

Draft Environmental Impact Report For the

Bilby Ridge Sphere of Influence Amendment LAFC# 04-16 SCH# 2017042071

PREPARED FOR

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December 2017

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Acronyms and Abbreviations Ascent Environmental

ACRONYMS AND ABBREVIATIONS

°C degrees Celsius
°F degrees Fahrenheit

2030 General Plan Sacramento County General Plan of 2005–2030

AB Assembly Bill

AB 939 California Integrated Waste Management Act of 1989

ADT average daily traffic
AFVs alternative fuel vehicles
afy acre-feet per year

AQMP operational air quality mitigation plan

B.P. before present

BMPs best management practices

BPTMP Bicycle, Pedestrian, and Trails Master Plan

Btu British thermal unit

CAA Clean Air Act

CAAQS California ambient air quality standards
CAFE Corporate Average Fuel Economy

CAL FIRE California Department of Forestry and Fire Protection
Cal OSHA California Occupational Safety and Health Administration

Cal/EPA California Environmental Protection Agency
CalEEMod California Emissions Estimator Model
CALGreen California Green Building Standards Code

CalRecycle California Department of Resources Recycling and Recovery

CalTrans California Department of Transportation

CAP Climate Action Plan

CAPCOA California Air Pollution Control Officers Association

CARB California Air Resources Board
CBC California Building Standards Code

CCAA California Clean Air Act

CCR California Code of Regulations

CCSD Cosumnes Community Service District

CCSDFD Cosumnes Community Services District Fire Department

CDFW California Department of Fish and Wildlife

CEC California Energy Commission
CEQA California Environmental Quality Act

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act of 1980

CESA California Endangered Species Act

Ascent Environmental Acronyms and Abbreviations

CFC California Fire Code

CFD Community Facilities District
CFR Code of Federal Regulations

City of Elk Grove

CKH Act Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000

CNDDB California Natural Diversity Database
CNEL Community Noise Equivalent Level
CNPS California Native Plant Society

CNRA California Natural Resources Agency

 $\begin{array}{c} \text{CO} & \text{carbon monoxide} \\ \text{CO}_2 & \text{carbon dioxide} \\ \text{CO}_2 \text{e} & \text{CO}_2\text{-equivalent} \end{array}$

Cortese-Knox-Hertzberg Act Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000

CPUC California Public Utilities Commission
CRHR California Register of Historical Resources

CSCGMP Central Sacramento County Groundwater Management Plan

CTC California Transportation Commission

CTR California Toxics Rule

CUPA Certified Unified Program Agency
CVFPB Central Valley Flood Protection Board

CWA Clean Water Act

dB decibels

dBA A weighted decibels
dbh diameter at breast height
DBH diameter at breast height

Delta Sacramento River-San Joaquin River Delta

diesel PM PM exhaust from diesel engines

DOC California Department of Conservation
DOF California Department of Finance
DOT Department of Transportation

DTSC California Department of Toxic Substances Control

DWR California Department of Water Resources

EAP Energy Action Plan

EGCSD Elk Grove Community Services District
EGPD City of Elk Grove Police Department
EGUSD Elk Grove Unified School District

EIA U.S. Energy Information Administration

EIR environmental impact report

EMD Environmental Management Department

Acronyms and Abbreviations Ascent Environmental

EO Executive Order

EPA U.S. Environmental Protection Agency

EPAct Energy Policy Act of 1992
ESA Environmental Site Assessment
ez-tran e-Tran neighborhood shuttle service

FEMA Federal Emergency Management Agency

FHWA Federal Highways Administration

FIRM flood insurance rate map

FMMP Farmland Mapping and Monitoring Program

FTA Federal Transit Administration

GHG greenhouse gas

GSA Groundwater Sustainability Agency
GSP Groundwater Sustainability Plans
GWTPs groundwater treatment plants
HAP hazardous air pollutants
HCP Habitat Conservation Plan
HOV high occupancy vehicle

