SR-99 and U.S. 50 corridors
- Park & ride facilities located throughout the community

The closest routes to the SOIA Area operate on Bilby Road between Franklin Boulevard and Bruceville Road and on Grant Line Road between Bradshaw Road and Waterman Road. The SOIA Area is not served by e-tran.

3.15.3 - Regulatory Framework

State

California Department of Transportation

California Department of Transportation (Caltrans) is responsible for planning, designing, constructing, operating, and maintaining all state-owned roadways in Sacramento County. Federal highway standards are implemented in California by Caltrans. Any improvements or modifications to the state highway system within the Sacramento County or the City of Elk Grove need to be approved by Caltrans, and the County or City has no ability to unilaterally make improvements to the state highway system.

The California Department of Transportation (Caltrans) operates and maintains State Route 99 (SR-99), I-5, SR-16, and SR-160, which provides regional access to the City and the SOIA Area. Additionally, the Caltrans Division of Planning has four major functions including the Office of Advance Planning, Regional Planning/Metropolitan Planning Organization, Local Assistance/IGR/CEQA, and System Planning Public Transportation. For planning purposes, Caltrans has established an LOS D as the minimal acceptable LOS for all roadways under their jurisdiction.

Local

SACOG 2035 Metropolitan Transportation Plan

SACOG is responsible for the preparation of, and updates to, the Metropolitan Transportation Plan (MTP) and the corresponding Metropolitan Transportation Improvement Program (MTIP). The MTP provides a 20-year transportation vision and corresponding list of projects. The MTIP identifies short-term projects (7-year horizon) in more detail. The current MTP is the 2008 Metropolitan Transportation Plan.

SACOG is also responsible for the oversight and distribution of most federal and state transportation funding sources. SACOG also develops the air quality plans and compliance measures, which incorporate mobile (vehicular) pollution sources.

The Sacramento County Department of Transportations (DOT) Traffic Impact Guidelines (June 2004)

The Sacramento County Department of Transportations (DOT) Traffic Impact Guidelines (June 2004) define the significance thresholds for traffic and circulation impacts in the County. Sacramento County defines the minimum acceptable operation level for its roadways and intersections to be LOS D for rural areas and LOS E for urban areas. The urban areas are those areas within the Urban Service Boundary as shown in the Land Use Element of the Sacramento County General Plan. The areas outside the USB are considered rural.

County of Sacramento

The County of Sacramento General Plan establishes goals and policies to guide both present and future development within the County's jurisdiction. The proposed SOIA project does not include any development at this time; therefore, determination of any specific policies for future projects would be premature. However, a general policies discussion is included as follows to provide guidance to any future development within the SOIA boundaries.

- **Policy CI-1:** Sacramento County shall conduct planning for road, parking, clean alternative fuel and low emission vehicles, transit, clean intercity rail, bikeway, and pedestrian facilities in a manner that is consistent with achieving air quality goals.
- **Policy CI-2:** Sacramento County shall conduct land use and transportation planning with a regional perspective.
- **Policy CI-3:** Sacramento County shall continue to seek secure financing for all components of the transportation system through the use of special taxes, assessment districts, developer dedications, or other appropriate mechanisms with an emphasis on expanding and operating the transit system, improving pedestrian and bicycle alternatives, increasing the use of clean alternative fuel and low emission vehicles, and maintenance of the road system.
- **Policy CI-4:** Require full and accurate analysis of all alternatives for public transit, including expanded bus service, private carrier operations, road capacity improvements, and rail transit, prior to committing funds for construction. Evaluation shall specifically include full social and economic costs and benefits, as well as net system effects and per-new-rider costs.
- **Policy CI-6:** Encourage transit, bicycle, and pedestrian projects when making decisions for the expenditure of discretionary local, state, or federal funds and in the Sacramento County Capital Improvement Program and the Congestion Management Plan.
- **Policy CI-9:** Sacramento County shall assess fees on new development sufficient to cover the fair share portion of that development's impacts to the regional transportation system that is not covered by other funding sources.
- **Policy CI-10:** Sacramento County shall promote and support the network of Transportation Corridors as designated on the Transportation Plan accompanying this Element.
- **Policy CI-12:** Sacramento County shall support the implementation of transportation control measures in order to meet the performance standards of the California Clean Air Act.
- **Policy CI-14:** Sacramento County shall utilize design and development standards which support travel by transit, walking, bicycling, and clean alternative fuel and low emission vehicles.
- **Policy CI-17:** Sacramento County shall participate in the preparation and implementation of a Congestion Management Plan (CMP) consistent with legal requirements which gives priority to air quality goals, alternatives to automobile travel, and the development of demand reduction measures over additional road capacity.

- **Policy CI-22:** Sacramento County shall apply the following Level of Service (LOS) standards for planning roads in the unincorporated area:

1. Rural collectors: LOS D
2. Urban area roads: LOS E

and may proceed with additional capacity projects within the scope of the adopted Transportation Plan when the Board of Supervisors has determined that the implementation of all feasible measures which will reduce travel demand in the affected corridor will not provide the target level of service.

- **Policy CI-10:** Sacramento County shall promote and support the network of Transportation Corridors as designated on the Transportation Plan accompanying this Element.
- **Policy CI-12:** Sacramento County shall support the implementation of transportation control measures in order to meet the performance standards of the California Clean Air Act.

City of Elk Grove

Approval by LAFCo of this SOIA does not authorize any change in land use or governance. However, the proposed project would adjust the City of Elk Grove's SOI and allow the City the opportunity to file an annexation request with LAFCo to annex lands within the SOIA Area. The City of Elk Grove General Plan establishes goals and policies to guide both present and future development within the City's jurisdiction. Therefore, the City of Elk Grove's General Plan policies regarding transportation that may apply to potential future development in the SOIA Area are provided below:

- **Policy CI-1:** Circulation planning for all modes of travel (vehicle, transit, bicycle, pedestrian, etc.) shall be coordinated with efforts to reduce air pollution.
- **Policy CI-2:** The City shall coordinate and participate with the City of Sacramento, Sacramento County and Caltrans on roadway improvements that are shared by the jurisdictions in order to improve operations.
- **Policy CI-3:** The City's efforts to encourage alternative modes of transportation will therefore focus on incentives to reduce vehicle use, rather than disincentives (which are generally intended to make driving and parking less convenient, more costly, or both). Incentives may include:
 - Preferential carpool and vanpool parking,
 - Bus turnouts, and
 - Pedestrian-friendly project designs
- **Policy CI-4:** Specific Plans, Special Planning Areas, and development projects shall be designed to promote pedestrian movement through direct, safe, and pleasant routes that connect destinations inside and outside the plan or project area.
- **Policy CI-5:** The City shall encourage the use of transportation alternatives that reduce the use of personal motor vehicles.

- **Policy CI-6:** The City shall require that transit service is provided in all areas of Elk Grove, including rural areas, so that transit dependent residents of those areas are not cut off from community services, events, and activities.
- **Policy CI-7:** The City shall encourage an approach to public transit service in Elk Grove which will provide the opportunity for workers living in other areas of Sacramento County to use all forms of public transit—including bus rapid transit and light rail—to travel to jobs in Elk Grove, as well as for Elk Grove workers to use public transit to commute to jobs outside the city.
- **Policy CI-8:** The City shall encourage the extension of bus rapid transit and/or light rail service to the planned office and retail areas north of Kammerer Road and west of Hwy 99.
- **Policy CI-10:** The City shall implement the roadway master plan shown in Figure CI-2. The following policies apply to selected roadways:
 - The City shall use the latest version of Caltrans' "Transportation Concept Report" for I-5 and Hwy 99 to determine the planned width of these freeways.
 - "Expanded right-of-way" indicates roadways on which sufficient width is provided for a middle two-way turn lane and/or expanded turn pockets at roadway intersections.
 - The City will widen Grant Line Road north of Bradshaw Road only as needed to accommodate traffic, and strongly supports efforts to locate a future regional connector to provide traffic relief for this roadway. Grant Line Road north of Bradshaw Road should be widened in phases as needed, and should be widened to six lanes only if no alternative route for a future regional connector (see Policy CI-12) has been located and traffic conditions warrant the widening.
 - Urban area roads: LOS E
- **Policy CI-11:** The City shall assist Caltrans in implementing improvements to I-5 and Hwy 99 within the city.
- **Policy CI-13:** The City shall require that all roadways and intersections in Elk Grove operate at a minimum Level of Service "D" at all times.
- **Policy CI-14:** The City recognizes that Level of Service D may not be achieved on some roadway segments, and may also not be achieved at some intersections. Roadways on which LOS D is projected to be exceeded are shown in the General Plan Background Report, based on the latest traffic modeling conducted by the City. On these roadways, the City shall ensure that improvements to construct the ultimate roadway system as shown in this Circulation Element are completed, with the recognition that maintenance of the desired level of service may not be achievable.
- **Policy CI-15:** Development projects shall be required to provide funding or to construct roadway/intersection improvements to implement the City's Circulation Master Plan. The payment of established traffic impact or similar fees shall be considered to provide compliance with the requirements of this policy with regard to those facilities included in the fee program, provided that the City finds that the fee adequately funds all required roadway and intersection

improvements. If payment of established fees is used to provide compliance with this policy, the City may also require the payment of additional fees if necessary to cover the fair share cost of facilities not included in the fee program.

- **Policy CI-16:** The City shall encourage an approach to public transit service in Elk Grove which will provide the opportunity for workers living in other areas of Sacramento County to use all forms of public transit—including bus rapid transit and light rail—to travel to jobs in Elk Grove, as well as for Elk Grove workers to use public transit to commute to jobs outside the city.
- **Policy CI-21:** The City shall require the installation of traffic pre-emption devices for emergency vehicles (police and fire) at all newly constructed intersections, and shall seek to retrofit all existing intersections to incorporate these features.
- **Policy CI-22:** Where traffic calming devices or techniques are employed, the City shall coordinate design and implementation with the Elk Grove Police Department and the Elk Grove CSD to ensure adequate access for police and fire vehicles.

3.15.4 - Methodology

The traffic impact analysis evaluates impacts based on the assumed land use scenario discussed in Table 3.15-5 to provide a reasonable projection of future traffic impacts. However, please note that approval of the proposed project itself would not result in any development activities or land uses changes. The development of such land use assumptions is used to inform Sacramento LAFCO using possible land use designations in order to make an informed decision regarding the direct and indirect impacts resulting from the proposed SOIA application. As such, the use of the term “project” in the following sections should not be confused with any proposed development activity but, rather, the proposed SOIA application currently before Sacramento LAFCO. The transportation impact analysis identifies foreseeable and possible impacts to roadway, transit, and bicycle/pedestrian facilities. For the purposes of this analysis, the criteria listed below were developed in consultation with Caltrans, Sacramento County, the City of Elk Grove, and Sacramento LAFCO to determine the significance of identified impacts.

Roadway System (Sacramento County)

Consistent with the County of Sacramento Traffic Impact Analysis Guidelines, a project is considered to have a significant effect if it would result in a roadway operating at an acceptable LOS (LOS D for rural areas and LOS E for urban areas to deteriorate to an unacceptable LOS. For roadways already operating at an unacceptable LOS, a project is considered to have a significant effect if it increases the volume-to-capacity ratio by more than 0.05.

The County defines the minimum acceptable operation level for its roadways to be LOS D for rural areas and LOS E for urban areas. The urban areas are those areas within the Urban Service Boundary

as shown in the Land Use Element of the Sacramento County General Plan. The areas outside the Urban Service Boundary are considered rural.

Roadway System (City of Elk Grove)

Consistent with the City of Elk Grove Traffic Impact Analysis Guidelines, a project is considered to have a significant effect if it causes a roadway to change from LOS D or better to LOS E or F. For roadways that operate at unacceptable levels of service without the project, an impact is considered significant if the project increase the volume-to-capacity ratio by 0.05 or more.

Freeway Facilities

A Transportation Concept Report (TCR) assesses a highway's current and future operating conditions and uses that and other information to establish a 20-year route concept for each segment of the route. A route concept consists of a concept LOS and a description of the concept facility. The TCR then determines the nature and extent of improvements to attain the route concept. The concept LOS applies to state highway intersections, interchange ramp terminal intersections, freeway segments, and freeway ramp junctions or weaving sections.

The Caltrans State Route 99 Transportation Corridor Concept Report (2010) and the Transportation Corridor Concept Report Interstate 5 (2010) identify the 20-year concept LOS for SR-99 and I-5 at LOS F in the study area.

Caltrans District 3 generally established minimum concept LOS standards for the 20-year horizon at LOS D for rural segments and LOS E for urban segments. Consistent with these minimum concept standards, the project was considered to have a significant effect if it would result in LOS F operations or add traffic to a freeway segment already operating at an unacceptable LOS F.

Bicycle and Pedestrian Facilities

Consistent with the County of Sacramento Traffic Impact Analysis Guidelines, a project is considered to have a significant effect if it would:

- a. Eliminate or adversely affect an existing bikeway or pedestrian facility in a way that would discourage its use.
- b. Interfere with the implementation of a planned bikeway as shown in the Bicycle Master Plan, or be in conflict with the Pedestrian Master Plan.
- c. Result in unsafe conditions for bicyclists or pedestrians, including unsafe bicycle/pedestrian, bicycle/motor vehicle, or pedestrian/motor vehicle conflicts.

Transit System

A project is considered to have a significant effect if it would disrupt or interfere with existing or planned transit operations or facilities.

Traffic Volume Forecasts

This chapter outlines the development of traffic volume forecasts for the analysis of potential impacts associated with expanding the Elk Grove Sphere of Influence (SOI).

Traffic Model Assumptions and Forecasts

A modified version of SACOG's SACMET Regional Travel Demand Forecasting Model was used to develop daily roadway segment traffic volume forecasts under Existing Plus Project and Cumulative conditions without and with the SOIA Area.

As a regional-scale model, the SACMET Travel Demand Forecasting Model lacked sufficient detail for the local-scale application for the SOI amendment. The modifications included creating a "sub-area version" of the model that still retains the entire model but is calibrated and validated with the specific project study area of the City of Elk Grove and Southern Sacramento County.

After modifications, the model was able to accurately replicate base year conditions and respond in the appropriate direction and magnitude when changes were made to input variables. Table 3.15-4 summarizes the model validation based on the thresholds contained in the Model Validation and Reasonableness Checking Manual (TMIP/FHWA 1997) and Travel Forecasting Guidelines (Caltrans 1992). The validation included each of the roadway segments listed in Chapter 1.

Table 3.15-4: Sub Area Model Validation Summary

Roadway Segment	Daily Capacity ¹	Existing Conditions		
		Daily Volume ²	V/C Ratio	LOS
I-5 – North of Laguna Boulevard	120,000	98,361	0.82	D
I-5 – Laguna Boulevard to Elk Grove Boulevard	80,000	68,724	0.86	D
I-5 – Elk Grove Boulevard to Hood-Franklin Road	80,000	55,199	0.69	C
I-5 – Hood-Franklin Road to Twin Cities Road	80,000	48,642	0.61	C
SR-99 – Twin Cities Road to Dillard Road	80,000	67,570	0.84	D
SR-99 – Dillard Road to Grant Line Road	80,000	62,520	0.78	D
SR-99 – Grant Line Road to Elk Grove Boulevard	80,000	67,395	0.84	D
Notes: ¹ The capacity of each roadway is based on the number of lanes and the facility type. ² Daily traffic volumes are mid-week from Caltrans for 2011. Bold text indicates unacceptable LOS. Source: Fehr & Peers, 2011				

As outlined above, the sub-area model was used to forecast traffic volumes for each analysis scenario. The Elk Grove SOIA Area model incorporates the following:

- 2035 land use forecasts in the SACMET planning area
- Additional traffic analysis zone (TAZ) detail in the SOIA Area
- Program level concept land use estimates for the SOIA Area based on estimates developed by the City of Elk Grove in consultation with LAFCo. Table 3.15-5 shows the concept land use. These land use inputs were developed to provide a general program level concept for the potential future impacts that may result for future development in the SOIA Area. For purposes of developing the traffic volume forecasts, the concept land use was allocated to the SOIA Area using general land use transportation planning principals like locating more intensive land uses (e.g., commercial uses) along major transportation corridors like Kammerer Road that are more accessible and consistent with planned development in Elk Grove north of Kammerer Road.
- Roadway network consistent with the MTP for 2035 as outlined in Table 3.15-5, showing major programmed improvements in the study area, which includes the western segment of the proposed Capital SouthEast Connector project.

Table 3.15-5: Program Level Land Use Estimates for Elk Grove SOIA Area

Land Use Category	Acres Proposed within the SOIA
Rural Residential (0.1 to 0.5 du/acre)	1,625
Estate Residential (0.6 to 4.0 du/acre)	320
Low Density Residential (4.1 to 7.0 du/acre)	2,390
Medium Density Residential (7.1 to 15.0 du/acre)	131
High Density Residential (15.1 to 30.0 du/acre)	76
Total – Residential	4,542
Office/Multi-Family (20.0 du/ac maximum)	146
Commercial/Office	28
Commercial/Office/Multi-Family	32
Commercial	659
Office	46
Public Schools	483
Institution	113
Public/Quasi Public	230
Light Industry	247

Table 3.15-5: (cont.): Program Level Land Use Estimates for Elk Grove SOIA Area

Land Use Category	Acres Proposed within the SOIA
Heavy Industry	357
Total – Retail/Non-Retail	2,340
Open Space ¹	987
Total – SOI Area	7,869
Note: SOI Area limited to FEMA 100-year floodplain Source: Sacramento Local Agency Formation Commission Proposed City of Elk Grove Sphere of Influence Amendment (LAFCo # 09-10) Project Description.	

Table 3.15-6: MTP 2035 Roadway Projects

Roadway	Improvement
Bruceville Road	Widen 6 lanes from Big Horn Road to Kammerer Road
Franklin Boulevard	Widen 6 lanes from Elk Grove Boulevard to Whitelock Parkway
Grant Line Road	Widen 4 lanes from Waterman Road to Calvine Road
	Widen 6 lanes from East Stockton Boulevard to Waterman Road with UPRR overcrossing
Kammerer Road	Widen 6 lanes from SR-99 to Bruceville Road
	Extend 4 lanes from Bruceville Road to I-5 with UPRR overcrossing
Source: MTP 2035.	

SOI Amendment Area Trip Generation and Distribution

Based on the program level land use estimates summarized in Table 3.15-5, the SOIA Area would generate about 218,000 vehicle trips per day. Of these trips, about 6 to 9 percent would stay within the SOIA Area under existing and cumulative conditions, respectively. This higher trip internalization under existing conditions is due in part to improved accessibility caused by the planned MTP roadway improvements summarized in Table 3.15-6. The external trip distribution is summarized in Table 3.15-7.

Table 3.15-7: SOIA Area Project Trip Distribution

North	South	East	West
75%	17%	7%	1%
Source: Fehr and Peers, 2011			

Traffic Forecasts

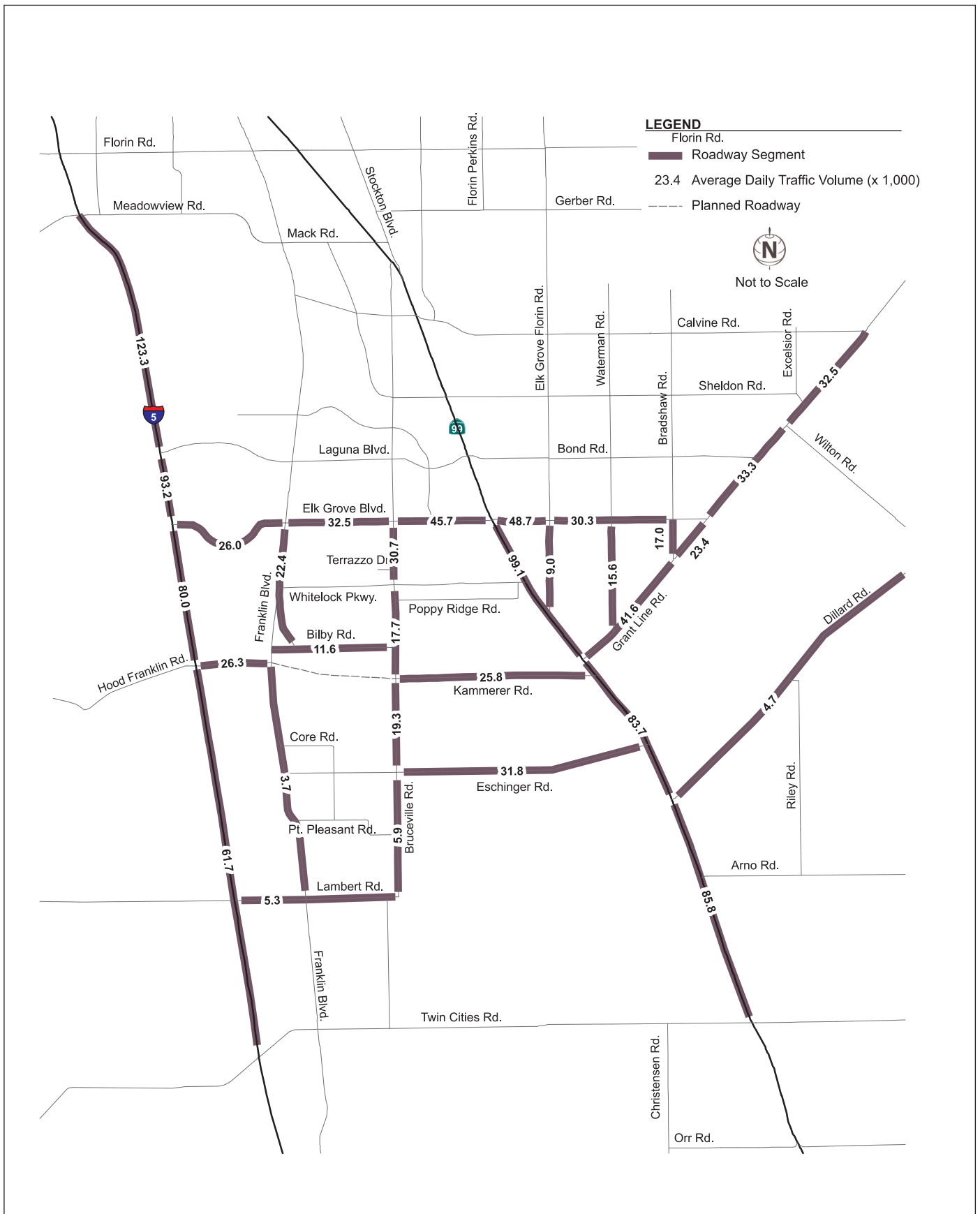
All traffic volume forecasts were adjusted using the difference method, which accounts for the difference between the base year traffic model volumes and existing counts by adding the increment of growth from the traffic model (future model – base year model) to the existing count for each study facility. Exhibit 3.15-2 through Exhibit 3.15-4 present the following information:

- Exhibit 3.15-2 – Average Daily Traffic Volumes - Existing Plus Project Conditions.
- Exhibit 3.15-3 – Average Daily Traffic Volumes - Cumulative No Project Conditions
- Exhibit 3.15-4 – Average Daily Traffic Volumes - Cumulative Plus Project Conditions.

3.15.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, transportation impacts resulting from the implementation of the proposed project would be considered significant if the project would:

- a.) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?
- b.) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?
- c.) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? (Refer to Section 7, Effects Found Not To Be Significant.)
- d.) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- e.) Result in inadequate emergency access?
- f.) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?



Source: Fehr and Peers



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Exhibit 3.15-4 Average Daily Traffic Volumes-Cumulative Plus Project Conditions

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3.15.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Existing Plus Project Traffic

Impact TRANS-1: Future annexation and development activities within the proposed project would generate new vehicle trips that would contribute to unacceptable traffic operations under Existing Plus Project Conditions.

Impact Analysis

This impact evaluates the potential impacts associated with expanding the Elk Grove SOIA Area to the south and southwest of the existing Elk Grove city limits.

For existing plus project conditions, the SOIA Area was assumed to be completely developed under 2010 conditions. The traffic volume forecasts shown on Exhibit 3.15-2 were analyzed using the analysis methodology presented earlier, which included the use of the assumed land use scenario identified in Table 3.15-5.

Roadway and Freeway Segment Operations

Table 3.15-8 and Table 3.15-9 summarize study roadway and freeway segment operations under existing plus project conditions, respectively, and include the following information for each study roadway segment:

- Daily roadway capacity
- Daily traffic volume (two-way total)
- Volume-to-capacity ratio
- LOS

The proposed project is likely to have indirect impacts on 10 roadway segments and one freeway segment should the SOIA Area fully develop. Specific impact statements and mitigation are presented below.