HUD U.S. Department of Housing & Urban Development

Hz hertz

I-5 Interstate 5

IEPR Integrated Energy Policy Report

IPCC Intergovernmental Panel on Climate Change

ISO Insurance Service Office ITPs Incidental Take Permits

kV kilovolt

LAFCo Local Agency Formation Commission

lb/day pounds per day

 $\begin{array}{cc} \text{LDL} & \text{Larson Davis Laboratories} \\ \text{L}_{\text{dn}} & \text{Day-Night Sound Level} \end{array}$

LEED Leadership in Energy and Environmental Design

L_{eq} Equivalent Continuous Sound Level

LOS Level of Service

LRSP Laguna Ridge Specific Plan

Ascent Environmental Acronyms and Abbreviations

MBTA Migratory Bird Treaty Act

MCLs maximum contaminant levels

MEIR maximum exposed individual resident

mm/s millimeters per second

MMT million metric tons

mPa micro-Pascals

mpg miles per gallon

MPOs metropolitan planning organizations
MS4s Municipal Separate Storm Sewer Systems

MSR Municipal Services Review

MTIP Metropolitan Transportation Improvement Program

MTP/SCS Metropolitan Transportation Plan/Sustainable Communities Strategy

MWELO Model Water Efficient Landscape Ordinance

MWs megawatts

NAAQS national ambient air quality standards

NAHC Native American Heritage Commission

NCIC North Central Information Center

NHPA National Historic Preservation Act of 1966

NHTSA U.S. Department of Transportation's National Highway Traffic Safety Administration

NMFS National Marine Fisheries Service

NOnitric oxideNO2nitrogen dioxideNOPnotice of preparationNOXnitrogen oxides

NPDES National Pollutant Discharge Elimination System

NRCS Natural Resource Conservation Service
NRHP National Register of Historic Places

NTR National Toxics Rule

OEHHA Office of Environmental Health Hazard Assessment

OES California Office of Emergency Services

OPR California Governor's Office of Planning and Research

OSHA Occupational Safety and Health Administration

PCBs polychlorinated biphenyls
PCR Public Resources Code

PG&E Pacific Gas and Electric Company PM_{10} respirable particulate matter $PM_{2.5}$ fine particulate matter

Porter-Cologne Act Porter-Cologne Water Quality Control Act of 1969

Acronyms and Abbreviations Ascent Environmental

PPV peak particle velocity
PRC Public Resources Code

PV photovoltaic

RCRA Resource Conservation and Recovery Act of 1976
Regional San Sacramento Regional County Sanitation District

River Road State Route 160

RMS root-mean-square

RMSE Root Mean Square Error

ROG reactive organic gases

RPS renewable portfolio standard

RWQCB regional water quality control boards

SACOG Sacramento Area Council of Governments

SAF Plan State Alternative Fuels Plan

SARA Superfund Amendments and Reauthorization Act of 1986

SASD Sacramento Area Sewer District

SB Senate Bill

SCGA Sacramento Central Groundwater Authority
SCMP Subregional Corridor Mitigation Program
SCS Sustainable Communities Strategy
SCWA Sacramento County Water Agency

SEMS Standard Emergency Management System
SEPA Southeast Policy Area Community Plan
SFD City of Sacramento Fire Department
SGMA Sustainable Groundwater Management Act

SIP State implementation plan

SMAQMD Sacramento Metropolitan Air Quality Management District

SMFD Sacramento Metropolitan Fire District
SMUD Sacramento Municipal Utilities District

SO₂ sulfur dioxide
SOI sphere of influence

SOIA sphere of influence amendment

SPL sound pressure level

SR State Route

SRWTP Sacramento Regional Wastewater Treatment Plant

SSA South Service Area

SSHCP South Sacramento Habitat Conservation Plan

STA Sacramento Transportation Authority

SUVs sport utility vehicles

SVAB Sacramento Valley Air Basin

Ascent Environmental Acronyms and Abbreviations

SWPPP stormwater pollution prevention plan
SWRCB State Water Resources Control Board

TACs toxic air contaminants
TAZs traffic analysis zones
TCRs tribal cultural resources
TDF travel demand forecasting
TMDL total maximum daily load
TRU transportation refrigeration unit

UAIC United Auburn Indian Community

UCMP University of California Museum of Paleontology

UDA Urban Development Area

UPA Urban Policy Area

USACE US Army Corps of Engineers
USB Urban Services Boundary

USC U.S. Code

USDA U.S. Department of Agriculture
USDOT U.S. Department of Transportation
USFWS U.S. Fish and Wildlife Service

V/C volume-to-capacity ratio

VdB vibration decibels
VMT vehicle miles traveled

WRCC Western Regional Climate Center

WSA Water Supply Assessment

ZNE Zero Net Energy

Acronyms and Abbreviations Ascent Environmental

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ES EXECUTIVE SUMMARY

This Executive Summary is provided in accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15123. As stated in the State CEQA Guidelines Section 15123(a), "[a]n EIR shall contain a brief summary of the proposed actions and its consequences. The language of the summary should be as clear and simple as reasonably practical." State CEQA Guidelines Section 15123(b) states, "[t]he summary shall identify: (1) each significant effect with proposed mitigation measures and alternatives that would reduce or avoid that effect; (2) areas of environmental controversy known to the Lead Agency, including issues raised by agencies and the public; and (3) issues to be resolved including the choice among alternatives and whether or how to mitigate the significant effects." Accordingly, this summary includes a brief synopsis of the project and project alternatives, environmental impacts and mitigation, areas of known environmental controversy, and issues to be resolved during environmental review. Table ES-1 (at the end of this section) presents the summary of potential environmental impacts, their level of significance without mitigation measures, proposed mitigation measures, and the levels of significance following the implementation of mitigation measures.

ES.1 PURPOSE AND INTENDED USES OF THIS DRAFT EIR

This draft environmental impact report (EIR) has been prepared 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 Bilby Ridge Sphere of Influence Amendment (SOIA) (LAFC# 04-16; State Clearinghouse# 2017042071). This document is prepared in conformance with CEQA (California Public Resources Code, Section 21000, et seq.) and the State CEQA Guidelines (California Code of Regulations, Title 14, Section 15000, et seq.).

ES.2 SUMMARY OF THE PROJECT

The project is a landowner-initiated proposal to amend the City of Elk Grove's sphere of influence (SOI) to include the 480-acre project site, which abuts the southern portion of the City of Elk Grove's existing jurisdictional boundary. This SOIA would allow the City of Elk Grove and other service providers to plan for future urbanization, but it does not authorize changes in land use or governance. Lands within an amended SOI would not be under the City's jurisdiction until future prezoning and/or development applications are received and requests for annexation of those parcels are approved by Sacramento LAFCo. The project does not include an annexation request. There will not be any change to the land use jurisdiction in the event that LAFCo approves the proposed SOIA. The project is being considered pursuant to the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (CKH), which includes provisions for amending spheres of influence.

The following summarizes key aspects of the project. A detailed description of the project components is included in Chapter 2, "Project Description," of this document.

ES.2.1 Project Setting

The Bilby Ridge site consists of approximately 480 acres and is in the unincorporated area of Sacramento County, just south of the City of Elk Grove. The City's existing jurisdictional boundaries are adjacent to the project site's western, northern, eastern boundaries. Roadway access to the project site is provided by Willard Parkway, Bilby Road, Bruceville Road, and Kammerer Road.

Most of the Bilby Ridge site is in agricultural production (e.g., row crops, irrigated and non-irrigated pasture land). There are currently 10 single-family residences on the site, as well as several accessory structures. The Sacramento County General Plan land use designation for the site is Agricultural Cropland, which designates lands most suitable for intensive agricultural activities, including row crops, tree crops, irrigated grains, and dairies. The project site is located within the County General Plan's Urban Services Boundary.

Adjacent land uses to the project site include agricultural operations to the south and east, and single-family residential and related uses to the west and north. The City of Elk Grove East Franklin Specific Plan, Laguna Ridge Specific Plan, the Southeast Policy Area border the site and designate residential, park, and open space uses adjacent to the project site. Land areas south of the project site are designated Agricultural Cropland by the Sacramento County General Plan.