Table 3.15-8: Roadway Segment Level of Service – Existing Plus Project Conditions

Roadway Segment	Daily Capacity ¹	Existing Conditions			Existing Plus Project		
		Daily Volume	V/C Ratio	LOS ²	Daily Volume	V/C Ratio	LOS ²
Elk Grove Boulevard – I-5 to Franklin Boulevard	54,000	24,000	0.44	A	26,000	0.48	A
Elk Grove Boulevard – Franklin Boulevard to Bruceville Road	54,000	29,600	0.55	A	32,400	0.60	A

Table 3.15-8 (cont.): Roadway Segment Level of Service – Existing Plus Project Conditions

Roadway Segment	Daily Capacity ¹	Existing Conditions			Existing Plus Project		
		Daily Volume	V/C Ratio	LOS ²	Daily Volume	V/C Ratio	LOS ²
Elk Grove Boulevard – Bruceville Road to SR-99	54,000	31,028	0.57	A	43,300	0.80	D
Elk Grove Boulevard – SR-99 to Elk Grove-Florin Road	36,000	37,700	1.05	F	43,700	1.21	F
Elk Grove Boulevard – Elk Grove-Florin Road to Bradshaw Road	18,000	13,800	0.77	C	18,600	1.03	F
Grant Line Road – SR-99 to Bradshaw Road	18,000	16,081	0.89	D	26,600	1.48	F
Grant Line Road – Bradshaw Road to Elk Grove Boulevard	18,000	9,525	0.53	A	12,900	0.72	C
Grant Line Road – Elk Grove Boulevard to Wilton Road	18,000	14,627	0.81	D	23,800	1.32	F
Grant Line Road – Wilton Road to Calvine Road	18,000	16,200	0.90	D	18,600	1.03	F
Hood-Franklin Road – I-5 to Franklin Boulevard	20,000	5,295	0.26	C	12,100	0.61	D
Bilby Road – Franklin Boulevard to Bruceville Road	18,000	4,771	0.26	A	9,900	0.55	A
Kammerer Road – Bruceville Road to West Stockton Boulevard	17,000	1,900	0.11	B	17,100	1.01	F
Eschinger Road – Bruceville Road to SR-99	17,000	1,000	0.06	A	29,300	1.72	F
Dillard Road – SR-99 and Wilton Road	17,000	4,676	0.28	C	6,400	0.38	D
Lambert Road – Bruceville Road (West) and Bruceville Road (East)	17,000	898	0.05	A	4,800	0.28	C
Franklin Boulevard – Elk Grove Boulevard to Whitelock Parkway	36,000	14,000	0.39	C	25,300	0.70	C
Franklin Boulevard – Hood-Franklin Road to Lambert Road	20,000	1,435	0.07	A	27,600	1.38	F
Bruceville Road – Elk Grove Boulevard to Whitelock Parkway	36,000	24,700	0.69	A	27,500	0.76	C
Bruceville Road – Whitelock Parkway to Kammerer Road	18,000	3,700	0.21	A	22,600	1.26	F
Bruceville Road – Kammerer Road to Eschinger Road	17,000	2,100	0.12	B	29,300	1.72	F
Bruceville Road – Eschinger Road to Lambert Road	17,000	1,500	0.09	A	5,400	0.32	C
Elk Grove-Florin Road – East Stockton	18,000	5,504	0.31	A	10,400	0.58	A

Table 3.15-8 (cont.): Roadway Segment Level of Service – Existing Plus Project Conditions

Roadway Segment	Daily Capacity ¹	Existing Conditions			Existing Plus Project		
		Daily Volume	V/C Ratio	LOS ²	Daily Volume	V/C Ratio	LOS ²
Boulevard to Elk Grove Boulevard							
Waterman Road – Elk Grove Boulevard to Grant Line Road	18,000	5,630	0.31	A	10,500	0.58	A
Bradshaw Road – Elk Grove Boulevard to Grant Line Road	18,000	5,247	0.29	A	11,700	0.65	B
Notes: ¹ The capacity of each roadway is based on the number of lanes and the facility type. ² Level of Service (LOS) based on Traffic Impact Analysis Guidelines, City of Elk Grove, July 2000. Bold text indicates unacceptable LOS. Shading indicates project impact. Source: Fehr & Peers, 2011; City of Elk Grove, 2010; County of Sacramento, 2010.							

Table 3.15-9: Freeway Segment Level of Service – Existing Plus Project Conditions

Roadway Segment	Daily Capacity ¹	Existing Conditions			Existing Plus Project		
		Daily Volume	V/C Ratio	LOS ²	Daily Volume	V/C Ratio	LOS ²
I-5 – North of Laguna Boulevard	120,000	98,361	0.82	D	103,400	0.86	D
I-5 – Laguna Boulevard to Elk Grove Boulevard	80,000	68,724	0.86	D	77,800	0.97	E
I-5 – Elk Grove Boulevard to Hood-Franklin Road	80,000	55,199	0.69	C	66,500	0.83	D
I-5 – Hood-Franklin Road to Twin Cities Road	80,000	48,642	0.61	C	48,700	0.61	C
SR-99 – Twin Cities Road to Dillard Road	80,000	67,570	0.84	D	69,500	0.87	D
SR-99 – Dillard Road to Grant Line Road	80,000	62,520	0.78	D	67,600	0.85	D
SR-99 – Grant Line Road to Elk Grove Boulevard	80,000	67,395	0.84	D	92,800	1.16	F
Notes: ¹ The capacity of each roadway is based on the number of lanes and the facility type. ² Level of Service (LOS) based on Traffic Impact Analysis Guidelines, City of Elk Grove, July 2000. Bold text indicates unacceptable LOS. Shading indicates project impact. Source: Fehr & Peers, 2010; City of Elk Grove, 2010; County of Sacramento, 2010.							

Implementation of the proposed project would not result in an increase in average daily traffic volumes; however, the proposed project is likely to have indirect impacts on roadways in the County of Sacramento and City of Elk Grove under existing plus project conditions. The increase in traffic

volume would cause deterioration in the daily LOS, resulting in a significant impact for the following existing roadways:

- Elk Grove Boulevard – SR-99 to Elk Grove-Florin Road
- Elk Grove Boulevard – Elk Grove-Florin Road to Bradshaw Road
- Grant Line Road – SR-99 to Bradshaw Road
- Grant Line Road – Elk Grove Boulevard to Wilton Road
- Grant Line Road – Wilton Road to Calvine Road
- Kammerer Road – Bruceville Road to West Stockton Boulevard
- Eschinger Road – Bruceville Road to SR-99
- Franklin Boulevard – Hood-Franklin Road to Lambert Road
- Bruceville Road – Whitelock Parkway to Kammerer Road
- Bruceville Road – Kammerer Road to Eschinger Road

Adequate roadways have not yet been identified to support the potential land use changes that could potentially result from the proposed project. Over 218,000 vehicle trips per day would add to the existing roadway network without adding new roadways or assuming that existing roadways would be widened. Under these circumstances, many of the study roadways would operate at levels worse than the stated significance criteria resulting in a significant impact.

Implementation of the proposed project would not result in an increase in average daily traffic volumes; however, the proposed project is likely to have indirect impacts on I-5 and SR-99 through the study area under existing plus project conditions. As shown in Table 3.15-9, the increase in traffic volume would cause deterioration in daily LOS from LOS D to LOS F on the segment of SR-99 from Grant Line Road to Elk Grove Boulevard resulting in a significant impact.

As discussed earlier, bottlenecks on SR-99 north of Elk Grove Boulevard causes vehicle queue spillback that can impact northbound SR-99 near Elk Grove Boulevard during the morning peak hour. The State Route 99 Transportation Corridor Concept Report does not show any improvements for this segment of SR-99 for the 20-year concept facility. The “Ultimate” facility for this segment is a six-lane freeway with two high-occupancy vehicle lanes.

This impact occurs because adequate capacity does not exist on SR-99 to accommodate buildout of the project area.

Impacts and Mitigation Measures

Below are descriptions of impacts and mitigation measures.

Roadway Improvements

To accommodate the addition of project trips to the existing network should the SOIA Area fully develop, substantial roadway improvements will have to be constructed. Future development within

the project area will be responsible for constructing on- and offsite roadway infrastructure, including new north-south roadway connections to planned development in the City of Elk Grove (north of Kammerer Road) and east-west connections for access to I-5 and SR-99. Depending on the specific location and intensity of development within the project area, these improvements could include the following:

- Widening Grant Line Road to four lanes from SR-99 to Calvine Road
- Constructing a grade-separated crossing of the Union Pacific Railroad (UPRR) east of SR-99 on Grant Line Road
- Widening Kammerer Road to four lanes from Bruceville Road and West Stockton Boulevard
- Widening or upgrading Franklin Boulevard from Hood-Franklin road to Lambert Road
- Widening Bruceville Road from Whitelock Parkway to Eschinger Road
- Constructing elements of the SouthEast Connector project like the extension of Kammerer Road from Bruceville Road to Franklin Boulevard, a grade-separated crossing of the Union Pacific Railroad (UPRR), and upgrade of the I-5/Hood-Franklin Road
- Upgrading the SR-99/Eschinger Road interchanges

The impacted segment of Elk Grove Boulevard from SR-99 to Elk Grove-Florin Road is identified as a four-lane arterial on the City's General Plan Circulation Element. The segment is already four lanes. Therefore, widening this segment of Elk Grove Boulevard to reduce the significance of the impact would be inconsistent with the City's General Plan. The specific number of lanes and scope of specific roadway mitigation improvements will be established by subsequent traffic studies that will be required for all future development and annexation proposals. Sufficient travel lanes to provide acceptable LOS D operations on roadway within the project area and in the City shall be determined in these studies.

Some of the roadways affected by which mitigation measure may not be subject to control by the City if the project area were annexed by the City and developed. Examples include segments of Franklin Boulevard and Bruceville Road. Improvements to these roadways would require coordination and adherence to regulatory standards of the County of Sacramento. Therefore, the City shall cooperate with the County of Sacramento to establish mitigation improvements that will provide level of service consistent with the County's General Plan.

The City—in cooperation with Caltrans, the County of Sacramento, the City of Sacramento, and the Sacramento Area Council of Governments—shall identify a funding strategy to construct additional mainline capacity and operational improvement on SR-99. The funding strategy could include fair-share contribution from future development in the project area. The specific improvements should be

based on Caltrans's concept for SR-99 and may include operational improvement downstream of the impact segment.

Conclusion

The project could indirectly result in future urbanization of the SOIA Area, and could contribute to unacceptable intersection and freeway operations under Existing Plus Project Conditions. Necessary improvements to improve operations to acceptable levels have been identified. However, it is not certain that identified mitigation would reduce identified impacts to a less than significant level and that some of the identified impacts are outside the jurisdictions of the City. It is conservatively assumed that the impact will be significant and unavoidable.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM TRANS-1 At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall cooperate with Sacramento County, and Caltrans that shall establish transportation improvement plans and funding mechanisms to provide service levels consistent with the City's and County's General Plan. In addition, any future annexation and development activity within the SOIA Area shall require the preparation of a traffic impact study that would include discussion of the project's fair-share contribution and mitigation strategies.

Level of Significance After Mitigation

Significant and unavoidable impact.

Cumulative Conditions Traffic

Impact TRANS-2: Future annexation and development activities within the proposed project would generate new vehicle trips that would contribute to unacceptable traffic operations under Cumulative Conditions.

Impact Analysis

This impact evaluates traffic conditions under cumulative conditions.

The purpose of the cumulative (2035) transportation impact analysis is to determine if implementation of the proposed project in addition to planned cumulative growth will adversely affect the planned transportation system. The MTP for 2035 identifies roadway and transit improvements that are proposed to accommodate future travel demand and are included in Table 3.15-6 for major study area facilities.

The SOIA Area is located just south of the western segment of the proposed Capital SouthEast Connector project, which is a 35-mile roadway that will link communities in El Dorado County and Sacramento County and the cities of Elk Grove, Rancho Cordova, and Elk Grove. It will connect between U.S. 50 in El Dorado Hills to I-5 at Hood-Franklin Road southwest of Elk Grove. Many of the roadway improvements shown in Table 3.15-6 are located along potential alignments of the SouthEast Connector project, including improvements on Grant Line Road, Kammerer Road, and Hood-Franklin Road. There are not planned roadway improvements in the SOIA Area.

Roadway and Freeway Segment Operations

Table 3.15-10 and Table 3.15-11 summarize study roadway and freeway segment operations under cumulative conditions, respectively, and include the following information for each study roadway segment:

- Daily roadway capacity
- Daily traffic volume (two-way total)
- Volume-to-capacity ratio
- LOS

The LOS results indicate that implementation of the proposed project would result in indirect impacts on five roadway segments and six freeway segments. Specific impact statements and mitigation are presented below.

Table 3.15-10: Roadway Segment Level of Service – Cumulative Plus Project Conditions

Roadway Segment	Daily Capacity ¹	Cumulative Conditions			Cumulative Plus Project		
		Daily Volume	V/C Ratio	LOS ²	Daily Volume	V/C Ratio	LOS ²
Elk Grove Boulevard – I-5 to Franklin Boulevard	54,000	24,000	0.44	A	26,000	0.48	A
Elk Grove Boulevard – Franklin Boulevard to Bruceville Road	54,000	31,500	0.58	A	32,500	0.60	B
Elk Grove Boulevard – Bruceville Road to SR-99	54,000	42,500	0.79	C	45,700	0.85	D
Elk Grove Boulevard – SR-99 to Elk Grove-Florin Road	36,000	46,100	1.28	F	48,700	1.35	F
Elk Grove Boulevard – Elk Grove-Florin Road to Bradshaw Road	36,000	25,900	0.72	C	30,300	0.84	D
Grant Line Road – SR-99 to Bradshaw Road	54,000	25,400	0.47	A	41,600	0.77	C
Grant Line Road – Bradshaw Road to Elk Grove Boulevard	36,000	20,900	0.58	A	23,400	0.65	B

Table 3.15-10 (cont.): Roadway Segment Level of Service – Cumulative Plus Project Conditions

Roadway Segment	Daily Capacity ¹	Cumulative Conditions			Cumulative Plus Project		
		Daily Volume	V/C Ratio	LOS ²	Daily Volume	V/C Ratio	LOS ²
Grant Line Road – Elk Grove Boulevard to Wilton Road	36,000	28,700	0.80	C	33,300	0.93	E
Grant Line Road – Wilton Road to Calvine Road	36,000	28,200	0.78	C	32,500	0.90	E
Hood-Franklin Road – I-5 to Franklin Boulevard	36,000	12,100	0.34	A	26,300	0.73	C
Bilby Road – Franklin Boulevard to Bruceville Road	36,000	8,400	0.23	A	11,600	0.32	A
Kammerer Road – Bruceville Road to West Stockton Boulevard	54,000	7,700	0.14	A	25,800	0.48	A
Eschinger Road – Bruceville Road to SR-99	17,000	1,100	0.06	A	31,800	1.87	F
Dillard Road – SR-99 To Wilton Road	17,000	4,700	0.28	C	4,700	0.28	C
Lambert Road – I-5 to Bruceville Road	17,000	900	0.05	A	5,300	0.31	C
Franklin Boulevard – Elk Grove Boulevard to Whitelock Parkway	36,000	10,600	0.29	A	22,400	0.62	B
Franklin Boulevard – Hood-Franklin Road to Lambert Road	20,000	1,400	0.07	A	3,700	0.19	B
Bruceville Road – Elk Grove Boulevard to Whitelock Parkway	54,000	24,700	0.46	A	30,700	0.57	A
Bruceville Road – Whitelock Parkway to Kammerer Road	54,000	3,700	0.07	A	17,700	0.33	A
Bruceville Road – Kammerer Road to Eschinger Road	17,000	2,100	0.12	B	19,300	1.14	F
Bruceville Road – Eschinger Road to Lambert Road	17,000	1,500	0.09	A	5,900	0.35	C
Elk Grove Florin Road – East Stockton Boulevard to Elk Grove Boulevard	18,000	5,700	0.32	A	9,000	0.50	D
Waterman Road – Elk Grove Boulevard to Grant Line Road	36,000	9,300	0.26	A	15,700	0.44	A
Bradshaw Road – Elk Grove Boulevard to Grant Line Road	54,000	7,900	0.15	A	17,000	0.31	A
Notes: ¹ The capacity of each roadway is based on the number of lanes and the facility type. ² Level of Service (LOS) based on Traffic Impact Analysis Guidelines, City of Elk Grove, July 2000. Bold text indicates unacceptable LOS. Shading indicates project impact. Source: Fehr & Peers, 2011; City of Elk Grove, 2010; County of Sacramento, 2010.							

Table 3.15-11: Freeway Segment Level of Service – Cumulative Plus Project Conditions

Roadway Segment	Daily Capacity ¹	Cumulative Conditions			Cumulative Plus Project		
		Daily Volume	V/C Ratio	LOS ²	Daily Volume	V/C Ratio	LOS ²
I-5 – North of Laguna Boulevard	120,000	111,700	0.93	E	123,300	1.03	F
I-5 – Laguna Boulevard to Elk Grove Boulevard	80,000	80,400	1.00	F	93,200	1.17	F
I-5 – Elk Grove Boulevard to Hood-Franklin Road	80,000	66,300	0.83	D	80,000	1.00	F
I-5 – Hood-Franklin Road to Twin Cities Road	80,000	64,100	0.80	D	61,700	0.77	D
SR-99 – Twin Cities Road to Dillard Road	80,000	82,800	1.03	F	85,800	1.07	F
SR-99 – Dillard Road to Grant Line Road	80,000	78,000	0.97	E	83,700	1.05	F
SR-99 – Grant Line Road to Elk Grove Boulevard	80,000	82,500	1.03	F	99,100	1.24	F
Notes: ¹ The capacity of each roadway is based on the number of lanes and the facility type. ² Level of Service (LOS) based on Traffic Impact Analysis Guidelines, City of Elk Grove, July 2000. Bold text indicates unacceptable LOS. Shading indicates project impact. Source: Fehr & Peers, 2010; City of Elk Grove, 2010; County of Sacramento, 2010.							

Implementation of the proposed project would not result in an increase in average daily traffic volumes on roadways; however, the proposed project is likely to have indirect impacts on the County of Sacramento and City of Elk Grove under cumulative plus project conditions. The increase in traffic volume would cause deterioration in the daily LOS, resulting in a significant impact for the following roadways:

- Elk Grove Boulevard – SR-99 to Elk Grove-Florin Road
- Grant Line Road – Elk Grove Boulevard to Wilton Road
- Grant Line Road – Wilton Road to Calvine Road
- Eschinger Road – Bruceville Road to SR-99
- Bruceville Road – Kammerer Road to Lambert Road

The impact results because adequate roadways have not yet been identified to support the potential land use changes that would occur under implementation of the proposed project. Under these circumstances, many of the study roadways would operate at levels worse than the stated significance criteria, thereby resulting in a significant impact.

Implementation of the proposed project would indirectly result in an increase in average daily traffic volumes on I-5 and SR-99 through the study area under cumulative plus project conditions, should the SOIA Area fully develop. As shown in Table 3.15-11, the increase in traffic volume would

impact all of the study freeway segments except for the segment I-5 from Elk Grove Boulevard to Twin Cities Road.

As discussed earlier, bottlenecks on SR-99 north of Elk Grove Boulevard causes vehicle queue spillback that can impact northbound SR-99 near Elk Grove Boulevard during the morning peak hour. The State Route 99 Transportation Corridor Concept Report does not show any improvements for the impacted segment of SR-99 for the 20-year concept facility. Transportation Corridor Concept Report Interstate 5 shows the addition of high occupancy vehicle (HOV) lane on I-5 north of Hood-Franklin Road. However, Caltrans identifies the 20-year concept level of service for I-5 and SR-99 as LOS F for the study segments.

This impact would occur because adequate capacity is not planned on I-5 or SR-99 to accommodate cumulative traffic volumes with buildout of the proposed project area.

Impacts and Mitigation Measures

Below are descriptions of impacts and mitigation measures.

Roadway Improvements

To accommodate the addition of project trips to the future roadway network should the SOIA Area fully develop, substantial roadway improvements will have to be constructed. Future development within the project area will be responsible for constructing on- and offsite roadway infrastructure or the payment of its fair share of traffic impact fees to the City's Roadway Fee program, which assists in delivering roadway projects. Examples of future projects include new north-south roadway connections to planned development in the City (north of Kammerer Road) and east-west connections for access to I-5 and SR-99. Depending on the specific location and intensity of development within the project area, these improvements could include the following:

- Widening Grant Line Road from Elk Grove Boulevard to Calvine Road
- Widening Kammerer Road to four lanes from Bruceville Road and West Stockton Boulevard
- Widening Bruceville Road from Kammerer Road to Lambert Road
- Upgrading the SR-99/Eschinger Road interchanges

The impacted segment of Elk Grove Boulevard from SR-99 to Elk Grove-Florin Road is identified as a four-lane arterial on the City's General Plan Circulation Element. The segment is already four-lanes. Therefore, widening this segment of Elk Grove Boulevard to reduce the significance of the impact would be inconsistent with the City's General Plan. The specific number of lanes and scope of specific roadway mitigation improvements will be established by subsequent traffic studies that will be required for all future development proposals. Sufficient travel lanes to provide acceptable LOS D operations on roadways within the project area and in the City shall be determined in these studies.

Some of the roadways affected by this mitigation measure would not be in the jurisdiction of the City if the project area were annexed by the City and developed. Examples include segments of Bruceville Road. Improvements to these roadways would require coordination and adherence to regulatory standards of the County of Sacramento County. Therefore, the City should cooperate with the County of Sacramento to establish mitigation improvements that will provide levels of service consistent with the County's General Plan.

Conclusion

The project could indirectly result in future urbanization of the SOIA Area, and could contribute to unacceptable intersection and freeway operations under Cumulative Plus Project Conditions. Necessary improvements to improve operations to acceptable levels have been identified. However, it is not certain that identified mitigation would reduce identified impacts to a less than significant level, and some of the identified impacts are outside the jurisdiction of the City. It is conservatively assumed that the impact will be significant and unavoidable.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measure TRANS-1.

Level of Significance After Mitigation

Significant and unavoidable impact.

Roadway Safety

Impact TRANS-3:	The project would not increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
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Impact Analysis

This impact is related to site-specific design features and potential incompatible uses. Potential hazardous design features that may occur to provide access to future development include sharp curves, dangerous intersections, or "suicide" lanes. However, any future roadway improvements required within the Elk Grove city limits or SOIA Area would be constructed to AASHTO, Caltrans, Sacramento County, and City of Elk Grove roadway standards as applicable and would therefore not result in potential traffic related hazards. No impact would occur.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Emergency Access

Impact TRANS-4: The project would not result in inadequate emergency access.

Impact Analysis

This impact is related to site-specific design features and emergency access. Emergency access impacts would be evaluated at a project-specific level by the City at the time of future development application submittal. In addition, compliance with City of Elk Grove General Plan Policy CI-2, which indicates that the City shall coordinate and participate with the City of Sacramento, Sacramento County, and Caltrans on roadway improvements that are shared by the jurisdictions in order to improve operations, would assure that continuous and adequate emergency access would occur throughout the SOIA Area. No impact would occur.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Public Transit, Bicycles, and Pedestrians

Impact TRANS-5: Future annexation and development activities within the proposed project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Impact Analysis

This impact will evaluate project accessibility to public transit, bicycles, and pedestrians.

Bicycles and Pedestrian

The proposed project would not construct or develop any structures or infrastructure (including roadways) that could potentially result in the decreased performance or safety of public transit, bicycle, or pedestrian facilities. However, future annexation and development activities within the proposed SOIA Area may substantially increase demand for bicycle and pedestrian facilities. The project area has only limited dedicated bicycle or pedestrian facilities. Most bicycle and pedestrian travel is limited to existing roadways that must be shared with autos.

Policy CI-5 (CI-5-Action 5) of the Elk Grove General Plan states that the City shall develop and implement Pedestrian and Bikeway Master Plans to provide safe and convenient pedestrian and on-

and off-street bicycle facilities throughout the City. The City's current Bicycle and Pedestrian Master Plan includes proposed facilities on Kammerer Road, Grant Line Road, and potential extension on Bruceville Road into the SOIA Area and along the planned alignment of the Kammerer Road extension to Franklin Road. The City has not planned for comprehensive bicycle and pedestrian facilities in the SOIA Area, as the area is not within the City's jurisdiction. Please note that the City may initiate comprehensive planning for the project area at an undetermined future time pursuant to approval of the SOIA application.

Future development of the project area may create a substantial demand for new bicycle and pedestrian facilities in the project area. This could include new off-street bike paths, on-street bike lanes or bike routes, and sidewalks. This is considered a significant impact. Mitigation Measure TRANS-5a is recommended to reduce impacts to less than significant.

Public Transit

The proposed project would not construct or develop any structures or infrastructure (including roadways) that could potentially result in the decreased performance or safety of public transit, bicycle, or pedestrian facilities. However, future annexation and development activities within the proposed SOIA Area may substantially increase demand for public transit service under existing plus project conditions. The project area is not served by existing public transit and future service is not planned to extend to the project area. This is a significant impact.

Policy CI-5 of the Elk Grove General Plan states that the City shall require that transit service is provided in all areas of Elk Grove, including rural areas, so that transit-dependent residents of those areas are not cut off from community services, events, and activities. Policy CI-7 states that the City shall encourage an approach to public transit service in Elk Grove that will provide the opportunity for workers living in other areas of Sacramento County to use all forms of public transit, including bus rapid transit and light rail, to travel to jobs in Elk Grove, as well as for Elk Grove workers to use public transit to commute to jobs outside the City.

Should the SOIA Area become urbanized, it would create a substantial demand for new transit service to the project area. This could include bus or fixed-rail transit. Since plans to extend transit to the area have not yet been prepared, this impact is significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM TRANS-5a At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall update the City's Bicycle and Pedestrian Master Plan to delineate bicycle and pedestrian facilities in the SOIA Area consistent with the goals and policies of the City's General Plan. The

update will identify on-street and off-street bikeways and pedestrian routes as well as support facilities. Development in the SOIA Area shall be responsible for implementing the master plan recommendation as development occurs in the project area.

MM TRANS-5b At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall complete a transit master plan for the SOIA Area consistent with policies of the City's General Plan. This plan will identify the roadways to be used by bus transit routes, locations for bus turnouts and pedestrian shelters, locations for bus transfer stations, alignment for fixed route rail service, and the location of rail service stations. Future development in the SOIA Area and the City of Elk Grove shall be responsible for implementing the master plan recommendations as development occurs in the project area.

Level of Significance After Mitigation

Less than significant impact.

3.16 - Utilities and Service Systems

3.16.1 - Introduction

This section describes the existing utilities and service systems potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on information provided by the City of Elk Grove Sphere of Influence Amendment Area Municipal Service Review, the 1993 County of Sacramento General Plan, 2009 Sacramento County General Plan Update Draft Environmental Impact Report, and applicable state laws.

Potable Water

Sacramento County Water Agency

The Sacramento County Water Agency (SCWA), Zone 41¹, is responsible for operating and maintaining its public water system. SCWA Zone 41 currently provides potable water to the northern and western portions of the City of Elk Grove and unincorporated portions of the County of Sacramento. SCWA's Zone 41's service area currently includes a very small portion of the Sphere of Influence Amendment (SOIA) Area, which is bounded by Franklin Boulevard, Bilby Road, Bruceville Road, and Kammerer Road. The remaining SOIA Area does not currently receive potable water. Exhibit 3.16-1 shows the municipal water service providers in the SOIA Area.

SCWA provides municipal water to approximately 49,000 households. Approximately 85 percent of SCWA's water supply comes from groundwater wells. SCWA pumps groundwater from the South American Sub-basin of the Sacramento Valley Groundwater Basin. This groundwater basin is not adjudicated, and the groundwater level trends do not indicate the basin to be in an overdraft condition.

The remaining water demand is met by surface water supplies. Customers in certain parts of the Laguna service area receive a portion of their drinking water from surface water (American River) from the City of Sacramento via the Franklin Intertie.

Major Infrastructure

Sacramento County Water Agency's Zone 40² provides for the construction of major water supply facilities in the urban and urbanizing areas of the Elk Grove, Vineyard, and Rancho Cordova communities, generally located in the central part of the County. Portions of Zone 40's boundaries also extend into the SOIA Area. Major facilities are funded by development and utility charges. In addition, the Water Agency owns and operates 61 wells and 11 water treatment plants. Major services include water supply development review, planning, and water supply capital facilities design.

¹ Zone 41 provides potable water to 28,000 customer connections located in 7 separate service areas.

² Zone 40 is a capital construction fund that provides for wholesale water supply in the southern portion of the County.

Utilities and Service Systems

Infrastructure Planning

Sacramento County Water Agency's Zone 40 efforts are guided by four primary documents for the planning of future infrastructure and services:

- Draft Environmental Impact Report (EIR) for the Draft 2002 Zone 40 Water Supply Master Plan
- Zone 40 Water Supply Master Plan
- Central Sacramento County Groundwater Management Plan (Central Basin GMP)
- Zone 40 Water System Infrastructure Plan (SCWA/MWH, November 2006)

The planning documents describe and quantify the facilities needed to provide adequate municipal water service to the anticipated service area in the year 2030, which projects new areas of future growth. The SOIA Area is outside of the Zone 40 Water Supply Master Plan's 2030 Study Area.

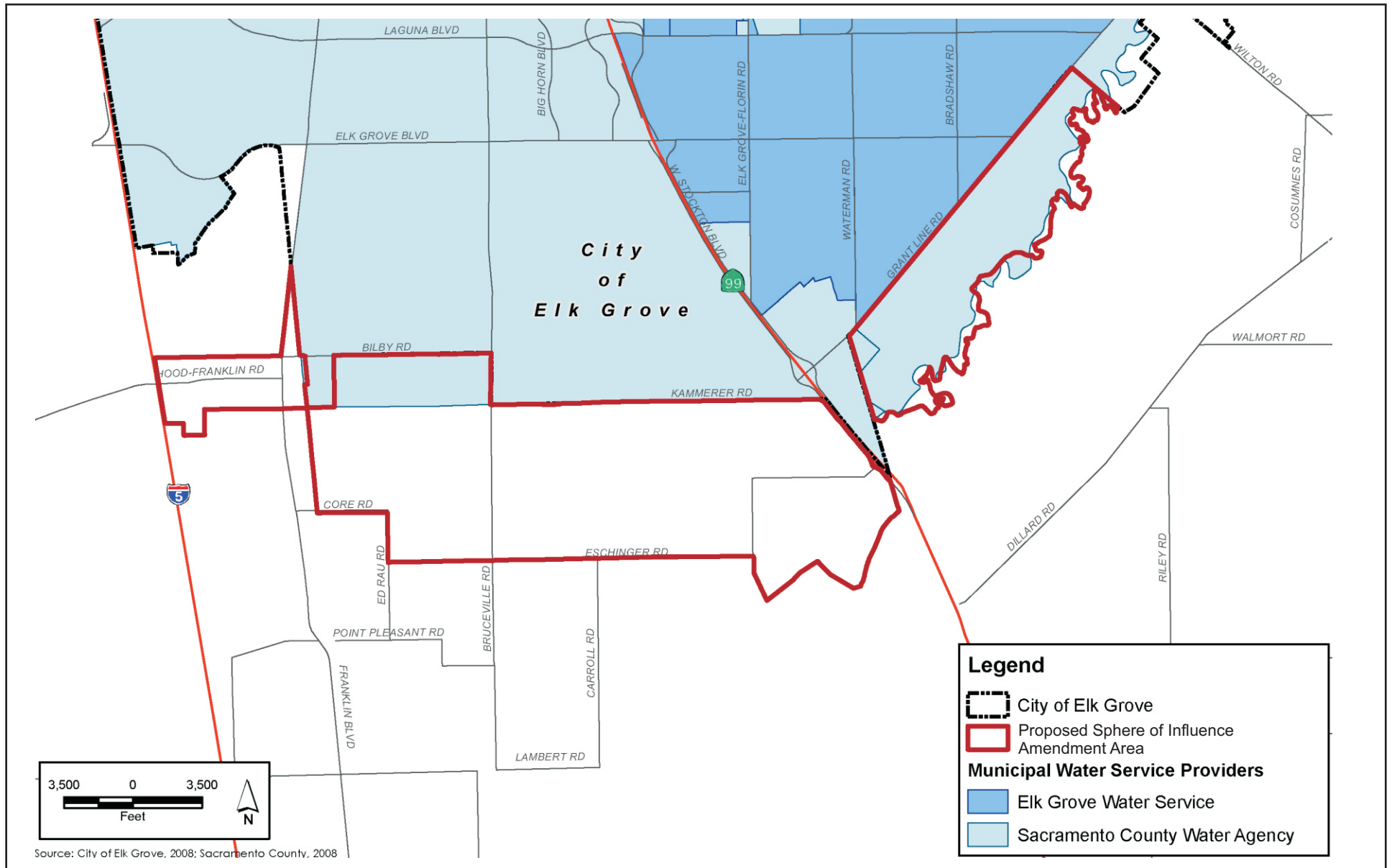
SCWA's Water Supply Master Plan provides an analysis, based on a 2030 planning horizon, of the water supply needs throughout the service area. SCWA has planned for and anticipated increased water demand within the City, including buildout of several large areas within the City. The analysis included within the Water Supply Master Plan indicates that SCWA will have a high level of control to implement the Plan and is expected to meet water demand within its planning area. Table 3.16-1 provides the current and projected water demand for the Zone 40 service area. Table 3.16-2 provides the estimated water supply for the Zone 40 service area.

Table 3.16-1: Zone 40 Current and Projected Water Demand (acre-feet annually)

Water Demand	2005	2010	2015	2020	2025	2030
Total Water Use	9,819	51,585	77,380	93,642	104,424	113,064
Source: SWCA Urban Water Management Plan, 2005.						

Table 3.16-2: Zone 40 Water Supply (acre-feet annually)

Water Supply	Normal Year	Single Dry Year	Multiple Dry Years		
			Year 1	Year 2	Year 3
Groundwater	39,097	68,327	69,599	69,599	68,522
Remediated Groundwater	14,532	14,532	14,532	14,532	14,532
Surface Water	69,567	34,683	26,106	26,106	23,183
Recycled Water	4,400	4,400	4,400	4,400	4,400
Total Water Supply	127,596	121,942	114,637	114,637	110,637
Source: SWCA Urban Water Management Plan, 2005.					



Source: City of Elk Grove, 2008. Sacramento County, 2008.



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Exhibit 3.16-1 Municipal Water Service Providers

SACRAMENTO LAFCO • ELK GROVE SPHERE OF INFLUENCE AMENDMENT
ENVIRONMENTAL IMPACT REPORT

Elk Grove Water Service (Florin Resource Conservation District)

Elk Grove Water Service (EGWS) currently provides municipal water to the southeastern portion of the City of Elk Grove, bounded by Sheldon Road to the north, State Route 99 to the west, Grantline Road to the east and the Union Industrial Park to the south. EGWS's current service boundaries are immediately adjacent to the SOIA Area. EGWS is typically supplied from groundwater sources. During peak periods in the summer, EGWS purchases wholesale treated surface water and groundwater from SCWA Zone 40. EGWS provides water to approximately 11,914 connections, with a customer base of approximately 35,607 people within the City.

EGWS currently receives a portion of their water supply from SCWA Zone 40. EGWS is provided water through a wholesale master water agreement with SCWA. Tariff Area No. 2 is located within the boundaries of SCWA's Zone 40, which has various sources of water supply, including groundwater, surface water, and recycled water. EGWS has a contractual agreement of up to 8,000 acre-feet per year. As a recipient of water supplies from SCWA as a wholesaler for Tariff Area No. 2, EGWS is indirectly a part of SCWA's Zone 40 Groundwater Management Plan.

It is not anticipated that EGWS will be the municipal water service provider in the SOIA Area, as the extension of EGWS's boundaries would cause overlapping service boundaries with SCWA.

Irrigation Water

Omochumne-Hartnell Water District

The Omochumne-Hartnell Water District (OHWD) provides irrigation water strictly for agricultural uses. OHWD's current service area includes the entire northeastern portion of the SOIA Area. Anticipated future growth of the SOIA Area will not require urban water services from OHWD; therefore, no infrastructure analysis is needed. OHWD will remain the irrigation water service provider until anticipated urban growth occurs.

Wastewater

Sacramento County Environmental Management Department

Septic Systems

Existing agricultural and rural residential land uses are served by individual septic systems. Major portions of the SOIA Area not served by a public wastewater service are served by private septic systems. The Sacramento County Environmental Management Department (EMD) provides mandated regulatory services in food service, hazardous materials, solid waste facilities, and septic service. Conventional septic systems use seepage pits of varying depths. The standard pit depth in the area is 35 feet.

Sacramento Area Sewer District

Wastewater Collection

The Sacramento Area Sewer District (SASD) provides local wastewater conveyance services and infrastructure throughout the Sacramento region. SASD maintains and provides wastewater

collection and conveyance from the local residences and businesses in the urbanized, unincorporated areas of the County; the cities of Elk Grove, Rancho Cordova, and Citrus Heights; portions of the City of Sacramento; and a very small area in the City of Folsom. The service area covers approximately 270 square miles and has a population of over 750,000. Exhibit 3.16-2 shows the service area of the Sacramento County Sanitation District 1 (CSD-1), also known as the Sacramento Area Sewer District.

The smaller local pipelines that SASD operates connect to the larger regional pipelines maintained by Sacramento Regional County Sanitation District. Existing SASD facilities are adjacent to the SOIA Area.

Sacramento Regional County Sanitation District

Wastewater Collection

The Sacramento Regional County Sanitation District (SRCSD) provides large pipeline conveyance of wastewater from all areas serviced by SASD, the City of Sacramento, the City of West Sacramento, and the City of Folsom to the wastewater treatment plant. The trunk lines that transport wastewater from the local residences and businesses flow into much larger regional pipelines maintained by SRCSD. SRCSD conveys wastewater through the larger regional pipes into the wastewater treatment plant operated and maintained by the District. After wastewater is treated and de-chlorinated, the treated effluent is discharged into the Sacramento River.

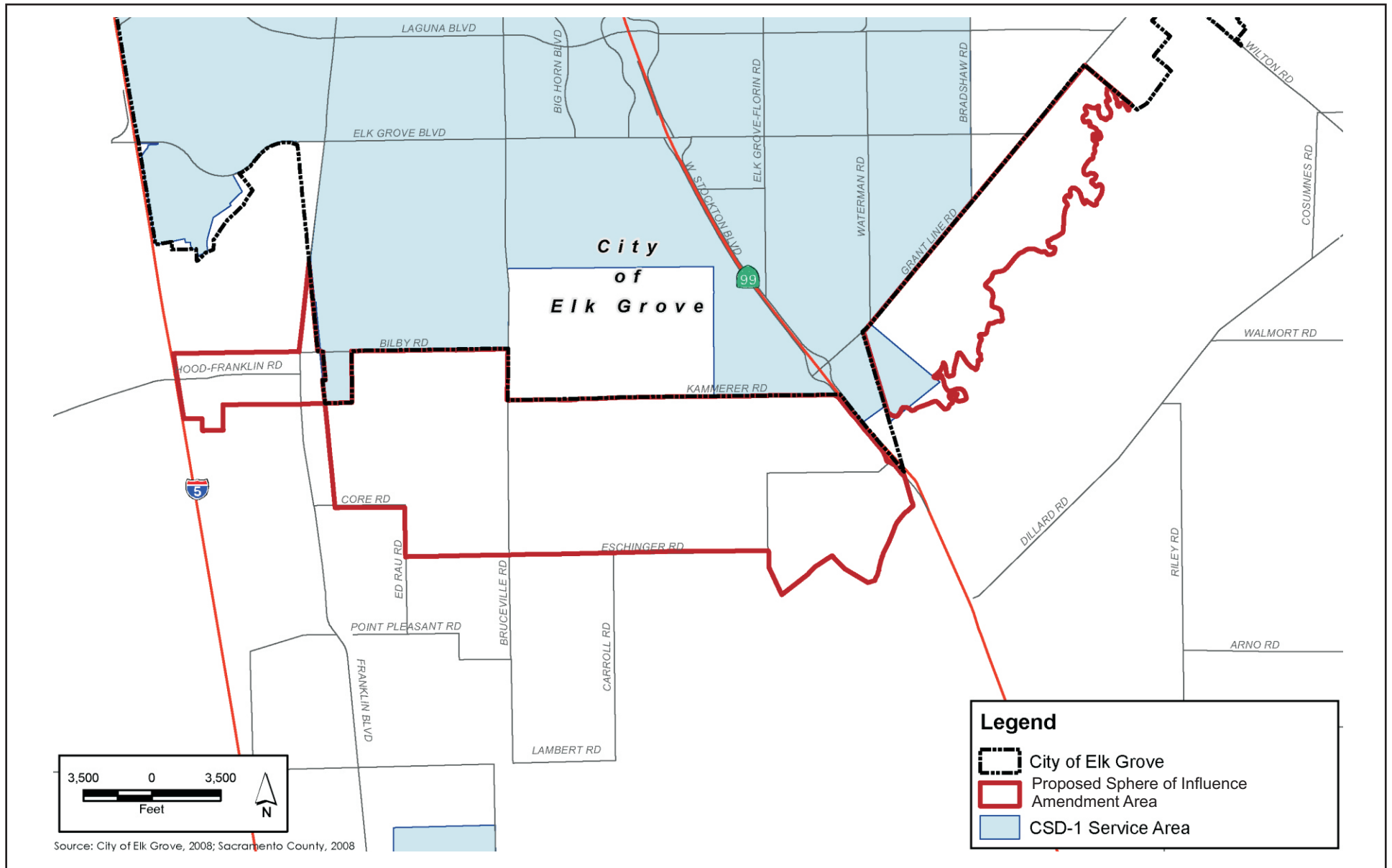
SASD has an adopted master planning document analyzing sewer conveyance needs of the area within the County's Urban Services Boundary (USB). Relief, rehabilitation, and expansion projects that are needed to meet demand are identified in the SASD Master Plan.

SRCSD is currently implementing large-scale improvements of the regional interceptor system to correct existing deficiencies and in anticipation of growth over the next 15 years. Improvements include the construction and extension of several interceptors and force mains.

Wastewater Treatment

SRCSD is in the process of expanding the Sacramento Regional Wastewater Treatment Plant (SRWTP) to accommodate 250 million gallons a day (mgd) of Average Dry Weather Flows (ADWF) and maintaining the 400 mgd for Average Wet Weather Flows (AWWF). The facility's current ADWF is approximately 165 mgd, with a permitted capacity of 181 mgd for ADWF. These expansions are projected to accommodate all projected regional growth through the year 2020.

The discharge permit adopted for the SRWTP in 2000 contains new, more stringent requirements at both the state and federal levels that are designed to restrict discharges of toxic pollutants into surface waters. Water recycling is a compliance strategy currently being used by SRCSD. Biosolids recycling technologies may also be implemented. The allowable total maximum daily loads of pollutants discharged into the Sacramento River, as well as prohibitions on elevated temperature of discharges into the Sacramento River, will be future concerns.



Source: City of Elk Grove, 2008. Sacramento County, 2008.



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32330002 • 09/2011 | 3.16-2_wastewater_service_providers.cdr

Exhibit 3.16-2 Wastewater Service Providers

SACRAMENTO LAFCO • ELK GROVE SPHERE OF INFLUENCE AMENDMENT
ENVIRONMENTAL IMPACT REPORT

Storm Drainage

Sacramento County Water Agency

Storm Drainage

Sacramento County Water Agency provides for the construction of major drainage facilities in the urban and urbanizing areas of the unincorporated county and the cities of Citrus Heights, Elk Grove, and Rancho Cordova. A majority of the City of Elk Grove and a portion of the SOIA Area are within SCWA's Zone 11A. Fees collected within the zone at the time of development fund the construction of the major drainage infrastructure in the urbanizing areas.

The area zones were created in order to finance, construct, acquire, reconstruct, maintain, operate, extend, repair, or otherwise improve any work or improvement of common benefit to such zone or participating zones.

SCWA Development Review staff evaluates new development proposals for subdivisions and commercial properties to ensure that improvement plans are in compliance with drainage and floodplain management policies. New development is required to conform to County standards, drainage ordinances, and floodplain development policies. SCWA also administers the Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP) for the unincorporated portion of the County.

City of Elk Grove, Development Services Group, Public Works Department, Water Resources

Storm Drainage

The City of Elk Grove provides local stormwater drainage services to residents within the City's boundaries. The Water Resources Division is responsible for drainage, flood control, stormwater quality, and long-term water and urban runoff planning within the City. The Division's mission is to protect the residents and businesses from the threat and damage of flooding, preserve natural areas, and protect water quality throughout the City.

The Division operates and maintains 66 miles of open channels, 330 miles of drainage pipes, four pump stations, over 8 miles of levees, four stormwater pump stations, and 19 flood control and water quality detention basins.

The Division's activities include:

- Pipeline, channel, and creek clearing and repairing;
- Detention basin and pump station maintenance, rehabilitation, and replacement;
- Response to drainage and flooding problems during storms;
- Complying with state and federal permitting requirements; and
- Engineering and Planning.

The Division reviews drainage studies and plans for new development to ensure that new storm drainage facilities will accommodate the stormwater runoff generated from new structures and roads to convey stormwater to the Sacramento and Cosumnes Rivers. The Division also works to protect the City from seasonal flooding.

The City is a partner in the Sacramento Storm Water Quality Partnership, comprising the County of Sacramento and the cities of Sacramento, Citrus Heights, Folsom, Rancho Cordova, Elk Grove, and Galt. The California Regional Water Quality Control Board, Central Valley Region issued members in the partnership a National Pollutant Discharge Elimination system (NPDES) Municipal Storm Water Permit to allow the lawful discharge of Sacramento area urban runoff into local creeks and rivers. The Storm Water Permit, a result of federal regulations driven by the Clean Water Act requires the members in the Partnership to reduce pollutants in urban stormwater discharges to maximum extent practicable.

Sacramento-San Joaquin Drainage District (State Reclamation Board)

The Sacramento-San Joaquin Drainage District (SSJDD) is currently operated by the State Reclamation Board (SRB) as a regulatory agency, and does not provide any services. The SSJDD does not have any personnel or facilities.

As a regulatory agency, the SSJDD is responsible for flood control within the Central Valley by regulating encroachments into the system via a permitting process, pursuant to Title 13. This process ensures proper flood control by limiting land uses.

A very small portion of the SOIA Area is within the SSJDD's boundaries near the Hood-Franklin Interstate 5 Interchange. The SSJDD is not expected to provide any drainage or flood control service to the SOIA Area.

Solid Waste

Sacramento Regional Solid Waste Authority

The Sacramento Regional Solid Waste Authority (SWA) is a joint powers authority between two agencies: the County and the City of Sacramento. SWA regulates commercial solid waste collection by franchised haulers through SWA ordinances. The SOIA Area is currently within the service boundaries of the Sacramento County Municipal Services Agency Department of Waste Management & Recycling, but service is provided by mostly private franchised hauling companies for the commercial and industrial customers. The private hauling companies are under a franchise agreement with the Sacramento Regional Solid Waste Authority to perform collection and disposal at properties and convey waste to landfills and recycling stations, as appropriate. Private providers do not fall under the jurisdiction of Sacramento Local Agency Formation Commission (LAFCo).

Residential Service (Central Valley Waste Services)

Sacramento County has contracted out residential solid waste services in the unincorporated area south of Calvine Road, which includes the proposed SOIA Area, to Central Valley Waste Services (doing business as Waste Management), a private commercial hauler. These services include solid waste management and recycling services.

Commercial Service (Various Commercial Haulers)

The commercial solid waste collected by private franchised haulers are sent to private transfer stations to be processed and disposed at various facilities, including the Sacramento County Keifer Landfill, Yolo County Landfill, and L and D Landfill.

City of Elk Grove, Neighborhood Services Group, Integrated Waste Department

The Integrated Waste Department manages the City's residential solid waste franchise and plans, and it coordinates, promotes, and implements citywide solid waste reduction, recycling, composting, and public education activities.

Solid waste diversion information indicates that the City discarded 2.6 pounds per person per day of solid waste in the year 2009, exceeding the 50-percent diversion requirement of CalRecycle and thus complying with Assembly Bill (AB) 939. Approximately 667,000 tons of solid waste was disposed at various landfills in 2009. This volume of waste could double within 25 years.

The City's solid waste is currently sent to transfer stations in the City of Sacramento, and then transported outside of the region for permanent disposal. The City is currently considering sites for a 20-acre solid waste transfer station within the City for greater convenience.

Residential Service (Allied Waste)

The City of Elk Grove has contracted out residential solid waste services to Allied Waste, a private commercial hauler. Allied Waste Services provides solid-waste collection services under an exclusive franchise agreement with the City. These services include collection of all solid waste, residential recyclables, used motor oil, and yard trimmings, along with other services. Residential garbage service is provided on a weekly basis. Green waste and mixed recycling are collected on an alternating week basis. Green waste and mixed recycling are collected on an alternating week basis: green waste is collected one week and mixed recycling the next. Refuse from residences are collected by an automated truck collection system.

Commercial Service (Various Commercial Haulers)

The City of Elk Grove has contracted out commercial solid waste services to a variety of commercial haulers. All commercial waste haulers operating, conducting business, or providing solid waste services within the City of Elk Grove boundaries must register with the City and receive a registration decal placed in their vehicles in order to operate. Businesses may select which commercial hauler to utilize for solid waste services.

Current solid waste facilities being utilized include the Kiefer Landfill, Elder Creek Transfer & Recovery Inc, BLT Enterprises, Florin-Perkins Transfer Station, Jackson Road Landfill, and Sacramento Recycling & Transfer Station.