ES.2.2 Project Description

There are no changes to land uses proposed as part of the project. The project does not include a land use plan or related pre-zoning entitlement requests. Annexation of the project site to the City is not an action under consideration for this project. Land use and zoning designations for the site would be proposed at the time a request for annexation is submitted to LAFCo. However, for LAFCo to understand and fully evaluate the direct and indirect impacts associated with consideration of the Bilby Ridge SOIA, it must also consider the reasonable development pattern and intensity that could occur at the site from subsequent land use approvals. To facilitate environmental analysis for this SOIA request, the applicant has developed a conceptual land use scenario and holding capacity. These proposed land uses are the applicant's representations of intended development for the site. Approval of the SOIA would not authorize changes in land use or governance. Land use activities within the SOIA area would remain under the jurisdiction of Sacramento County until annexation is approved by LAFCo at some future time. A municipal services review (MSR) has been prepared for the project as required under CKH. The MSR assesses the adequacy of required infrastructure and services capacity and means of financing as part of a sphere of influence amendment request. The MSR is not a project subject to CEQA review. The MSR is being prepared concurrently with this EIR. While the MSR is not subject to CEQA review, it may serve to inform the environmental review process.

ES.2.3 Project Objectives

Sacramento LAFCo has identified the following objectives for the project:

- ▲ Amend the Sphere of Influence (SOI) boundary beyond the existing Elk Grove city limits to accommodate orderly and sustainable growth compatible with the Sacramento LAFCo, City of Elk Grove, and Sacramento County growth goals and policies, including promoting a sustainable jobs to housing ratio;
- Implement the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 consistent with public service conditions present or reasonably foreseeable in the proposed Bilby Ridge SOIA area;
- Establish a logical boundary within which future annexation requests to the City of Elk Grove may be considered; and
- Establish an expanded SOI for the City of Elk Grove that will facilitate the protection of important environmental, cultural, and agricultural resources.

ES.3 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Under CEQA, a significant effect on the environment is defined as a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project. This draft EIR evaluates impacts to environmental resources that could result from implementation of the Bilby Ridge SOIA, and discusses mitigation measures that could be implemented by Sacramento LAFCo to reduce potential adverse impacts to a level that is considered less than significant. The impacts and mitigation measures are identified Chapter 3, "Affected Environment, Environmental Consequences, and Mitigation Measures," and are summarized in Table ES-1 at the end of this chapter. Chapter 4, "Cumulative Impacts," provides a discussion of cumulative impacts. The mitigation measures presented in this draft EIR will form the basis of the Mitigation Monitoring Program.

ES.3.1 Significant and Unavoidable Adverse Impacts

An impact that remains significant after mitigation is considered an unavoidable adverse impact of the project. Implementation of the project would result in significant and unavoidable impacts in the following resource areas:

- ▲ Aesthetics (Section 3.1)
- ▲ Agricultural Resources (Section 3.2)
- ▲ Air Quality (Section 3.3)
- Biological Resources (Section 3.4)
- ▲ Energy (Section 3.6)
- ▲ Land Use (Section 3.9)
- Noise and Vibration (Section 3.10)
- Population and Housing (Section 3.11)
- Public Services and Recreation (Section 3.12)
- ▲ Transportation and Circulation (Section 3.13)
- Utilities (Section 3.14)

ES.4 SUMMARY OF PROJECT ALTERNATIVES

Pursuant to Section 15126.6(c) of the State CEQA Guidelines, this draft EIR includes a reasonable range of alternatives to the project that meet most of the objectives of the project and avoid or substantially lessen the identified likely environmental impacts. The following summary describes the alternatives to the project that are evaluated in this draft EIR. For further discussion, refer to Chapter 6, "Project Alternatives."

This draft EIR provides an analysis of the comparative impacts anticipated from three alternatives to the project:

- ▲ Alternative 1: No Project This alternative would consist of not approving the Bilby Ridge SOIA and the SOIA area would remain under the jurisdiction of Sacramento County with no changes to current agricultural land use designation and zoning.
- ▲ Alternative 2: Reduced Sphere of Influence This alternative would reduce the SOIA area from 480 acres to 240 acres.
- ▲ Alternative 3: Off-Site Alternative This alternative would involve the establishment of the SOIA area adjacent to the proposed Elk Grove Multi Sport Complex that is proposed for annexation south of Grant Line Road.