Landfills

Table 3.16-3 summarizes the three regional landfills that serve the various jurisdictions in the Sacramento County area, based on information provided by the California Department of Resources Recycling and Recovery. As shown in the table, the landfills collectively have more than 154 million cubic yards of remaining capacity.

Table 3.16-3: Landfill Summary

Landfill	Location	Maximum Daily Throughput	Remaining Capacity	Closure Date
Kiefer Landfill	Sacramento	10,815 tons	112.9 million cubic yards	2064
L & D Landfill	Sacramento	2,540 tons	4.1 million cubic yards	2016
Yolo County Landfill	Davis	1,800 tons	37.3 million cubic yards	2081
Source: California Department of Resources Recycling and Recovery, 2010.				

Energy

Electricity is currently supplied by the Sacramento Municipal Utility District (SMUD). Natural gas service is currently unavailable in the SOIA Area, but would be supplied by Pacific Gas and Electric Company, a private provider. Below is a discussion of each energy source.

Sacramento Municipal Utility District

SMUD is currently providing electricity service to customers in Sacramento County and a small part of Placer County. SMUD has sufficient electricity generation capacity to provide adequate electrical supplies from its power plants, including hydroelectric, natural gas, wind, and solar-power electrical generation facilities. In addition, SMUD is able to purchase additional electricity as the need arises.

Pacific Gas and Electric Company

Pacific Gas and Electric Company (PG&E) currently does not have any existing natural gas facilities within the SOIA Area. PG&E is currently providing natural gas service to most of northern California. PG&E has an extensive natural gas distribution pipeline network to provide adequate service in the Sacramento area. All construction and maintenance activities for natural gas facilities are the responsibility of PG&E. PG&E is a private provider and does not fall under the purview of LAFCo.

3.16.2 - Regulatory Framework

Federal

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) of 1974 gave the United States Environmental Protection Agency (EPA) the authority to set standards for contaminants in drinking water supplies. The EPA was required to establish primary regulations for the control of contaminants that affect public health and secondary regulations for compounds that affect the taste, odor, or aesthetics of drinking water. Under the provisions of the SDWA, the California Department of Health Services (DHS) has the primary enforcement responsibility. Title 22 of the California Administrative Code establishes DHS authority and stipulates State drinking water quality and monitoring standards.

National Pollution Discharge Elimination System Permit

Discharge of treated wastewater to surface water(s) of the United States, including wetlands, require a National Pollutant Discharge Elimination System (NPDES) permit. In California, the Regional Water Quality Control Boards (RWQCB) administers the issuance of these federal permits. Obtaining an NPDES permit requires preparation of detailed information, including characterization of wastewater sources, treatment processes, and effluent quality. Whether or not a permit may be issued, the conditions of a permit are subject to many factors such as basin plan water quality objectives, impaired water body status of the receiving water, historical flow rates of the receiving water, effluent quality and flow, the State Implementation Plan (SIP), the California Toxics Rule (CTR), and established Total Maximum Daily Loading (TMDL) rates for various pollutants. These factors are highly specific to the potential discharge point. Obtaining an NPDES permit is generally considered difficult in inland areas and may not be possible in sensitive areas.

Clean Water Act (CWA)

The Clean Water Act (CWA), initially passed in 1972, regulates the discharge of pollutants into watersheds throughout the nation. Section 402(p) of the Act establishes a framework for regulating municipal and industrial stormwater discharges under the NPDES Program. Section 402(p) requires that stormwater associated with industrial activities that discharges either directly to surface waters or indirectly through municipal separate storm sewers must be regulated by an NPDES permit.

The State Water Resources Control Board (SWRCB) is responsible for implementing Section 402 of the Clean Water Act and does so through issuing National Pollution Discharge Elimination System (NPDES) permits to cities and counties through regional water quality control boards. Sacramento County is located within a portion of the State that is regulated by the Sacramento Main Office of the Central Valley Regional Water Quality Control Board (RWQCB).

The SWRCB has issued a statewide General Permit (Water Quality Order No. 99-08-DWQ) for construction activities within the State. The Construction General Permit (CGP) is implemented and enforced by the RWQCBs. The CGP applies to construction activities that disturb one acre or more

and requires the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) that requires control of pollutant discharges that utilize the best available technology (BAT) economically feasible and best conventional pollution technology (BCT) to meet water quality standards.

The SWRCB has also issued a statewide General Permit (Water Quality Order No. 97-03-DWQ) for regulating stormwater discharges associated with industrial activities. This General Permit requires the implementation of management measures that will achieve the performance standard of best available technology (BAT) economically achievable and best conventional pollutant control technology (BCT). It also requires the development and implementation of an SWPPP, a monitoring plan, and the filing of an annual report.

Certain actions also need to conform to a General Permit (Water Quality Order No. 5-00-175), which requires that a permit be acquired for dewatering and other low-threat discharges to surface waters, provided that they do not contain significant quantities of pollutants and are either (1) four months or less in duration, or (2) the average dry weather discharge does not exceed 0.25 mgd. Examples of activities that may require the acquisition of such a permit include well development water, construction dewatering, pump/well testing, pipeline/tank pressure testing, pipeline/tank flushing or dewatering, condensate discharges, water supply system discharges, and other miscellaneous dewatering/low-threat discharges.

The SWRCB has renewed a NPDES Permit (Renewed Waste Discharge Requirements NPDES No. CAS082597) for the County of Sacramento and the cities of Citrus Heights, Elk Grove, Folsom, Galt, and Sacramento. This permit is for stormwater discharges from municipal separate storm sewer systems (MS4).

Federal Emergency Management Agency (FEMA)

The City and County are participants in the National Flood Insurance Program (NFIP), a Federal program administered by FEMA. Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 has adopted as a desired level of protection an expectation that developments should be protected from floodwater damage of the Intermediate Regional Flood (IRF). The IRF is defined as a flood that has an average frequency of occurrence on the order of once in 100 years, although such a flood may occur in any given year. Communities are occasionally audited by FEMA and DWR to insure the proper implementation of FEMA floodplain management regulations.

State

California Urban Water Management Planning Act

The Urban Water Management Planning Act (California Water Code Sections 10610–10656) requires that all urban water suppliers with at least 3,000 customers prepare urban water management plans and update them every 5 years. The act requires that urban water management plans include a

description of water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions. Specifically, urban water management plans must:

- Provide current and projected population, climate, and other demographic factors affecting the supplier's water management planning;
- Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier;
- Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage;
- Describe plans to supplement or replace that source with alternative sources or water demand management measures;
- Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis (associated with systems that use surface water);
- Quantify past and current water use;
- Provide a description of the supplier's water demand management measures, including schedule of implementation, program to measure effectiveness of measures, and anticipated water demand reductions associated with the measures;
- Assessment of the water supply reliability.

Senate Bill (SB) 610 and Assembly Bill (AB) 910

During the 2001 regular session of the State Legislature, SB 610 and AB 910 – Water Supply Planning, were signed and became effective January 1, 2002. SB 610 amends Public Resources Code Section 21151.9, requiring any EIR, negative declaration, or mitigated negative declaration for a qualifying project to include consultation with affected water supply agencies (previous law applied only to Notices of Preparation). SB 610 also amended the following: (1) Water Code Sections 10656 and 10657—to restrict state funding for agencies that fail to submit their Urban Water Management Plan to the Department of Water Resources, and (2) Water Code Section 10910—to describe the water supply assessment that must be undertaken for projects referred under PRC Section 21151.9, including an analysis of groundwater supplies. Water agencies would be given 90 days from the start of consultation to provide a water supply assessment to the CEQA lead agency; Water Code Section 10910 would also specify the circumstances under which a project for which a water supply assessment was once prepared would be required to obtain another assessment. AB 910 amended Water Code Section 10631, expanding the contents of the Urban Water Management Plans to include further information on future water supply projects and programs and groundwater supplies.

Senate Bill 221

SB 221 adds Government Code Section 66455.3, requiring that the local water agency be sent a copy of any proposed residential subdivision of more than 500 dwelling units within 5 days of the subdivision application being accepted as complete for processing by the City or County. It adds Government Code Section 66473.7, establishing detailed requirements for establishing whether a “sufficient water supply” exists to support any proposed residential subdivisions of more than 500 dwellings, including any such subdivision involving a development agreement.

When approving a qualifying subdivision tentative map, the City or County must include a condition requiring a sufficient water supply to be available. Proof of availability must be requested of and provided by the applicable public water system. If there is no public water system, the City or County must undertake the analysis described in Section 66473.7. The analysis must include consideration of effects on other users of water and groundwater.

Model Water Efficient Landscape Ordinance

The Model Water Efficient Landscape Ordinance was adopted by the Office of Administrative Law in September 2009 and requires local agencies to implement water efficiency measures as part of its review of landscaping plans. Local agencies can either adopt the Model Water Efficient Landscape Ordinance or incorporate provisions of the ordinance into code requirements for landscaping. For new landscaping projects of 2,500 square feet or more that require a discretionary or ministerial approval, the applicant is required to submit a detailed Landscape Documentation Package that discusses water efficiency, soil management, and landscape design elements.

California Integrated Waste Management Act

To minimize the amount of solid waste that must be disposed of by transformation and land disposal, the State Legislature passed AB 939, the California Integrated Waste Management Act of 1989, effective January 1990. The legislation required each local jurisdiction in the State to set diversion requirements of 25 percent by 1995 and 50 percent by 2000; established a comprehensive statewide system of permitting, inspections, enforcement, and maintenance for solid waste facilities; and authorized local jurisdictions to impose fees based on the types or amounts of solid waste generated. In 2007, Senate Bill (SB) 1016, Wiggins, Chapter 343, Statutes of 2008, introduced a new per capita disposal and goal measurement system that moves the emphasis from an estimated diversion measurement number to using an actual disposal measurement number as a per capita disposal rate factor. As such, the new disposal-based indicator (pounds per person per year) uses only two factors: a jurisdiction’s population (or in some cases employment) and its disposal as reported by disposal facilities.

California Public Utilities Commission

The California Public Utilities Commission (CPUC) regulates privately owned telecommunication, electric, natural gas, water, railroad, rail transit, and passenger transportation companies. It is the responsibility of the CPUC to (1) assure California utility customers safe, reliable utility service at

reasonable rates; (2) protect utility customers from fraud; and (3) promote a healthy California economy. The Public Utilities Code, adopted by the legislature, defines the jurisdiction of the CPUC.

Title 24, California's Energy Efficiency Standards for Residential and Nonresidential Buildings

Title 24, Part 6, of the California Code of Regulations establishes California's Energy Efficiency Standards for Residential and Nonresidential Buildings. The standards were updated in 2005 and amended in 2008. The 2008 standards set a goal of reducing growth in electricity use by 561.2 gigawatt-hours per year (GWh/y) and growth in natural gas use by 19 million therms per year (therms/y). The savings attributable to new nonresidential buildings are 151.2 GWh/y of electricity savings and 3.3 million therms. For nonresidential buildings, the standards establish minimum energy efficiency requirements related to building envelope, mechanical systems (e.g., heating, ventilation, and air conditioning [HVAC]; and water heating systems), indoor and outdoor lighting, and illuminated signs.

California Green Building Standards Code

The California Green Building Standard Code was adopted January 12, 2009. The purpose of this code is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories:

- Planning and design
- Energy efficiency
- Water efficiency and conservation
- Material conservation and resource efficiency
- Environmental air quality

The Code addresses exterior envelope, water efficiency, and material conservation components. The aim is to reduce energy usage in non-residential buildings by 20 percent by 2015 and help meet reductions contemplated in AB 32. With the 2008 Building Code, a 15-percent energy reduction over 2007 edition is expected. Compliance will be mandatory as of January 1, 2011.

Local

City of Elk Grove

The City of Elk Grove General Plan sets forth the following goals and policies that are relevant to utility systems:

Public Facilities and Finance

- **Policy PF-2:** The City shall coordinate with outside service agencies - including water and sewer providers, the Elk Grove Community Services District, and the Elk Grove Unified School District - during the review of plans and development projects.

- **Policy PF-3:** Water supply and delivery systems shall be available in time to meet the demand created by new development, or shall be assured through the use of bonds or other sureties to the City's satisfaction.
- **PF-3-Action 1:** The following shall be required for all development projects, excluding subdivisions:
 - An assured water supply and delivery system shall be available at the time of project approval. The water agency providing service to the project may provide several alternative methods of supply and/or delivery, provided that each is capable individually of providing water to the project.
 - All required water infrastructure for the project shall be in place at the time of project approval, or shall be assured through the use of bonds or other sureties to the City's satisfaction. Water infrastructure may be phased to coincide with the phased development of large-scale projects.
- **PF-3-Action 2:** The following shall be required for all subdivisions to the extent permitted by state law:
 - Proposed water supply and delivery systems shall be identified at the time of tentative map approval to the satisfaction of the City. The water agency providing service to the project may provide several alternative methods of supply and/or delivery, provided that each is capable individually of providing water to the project.
 - The agency providing water service to the subdivision shall demonstrate prior to the approval of the Final Map by the City that sufficient capacity shall be available to accommodate the subdivision plus existing development, and other approved projects in the same service area, and other projects that have received commitments for water service.
 - Offsite and onsite water infrastructure sufficient to provide adequate water to the subdivision shall be in place prior to the approval of the Final Map or their financing shall be assured to the satisfaction of the City, consistent with the requirements of the Subdivision Map Act.
 - Offsite and onsite water distribution systems required to serve the subdivision shall be in place and contain water at sufficient quantity and pressure prior to the issuance of any building permits. Model homes may be exempted from this policy as determined appropriate by the City, and subject to approval by the City.
- **Policy PF-8:** Sewage conveyance and treatment capacity shall be available in time to meet the demand created by new development, or shall be assured through the use of bonds or other sureties to the City's satisfaction.
- **PF-8-Action 1:** The following shall be required for all development projects, excluding subdivisions:
 - Sewer/wastewater treatment capacity shall be available at the time of project approval.

- All required sewer/wastewater infrastructure for the project shall be in place at the time of project approval, or shall be assured through the use of bonds or other sureties to the City's satisfaction.
- **PF-8-Action 2:** The following shall be required for all subdivisions to the extent permitted by state law:
 - Sewage/wastewater treatment capacity shall be available at the time of tentative map approval.
 - The agency providing sewer service to the subdivision shall demonstrate prior to the approval of the Final Map by the City that sufficient capacity shall be available to accommodate the subdivision plus existing development, and other approved projects using the same conveyance lines, and projects which have received sewage treatment capacity commitment.
 - Onsite and offsite sewage conveyance systems required to serve the subdivision shall be in place prior to the approval of the Final Map, or their financing shall be assured to the satisfaction of the City, consistent with the requirements of the Subdivision Map Act.
 - Sewage conveyance systems within the subdivision shall be in place and connected to the sewage disposal system prior to the issuance of any building permits. Model homes may be exempted from this policy as determined appropriate by the City, and subject to approval by the City.
- **Policy PF-19:** Public facilities should be phased in a logical manner which avoids "leapfrog" development and encourages the orderly development of roadways, water and sewer, and other public facilities. The City shall not provide public financing or assistance for projects that do not comply with the planned phasing of public facilities. Interim facilities may be used only if specifically approved by the City Council
- **Policy PF-21:** New development shall fund its fair share portion of its impacts to all public facilities and infrastructure as provided for in state law.
- **Policy PF-23:** The City will coordinate with independent public service providers, including schools, parks and recreation, reclamation, water, transit, electric, and other service districts, in developing financial and service planning strategies.

Safety

- **Policy SA-13:** The City shall require that all new projects not result in new or increased flooding impacts on adjoining parcels on upstream and downstream areas.
- **Policy SA-23:** The City shall require all new urban development projects to incorporate runoff control measures to minimize peak flows of runoff and/or assist in financing or otherwise implementing Comprehensive Drainage Plans.

Sacramento County Water Agency Zone 41 Urban Water Management Plan and Zone 40 Water Supply Master Plan

Every urban water supplier that provides water to more than 3,000 customers or supplies more than 3,000 acre-feet per year is required to prepare and adopt an Urban Water Management Plan (UWMP) that describes the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The plan describes the sources of supplies and the major infrastructure required to meet those demands.

Additionally, the UWMP identifies and quantifies, to the extent practicable, the existing and planned sources of water available to the supplier and the reliability of the water supply and vulnerability to seasonal or climatic shortages. SCWA is responsible for developing the UWMP for their service area.

The Master Plan was prepared in 2005 by SCWA with the Water Forum Agreement as its foundation. The Master Plan provides a flexible plan of water management alternatives, which can be implemented and revised as availability and feasibility of water supply sources change in the future.

Sacramento County Department of Water Resources Local Floodplain Management Plan

Sacramento County Water Agency has established the Local Floodplain Management Plan. The Local Floodplain Management Plan area has been mapped out, and the Planning Area is included in the majority of the Morrison Creek Stream Group and a portion of the South County area. The Floodplain Management Plan outlines policies and mitigations for minimizing impacts from new development within most areas of Sacramento County.

Water Forum Agreement

The Water Forum is a diverse group of business and agricultural leaders, citizens groups, environmentalists, water managers, and local governments in Sacramento County. The Water Forum was developed to address water-related issues facing the Sacramento region, which include water shortages, environmental degradation, groundwater contamination and reliability, and economic prosperity. The Water Forum resulted in the establishment of principles to guide regional development and the development of the Water Forum Agreement (WFA).

The comprehensive WFA allows the region to meet its needs in a balanced way through implementation of seven elements. The elements provide detailed understandings among stakeholders on how this region will deal with key issues, which include groundwater management practices, water diversions, dry year water usage, water conservation measures, and the protection of the Lower American River. The understandings were included in the Memorandum of Understanding for the Water Forum Agreement, which created the overall political and moral commitment to the WFA. The WFA established the following two main co-equal objectives: "Provide a reliable and safe water supply for the region's economic health and planned development to the year 2030" and "Preserve the fishery, wildlife, recreational, and aesthetic values of the Lower American River."

The Sacramento Regional County Sanitation District

As previously discussed, SRCSD, under the direction of the County of Sacramento's Water Quality Division, provides public wastewater treatment, and disposal in the unincorporated and urbanized portions of Sacramento County, which includes the SOIA Area. SRCSD has prepared the following documents to guide the development of wastewater facilities in Sacramento County:

- **Regional Interceptor Master Plan 2000.** SRCSD has prepared a long-range master plan for the large diameter interceptors that transport wastewater to the Sacramento Regional Wastewater Treatment Plant and includes interceptor upgrades/expansions to accommodate anticipated growth through 2035.
- **The Interceptor Master Plan 2000 (Plan 2000)** uses land use and population projections to determine wastewater needs. Plan 2000 uses geographically based sewer-billing information to predict existing flows and Sacramento Council of Governments (SACOG) geographically based population projections to predict areas of future growth and development densities.
- **Regional 2020 Master Plan.** The Sacramento Wastewater Treatment Plant Master Plan (2020 Master Plan) for the SRWTP provides a phased program of recommended wastewater treatment facilities and management programs to accommodate planned growth and to meet existing and anticipated regulatory requirements through the year 2020. The 2020 Master Plan addresses both public health and environmental protection issues while ensuring reliable service at affordable rates for SRCSD customers. The key goals of the 2020 Master Plan are to provide sufficient capacity to meet growth projections and an orderly expansion of SRWTP facilities, to comply with applicable water quality standards, and to provide for the most cost-effective facilities and programs from a watershed perspective.

New regulations and policies will have a significant influence on the operation of the wastewater treatment plant. The discharge permit adopted by SRWTP in 2000 contains new, more stringent requirements at both the state and federal levels that are designed to restrict discharges of toxic pollutants into surface waters. Water recycling will become an important compliance strategy. Innovative biosolids recycling technologies may be implemented. The allowable total maximum daily loads of pollutants discharged into the Sacramento River as well as prohibitions on elevated temperature of discharges into the Sacramento River will be future concerns.

Sacramento Area Sewer District

In 1999, SASD agreed to prepare its own studies, separate from that of SRCSD, which are known as the SASD Sewerage Facilities Expansion Master Plan, and the SASD Rehabilitation Master Plan.

- **Sacramento Area Sewer District Sewerage Facilities Expansion Master Plan.** The overall goal of the SASD Sewerage Facilities Master Plan is to estimate the future capital improvement needs of the SASD trunk sewer system, both in capacity relief projects for the existing system

and expansion projects to serve newly developed areas. This plan provides for sewerage facilities and relief sewers to address future development within SASD's service area and to minimize the risk from potential sewer overflows that could occur during storm events. This plan also addresses the financial aspects of the SASD Trunk Expansion Program.

3.16.3 - Methodology

Michael Brandman Associates evaluated potential impacts on utility systems through review of the 1993 Sacramento County General Plan, the City of Elk Grove Sphere of Influence Amendment Area Municipal Service Review, and the SCWA Urban Water Management Plan.

3.16.4 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, utilities and services impacts resulting from the implementation of the proposed project would be considered significant if the project would:

- a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?
- b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
- c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
- d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?
- e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?
- f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?
- g) Comply with federal, state, and local statutes and regulations related to solid waste?
- h) Result in the unnecessary, wasteful, or inefficient use of energy?

3.16.5 - Project Impacts and Mitigation Measures

Water

Impact USS-1:	The proposed project would not generate a demand for increased water services over that which is currently produced in the area and would not result in a need for additional water supplies or facilities.
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Impact Analysis

The SOIA Area contains primarily agricultural land uses and currently requires minimal municipal water services. The proposed SOIA includes no specific land use plan. Existing service providers are expected to continue the current level of service. Addition of the SOIA Area would cause no additional immediate demand for municipal water service, water supplies, and infrastructure.

Possible growth of the area will require adequate planning for long-term growth. The proposed SOIA will provide direction to municipal water service providers about the location and extent of the City's growth. This will allow the provider to conduct long-term planning to ensure adequate services and infrastructure are available. Future actions may include the expansion of the service provider's SOL. Further, as identified above, Elk Grove General Plan Policy PF-23 requires the City to coordinate with independent public service providers, such as the SCWA, in developing financial and service planning strategies.

SCWA is the most likely municipal water service provider for future residents in the SOIA Area. SCWA would need to plan for, annex, and extend infrastructure and services to fully serve the entire SOIA Area.

There are several major points of connection to major SCWA infrastructure near the SOIA Area boundaries. SCWA's nearest water transmission mains are along Bilby Road at West Stockton Boulevard and at the Grantline-SR-99 interchange. SCWA is capable of expanding infrastructure and services to provide adequate municipal water services in the SOIA Area. Nearly all of the SOIA Area lies outside of Zone 40 and is currently not included in SCWA's 2030 Study Area. SCWA can conduct master planning for adequate infrastructure during its next master plan update for Zone 40. Area-specific planning will be conducted when service demands require an expansion of services in the area to ensure adequate facilities are available to serve the area.

Indirect and potential buildout water demands for the SOIA Area may increase the consumption of water, as detailed in Section 3.9, Hydrology and Water Quality. Impact HYD-2 contains an evaluation of the project's potential to substantially deplete groundwater supplies, and found that the project may result in a potentially significant indirect impact. Implementation of Mitigation Measure HYD-2 would reduce this impact to less than significant.

SCWA staff has envisioned general future service requirements for the SOIA Area. The public water system could be similar to the water system in the Laguna Ridge and East Franklin area. This water system could be served with wells, groundwater treatment, storage tanks, pump stations, transmission

and distribution mains, and fire hydrants. SCWA staff also envisioned a non-potable water supply system to meet specific non-potable water demands.

The land use assumptions discussed in Section 2, Project Description indicate that future growth of the SOIA Area would require the provision of water infrastructure and services to meet the demands of the community. It is anticipated that future water supply, treatment, and delivery systems can be extended to provide adequate service to residents. The current SCWA service area boundary includes a portion of the SOIA Area; however, the majority of the SOIA Area currently lies outside of SCWA's 2030 Study Area. SCWA would need to amend its boundaries and undergo environmental review process in order to fully serve anticipated future growth.

As stated previously, the SOIA would not directly change the current municipal water demands in the SOIA Area; existing services, such as irrigation water provided by the Omoichumne-Hartnell Water District, will continue at its existing level of service. However, the SOIA could indirectly result in future urbanization and associated increase in water consumption in the SOIA Area. Therefore, this impact is potentially significant. Implementation of Mitigation Measure HYD-2, and Mitigation Measure USS-1 would reduce potential water demand impacts and is recommended to ensure that future annexation and development activities would result in less than significant impacts.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measure HYD-2, and:

MM USS-1 Prior to submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove will provide a Plan for Services that demonstrates that the water purveyor has requested that the SOIA Area be within its Sphere of Influence if a public agency, and that such purveyor has prepared or approved an infrastructure plan and funding program to ensure compliance with Federal Clean Drinking Water Act standards; and that sufficient, sustainable potable water supplies adequate for projected needs are available to accommodate the buildout of the annexation territory, with no adverse impact to existing ratepayers.