As discussed in Chapter 6, "Project Alternatives," the Reduced Sphere of Influence Alternative is considered the environmentally superior alternative because it reduces several impacts associated with the project and would generally meet the stated project objectives. However, the Reduced Sphere of Influence Alternative may result in irregular jurisdictional boundaries if the Kammerer Road extension is completed in the future.

ES.5 AREAS OF POTENTIAL CONTROVERSY

Section 15123 of the State CEQA Guidelines requires the summary section of a draft EIR to identify areas of controversy known to the lead agency, including issues raised by agencies and the public. The following provides a summary of issues raised through scoping and comments on the Notice of Preparation (NOP) that could be considered controversial. The comment letters received on the NOP are included in Appendix A of this document.

- ▲ Effects to adjacent agricultural land
- ▲ Effects on Swainson's Hawk
- ▲ Participation in the South Sacramento Habitat Conservation Plan
- Utility service in the SOIA area

The draft EIR addresses the above issues to the extent that substantial evidence permits, and to the extent that the issue is an environmental issue. However, it does not address impacts that are speculative and not reasonably foreseeable. All the substantive environmental issues raised in the NOP comment letters have been addressed in this draft EIR.

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---|--------------------------------------|--|-------------------------------------|
| 3.1 Aesthetics | | | |
| Impact 3.1-1: Substantially degrade the existing visual character or quality of the site and its surroundings. The visual character surrounding the SOIA area consists of suburban uses that transition to rural residential and agricultural conditions. While approval of the SOIA alone would not result in physical visual changes to the site, future development of the SOIA area could convert the open space character of project site to suburban uses, which would further expand suburban development conditions south of the existing City of Elk Grove. This may substantially alter public views. Because of the size of SOIA area and its location adjacent to agricultural lands in unincorporated Sacramento County, the change in visual character would be considered a significant impact. | S | Mitigation Measure 3.1-1: Design future projects consistent with City development standards. At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants demonstrate compliance with the City's Design Guidelines in effect at the time of the annexation application or the establishment of its own design guidelines that are consistent with the City's Design Guidelines to ensure that future development will be compatible with the desired character of the City and to ensure physical, visual, and functional compatibility between uses. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. | SU |
| Impact 3.1-2: Create a new source of substantial light or glare. The SOIA would not result in any changes in existing land uses and, as such, would not result in new sources of substantial light or glare. If the site is annexed and developed in the future, development could result in the introduction of buildings and facilities that may create lighting and glare on adjoining areas. This impact would be significant. | S | Mitigation Measure 3.1-2: Design development to reduce lighting and glare. At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants demonstrate compliance with the City's Design Guidelines and City Municipal Code standards in effect at the time of the project approval associated with reflective building materials and lighting fixture design and orientation that avoid day time glare and nighttime spillover effects on adjacent areas and nighttime sky glow conditions. Compliance with this mitigation measure may be combined with Mitigation Measure 3.1-1 and shall be provided in the annexation application to LAFCo. | SU |
| 3.2 Agricultural Resources | | | |
| Impact 3.2-1: Direct conversion of Important Farmland and prime agricultural land to non-agricultural use. While the SOIA would not result in direct physical changes to the site, future development facilitated by subsequent annexation within the Bilby Ridge site could result in the direct conversion of up to 362 acres of Farmland of Statewide Importance and 113 acres of Farmland of Local Importance, 70 of which are also considered prime agricultural land by LAFCo, to nonagricultural urban uses. This impact would be a significant impact. | S | Mitigation Measure 3.2-1: Preserve agricultural land. At the time of submittal of any application to annex territory within the Bilby Ridge site, the City of Elk Grove shall require that applicants protect 1 acre of existing farmland land of equal or higher quality for each acre of Farmland of Statewide Importance, Farmland of Local Importance, and prime agricultural land that would be developed as a result of the project. In quantifying the amount of protected farmland needed to mitigate impacts, 1 acre of protected farmland that is designated as both Farmland of Statewide Importance and prime agricultural land, for example, would count towards mitigation in both categories. This protection may consist of the establishment of a farmland conservation easement, farmland deed restriction, or other appropriate farmland conservation mechanism to ensure the preservation of the land from conversion in perpetuity, but may also be utilized for compatible wildlife habitat | SU |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---------|--------------------------------------|--|-------------------------------------|