Level of Significance After Mitigation

Less than significant impact.

Wastewater

Impact USS-2: **The proposed project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities.**

Impact Analysis

The SOIA Area currently does not require municipal wastewater services, as the area remains primarily agricultural. Since no specific land use plan has been defined, existing service providers are expected to continue the current level of service. Addition of the SOIA Area would cause no additional immediate demand for municipal wastewater service and infrastructure.

The land use assumptions discussed in Section 2, Project Description, indicate that anticipated future growth of the SOIA Area will require adequate planning for long-term growth. Expansion of the City's SOI into the SOIA Area would provide direction to municipal wastewater service providers about the location and extent of the City's growth. This will allow the provider to conduct long-term planning to ensure adequate services and infrastructure are available. Future actions may include the expansion of the service provider's SOI.

In general, the SOIA Area could be indirectly converted from primarily undeveloped, agricultural land uses to an integrated community of land uses including workplace, residential, mixed use, retail, public services (schools, parks, fire stations, etc.), and infrastructure. An analysis by the Sacramento Area Sewer District (SASD) indicates that the existing 42-inch and 33-inch lines in the Elk Grove/Laguna area have existing and/or future capacity limitations (Sacramento Area Sewer District Sewerage Facilities Expansion Master Plan, 2006). Accordingly, the urbanization of the SOIA Area would require the installation of a sanitary sewer system to serve the future needs of proposed development within the SOIA Area.

Sacramento Area Sewer District

SASD will be the local wastewater service provider for any future residents in the SOIA Area. The City of Elk Grove would need to annex into the Sacramento Regional County Sanitation District (SRCSD) and SASD service areas and extend infrastructure and services to fully serve the entire SOIA Area.

Infrastructure Extensions

There are several major points of connection to major SASD infrastructure near the SOIA Area boundaries that lie just north of the SOIA Area. In addition, SASD's 2006 Sewerage Facilities Expansion Master Plan indicates that additional future interceptors and expansion trunk sewers would be evaluated in the 2011–2020 period and post 2020 period, immediately adjacent to the SOIA Area. Exhibit 3.16-3 shows the expansion trunk projects near the SOIA Area.

SASD would need to be expanded for its infrastructure and services to provide adequate local wastewater conveyance services in the SOIA Area. Nearly all of the SOIA Area lies outside of SASD's boundaries and is currently not included in the 2006 Master Plan document. SASD can conduct master planning for adequate infrastructure during its next master plan update. Current

Utilities and Service Systems

infrastructure planning efforts focus on a large area of the Sacramento region. Area-specific planning will be conducted when service demands require an expansion of services in the area to ensure adequate facilities to serve the area.

The following areas are currently located within the SASD's service area and have been identified in the 2006 SASD Master Plan Update:

- The portion of the area Southeast of Grant Line Blvd that is located within the SOIA Area can be served by the EG Elk Grove East Trunk sheds.
- The EGO-1 trunk shed in this area is scheduled to be evaluated for possible completion between 2011 and 2020, and the EGO-2 shed will be evaluated for possible completion after 2020.
- The area north of Bilby Road will be served by the SO East Franklin Trunk Shed, and the trunk line ELK-13 relief project is scheduled to be evaluated for possible completion between 2011 and 2020.
- A portion of the area south of Bilby Road that is within the USB will be served by the SO East Franklin Trunk Shed. The trunk line that will serve this area is tentatively scheduled to be evaluated for possible completion before 2011.

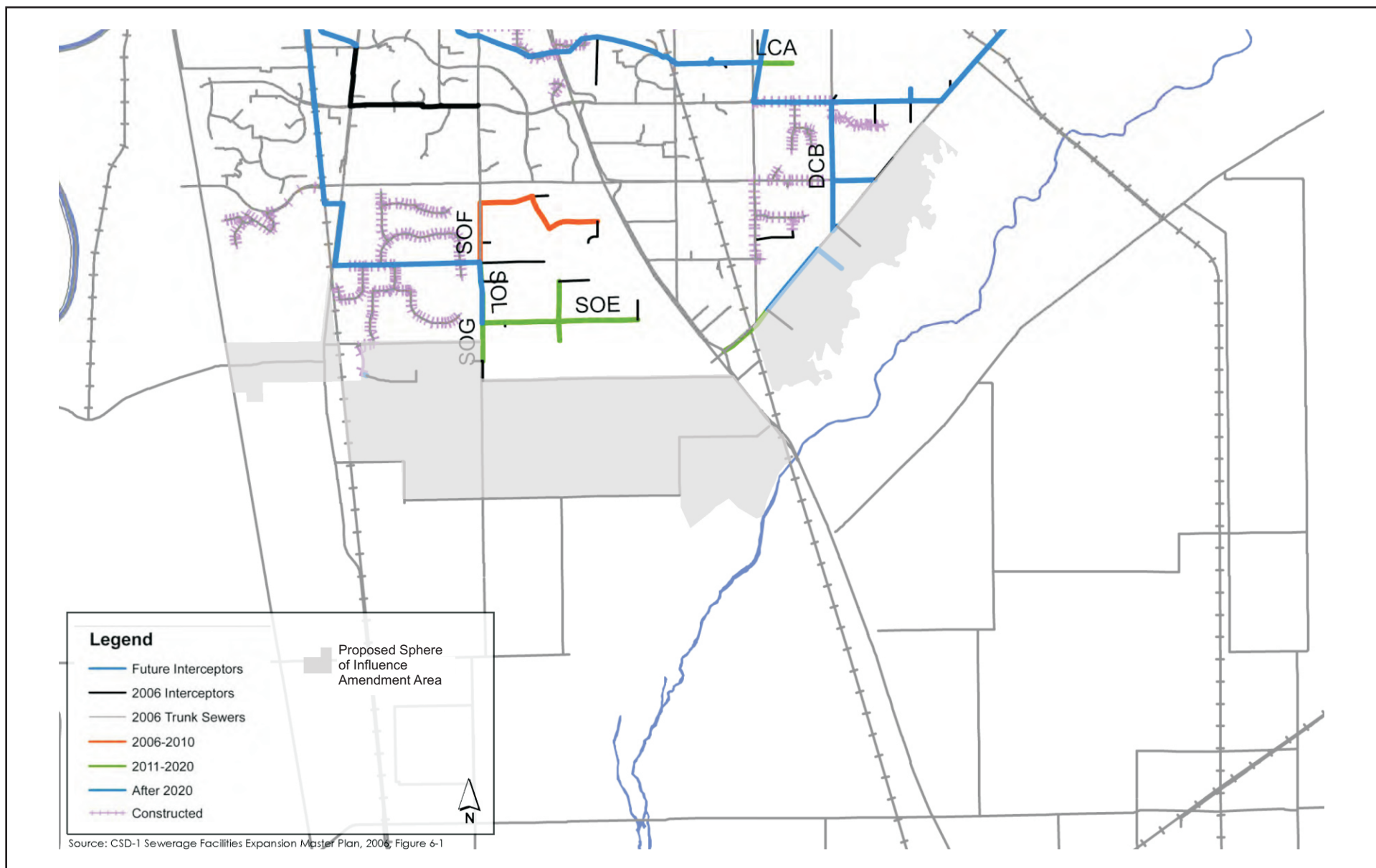
Development projects are required to design and build project-specific infrastructure, sized appropriately for anticipated demand. These improvements typically consist of underground pipelines that connect to the overall conveyance systems, through varying pipeline sizes and pump stations. Since the City's incorporation, SASD has approved every new connection to the existing conveyance system from a development project. SASD staff has indicated that the SASD system would have adequate capacity to meet future demands as a result of appropriate, long-term service planning. SASD will issue sewer permits to connect to the system if it is determined that capacity is available and the property has met all other requirements for service.

Sacramento Regional County Sanitation District (SRCSD)

SRCSD is the most likely regional wastewater treatment service provider for residents in the SOIA Area. SASD conveys wastewater to SRCSD's regional interceptors for treatment at SRCSD's regional wastewater treatment plant, located just northwest of the City. The City of Elk Grove would need to annex the SOIA Area to the SRCSD service area in order to receive regional wastewater treatment services.

Infrastructure Expansions

SRCSD's 2000 Master Plan was originally planned for the area located within the USB to be served by the South Interceptor. All wastewater from the SOIA Area is anticipated to travel through SASD's pipelines, then to SRCSD's pipelines to the treatment plant. SRCSD will issue sewer permits to connect to the system if it is determined that capacity is available and the property has met all other requirements for service.



Source: City of Elk Grove, 2008. Sacramento County, 2008.



Michael Brandman Associates

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Exhibit 3.16-3 County Sanitation District-1 Expansion Trunk Project

SACRAMENTO LAFCO • ELK GROVE SPHERE OF INFLUENCE AMENDMENT
ENVIRONMENTAL IMPACT REPORT

SRCSO is currently in the process of conducting an Interceptor Sequencing Study that will study the SOIA Area and will provide general information about the best way to serve the SOIA Area, including reevaluating the current alignment and/or need for the South Interceptor and potential interim facilities that may be necessary to provide service. The Sequencing Study will also study potential impacts that areas outside the County's USB may have on future facilities. However, SRCSD staff has stated that future sewer service to these areas cannot be planned until annexation into SRCSD has occurred.

The land use assumptions discussed in Section 2, Project Description, indicate that anticipated future growth of the SOIA Area would require the provision of wastewater infrastructure and services to meet the demands of the community. Should growth occur in the SOIA Area, future wastewater conveyance and treatment systems could be extended to provide adequate service to residents. SASD and SRCSD would be the most logical municipal wastewater service providers for the SOIA Area. The current SASD and SRCSD service area boundaries would need to be amended in order to fully serve anticipated future growth. SASD and SRCSD would conduct master planning to adequately serve anticipated growth in the SOIA Area once annexed.

As no land use changes are proposed, there is no immediate or direct change in the existing level of service in the area; therefore, demands for wastewater services would remain unchanged. Any future development and land use activities would be subject to an independent CEQA review necessary to address any impacts, including the need for wastewater treatment capacities and infrastructure. However, the SOIA does have the potential to indirectly increase the demand for wastewater services through the potential for future urbanization of the SOIA Area. Accordingly, this is a potentially significant impact.

Implementation of Mitigation Measure USS-2 would ensure that potential future annexation and development activities would result in less than significant impacts to wastewater service because it would ensure that a wastewater plan for services is in place prior to potential future annexation.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM USS-2 Prior to submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove will provide a Plan for Services that demonstrates that the wastewater transmission and treatment providers have requested that the SOIA Area be within their respective Spheres of Influence if a public agency, and that such providers have prepared or approved an infrastructure plan and funding program to ensure compliance with Federal Clean Water Act and applicable state standards; and that sufficient transmission infrastructure, and treatment and disposal capacity adequate for projected needs are available to

accommodate the buildout of the annexation territory, with no adverse impact to existing ratepayers.

Level of Significance After Mitigation

Less than significant impact.

Storm Drainage

Impact USS-3:	The proposed project would not require or result in the construction of new stormwater drainage facilities or expansion of existing facilities.
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Impact Analysis

The SOIA Area currently requires minimal storm drainage services, as the area remains primarily agricultural. The SOIA would not cause an additional, immediate demand for municipal storm drainage service and infrastructure.

Expansion of the City's SOI into the SOIA Area will provide direction to storm drainage and flood control service providers about the potential location and extent of the City's growth. This will allow providers to conduct long-term planning to ensure adequate services and infrastructure are available. Future actions may include the expansion of the service provider's SOI.

The City and SCWA would likely be the storm drainage and flood control service providers for the SOI Area. Both SCWA and the City review drainage studies and plans for new development within their jurisdictions to ensure that storm drainage facilities would accommodate the stormwater runoff generated from new structures and roads.

The land use assumptions discussed in Section 2, Project Description, indicate that anticipated future growth of the SOIA Area could result in increased runoff in the area and may require the construction and maintenance of additional drainage infrastructure and facilities to ensure adequate drainage.

Since there are no immediate land use changes, there would be no direct increase in impervious surface coverage that would result in increased stormwater runoff volumes and peak flows and create a need for offsite storm drainage facilities. However, the project may result in indirect increases in stormwater runoff through the potential of future urbanization within the SOIA Area. Therefore, implementation of Mitigation Measure HYD-3 is recommended to ensure that future annexation and development activities would result in less than significant impacts.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measure HYD-3.

Level of Significance After Mitigation

Less than significant impact.

Solid Waste

Impact USS-4:	The proposed project would be served by landfills with sufficient permitted capacity and would comply with applicable regulations.
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Impact Analysis

Land uses within the proposed SOIA Area generate solid waste that is landfilled at one of the three landfills shown in Table 3.16-3. As discussed previously, there is more than 154 million cubic yards of remaining capacity at those three landfills. The SOIA Area is currently within the service boundaries of the Sacramento County Municipal Services Agency, Department of Waste Management & Recycling; however, service is provided by mostly private, franchised hauling companies for the commercial and industrial customers. The private hauling companies are under a franchise agreement with the Sacramento Regional Solid Waste Authority to perform collection and disposal at properties and convey waste to landfills and recycling stations, as appropriate. The SOIA would not cause an additional immediate demand for solid waste services. Existing service providers are expected to continue the current level of service to the SOIA Area. However, the SOIA may result in an indirect increase in demand for solid waste by way of future urbanization of the SOIA Area. While specific solid waste generation rates by land use are not available for the area, the City of Elk Grove Sphere of Influence Amendment Area Municipal Service Review states the average per capita rate for the area is 6 pounds per day (City of Elk Grove 2010).

Future growth or change in organization is not anticipated to significantly affect the current solid waste services provided. Solid waste collection and disposal for commercial, industrial, and multi-family residential units would be serviced by the current private haulers. It is anticipated that single-family residential customers would be served by the City. Subsequent project-specific environmental review would be required, as appropriate and necessary, prior to approval and construction of these facilities. Potential environmental impacts include noise and odors from solid waste collection and disposal activities as well as impacts to biological resources and water quality. AB 939 and the County Integrated Waste Management Plan will continue to apply to the SOIA Area, which require recycling programs that result in a 50-percent diversion away from landfills.

The land use assumptions discussed in Section 2, Project Description, indicate that anticipated future growth of the SOIA Area may require the provision of additional coordinated collection efforts to meet service demands. The City of Elk Grove would be the most likely provider of solid waste service services within the SOIA Area. The City would need to amend its service boundaries in order to fully serve future growth. Future growth within the SOIA Area would increase service demands for solid waste collection providers. Future land use changes would be required to comply with existing federal, state, and local statutes and regulations related to solid waste. However, the project would indirectly result in a potentially significant increase in waste generation. Implementation of

Utilities and Service Systems

Mitigation Measure USS-4 would reduce potential solid waste demand impacts to a less than significant level by requiring that a solid waste services plan be in place prior to potential future annexation.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM USS-4 At the time of submittal of any application to annex any or all territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall identify solid waste services to be extended, the level and range of services, timing of services, improvements of facility upgrades associated with the services, and how the services will be financed to accommodate the buildout of the SOIA Area.

Level of Significance After Mitigation

Less than significant impact.

Energy

Impact USS-5:	The proposed project would not result in the unnecessary, wasteful, or inefficient use of energy.
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Impact Analysis

Electrical service and natural gas service to the SOIA Area are provided by SMUD and PG&E, respectively. Each service provider is discussed separately below.

Sacramento Municipal Utility District

SMUD is able to expand services to provide adequate electrical services in the SOIA Area. Area-specific planning would be conducted if demands require an expansion of services in the area to ensure adequate facilities to serve the area. Electrical facilities could be extended from nearby facilities to serve the SOIA Area. SMUD is expected to remain the future electrical service provider, since SMUD is the electrical service provider for the area.

SMUD routinely plans for future electrical service needs. SMUD's Systems Plan is updated annually and is based on the latest summer peak information. The information is used to determine which projects are needed over the next 5 years in order to continue reliable service.

Pacific Gas and Electric Company

PG&E has stated that natural gas service can be provided to the SOIA Area upon future growth. PG&E is capable of expanding services to provide adequate natural gas services. Area-specific planning would be conducted if demands require an expansion of services in the area to ensure adequate facilities to serve the area. Natural gas facilities could be extended from nearby facilities to

serve the SOIA Area. PG&E is expected to remain the future natural gas service provider, as PG&E is the natural gas service provider for the area.

Determination

The land use assumptions discussed in Section 2, Project Description indicate that anticipated future growth of the SOIA Area could require the provision of additional electrical facilities and gas pipeline facilities to meet service demands. SMUD and PG&E would remain the logical electrical and natural gas service provider within the SOIA Area.

Since there are no immediate land use changes, there would be no direct additional energy demands. However, future urbanization within the SOIA Area would increase energy demands. Future development would be required to comply with existing state statutes and regulations related to energy conservation, such as Title 24 and the new Green Building Code. This would ensure that future development would not result in the inefficient or wasteful use of energy. In addition, Section 6, Other CEQA Considerations, found the project would not result in inefficient, wasteful, or unnecessary energy requirements. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

SECTION 4: CUMULATIVE EFFECTS

4.1 - Introduction

CEQA Guidelines Section 15130 requires the consideration of cumulative impacts within an EIR when a project's incremental effects are cumulatively considerable. Cumulatively considerable means that "the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." In identifying projects that may contribute to cumulative impacts, the CEQA Guidelines allow the use of a list of past, present, and reasonably anticipated future projects, producing related or cumulative impacts, including those that are outside of the control of the lead agency.

In accordance with CEQA Guidelines Section 15130(b), "the discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, the discussion need not provide as great [a level of] detail as is provided for the effects attributable to the project alone." The discussion should be guided by standards of practicality and reasonableness, and it should focus on the cumulative impact to which the identified other projects contribute rather than on the attributes of other projects that do not contribute to the cumulative impact.

In compliance with CEQA, Sacramento LAFCo establishes the following standard in its Policies, Standards, and Procedures Manual:

- Chapter 4, General Standards
 - 5. An EIR completed on a project subject to LAFCo review shall contain a discussion of the following topics:
 - a. County-wide or cumulative impacts which concern LAFCo.

The proposed project's cumulative impacts were considered in conjunction with other proposed and approved projects in Sacramento County that concern or have some level of involvement or authority with LAFCo. Table 4-1 provides a list of the projects considered in the cumulative analysis.

Table 4-1: Cumulative Projects

Jurisdiction	Project	Characteristics	Location	Status
Sacramento County	City of Galt Sphere of Influence EIR	Consists of both an added area of approximately 1,053 acres and the detachment of territory of approximately 1,613 acres from the current SOI. The amended SOI would result in a net decrease of approximately 560 acres from the existing SOI.	Sacramento County	Completed
	RE Kammerer Road Solar Facility	15-megawatt solar farm facility consisting of ground-mounted photovoltaic solar modular array panel blocks on 115 acres of an approximately 160-net-acre site	8212 Kammerer Road (within the proposed SOIA Area)	Pending
	Grundman/Wilkinson Solar Farm	18-megawatt solar farm facility (ground-mounted photovoltaic solar array panels) on 139.2 acres of an approximately 154.82-net-acre site	10743 Bruceville Road (within the proposed SOIA Area)	Pending
	RE Bruceville Road Solar Facility	15-megawatt solar facility consisting of ground-mounted photovoltaic solar modular array panel blocks on 115 acres of an approximately 119.67-net-acre site	11281 Bruceville Road	Pending
	Point Pleasant Road Solar Facility	1-megawatt solar facility (ground-mounted photovoltaic solar array panels) on approximately 9.7 acres of an approximately 67.306 net-acre site	6116 Point Pleasant Road	Pending
	City of Sacramento General Plan and EIR	General Plan Update	City of Sacramento	Completed
	County of Sacramento General Plan and EIR	General Plan Update	County of Sacramento	Pending

Table 4-1 (cont.): Cumulative Projects

Jurisdiction	Project	Characteristics	Location	Status
Multiple Jurisdictions	Southeast Connector DEIR	The proposed project is a 35-mile multi-modal transportation facility that will link communities in Sacramento and El Dorado Counties, including Elk Grove, Rancho Cordova, Folsom, and El Dorado Hills.	Multiple locations	Pending
North San Joaquin Valley	Sacramento Area Council of Governments Metropolitan Transportation Plan 2035	Comprehensive long-range transportation plan for the region's multi-modal transportation system and one of SACOG's primary statutory responsibilities as the region's MPO	Sacramento Metropolitan Planning Area	Completed

4.2 - Cumulative Impact Analysis

The cumulative impact analysis below is guided by the requirements of CEQA Guidelines Section 15130. Key principles established by this section include:

- A cumulative impact only occurs from impacts caused by the proposed project and other projects. An EIR should not discuss impacts that do not result from the proposed project.
- When the combined cumulative impact from the increment associated with the proposed project and other projects is not significant, an EIR need only briefly explain why the impact is not significant; detailed explanation is not required.
- An EIR may determine that a project's contribution to a cumulative effect impact would be rendered less than cumulatively considerable if a project is required to implement or fund its fair share of mitigation intended to alleviate the cumulative impact.

The cumulative impact analysis that follows relies on these principles as the basis for determining the significance of the proposed project's cumulative contribution to various impacts.

4.2.1 - Aesthetics

The geographic scope of the cumulative aesthetics, light, and glare analysis is the area surrounding the project area. This is the area within view of the project; therefore, the area most likely to experience changes in visual character or experience light and glare impacts.

The land use designations surrounding the project area include primarily agricultural uses to the south, east, and west, and urban uses to the north. Other planned or reasonably foreseeable roadway improvement projects in the immediate area include Kammerer Road and Grant Line Road that form the proposed Sphere of Influence (SOIA) Area's north and northeastern boundaries, respectively. In addition, two solar facilities are proposed within the SOIA Area as separate applications (not part of the proposed project), and one application is proposed immediately south of the SOIA Area.

The project, in combination with planned and reasonably foreseeable projects, could result in substantial changes to the aesthetic character of the study area. The project would replace rural setting with urban character. Other planned and reasonably foreseeable projects would introduce structures that would reduce the intactness and unity of the agricultural and rural visual landscape, as well as introduce substantial new sources of light and glare resulting in a cumulative impact on visual quality. Mitigation is proposed requiring the City of Elk Grove to develop a light and glare reduction plan for the SOIA Area prior to annexation activities, or demonstrate that implementation of existing policies and ordinances would reduce outdoor lighting and glare through standards and screening.

Cumulative impacts would be reduced through design measures incorporated into future development to be sensitive to the rural and agricultural views. In addition, general plan policies would have the effect of reducing cumulative visual change, such as the creation of open space areas and view corridors to preserve key visual elements, and would result in development that is aesthetically pleasing. However, alteration of visual character from agricultural to urban uses would be an unavoidable and cumulatively significant impact.

4.2.2 - Agricultural Resources

The geographic scope of the cumulative agricultural resources analysis is focused on Sacramento County. Agricultural resources are most commonly evaluated in the context of countywide resources; in addition, Sacramento LAFCo's authority is limited to the extent of Sacramento County. Therefore, it is most appropriate to use the Sacramento County boundary as the basis for assessing cumulative impacts.

Development and land use activities within both the SOIA Area and nearby areas have the potential to result in the conversion of agricultural land to non-agricultural use, conflict with Williamson Act contracts, and creation of pressures that cause the premature conversion of agricultural land. In addition, implementation of the Southeast Connector would have the potential to directly impact farmland.

Future development of the SOIA Area may result in the conversion of approximately 400 acres of Prime Farmland, 132 acres of Unique Farmland, and 5,236.6 acres of Farmland of Statewide Importance. These conversions would make up approximately 2.5 percent of the total important farmland acreage known to exist in Sacramento County in 2000 (approximately 234,120 acres) (Elk Grove DEIR 2003). Mitigation is proposed requiring development to demonstrate application of and compliance with City of Elk Grove's General Plan policies governing agricultural land conversions and avoidance of conflicts with Williamson Act lands. Given the statewide conversion of important farmland areas and the extent of conversion in Sacramento County anticipated as a result of potential development of the SOIA Area, the project's contribution to this cumulative impact is considered significant.

4.2.3 - Air Quality

The geographic scope of the cumulative air quality analysis is the Sacramento Valley Air Basin. Air pollution is regarded as a regional issue; therefore, this area would be the area most likely to be impacted by project emissions.

All of the projects listed in Table 4-1 would result in new air emissions, during construction or operations (or both). Future annexation and development activities within the proposed project area could accommodate more population and jobs than anticipated by the Sacramento Valley Air Quality Management District (SMAQMD) air quality attainment plan and Sacramento Area Council of Government's (SACOG) Metropolitan Transportation Plan's growth assumptions and, therefore, would be inconsistent with the SMAQMD's air quality attainment plan. Mitigation is proposed requiring an Air Quality Mitigation Plan (AQMP) that reduces the estimated ozone precursor emissions of the SOIA Area by 35 percent when compared with the potential emissions that could occur in the SOIA Area in the absence of the policies and measures in the AQMP, and coordinate development of the AQMP with SMAQMD and SACOG. This would reduce the potential impact to less than significant, and it would support growth within the project area that is consistent with the SMAQMD air quality attainment plan. Therefore, a significant impact associated with air quality violations (construction and operations) and air quality attainment plan consistency would not occur. Operational activities associated with other planned and approved projects would emit air pollutants, which, depending on the nature of the project, may or may not exceed SMAQMD thresholds. However, because the proposed project would not exceed SMAQMD growth consistency thresholds, its air emissions would be within the regional air emissions budget; therefore, it can be assumed not to be cumulatively considerable.