| | | conservation efforts (e.g., Swainson's hawk foraging habitat mitigation) that do not substantially impair or diminish the agricultural productivity of the land. The farmland/wildlife habitat land to be preserved must have adequate water supply to support agricultural use. The City shall consider the benefits of preserving farmlands in proximity to other protected lands. | |
| | | The total acres of land conserved shall be based on the total on-site agriculture acreage converted to urban uses. Conserved agriculture areas may include areas on the project site, lands secured for permanent habitat enhancement (e.g., giant garter snake habitat, Swainson's hawk habitat), or additional land identified by the City. The City shall attempt to locate preserved farmland within 5 miles of the Bilby Ridge site; however, the preserved farmland shall at a minimum be located inside Sacramento County. The City shall impose the conservation easement content standards to include, at a minimum: land encumbrance documentation; documentation that the easements are permanent, monitored, and appropriately endowed; prohibition of activity which substantially impairs or diminishes the agricultural productivity of the land; and protection of water rights. | |
| | | In addition, the City shall impose the following minimum conservation easement content standards upon annexation: All owners of the agricultural/wildlife habitat mitigation land shall execute the document encumbering the land. The document shall be recordable and contain an accurate legal description of the agricultural (wildlife habitat mitigation land). | |
| | | of the agricultural/wildlife habitat mitigation land. The document shall prohibit any activity that substantially impairs or diminishes the agricultural productivity of the land. If the conservation easement is also proposed for wildlife habitat mitigation purposes, the document shall also prohibit any activity that substantially impairs or diminishes the wildlife habitat suitability of the land. | |
| | | ▲ The document shall protect any existing water rights necessary to maintain agricultural uses on the land covered by the document and retain such water rights for ongoing use on the agricultural/wildlife habitat mitigation land. ▲ Interests in agricultural/habitat mitigation land shall be held in trust by an entity acceptable to the City and/or by the City in perpetuity. The entity shall | |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|--|--------------------------------------|---|-------------------------------------|
| | | not sell, lease, or convey any interest in agricultural/wildlife habitat mitigation land that it acquires without the City's prior written approval. The applicant shall pay to the City an agricultural/wildlife habitat mitigation monitoring fee to cover the costs of administering, monitoring, and enforcing the document in an amount determined by the receiving entity or City. The City shall be named a beneficiary under any document conveying the interest in the agricultural/wildlife habitat mitigation land to an entity acceptable to the City. If any qualifying entity owning an interest in agricultural/wildlife habitat mitigation land ceases to exist, the duty to hold, administer, monitor, and enforce the interest shall be transferred to another entity acceptable to the City or transferred to the City. Before committing to the preservation of any particular farmland pursuant to this measure, the applicant shall obtain the City's approval of the farmland proposed for | |
| Impact 3.2-2: Conflict with existing Williamson Act contracts. Future development within the Bilby Ridge site could result in conflicts with existing | S | preservation. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. Implement Mitigation Measure 3.2-1. | SU |
| Williamson Act contracts that that protect farmland in the SOIA and require filing of non- renewals or cancelations of the contracts. This impact would be a significant impact. | | | |
| Impact 3.2-3: Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use. The project would establish an expanded sphere of influence for the City of Elk Grove that would likely facilitate the subsequent annexation and development of the project site. New urban land uses in the project area could impair or result in conflicts with adjacent agricultural activities. This impact would be significant. | S | Mitigation Measure 3.2-3 Provision of agricultural buffering as part of future project design. At the time of submittal of any application to annex territory within the Bilby Ridge SOIA area, the City shall require the applicant to establish agricultural buffering features in the development site design. This shall include implementation of City Municipal Code, Chapter 14.05, "Agricultural Activities," in effect at the time of the annexation application that may include screening, fencing, landscaping, setbacks, and other provisions to buffer agricultural uses. 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. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. | SU |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|--|--------------------------------------|---|-------------------------------------|