4.2.4 - Biological Resources

The geographic scope of the cumulative agricultural resources analysis is the SOIA Area and areas within 2 miles of the project area. Generally, biological resource impacts tend to be localized, depending on the species or habitat being considered; therefore, a 2-mile buffer around the SOIA Area provides for a conservative evaluation of cumulative impacts.

Development and land use activities within both the SOIA Area and nearby areas have the potential to result in impacts to special-status plant and animal species, sensitive natural habitat, and trees. Mitigation is included that requires project-level biological surveys; avoidance, preparation and implementation of a Habitat Conservation Management Plan (HCMP); a tree survey, and a tree preservation and monitoring plan; Swainson's hawk and other raptor preconstruction surveys and avoidance actions; and permitting compliance with federal and state wetlands, waterways and streambed alterations and wetland habitat mitigation that would reduce impacts to less than significant level. All other project-related biological impacts were found to be less than significant and did not require mitigation. Other projects that result in similar impacts would be required to mitigate for their impacts. Although the proposed project can mitigate all of its biological impacts to a level of less than significant, it would have a significant and unavoidable cumulative effect when considered with growth and development on a regional scale.

4.2.5 - Cultural Resources

The geographic scope of the cumulative cultural resources analysis is the SOIA Area and areas within 1 mile of the project area. Generally, cultural resource impacts tend to be localized; therefore, a 1-mile buffer around the SOIA Area provides a conservative evaluation of cumulative impacts.

Future development and land use activities within both the SOIA Area and nearby areas have the potential to result in impacts to documented and undiscovered cultural resources such as artifacts, fossils, and burial sites. The general plan, other long-term planning documents, and regulatory agency guidance establish policies that require mitigation for impacts on potential cultural resources (e.g., evaluation requirements and inadvertent discovery procedures). Furthermore, these documents call for protection of known historic resources and mitigation in instances where previously undiscovered resources are encountered. Mitigation is proposed requiring a comprehensive cultural survey and paleontological resources survey would reduce the impact to less than significant. Because the proposed project can mitigate all of its cultural and paleontological impacts to a level of less than significant, it would not have a related cumulative considerable impact.

4.2.6 - Geology, Soils, and Seismicity

The geographic scope of the cumulative geology, soils, and seismicity analysis is the SOIA Area and areas within 2 mile of the project area. Geologic, soil, and seismic impacts tend to be localized; therefore, a 1-mile buffer around the SOIA Area provides for a conservative evaluation of cumulative impacts.

Future development and land use activities within both the SOIA Area and nearby areas have the potential to result in impacts to seismic hazards (e.g., fault rupture, ground shaking, liquefaction, landsliding), erosion, unstable soils and geologic units, and expansive soils. The general plan, other long-term planning documents, and regulatory agency guidance establish policies that require compliance with building code standards, the preparation of geotechnical and soil studies for new

development, and avoidance of geologically unstable areas. In addition, mitigation is proposed requiring the City to demonstrate compliance with City General Plan policies, develop a Master Stormwater Pollution Prevention Plan, and develop a Stormwater Quality Plan that would reduce the impacts to less than significant. Because the proposed project can mitigate all of its geologic impacts to a level of less than significant, it would not have a related cumulative considerable impact.

4.2.7 - Greenhouse Gas Emissions

The geographic scope of the cumulative greenhouse gas analysis is the San Joaquin Valley Air Basin. Air pollution is regarded as a regional issue; therefore, this area would be the area most likely to be impacted by project emissions.

All of the projects listed in Table 4-1 would result in new air emissions. The proposed project would have significant impacts related to greenhouse gas generation and greenhouse gas plan consistency. Combined, the project and other projects within the Sacramento Valley Air Basin would have a significant cumulative impact. However, the project would implement mitigation to reduce its impacts to a less than significant level; therefore, the project's cumulative contribution would also be less than significant because greenhouse gas impacts are a cumulative impact. Other projects that result in similar impacts would be required to mitigate for their impacts.

4.2.8 - Hazards and Hazardous Materials

The geographic scope of the cumulative hazards and hazardous materials analysis is the SOIA Area and areas within 2 miles of the project area. Hazard impacts tend to be localized; therefore, a 2-mile buffer around the SOIA Area provides for a conservative evaluation of cumulative impacts.

Future development and land use activities within both the SOIA Area and nearby areas have the potential to result in impacts associated with hazardous materials usage, risk of upset, exposure of schools, emergency evacuation, and wildfires. The general plan, other long-term planning documents, and regulatory agency guidance establish policies that require compliance with hazardous materials handling regulations, inspection and reporting requirements, first responder training, identification of evacuation and response procedures, and wildfire protection measures. Therefore, the proposed project would not have cumulatively considerable hazard and hazardous material impacts.

4.2.9 - Hydrology and Water Quality

The geographic scope of the cumulative hydrology and water quality analysis consists of the two watersheds the SOIA Area straddles (American River and Cosumnes River). Hydrologic and water quality issues have the potential to affect downstream areas; therefore, using watersheds as a basis for analysis provides for a conservative evaluation of cumulative impacts.

Future development and land use activities within both the SOIA Area and nearby areas have the potential to create adverse impacts associated with water quality, groundwater, flooding, and drainage. Mitigation is included that may require preparation of a Stormwater Pollution Prevention Plan (SWPPP), comprehensive drainage plan, and storm water quality control plan that would reduce impacts to less than significant level. In addition, mitigation to demonstrate a Plan for Services would reduce the project's potential to deplete groundwater supplies to less than significant. All other project-related hydrological impacts were found to be less than significant and did not require mitigation. Other projects that result in similar impacts would be required to mitigate for their impacts. Because the proposed project can mitigate all of its hydrologic impacts to a level of less than significant through implementing Best Management Practices during construction, implementing drainage plans to identify and reduce pollutants before they reach surface waters, ensuring sufficient and sustainable water supplies to serve increased demand, reducing contribution to downstream flood elevations, and eliminating potential for structures to be located within a flood plain, it would not have a related cumulative considerable impact.

4.2.10 - Land Use and Planning

The geographic scope of the cumulative land use analysis is the SOIA Area and jurisdictions that border the project area. Land use decisions are made at the jurisdictional level; therefore, the use of jurisdictions constitutes an appropriate geographic scope.

Future development and land use activities within both the SOIA Area and neighboring jurisdictions have the potential to create adverse impacts associated with division of an established community and inconsistency with adopted land use plans. The general plan, other long-term planning documents, and regulatory agency guidance establish policies that require the evaluation of land use compatibility and compliance with applicable requirements. It should be noted that development and land use activities are required to be consistent with the General Plan and Zoning Ordinance. Since approval of an SOIA by LAFCo indicates that the Commission has designated the revised SOIA Area for future urbanization, impacts related to permanent conversion of agricultural uses to urban uses would be potentially significant. In addition, impacts related to permanent conversion of open space uses to urban uses would be potentially significant. Implementation of Mitigation Measure AG-1 would reduce the conversion of open space and agricultural resources, but impacts would remain significant and unavoidable. .

4.2.11 - Mineral Resources

The geographic scope of the cumulative mineral resources analysis is Sacramento County. Mineral resources are most commonly evaluated in the context of countywide resources; therefore, it is most appropriate to use this as the basis for assessing cumulative impacts.

Future development within the County will contribute to the continuing loss of mineral resources. This loss will result from urban development and conversion of Mineral Resource Zones to urban

uses. However, the SOIA Area is not located in areas that have been designated as mineral resources zone. Therefore, future urbanization of proposed project would not have cumulatively considerable mineral resource impacts.

4.2.12 - Noise

The geographic scope of the cumulative noise analysis is the project vicinity, including surrounding sensitive receptors. Noise impacts tend to be localized; therefore, the area within 0.5-mile of the project site would be the area most affected by project activities.

Development within the SOIA Area would result in increased traffic noise along roadways used by project-generated traffic. As indicated in Section 3.12, Noise, the traffic noise increases associated with such development would range from 0 to 10 dB L_{dn} relative to cumulative conditions without the project. The project-related increases would exceed the project thresholds of significance on nine roadway segments. As a result, this impact is considered significant. While repaving the affected segments using open-graded asphalt, rubberized asphalt, or similar material could reduce traffic noise levels 4 dB, thereby reducing this impact to a level of insignificance along some segments, this measure would not provide the required degree of noise reduction to fully mitigate this impact along all affected roadway segments. In addition, because of driveway access requirements and other physical constraints, the construction of solid noise barriers at the existing residences located along these impacted sections is similarly considered infeasible. The Sacramento County General Plan Policy NO-9 pertains to increased traffic noise levels that result from capacity-enhancing roadway improvement projects. However, this policy does not appear to be applicable to the general citywide increase in traffic noise levels that would result from future buildout of the SOIA Area. Other projects shown in Table 4-1 would generate trips that contribute to this cumulative impact. As such, the proposed project would have a cumulatively considerable impact.

4.2.13 - Population and Housing

The geographic scope of the cumulative population and housing analysis is Sacramento County, which is the area most likely to be affected by project activities.

Future development and land use activities within both the SOIA Area and Sacramento County would result in population and employment growth. The City of Elk Grove is proposing expansion of its SOI boundary to accommodate future population and housing growth and help in achieving jobs housing balance. However, the increase in SOI would exceed the current projected growth needs of the City. Mitigation is proposed that requires the City to demonstrate SOIA Area consistency with the adopted City Housing Element. Because the proposed project can mitigate all of its population and housing impacts to a level of less than significant, it would not have a related cumulative considerable impact.

4.2.14 - Public Services

The geographic scope of the cumulative public services and recreation analysis is the SOIA Area and the service areas of the public service providers that may potentially serve the project area, such as the Cosumnes Community Services District's Fire Department, the City of Elk Grove Police Department, the City of Elk Grove and the Cosumnes Community Services District Parks Department, the Cosumnes Community Services District, the Sacramento Public Library Authority, and the Elk Grove Unified School District.

Future development and land use activities within both the SOIA Area and neighboring jurisdictions have the potential to increase demands for such public services as fire protection, emergency medical response, police protection, schools, parks, libraries, and recreational facilities. Specifically, the assumed growth projection for the SOIA would lead to an indirect increase in the need for higher levels of fire protection, including additional staffing, vehicles, and facilities, as well as enhanced level of law enforcement services. Mitigation is proposed to reduce these impacts to less than significant; therefore, the proposed project would not have cumulatively considerable public service and recreation impacts.

4.2.15 - Transportation/Traffic

The geographic scope of the cumulative transportation analysis is the Sacramento area.

Future development and land use activities within the SOIA Area would generate 218,000 vehicle trips per day. The traffic analysis identified several roadways that would operate at an unacceptable level of service and would require improvements should the SOIA Area become fully developed in the future. Mitigation is proposed requiring the applicant to provide fair-share impact fees to fund the future improvements. However, some of the roadways affected by this mitigation measure would not be in the jurisdiction of the City of Elk Grove. Other planned and approved projects would also add significant numbers of new trips to local roadways. Therefore, the proposed project, in conjunction with other projects, would have a cumulatively considerable contribution to unacceptable roadway and freeway operations. This would be a significant and unavoidable impact.

Future development and land use activities within the SOIA Area would implement mitigation measures that would require update to the City's Bicycle and Pedestrian Master Plan as well as its Transit Master Plan. It is reasonable to assume that other projects would also be required to provide public transit, bicycle, and pedestrian access. Therefore, the proposed project, in conjunction with other projects, would not have any cumulatively considerable impacts on these transportation-related areas.

4.2.16 - Utilities and Service Systems

The geographic scope of the cumulative utility systems analysis is the SOIA Area and the service areas of the utility providers that may potentially serve the project area, such as the Sacramento

County Water Agency, the Sacramento Area Sewer District, the Cosumnes Community Services District, the Sacramento Municipal Utility District, the Sacramento Regional County Sanitation District, and Pacific Gas and Electricity).

Future development and land use activities within both the SOIA Area and neighboring jurisdictions have the potential to increase demands for utilities including water, wastewater, storm drainage, solid waste, and energy. Mitigation is proposed that would require that City demonstrate that there is adequate water and wastewater treatment capacity and infrastructure planned or available prior to annexation activity. Mitigation is also proposed that would require the City to demonstrate that adequate solid waste services would be extended to the SOIA Area commensurate with and to service future development prior to annexation activity. All other impacts related to utilities were found to be less than significant and did not require mitigation. Other projects that result in similar impacts would be required to mitigate for their impacts. Because the proposed project can mitigate all of its impacts to a level of less than significant, it would not have a related cumulative considerable impact.

SECTION 5: ALTERNATIVES TO THE PROPOSED PROJECT

5.1 - Introduction

In accordance with CEQA Guidelines Section 15126.6, this Environmental Impact Report (EIR) contains a comparative impact assessment of alternatives to the proposed project. The primary purpose of this section is to provide decision makers and the general public with a reasonable number of feasible project alternatives that could attain most of the basic project objectives, while avoiding or reducing any of the project's significant adverse environmental effects. Important considerations for these alternatives analyses are noted below.

As stated in CEQA Guidelines Section 15126.6:

- An EIR need not consider every conceivable alternative to a project;
- An EIR should identify alternatives that were considered by the lead agency, but rejected as infeasible during the scoping process;
- Reasons for rejecting an alternative include:
 - Failure to meet most of the basic project objectives;
 - Infeasibility; or
 - Inability to avoid significant environmental effects.

5.1.1 - Significant Unavoidable Impacts

The proposed project would result in the following significant unavoidable impacts:

- **Visual Character:** Sacramento Local Agency Formation Commission (LAFCo) acknowledges that expansion of the Sphere of Influence (SOI) boundary would result in future urbanization (at an undetermined time) of the project area. In addition, the City of Elk Grove estimates that 6,327 acres would be required outside the existing city boundaries to accommodate future growth. Therefore, future urbanization of agricultural lands would significantly alter the existing visual character of the proposed Sphere of Influence Amendment (SOIA) Area and add light and glare.
- **Important Farmland:** Sacramento LAFCo acknowledges that expansion of the SOI boundary would result in future urbanization (at an undetermined time) of the project area. More than 90 percent (7,360 acres) of the SOIA Area is designated as Important Farmland. The City of Elk Grove estimates that 6,327 acres would be required outside the existing city boundaries (within the proposed SOIA Area) to accommodate future growth. Therefore, urbanization of agricultural lands would result in permanent loss of prime agricultural lands and conflict with Williamson Act contracts.

- **Land Use Plans, Policies, and Regulations:** Since approval of an SOIA by LAFCo indicates that the Commission has designated the revised SOIA Area for future urbanization, impacts related to permanent conversion of agricultural uses to urban uses would be potentially significant. Implementation of Mitigation Measure AG-1 would reduce the conversion of farmland, but impacts would remain significant and unavoidable.
- **Population and Housing:** Sacramento LAFCo acknowledges that expansion of the SOI boundary would result in future urbanization (at an undetermined time) of the project area. It is reasonably foreseeable that the approval of the SOIA would result in substantial population growth in the SOIA Area by proposing new homes and businesses. . With the implementation of Mitigation Measure POP-1, impacts created by the proposed project would be reduced by assuring that future annexations are consistent with the Metropolitan Transportation Plan. However, even with mitigation, the proposed project could lead to eventual development of the area and direct and indirect population growth, rendering impacts significant and unavoidable.
- **Traffic Noise:** Sacramento LAFCo acknowledges that expansion of the SOI boundary would result in future urbanization (at an undetermined time) of the project area. Urbanization of the SOIA Area would result in an increase in traffic noise from 0 to 13 dB L_{dn} relative to existing conditions. No feasible mitigation measure is available; therefore, impacts would remain significant and unavoidable.
- **Traffic Levels of Service:** Should the proposed SOIA be fully developed in the future, it would generate vehicle trips that would contribute to unacceptable levels of service (LOS) on various roadway and freeway segments under Existing Plus Project conditions. Mitigation is proposed that would require the applicant to contribute fees to fund necessary improvements; however, there is uncertainty regarding actual implementation of the improvements. As such, the residual significance of this impact is significant and unavoidable.
- **Cumulative Traffic Levels of Service:** Should the proposed SOIA be fully developed in the future, it would generate vehicle trips that would contribute to unacceptable levels of service (LOS) on various roadway and freeway segments under Cumulative conditions. Mitigation is proposed that would require the applicant to contribute fees to fund necessary improvements; however, there is uncertainty regarding actual implementation of the improvements. As such, the residual significance of this impact is significant and unavoidable.

5.1.2 - Alternatives to the Proposed Project

The two alternatives to the proposed project analyzed in this section are as follows:

- **No Project/Existing General Plan Alternative:** The project site would remain in its existing condition and no Sphere of Influence application would be submitted. The Sphere of Influence boundaries would be limited to the existing City of Elk Grove City limits. The SOIA Area is anticipated to continue to develop under the existing Sacramento County General Plan.

- **Alternate SOI Boundary Alternative:** The Alternate SOI Boundary Alternative would entail the expansion of the City of Elk Grove's SOI to the northeast of the existing City limits and would encompass an area that is larger than the currently proposed SOI area. This Alternate SOI Boundary modification is aimed to encompass an unincorporated area of the County that would allow the City meet its objectives of future growth and expansion but focus on areas adjacent to the City that are currently processing specific plans and development applications. As such, the alternate SOI boundary would include the North Vineyards Station Specific Plan (1,590 acres); the Vineyard Springs Comprehensive Plan (2,650 acres); and an area west of these specific plans that includes 6,500 acres bounded by Eagle Nest Road to the east, Elder Creek Road to the north, Calvine Road to the south, and Grant Line Road to the southeast. The Alternate SOI Boundary Alternative is illustrated in Exhibit 5-1. Similar to the proposed SOIA Area, the land use designations for the 6,500 acres is General Agriculture-20: most of the land (about 90 percent) is grazing land, according to the Farmland Mapping and Monitoring Program (FMMP).
- **Enhanced Regional Alternative:** The Enhanced Regional Alternative would entail the expansion of the City of Elk Grove's SOI over 2,700 acres immediately to the south of the current City limits, generally 0.5 mile north of Eschinger Road, in the area between State Route 99 (SR-99) and Franklin Boulevard. The Enhanced Alternative is illustrated in Exhibit 5-2. This Enhanced Regional Alternative would be located within portions of the area identified by the Sacramento Area Council of Governments (SACOG) Blueprint Preferred Scenario for Elk Grove as a Medium Density Residential place type, and as Vacant Urban Designated Lands (2050). This alternative aims to encompass an unincorporated area of the County that would allow the City to meet many of its objectives for future growth and expansion but would focus on siting that growth in areas that meet regional as well as City objectives, as set forth in regional transportation and air quality planning documents. By encouraging more compact urban development, the alternative would reduce potential environmental impacts to air quality and greenhouse gas emissions, and the loss of agricultural and biological resources as well.

Two alternatives to the proposed project are analyzed below. These analyses compare the proposed project and each individual project alternative. In several cases, the description of the impact may be the same under each alternative when compared with the CEQA Thresholds of Significance (i.e., both the project and the alternative would result in a less than significant impact). The actual degree of impact may be slightly different between the proposed project and each alternative, and this relative difference is the basis for a conclusion of greater or lesser impacts.

5.2 - Project Objectives

As stated in Section 2, Project Description, the objectives of the proposed project are to:

- To amend the Sphere of Influence (SOI) boundary beyond the existing Elk Grove city limits to accommodate orderly and sustainable growth consistent with the City's General Plan.
- To implement the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 consistent with public service conditions present or reasonably foreseeable in the proposed SOI Amendment area.
- To establish a logical boundary within which future and timely annexation requests by the City of Elk Grove may be considered.
- To establish an SOI for the City of Elk Grove that will facilitate the protection of important environmental, cultural, and agricultural resources.

5.3 - Alternative 1 – No Project/Existing General Plan Alternative

Under the No Project/Existing General Plan Alternative, the project site would remain unchanged and no future annexation to and urbanization in the City of Elk Grove would occur. The project site would remain primarily agricultural for the foreseeable future. The existing 1993 Sacramento County General Plan designations and Zoning Ordinance designations that establish agricultural designations for more than 90 percent of the project site would be maintained.