| 3.3 Air Quality | • | | |
| Impact 3.3-1: Construction emissions of criteria air pollutants and ozone precursors. Construction-related activities associated with future development within the SOIA area upon annexation could result in emissions of ROG, NOX, PM10 and PM2.5 from site preparation (e.g., excavation, clearing), off-road equipment, material and equipment delivery trips, and worker commute trips, and other miscellaneous activities (e.g., building construction, asphalt paving, application of architectural coatings). Construction activities could result in mass emissions of NOX and PM10 that exceed SMAQMD's thresholds of 85 lb/day and 80 lb/day, respectively. Therefore, construction-generated emissions of NOX and PM10 could contribute to the existing nonattainment status of the SVAB with respect to the CAAQS and NAAQS for ozone, the CAAQS forPM10 and the NAAQS for PM2.5. This would be a significant impact. | S | Mitigation Measure 3.3-1: Construction exhaust and fugitive dust emissions controls At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants implement SMAQMD's Basic Construction Emission Control Practices and SMAQMD's Enhanced Exhaust Control Practices during any construction or ground disturbance activities to reduce construction-related fugitive dust emissions, diesel PM, and NOX emissions. These measures are included below and are consistent with General Plan Policy CAQ-30 and Policy CAQ-33. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. Basic Construction Fugitive Dust Emissions Control Practices ✓ Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads. ✓ Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered. ✓ Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited. ✓ Limit vehicle speeds on unpaved roads to 15 miles per hour (mph). ✓ All roadways, driveways, sidewalks, parking lots to be paved should completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used. ✓ Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [required by California Code of Regulations, Title 13, sections 2449(d)(3) and 2485]. Provide clear signage that posts this requirement for workers at the entrances to the site. ✓ Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment mus | SU |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---------|--------------------------------------|--|-------------------------------------|
| | | Enhanced Exhaust Control Practices ✓ Prior to any activities on the site, the applicant shall submit to the City and SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project before any grading activities. The inventory shall include the horsepower rating, engine model year, and projected hours of use for each piece of equipment. The project applicant shall provide the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman. The information shall be submitted at least 4 business days before the use of subject heavy-duty off-road equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. ✓ Prior to any grading activities, the applicant shall provide a plan for approval by the City and SMAQMD demonstrating that the heavy-duty off-road vehicles (50 horsepower or more) to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project wide fleet-average 20-90 percent NOX reduction (depending on available technology and engine Tier) and 45 percent particulate reduction compared to the most recent CARB fleet average. This plan shall be submitted in conjunction with the equipment inventory. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. | |
| | | ■ The applicant shall ensure that emissions from all off-road, diesel-powered equipment used on the project area do not exceed 40 percent opacity for more than three minutes in any one hour. Use of any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be discontinued immediately until equipment is repaired or replaced. Non-compliant equipment will be documented and a summary provided to the lead agency and SMAQMD monthly. A visual survey of all in-operation equipment shall be made at least weekly. A monthly summary of the visual survey shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. | |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|--|--------------------------------------|---|-------------------------------------|