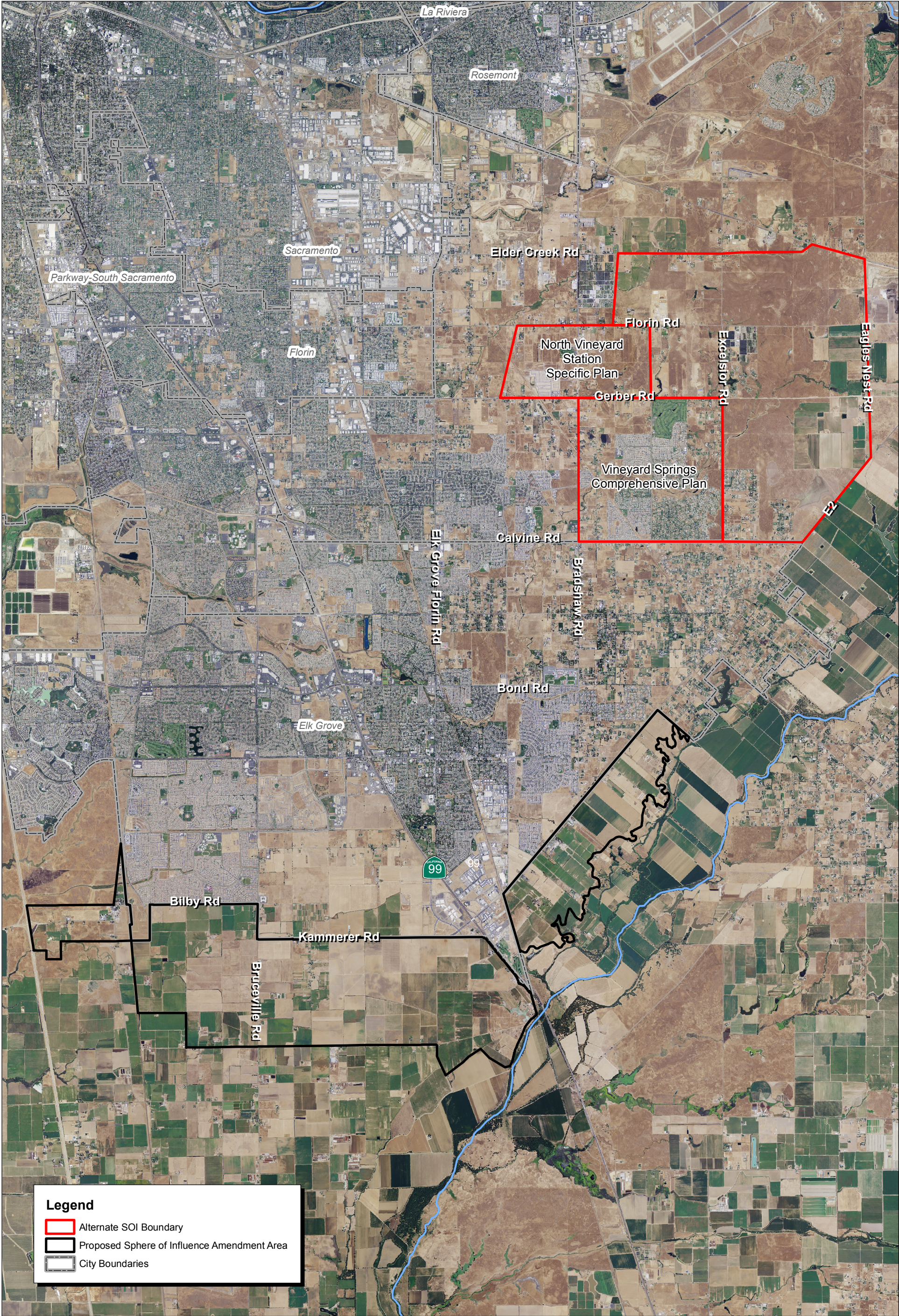
5.3.1 - Impact Analysis

Aesthetics

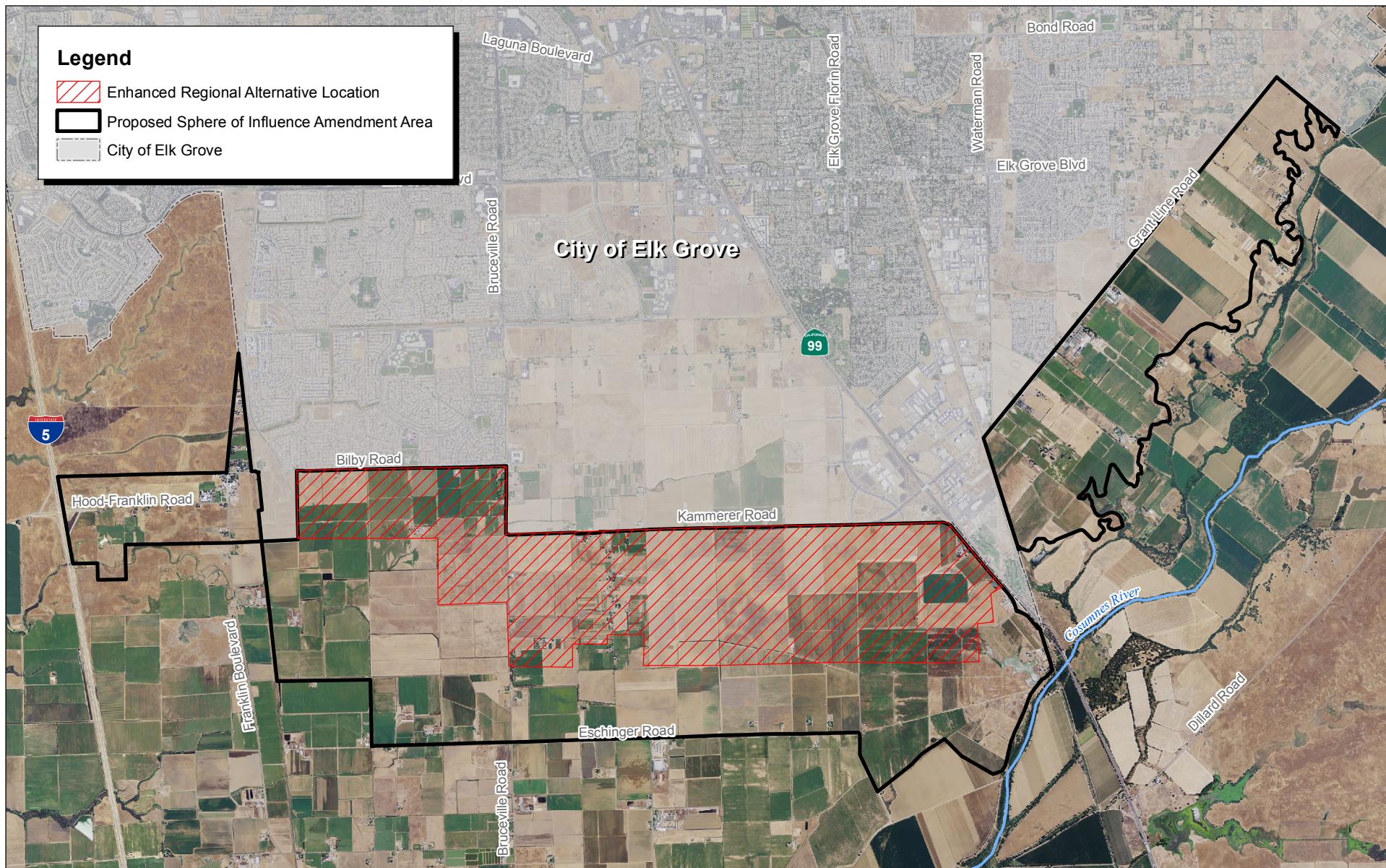
This alternative would maintain agricultural uses on the project site. The proposed project's visual character, light, and glare impacts were found to be significant and unavoidable from potential future urbanization of the SOIA Area under the proposed project. Therefore, this alternative would reduce impacts to less than significant, as development would occur under the existing County General Plan that would result in a reduced development conforming to existing agricultural designations. Therefore, this alternative would have more reduced impacts on aesthetics, light, and glare than the proposed project.

Agricultural Resources

As discussed in Section 3.2, Agricultural Resources, the potential development of the SOIA Area would result in significant and unavoidable impacts associated with the loss of Important Farmlands. The No Project/Existing General Plan Alternative would not result in loss of farmland, as any future activity would conform to the existing Agricultural designations. Therefore, this alternative would have fewer impacts on loss of Important Farmland than the proposed project.



Source: Sacramento County NAIP, 2009.



Michael Brandman Associates

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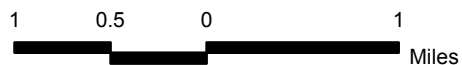


Exhibit 5-2 Enhanced Regional Alternative Location Map

SACRAMENTO LAFCO • ELK GROVE SPHERE OF INFLUENCE AMENDMENT
ENVIRONMENTAL IMPACT REPORT

Air Quality

Future annexation and development under the proposed project would not result in significant and unavoidable air quality impacts that could not be mitigated. However, the No Project/Existing General Plan Alternative would result in substantially reduced development in conformance with the existing County General Plan. This would result in fewer air quality impacts than the potential future urbanization of the SOIA Area. Therefore, this alternative would have less impact than the proposed project.

Biological Resources

Development under No Project/Existing General Plan Alternative would maintain continuation of agricultural activities within the SOIA Area. The County General Plan identifies the project site as suitable foraging habitat for Swainson's hawk. Development under this alternative would allow continuation of agricultural activities, thereby avoiding any disturbance to the foraging habitat for Swainson's hawk. No impacts would occur to special-status species. In addition, no urbanization would occur that would have the potential to impact existing wetlands. Therefore, this alternative would have fewer impacts than the proposed project.

Cultural Resources

The proposed project identified impacts to cultural resources that were less than significant. Continuation of agricultural activities and limited development under the existing General Plan would have the same potential to unearth cultural resources and would be subject to similar regulations protecting cultural resources. Therefore, impacts would be similar to the proposed project.

Geology, Soils, and Seismicity

As described in Section 3.6, Geology and Soils, future annexation and development activities under the proposed project could expose residences and structures to unstable soil conditions. Since the No Project/Existing General Plan Alternative would result in limited development under the existing primarily agricultural designations, impacts would be less than those of the proposed project.

Greenhouse Gas Emissions

This alternative would result in fewer greenhouse gas emissions relative to the proposed project. While the proposed project's greenhouse gas emissions were found to add no considerable amounts to global greenhouse gas emission concentrations, this alternative would still result in fewer overall emissions through the reduction of vehicle trips and overall development intensity and, therefore, would be considered more beneficial. Therefore, this alternative would have less impact than the proposed project.

Hazards and Hazardous Materials

This alternative would result in continuation of agricultural activities that would dominate the project site. The proposed project would not create any significant hazards or hazardous materials impacts

requiring mitigation. As such, this alternative would have impacts related to hazards and hazardous materials similar to the proposed project.

Hydrology and Water Quality

The proposed SOIA Area is currently covered with largely pervious surfaces and very few structures. Therefore, the amount of surface runoff associated with No Project/Existing General Plan Alternative would be substantially less than the level of runoff associated with the proposed project. In addition, no development would occur in a flood zone. As such, this alternative would have fewer hydrology and water quality impacts than the proposed project.

Land Use and Planning

The existing land use and zoning designations for both the proposed project and the No Project/Existing General Plan Alternative conform to the County designations. However, it is acknowledged that approval of the SOIA could result in future annexation and land use planning by the City of Elk Grove. The proposed project's land use impacts were found to be less than significant. Under the No Project/Existing General Plan Alternative, future development to accommodate the City's job housing balance would not occur. The No Project/Existing General Plan Alternative would require the City to look for alternate lands to accommodate future growth consistent with the City's General Plan. This would indirectly result in more impacts related to land use and planning. However, since City has no land use authority over the SOIA Area, direct impacts to land use and planning would be similar to the proposed project.

Mineral Resources

Under this alternative, impacts to Mineral Resources would be similar to those of the proposed project, as no significant mineral resources were found in the project area.

Noise

As discussed in Section 3.12, Noise, the proposed project could result in significant and unavoidable noise impacts associated with future annexation and development activities within the SOIA Area. The No Project/Existing General Plan Alternative would result in a substantially lower-density land pattern than the proposed project. Therefore, this alternative would have fewer noise impacts than the proposed project.

Population and Housing

This alternative would result in very low-density development on the project site in place of high-density urban development consisting of residential and employment generating land uses. The new employment opportunities created by the proposed project were not found to have the potential to cause indirect growth inducement. Under this alternative, population and housing growth would be consistent with the County's General Plan. Therefore, this alternative would have impacts on population, housing, and employment similar to the proposed project.

Public Services

The No Project/Existing General Plan Alternative would result in development substantially lower than the proposed project that would be primarily associated to agricultural activities. Therefore, this alternative would not generate an increased demand for public services beyond what is anticipated in the Sacramento County General Plan. As such, this alternative would have less impact on public services than the proposed project.

Transportation and Traffic

Section 3.15, Transportation and Traffic identifies significant and unavoidable impacts to local roadways and freeways associated with the proposed project. The No Project/Existing General Plan Alternative would not cause a traffic increase in the proposed SOIA Area and surrounding areas, because development would occur under the Sacramento County General Plan. This alternative would not have substantial traffic- or transportation-related impacts resulting from buildout of the vacant parcels in the proposed SOIA Area; therefore, the No Project/Existing General Plan Alternative would have fewer impacts related to traffic and transportation than the proposed project.

Utilities and Service Systems

The No Project/Existing General Plan Alternative would result in substantially reduced development than the proposed project primarily associated with agricultural activities. Therefore, this alternative would not generate an increased demand for public utilities beyond what is anticipated in the Sacramento County General Plan. Annexation into service districts such as Sacramento County Water Agency (SCWA) and Sacramento Area Sewer District (SASD) is not anticipated. As such, this alternative would have less impact on public services than the proposed project.

5.3.2 - Conclusion

The No Project/Existing General Plan Alternative would avoid all of the proposed project's significant unavoidable impacts and would have less impact on all environmental topical areas. However, this alternative would not advance any of the project objectives. Furthermore, this alternative would not realize the project benefits associated with City's objectives of orderly and sustainable growth in accordance with the City's General Plan and would not achieve job-housing balance.

5.4 - Alternative 2 – Alternate SOI Boundary Alternative

The Alternate SOI Boundary Alternative would entail the expansion of the City of Elk Grove's SOI to the northeast of the existing City limits and would encompass an area that is larger than the currently proposed SOI Area. This Alternate SOI Boundary modification aims to encompass an unincorporated area of the County that would allow the City to meet its objectives of future growth and expansion but focus on areas adjacent to the City that are currently processing specific plans and development applications. As such, the Alternate SOI boundary would include the North Vineyards

Station Specific Plan (1590 acres); the Vineyard Springs Comprehensive Plan (2,650 acres); and area west of these specific plans that includes 6,500 acres bounded by Eagle Nest Road to the east, Elder Creek Road to the north, Calvine Road to the south, and Grant Line Road to the southeast. The Alternate SOI Boundary Alternative is illustrated in Exhibit 5-1. Similar to the proposed SOIA Area, the land use designations for the 6,500 acres is General Agriculture-20; most of the land (approximately 90 percent) is grazing land according to FMMP designations.

This alternative would result in similar land use assumptions made for the proposed project to accommodate future growth envisioned by the City of Elk Grove. This alternative would require similar discretionary approvals for future annexation and development activities, including General Plan Amendment, rezone, planned development adoption, subdivision map, development agreement, and Williamson Act cancellation.

5.4.1 - Impact Analysis

Aesthetics

Under this alternative, future annexation and development activities would occur on the northeast of the existing Elk Grove city limits. The proposed project's visual character, light, and glare impacts were found to be significant and unavoidable from potential future urbanization of the SOIA Area under the proposed project. Future urban growth under this alternative would be similar to the proposed project. As shown in Exhibit 5-1, the Alternate SOI Boundary includes specific plans that have been developed as urban uses and is close to urban development in the cities of Rancho Cordova and Sacramento. Therefore, this alternative would reduce visual impacts to less than significant, since development would occur in an area that is currently undergoing urbanization, and any future development would continue to exhibit similar visual characteristics associated with urban growth. Therefore, this alternative would have fewer impacts on aesthetics, light, and glare than the proposed project.

Agricultural Resources

As discussed in Section 3.2, Agricultural Resources, the potential development of the SOIA Area would result in significant and unavoidable impacts associated with the loss of Important Farmlands. The Alternate SOI Boundary Alternative would not result in loss of Important Farmland, as most of the land is identified as grazing land. Agricultural activities may exist on vacant lands that would be impacted by future urbanization; however, mitigation measures such as payment of fees for loss of farmland would reduce those impacts. Therefore, this alternative would have fewer impacts on loss of Important Farmland than the proposed project.

Air Quality

Future annexation and development activities would be similar to the proposed project under the Alternate SOI Boundary Alternative. Therefore, this alternative would have air quality impacts similar to the proposed project.

Biological Resources

The Alternate SOI Boundary area is zoned as AG-20 by the County Zoning Map. As a baseline, the Department of Environmental Review and Assessment (DERA) assumes that properties zoned AG-40 and larger have 100 percent habitat value and AG-20 properties have 75 percent habitat value.

Therefore, impacts to Swainson's hawk's foraging habitat would be marginally less significant under this alternative than the proposed project. Similar mitigation measures would be required to reduce impacts. The Alternate SOI Boundary contains both freshwater emergent wetlands and freshwater ponds. Impact to wetlands would also be similar to the proposed project. Therefore, this alternative would have impacts similar to the proposed project.

Cultural Resources

The proposed project was found to have less than significant impacts on historical resources, archaeological resources, paleontological resources, and burial sites. Because this alternative would result in similar potential to unearth cultural resources and would be subject to similar regulations protecting cultural resources, it would have impacts on cultural resources similar to the proposed project.

Geology, Soils, and Seismicity

This alternative would accommodate the same amount of future growth as envisioned by the City of Elk Grove and therefore would be developed in the future with urban uses similar to the proposed project. Therefore, this alternative would have impacts on geology, soils, and seismicity similar to the proposed project.

Greenhouse Gas Emissions

This alternative would accommodate the same amount of future growth envisioned by the City of Elk Grove and therefore would be developed with urban uses similar to the proposed project in the future. As such, this alternative would have impacts on greenhouse gas emissions similar to the proposed project.

Hazards and Hazardous Materials

This alternative would accommodate the same amount of future growth envisioned by the City of Elk Grove and therefore would be developed with urban uses similar to the proposed project in the future. The proposed project was found to have less than significant impacts associated with hazardous materials from past or present site usage as well as the potential for risk of upset. Therefore, this alternative would have impacts related to hazards and hazardous materials similar to the proposed project.

Hydrology and Water Quality

This alternative would accommodate the same amount of future growth envisioned by the City of Elk Grove and therefore would be developed with urban uses similar to the proposed project in the future.

The proposed project was found to have significant impacts on short-term water quality, long-term water quality, drainage, and flood hazards. Mitigation was proposed to address all of these impacts and would fully mitigate these issues to a level of less than significant. Because this alternative would result in urbanization activities similar to the proposed project, similar impacts would occur. The available areas for future development within the Alternate SOI Boundary are outside 100-year flood zones. Therefore, this alternative would have fewer impacts on hydrology and water quality than the proposed project.

Land Use and Planning

The alternative would require a General Plan Amendment, rezone, subdivision map, and other discretionary approvals for future annexation and development activities similar to the proposed project. Similar to the proposed project, this alternative would be required to be consistent with the City of Elk Grove General Plan, the Elk Grove Municipal Code, and Sacramento LAFCo annexation policies. Therefore, this alternative would have land use impacts similar to the proposed project.

Mineral Resources

The Alternate SOI Boundary Alternative impacts to Mineral Resources would be similar to those of the proposed project; no significant mineral resources were found in the project area.

Noise

As discussed in Section 3.12, Noise, the proposed project would result in significant and unavoidable noise impacts associated with future annexation and development activities within the SOIA Area. This alternative would accommodate the same amount of future growth as envisioned by the City of Elk Grove and would thus be developed with urban uses similar to the proposed project in the future. Therefore, this alternative would have impacts on noise similar to the proposed project.

Population and Housing

This alternative would result in similar land use assumptions as the proposed project to accommodate future growth envisioned by the City of Elk Grove. Therefore, this alternative would have impacts on population, housing, and employment similar to the proposed project.

Public Services

This alternative would accommodate the same amount of future growth as envisioned by the City of Elk Grove and would require demand on public services similar to those identified for the proposed project. Therefore, this alternative would have impacts on public services similar to the proposed project.

Transportation and Traffic

Section 3.15, Transportation and Traffic identifies significant and unavoidable impacts to local roadways and freeways associated with the proposed project. The Alternate SOI Boundary

Alternative would cause a traffic increase similar to the proposed project, as most of the area available for development under this alternative contains rural roads similar to the proposed project. Therefore, this alternative would have impacts on traffic similar to the proposed project.

Utilities and Service Systems

The Alternate SOI Boundary Alternative would include development potential similar in nature to the proposed project. The area under the Alternate SOI Boundary is served by the Sacramento County Water Agency (SCWA). No sewer service is currently available to the area. The proposed project would require annexation by a sewer service provider. Under this alternative, annexation by SCWA would not be required, since the alternative area is currently going under urbanization. Therefore, this alternative would have slightly less impact than the proposed project

5.4.2 - Conclusion

The Alternate SOI Boundary Alternative would avoid some of the proposed project's significant unavoidable impacts except traffic and noise. In addition, this alternative would lessen the severity of other impacts, including those associated with aesthetics, light, and glare; biological resources; hydrology and water quality; and utilities. This alternative would advance most of the project objectives.

5.5 - Alternative 3 – Enhanced Regional Alternative

The Enhanced Regional Alternative would entail the expansion of the City of Elk Grove's SOI over 2,700 acres immediately to the south of the current city limits, generally 0.5 mile north of Eschinger Road, in the area between SR-99 and Franklin Boulevard. This Enhanced Regional Alternative would be located within portions of the area identified by the Sacramento Area Council of Governments (SACOG) Blueprint Preferred Scenario for Elk Grove as a Medium Density Residential place type, and as Vacant Urban Designated Lands (2050). This alternative aims to encompass an unincorporated area of the County that would allow the City to meet many of its objectives for future growth and expansion but would focus on siting that growth in areas that meet regional as well as City objectives, as set forth in regional transportation and air quality planning documents. By encouraging more compact urban development, the alternative would reduce potential environmental impacts to air quality and greenhouse gas emissions, and the loss of agricultural and biological resources as well.

The City of Elk Grove application (i.e., the proposed project) consists of approximately 7,900 acres. The area encompassed by this Enhanced Regional Alternative is included within that larger area. As a result, the impacts and mitigation measures of the Enhanced Regional Alternative have been fully analyzed within the analysis of the impacts and mitigation measures of the proposed project. The Enhanced Regional Alternative, as a project narrower in scope than the proposed project, does not

create any new or more severe significant effects than those analyzed in connection with the proposed project.

5.5.1 - Impact Analysis

Aesthetics

Under this alternative, future annexation and development activities would occur within a smaller footprint located immediately adjacent to the southern City of Elk Grove city limits. The proposed project's visual character, light, and glare impacts were found to be significant and unavoidable from potential future urbanization of the SOIA Area under the proposed project. Future urban growth under this alternative would be similar to the proposed project. Therefore, this alternative would not reduce visual impacts to less than significant, since development would occur in an area that is currently rural, and any future development would continue to exhibit similar visual characteristics associated with urban growth. Therefore, this alternative would have impacts on aesthetics, light, and glare similar to the proposed project.

Agricultural Resources

As discussed in Section 3.2, Agricultural Resources, the potential development of the SOIA Area would result in significant and unavoidable impacts associated with the loss of Important Farmlands. The Enhanced Regional Alternative would result in loss of Important Farmland, as most of the land is identified as prime farmland or farmland of statewide importance. However, this alternative would affect far less acreage of Important Farmland. Therefore, this alternative would have fewer impacts on loss of Important Farmland than the proposed project.

Air Quality

Future annexation and development activities would be similar to the proposed project under the Enhanced Regional Alternative. However, this alternative is based on the SACOG Blueprint Preferred Scenario. Therefore, this alternative would have fewer air quality impacts than the proposed project.

Biological Resources

The Enhanced Regional Alternative area is zoned as AG-80 by the County Zoning Map. As a baseline, the Department of Environmental Review and Assessment (DERA) assumes that properties zoned AG-40 and larger have 100 percent habitat value and AG-20 properties have 75 percent habitat value. Therefore, impacts to Swainson's hawk's foraging habitat would be similar under this alternative to those of the proposed project. Similar mitigation measures would be required to reduce impacts. The Enhanced Regional Alternative contains both freshwater emergent wetlands and freshwater ponds. Impact to wetlands would also be similar to the proposed project. Therefore, this alternative would have impacts similar to the proposed project.

Cultural Resources

The proposed project was found to have less than significant impacts on historical resources, archaeological resources, paleontological resources, and burial sites. Because this alternative would result in similar potential to unearth cultural resources and would be subject to similar regulations protecting cultural resources, it would have impacts on cultural resources similar to the proposed project.

Geology, Soils, and Seismicity

This alternative would accommodate the less future growth than envisioned by the City of Elk Grove under the proposed project. However, this alternative would be developed with similar urban uses. Therefore, this alternative would have impacts on geology, soils, and seismicity similar to the proposed project.

Greenhouse Gas Emissions

This alternative would accommodate the less future growth than envisioned by the City of Elk Grove's proposed project. In addition, this alternative is based on SACOG Blueprint Preferred Scenario. As such, this alternative would have fewer impacts on greenhouse gas emissions than the proposed project.

Hazards and Hazardous Materials

This alternative would accommodate less future growth than envisioned by the City of Elk Grove proposed project. However, this alternative would be developed with similar urban uses. The proposed project was found to have less than significant impacts associated with hazardous materials from past or present site usage as well as the potential for risk of upset. This alternative would have impacts related to hazards and hazardous materials similar to the proposed project.

Hydrology and Water Quality

This alternative would accommodate less future growth than envisioned by the City of Elk Grove proposed project. The proposed project was found to have significant impacts on short-term water quality, long-term water quality, drainage, and 100-year flood hazards. Mitigation was proposed to address all of these impacts and would fully mitigate these issues to a level of less than significant. Because this alternative would result in less urbanization activities less than the proposed project, fewer impacts would occur. The available areas for future development within the Enhanced Regional Alternative are outside 100-year flood zones. Therefore, this alternative would have fewer impacts on hydrology and water quality than the proposed project.

Land Use and Planning

The alternative would require a General Plan Amendment, rezone, subdivision map, and other discretionary approvals for future annexation and development activities similar to the proposed project. Similar to the proposed project, this alternative would be required to be consistent with the

City of Elk Grove General Plan, the Elk Grove Municipal Code, and Sacramento LAFCo annexation policies. Therefore, this alternative would have land use impacts similar to the proposed project.

Mineral Resources

The Enhanced Regional Alternative impacts to Mineral Resources would be similar to those of the proposed project; no significant mineral resources were found in the project area.

Noise

As discussed in Section 3.12, Noise, the proposed project would result in significant and unavoidable noise impacts associated with future annexation and development activities within the SOIA Area. This alternative would accommodate less future growth than envisioned by the City of Elk Grove's proposed project. However, this alternative would be developed with similar urban uses. Therefore, this alternative would have impacts on noise similar to the proposed project.

Population and Housing

This alternative would result in less urbanization than the proposed project, and it would accommodate less future growth than what is envisioned by the City of Elk Grove's proposed project. In addition, this alternative is based on SACOG Blueprint Preferred Scenario. Therefore, this alternative would have fewer impacts on population, housing, and employment than the proposed project.

Public Services

This alternative would accommodate less future growth than envisioned by the City of Elk Grove's proposed project and would generate less demand on public services than those identified for the proposed project. Therefore, this alternative would have fewer impacts on public services than the proposed project.

Transportation and Traffic

Section 3.15, Transportation and Traffic identifies significant and unavoidable impacts to local roadways and freeways associated with the proposed project. The Enhanced Regional Alternative would cause a lesser increase in traffic than the proposed project, as the developable area is substantially smaller than the proposed project. Therefore, this alternative would have fewer impacts on traffic than the proposed project.

Utilities and Service Systems

The Enhanced Regional Alternative would include less development potential than the proposed project. The area under the Enhanced Regional is served by the Sacramento County Water Agency (SCWA). No sewer service is currently available to the area. The proposed project would require annexation by a sewer service provider. Because this alternative would generate less demand for utilities and service systems, this alternative would have slightly less impact than the proposed project.

5.5.2 - Conclusion

The Enhanced Regional Alternative would avoid some of the proposed project's significant unavoidable impacts except impacts from noise. In addition, this alternative would lessen the severity of other impacts, including those associated with air quality, greenhouse gases, hydrology and water quality, population and housing, public services, transportation, and utilities. This alternative would advance most of the project objectives.

5.6 - Environmentally Superior Alternative

The qualitative environmental effects of each alternative in relation to the proposed project are summarized in Table 5-1.

Table 5-1: Summary of Alternatives

Environmental Topic Area	No Project/Existing General Plan	Alternate SOI Boundary	Enhanced Regional Alternative
Aesthetics	Less Impact	Less Impact	Similar Impact
Agricultural Resources	Less Impact	Less Impact	Less Impact
Air Quality	Less Impact	Similar Impact	Less Impact
Biological Resources	Less Impact	Less Impact	Similar Impact
Cultural Resources	Similar Impact	Similar Impact	Similar Impact
Geology, Soils, and Seismicity	Less Impact	Similar Impact	Similar Impact
Greenhouse Gas Emissions	Less Impact	Similar Impact	Less Impact
Hazards and Hazardous Materials	Less Impact	Similar Impact	Similar Impact
Hydrology and Water Quality	Less Impact	Less Impact	Less Impact
Land Use and Planning	Less Impact	Similar Impact	Similar Impact
Mineral Resources	Similar Impact	Similar Impact	Similar Impact
Noise	Less Impact	Similar Impact	Similar Impact
Population and Housing	Less Impact	Similar Impact	Less Impact
Public Services	Less Impact	Similar Impact	Less Impact
Transportation	Less Impact	Similar Impact	Less Impact
Utilities and Service Systems	Less Impact	Less Impact	Less Impact

CEQA Guidelines Section 15126(e)(2) requires an EIR to identify an environmentally superior alternative. If the No Project Alternative is the environmentally superior alternative, the EIR must also identify an environmentally superior alternative from among the other alternatives.

The No Project Alternative is the environmentally superior alternative, as the project site would remain in its existing condition, thereby avoiding any potentially adverse environmental impacts.

As stated above, if the No Project Alternative is environmentally superior, the EIR must also identify another environmentally superior alternative among the remaining alternatives. The Enhanced Regional Alternative would be environmentally superior because it would lessen the severity of the proposed project's four significant unavoidable impacts associated with agricultural resources, land use and planning, population and housing, and transportation.

5.7 - Alternatives Rejected From Further Consideration

CEQA Guidelines Section 15126.6(c) states that an EIR should identify any alternatives that were considered by the lead agency, but were rejected as infeasible during the scoping process. Below is the alternative that was initially considered but rejected because of infeasibility.

5.7.1 - Reduced Agriculture Impacts/Smaller Footprint Alternative

A common practice in alternatives evaluation is to consider a smaller project site footprint or reduced development of the proposed project. The project site's FMMP designations and soil characteristics were evaluated to identify areas most suitable for agricultural production and thereby remove it from the proposed SOIA boundary. However, the soils underlie the site in a non-uniform matrix with no specific type of soil encompassing a large, contiguous area that can be logically separated from the proposed boundary. Although the Enhanced Regional Alternative would result in a smaller footprint of potential urbanization, it does not remove all suitable agricultural land from the alternative. Removal of any suitable agricultural area would result in a non-contiguous SOI boundary and would create islands that are against LAFCo policy for SOI expansions. Therefore, this alternative was rejected.

SECTION 6: OTHER CEQA CONSIDERATIONS

6.1 - Significant Unavoidable Impacts

CEQA Guidelines Section 15126.2(a)(b) requires an EIR to identify and focus on the significant environmental effects of the proposed project, including effects that cannot be avoided if the proposed project were implemented.

This section describes significant impacts, including those that can be mitigated but not reduced to a level of less than significant. Where there are impacts that cannot be alleviated without imposing a project alternative, their implications, and the reason why the project is being proposed, notwithstanding their effect, is described. With implementation of the proposed project, seven significant impacts that cannot be avoided would occur. Each significant unavoidable impact is discussed below.

- **Visual Character:** Sacramento Local Agency Formation Commission (LAFCo) acknowledges that expansion of the Sphere of Influence (SOI) boundary would result in future urbanization of the project area (at an undetermined time). In addition, the City of Elk Grove estimates that 6,327 acres would be required outside the existing city boundaries to accommodate future growth. Therefore, it is concluded that future urbanization of agricultural lands would significantly alter the existing visual character of the proposed Sphere of Influence Amendment (SOIA) Area.
- **Important Farmland:** Sacramento LAFCo acknowledges that expansion of the SOI boundary would result in future urbanization of the project area (at an undetermined time). In addition, the City of Elk Grove estimates that 6,327 acres would be required outside the existing city boundaries to accommodate future growth. Therefore, it is concluded that urbanization of agricultural lands would result in permanent loss of prime agricultural lands and would conflict with Williamson Act contracts.
- **Land Use Plans, Policies, and Regulations:** Since approval of an SOIA by LAFCo indicates that the Commission has designated the revised SOIA Area for future urbanization, impacts related to permanent conversion of agricultural uses to urban uses would be potentially significant. Implementation of Mitigation Measure AG-1 would reduce the conversion of farmland, but impacts would remain significant and unavoidable.
- **Population and Housing:** Sacramento LAFCo acknowledges that expansion of the SOI boundary would result in future urbanization (at an undetermined time) of the project area. It is reasonably foreseeable that the approval of the SOIA would result in substantial population growth in the SOIA Area by proposing new homes and businesses. With the implementation of Mitigation Measure POP-1, impacts created by the proposed project would be reduced by

assuring that future annexations are consistent with the Metropolitan Transportation Plan. However, even with mitigation, the proposed project could lead to eventual development of the area and direct and indirect population growth, rendering impacts significant and unavoidable.

- **Traffic Noise:** Sacramento LAFCo acknowledges that expansion of the SOI boundary would result in future urbanization of the project area (at an undetermined time). Urbanization of the SOIA Area would result in increase in traffic noise from 0 to 13 dB L_{dn} relative to existing conditions. No feasible mitigation measure is available and therefore, it is concluded that urbanization would significantly alter the existing traffic noise levels of the proposed SOIA Area.
- **Traffic Levels of Service:** Should the proposed SOIA be fully developed in the future, it would generate vehicle trips that would contribute to an unacceptable Level of Service (LOS) on various roadway and freeway segments under Existing Plus Project conditions. Mitigation is proposed that would require the applicant to contribute fees to fund necessary improvements; however, there is uncertainty regarding actual implementation of the improvements. As such, the residual significance of this impact is significant and unavoidable.
- **Cumulative Traffic Levels of Service:** Should the proposed SOIA be fully developed in the future, it would generate vehicle trips that would contribute to unacceptable LOS on various roadway and freeway segments under Cumulative conditions. Mitigation is proposed that would require the applicant to contribute fees to fund necessary improvements; however, there is uncertainty regarding actual implementation of the improvements. As such, the residual significance of this impact is significant and unavoidable.

6.2 - Growth-Inducing Impacts

There are two types of growth-inducing impacts that a project may have: direct and indirect. To assess the potential for growth-inducing impacts, the project's characteristics that may encourage and facilitate activities that individually or cumulatively may affect the environment must be evaluated (CEQA Guidelines Section 15126.2(d)). Growth-inducing impacts are discussed in detail in Section 3.13, Population and Housing.

Direct growth-inducing impacts occur when the development of a project imposes new burdens on a community by directly inducing population growth, or by leading to the construction of additional developments in the same area. Also included in this category are projects that remove physical obstacles to population growth (such as a new road into an undeveloped area or a wastewater treatment plant with excess capacity that could allow additional development in the service area). Construction of these types of infrastructure projects cannot be considered isolated from the development they facilitate and serve. Projects that physically remove obstacles to growth, or projects that indirectly induce growth may provide a catalyst for future unrelated development in an

area such as a new residential community that requires additional commercial uses to support residents.

As discussed in Section 3.13, Population, Housing, and Employment, approval of the proposed SOIA would result in a significant and unavoidable impact for growth inducement.

6.3 - Energy Conservation

Public Resources Code Section 21100(b)(3) and CEQA Guidelines Section 15126.4 require EIRs to describe, where relevant, the wasteful, inefficient, and unnecessary consumption of energy caused by a project. In 1975, largely in response to the oil crisis of the 1970s, the State Legislature adopted Assembly Bill (AB) 1575, which created the California Energy Commission (CEC). The statutory mission of the CEC is to forecast future energy needs, license thermal power plants of 50 megawatts or larger, develop energy technologies and renewable energy resources, plan for and direct state responses to energy emergencies, and—perhaps most importantly—promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code Section 21100(b)(3) to require EIRs to consider the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Thereafter, the State Resources Agency created Appendix F of the CEQA Guidelines. Appendix F is an advisory document that assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy.

The potential indirect urbanization of the SOIA Area could result in new land uses and infrastructure construction, including approximately 20,685 dwelling units, 67,035 jobs as well as the necessary public services, roadways, flood control, storm drainage facilities, and utilities designed to serve the increased demand. Energy would be consumed during both the construction and operational phases of such activities. The construction activities would require energy for the manufacture and transportation of building materials, preparation of the various sites (e.g., grading), and the actual construction of the buildings and infrastructure. The operation of such urbanization would consume energy for multiple purposes including, but not limited to, building heating and cooling, lighting, appliances, electronics, office equipment, and commercial machinery. Operational energy could also be consumed during each vehicle trip associated with these proposed uses. It is important to note that actual energy usage could vary substantially depending upon factors such as the type of industrial and commercial uses that would occupy the buildings, actual miles driven by future residents/employees, and the degree to which energy conservation measures are incorporated into the various facilities.

For the reasons set forth below, this EIR concludes that the proposed project will not result in the wasteful, inefficient, and unnecessary consumption of energy, will not cause the need for additional natural gas or electrical energy-producing facilities, and, therefore, will not create a significant impact on energy resources.

6.3.1 - Regulatory Setting

Federal and state agencies regulate energy use and consumption through various means and programs. At the federal level, the United States Department of Transportation, the United States Department of Energy, and the United States Environmental Protection Agency are three agencies that have substantial influence over energy policies and programs. Generally, federal agencies influence and regulate transportation energy consumption through establishment and enforcement of fuel economy standards for automobiles and light trucks, through funding of energy-related research and development projects, and through funding for transportation infrastructure improvements. At the State level, the California Public Utilities Commission (CPUC) and the CEC are two agencies with authority over different aspects of energy. The CPUC regulates privately owned utilities in the energy, rail, telecommunications, and water fields. The CEC collects and analyzes energy-related data, prepares statewide energy policy recommendations and plans, promotes and funds energy efficiency programs, and adopts and enforces appliance and building energy efficiency standards. California is exempt under federal law from setting State fuel economy standards for new on-road motor vehicles. Some of the more relevant federal and State energy-related laws and plans are discussed below.

Federal Energy Policy and Conservation Act

The Federal Energy Policy and Conservation Act of 1975 sought to ensure that all vehicles sold in the U.S. would meet certain fuel economy goals. Through this Act, Congress established the first fuel economy standards for on-road motor vehicles in the U.S. Pursuant to the Act, the National Highway Traffic and Safety Administration, which is part of the United States Department of Transportation, is responsible for establishing additional vehicle standards and for revising existing standards. Since 1990, the fuel economy standard for new passenger cars has been 27.5 miles per gallon. Since 1996, the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 miles per gallon. Heavy-duty vehicles (i.e., vehicles and trucks over 8,500 pounds gross vehicle weight) are not currently subject to fuel economy standards. Compliance with federal fuel economy standards is not determined for each individual vehicle model; rather, compliance is determined on the basis of each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the United States. The Corporate Average Fuel Economy (CAFE) program, which is administered by United States Environmental Protection Agency, was created to determine vehicle manufacturers' compliance with the fuel economy standards. The United States Environmental Protection Agency calculates a CAFE value for each manufacturer, based on city and highway fuel economy test results and vehicle sales. On the basis of the information generated under the CAFE program, the United States Department of Transportation is authorized to assess penalties for noncompliance. In the course of its over 30-year history, this regulatory program has resulted in vastly improved fuel economy throughout the nation's vehicle fleet.

Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) promoted the development of inter-modal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations (MPOs) such as ABAG were required to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values that were to guide transportation decisions in that metropolitan area. The planning process for specific projects would then address these policies. Another requirement was to consider the consistency of transportation planning with federal, state, and local energy goals. Through this requirement, energy consumption was expected to become a decision criterion, along with cost and other values that determine the best transportation solution.

The Transportation Equity Act for the 21st Century (TEA-21)

The Transportation Equity Act for the 21st Century (TEA-21) was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation discussed above. TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21 continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of good transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety.

State of California Energy Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including providing assistance to public agencies and fleet operators, encouraging urban designs that reduce vehicle miles traveled, and accommodating pedestrian and bicycle access.

Title 24, Energy Efficiency Standards

Title 24, which was promulgated by the CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption, provides energy efficiency standards for residential and nonresidential buildings. According to the CEC, since the energy efficiency standards went into effect in 1978, it is estimated that California residential and nonresidential consumers have reduced their utility bills by at least \$15.8 billion. The CEC further

estimates that by 2011, residential and nonresidential consumers will save an additional \$43 billion in energy costs.

In 2005, the CEC adopted new energy efficiency standards. All projects that apply for a building permit on or after October 2005 must adhere to the new 2005 standards. A copy of the 2005 Energy Efficiency Standards may be reviewed online at www.energy.ca.gov/title24/2005standards/index/html. The 2005 Energy Efficiency Standards may also be reviewed at the Energy Efficiency Division, California Energy Commission, 1516 Ninth Street, MS-29, Sacramento, CA 95814-5512.

Because the adoption of Title 24 post-dates the adoption of AB 1575, it has generally been the presumption throughout the State that compliance with Title 24 (as well as compliance with the federal and State regulations discussed above) ensures that projects will not result in the inefficient, wasteful, and unnecessary consumption of energy. As is the case with other uniform building codes, Title 24 is designed to provide certainty and uniformity throughout the State while ensuring that the efficient and non-wasteful consumption of energy is carried out through design features. Large infrastructure transportation projects that cannot adhere to Title 24 design-build performance standards may undertake, depending on the circumstances, a more involved assessment of energy conservation measures in accordance with some of the factors set forth in Appendix F of the CEQA Guidelines. As an example, pursuant to the California Department of Transportation CEQA implementation procedures and FHWA Technical Advisory 6640.8A, a detailed energy study is generally only required for large-scale infrastructure projects. However, for the vast majority of residential and nonresidential projects, adherence to Title 24 is deemed necessary to ensure that no significant impacts occur from the inefficient, wasteful, and unnecessary consumption of energy. As a further example, the adoption of federal vehicle fuel standards, which have been continually improved since their original adoption in 1975, have also protected against the inefficient, wasteful, and unnecessary use of energy.

According to the CEC, reducing energy use has been a benefit to all. Building owners save money, Californians have a more secure and healthy economy, the environment is less negatively impacted, and our electrical system can operate in a more stable state. The 2005 Standards (for residential and nonresidential buildings) are expected to reduce the growth in electricity use by 479 gigawatt-hours per year (GWh/y) and reduce the growth in natural gas use by 8.9 million therms per year (therms/y). The savings attributable to new nonresidential buildings are 143 GWh/y of electricity savings and 0.5 million therms. Additional savings result from the application of the Standards on building alterations. In particular, requirements for cool roofs, lighting, and air distribution ducts are expected to save about 175 GWh/y of electricity. These savings are cumulative—doubling in two years, tripling in three, etc. Table 6-1 provides a summary of the electricity savings envisioned by the 2005 standards.

Table 6-1: Electricity Savings Projected From the 2005 Standards

Category	2001 Standard (GWh)	2005 Standard (GWh)	Savings (GWh)	Percent Reduction
Lighting	861.6	777.5	84.1	9.8
Heating	38.8	36.9	1.9	4.9
Cooling	537.5	501.5	35.9	6.7
Fans	424.7	403.6	21.1	5.0
Total	1,862.6	1,719.5	143.0	7.7
Note: GWh = Gigawatt hours Source: California Energy Commission, 2005.				

Since the California 2000–2001 electricity crisis, the CEC has placed greater emphasis on demand reductions. Changes in 2001 (following the electricity crisis) reduced electricity demand for newly constructed residential and nonresidential buildings by about 110.3 megawatts (MW) each year. Newly constructed nonresidential buildings account for 44 MW of these savings. Like energy savings, demand savings accumulate each year. The 2005 Standards are expected to reduce electric demand by another 180 MW each year. Table 6-2 provides a summary of the demand savings envisioned by the 2005 standards.

Table 6-2: Demand Savings Projected From the 2005 Standards

Category	2001 Standard (MW)	2005 Standard (MW)	Savings (MW)	Percent Reduction
Lighting	157.9	142.6	15.3	9.7
Heating	3.6	3.5	0.1	2.2
Cooling	276.7	253.1	23.6	8.5
Fans	79.7	74.6	5.0	6.3
Total	517.9	473.9	44.0	8.5
Note: MW = Megawatts Source: California Energy Commission, 2005.				

In many parts of the world, the wasteful and poorly managed use of energy has led to oil spills, acid rain, smog, and other forms of environmental pollution that have ruined the natural beauty people seek to enjoy. California is not immune to these problems, but the CEC-adopted appliance standards, building standards, and utility programs that promote efficiency and conservation have gone a long way toward maintaining and improving environmental quality. Other benefits include reduced destruction of natural habitats, which, in turn, helps protect wildlife, plants, and natural systems.

Many experts believe that burning fossil fuel is a major contributor to global warming; carbon dioxide is being added to an atmosphere already containing 25 percent more than it did two centuries ago. Carbon dioxide and other greenhouse gases create an insulating layer around the Earth that leads to global climate change. CEC research shows that most of the sectors of the state economy face significant risk from climate change, including agriculture, forests, and the natural habitats of a number of indigenous plants and animals.

Scientists recommend that actions be taken to reduce emissions of carbon dioxide and other greenhouse gases. While adding scrubbers to power plants and catalytic converters to cars are steps in the right direction (both of which are currently enforced as part of existing regulatory schemes), the use of energy-efficient standards can be effective actions to limit the carbon dioxide that is emitted into the atmosphere. According to the CEC, using energy efficiently, in accordance with Title 24 Energy Efficiency standards, is a proven, far-reaching strategy that can and does present an important contribution to the significant reduction of greenhouse gases.

In fact, the National Academy of Sciences has urged the country to follow California's lead on such efforts, and it has recommended that energy efficiency building codes modeled after Title 24 be adopted nationwide. The CEC's Title 24 program has played a vital, if not the most important, role in maximizing energy efficiency and preventing the wasteful, inefficient, and unnecessary use of energy throughout the State.

Pursuant to the California Building Standards Code and the Title 24 Energy Efficiency Standards, the City will review the design and construction components of the project's Title 24 compliance when specific building plans are submitted.

6.3.2 - Energy Requirements of the Proposed Project

LAFCo acknowledges that expansion of the SOI boundary would result in future urbanization (at an undetermined time) of the area. This would result in new energy demand for both construction and operation. However, since future development is required to comply with the energy requirements, including Title 24 and the California Green Building Standards Code, the proposed project would not result in inefficient, wasteful, or unnecessary energy requirements.

SECTION 7: EFFECTS FOUND NOT TO BE SIGNIFICANT

7.1 - Introduction

This section is based on the Notice of Preparation (NOP), dated September 27, 2010, which is contained in Appendix A of this Environmental Impact Report (EIR). The NOP was prepared to identify the potentially significant effects of the proposed projects and was circulated for public review between September 27, 2010 and October 26, 2010. In the course of this evaluation, certain impacts were found to be less than significant because the proposed project's characteristics would not create such impacts. This section provides a brief description of effects found not to be significant or less than significant, based on the NOP comments or more detailed analysis conducted as part of the EIR preparation process. Note that a number of impacts that are found to be less than significant are addressed in the various EIR topical sections (Sections 3.1 through 3.16) to provide more comprehensive discussion of why impacts are less than significant, in order to better inform decision makers and the general public.

7.2 - Effects Found Not To Be Significant

7.2.1 - Agriculture Resources

Forest Land Zoning

The project site does not contain a forest land zoning classification. Furthermore, based on the definition of timberland provided in Public Resources Code Section 4526, no timberland or commercial production of trees or other forest-related resources occurs on the site. Moreover, the Zoning Code does not contain a zoning district for timberland and does not contain statutory definitions for either forest land or timberland. No direct conflicts with forest land zoning or timberland would result from implementation of the SOIA project. No impacts would occur.

Forest Lands

Based on the definition of forest land provided in Public Resources Code Section 12220, no timberland or commercial production of trees or other forest-related resources occurs on the site. The Sacramento County Zoning Code does not contain any zoning classifications for forest land and does not contain a statutory definition for this resource. Therefore, no impacts related to conversion of forest land would result from project implementation.

7.2.2 - Geology, Soils, and Seismicity

Septic or Alternative Wastewater Disposal Systems

The proposed project does not include physical development, and no wastewater disposal system is required at this time. Any future development would be served by the Sacramento Area Sewer District (SASD). Any future development or annexation would need to annex into the Sacramento Regional County Sanitation District (SRCSD) and SASD service areas, and extend infrastructure and

services to fully serve the entire Sphere of Influence Amendment (SOIA) Area. No impacts would occur.

7.2.3 - Hazards and Hazardous Materials

Airports

The nearest airport to the project site is the Franklin Field Airport, located approximately 2.6 miles to the south. The project site is not within the boundaries of the Franklin Field Airport Influence Area. This condition precludes the possibility of the proposed project increasing aviation safety risks for persons residing or working in the project area. No impacts would occur.

Private Airstrips

There are no private airstrips in the project area vicinity. This condition precludes the possibility of exposing persons residing or working in the project area to aviation hazards associated with private airstrips. No impacts would occur.

7.2.4 - Hydrology and Water Quality

Seiches, Tsunamis, or Mudflows

There are no inland water bodies that could be potentially susceptible to a seiche in the project vicinity. This precludes the possibility of a seiche inundating the project site. The project area is more than 65 miles from the Pacific Ocean, a condition that precludes the possibility of inundation by tsunami. There are no steep slopes that would be susceptible to a mudflow in the project vicinity, nor are there any volcanically active features that could produce a mudflow in the County of Sacramento. This precludes the possibility of a mudflow inundating the project site. No impacts would occur.

7.2.5 - Noise

Aviation Noise

The nearest airport to the project site is the Franklin Field Airport, located approximately 2.6 miles to the south. The project site is not within the boundaries of the Franklin Field Airport Influence Area. This condition precludes the possibility of the proposed project exposing persons residing or working in the project area to excessive aviation noise. No impacts would occur.

7.2.6 - Population and Housing

Displacement of Substantial Numbers of Persons or Housing Units

Although there are scattered rural residence throughout the project area, the proposed SOIA does not include any features that would result in the displacement of substantial numbers of people or housing units and, therefore, would not require the construction of replacement housing elsewhere. No impacts would occur.

7.2.7 - Transportation

Air Traffic Patterns

The nearest airport to the project site is the Franklin Field Airport, located approximately 2.6 miles to the south. The project site is not within the boundaries of the Franklin Field Airport Influence Area. This distance precludes the possibility of the proposed project altering aviation patterns or creating aviation hazards. No impacts would occur.

SECTION 8: PERSONS AND ORGANIZATIONS CONSULTED/LIST OF PREPARERS

8.1 - Persons and Organizations Consulted

8.1.1 - Lead Agency

Sacramento Local Agency Formation Commission

Executive Officer Peter Brundage

Assistant Executive Officer Donald J. Lockhart, AICP

Planning Partners (LAFCo Consultant)

Staff Consultant/Principal Robert D. Klousner

8.1.2 - Public Agencies

Sacramento Area Sewer District/Sacramento Regional County Sanitation District

Policy and Planning Sarena Deeble

8.1.3 - Applicant

City of Elk Grove

Planning Director Taro Echiburu

8.2 - List of Preparers

8.2.1 - Lead Agency

Sacramento Local Agency Formation Commission

Executive Officer Peter Brundage

Assistant Executive Officer Donald J. Lockhart, AICP

8.2.2 - Lead Consultant

Michael Brandman Associates

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Project Manager Trevor Macenski

Assistant Project Manager Chryss Meier

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Agricultural Resources Kevin Shannon
Trevor Macenski

Air Quality Dave Mitchell
Chryss Meier

Biological Resources Dale Hameister
Robert Francisco
Angela McIntire

Cultural Resources Carrie Wills, RPA

Geology, Soils and Seismicity Jason Hade

Greenhouse Gas Emissions/LAFCO Specialist Chryss Meier

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Chryss Meier

Land Use and Planning Randy Chafin
Jason Hade
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Mineral Resources Kevin Shannon

Noise Trevor Macenski

Population and Housing Jason Hade

Public Services Jason Hade

Transportation and Traffic Trevor Macenski

Utilities and Service Systems Jason Hade

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Cole Forbes

8.2.3 - Technical Subconsultants

Fehr & Peers Transportation Consultants

Principal..... John Gard, P.E.
Transportation Engineer David B. Robinson, P.E.

Bollard Acoustical Consultants, Inc.

President Paul Bollard

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