| | | Enhanced Fugitive PM Dust Control Practices Soil Disturbance Areas ✓ Water exposed soil with adequate frequency for continued moist soil. However, do not overwater to the extent that sediment flows off the site. ✓ Suspend excavation, grading, and/or demolition activity when wind speeds exceed 20 mph. ✓ Install wind breaks (e.g., plant trees, solid fencing) on windward side(s) of construction areas. ✓ Plant vegetative ground cover (fast-germinating native grass seed) in disturbed areas as soon as possible. Water appropriately until vegetation is established. Unpaved Roads ✓ Install wheel washers for all exiting trucks, or wash off all trucks and equipment leaving the site. ✓ Treat site accesses to a distance of 100 feet from the paved road with a 6 to 12-inch layer of wood chips, mulch, or gravel to reduce generation of road dust and road dust carryout onto public roads. ✓ Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The phone number of the District shall also be visible to ensure compliance. | |
| Impact 3.3-2: Long-term operational emissions of air pollutants. While approval of the SOIA would not result in any physical changes to the environment, development in the SOIA area upon future annexation could result in long-term operational emissions of ROG, NOX, PM10 and PM2.5 that exceed SMAQMD-recommended mass emission thresholds and, therefore, could conflict with the air quality planning efforts and contribute substantially to the nonattainment status of the SVAB with respect to the CAAQS and NAAQS for ozone, the CAAQS forPM10 and the NAAQS forPM2.5. This would be significant impact. | S | Mitigation Measure 3.3-2: Prepare an Air Quality Mitigation Plan to reduce potential operational emissions At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants prepare and implement an operational air quality mitigation plan (AQMP) that achieves a 35 percent reduction in operational emissions of ROG and NOX compared to unmitigated project emissions. The AQMP shall be prepared in accordance with guidance from SMAQMD's Recommended Guidance for Land Use Emission Reductions, Version 3.3 (SMAQMD 2016c). A 35 percent reduction is recommended by SMAQMD, rather than SMAQMD's standard 15 percent reduction, because SOIA area was not included in the 2016 Sacramento Area Council of Governments (SACOG) Metropolitan Transportation Plan/Sustainable Communities Strategy, which is used to develop mobile-source emissions inventories for the region, and used to show consistency | SU |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---|--------------------------------------|--|-------------------------------------|
| | | with adopted air quality plans and not conflict with the ability to bring the SVAB into attainment of the CAAQS and NAAQS for ozone (SMAQMD 2016b:4). The AQMP shall also include all feasible measures to reduce operational emissions of PM10, and PM2.5, though SMAQMD has not determined any specific percent reductions for PM10, and PM2.5 to be feasible (SMAQMD 2016c:4). The AQMP can include policies and emissions reduction measures demonstrating compliance with the City of Elk Grove's General Plan Conservation and Air Quality Element. The City's development of an AQMD may be conducted in parallel with implementation of Mitigation Measure 3.7-1a of this EIR, which requires implementation of on-site greenhouse gas reduction measures. The AQMP shall be approved by SMAQMD before the construction of any new land use development on the SOIA site. The City can require future developers of the SOIA site to be responsible for funding preparation of the AQMP. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. The AQMP can be prepared after a more detailed development plan is determined. However, in addition to the conditions of approval required by this mitigation measure, the following text shall also be included as a condition of approval for the annexation of territory in the SOIA area into the City of Elk Grove: "All amendments to the detailed land use plan on which the AQMP is based and that have the potential to result in a change in ozone precursor emissions shall include an analysis which quantifies, to the extent practicable, the effect of the established AQMP on ozone precursor emissions. The amendment shall not increase total ozone precursor emissions above what was considered in the AQMP for the entire project area and shall achieve the original 35 percent reduction in total operational emissions. If the amendment would require a change in the AQMP to meet that requirement, then the proponent of the amendment shall consult with SMAQMD on the revised an | |
| Impact 3.3-3: Mobile-source CO concentrations. While approval of the SOIA would not result in any physical changes to the environment, long-term operational mobile-source emissions of CO potentially generated by vehicle trips associated with future annexation and development of the SOIA area would not be large enough to violate or contribute substantially to localized | LTS | None required. | LTS |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---|--------------------------------------|--|-------------------------------------|
| concentrations of CO that exceed the CAAQS or NAAQS for CO. As a result, this impact would be less than significant. | | | |
| Impact 3.3-4: Exposure of sensitive receptors to TACs. Approval of the SOIA would not result in any physical changes to the environment. Further, development associated with future annexation of the site would not result in the generation of TACs during construction that would result in an incremental increase in cancer risk greater than 10 in one million or a hazard index greater than 1.0 at existing or future sensitive receptors based on the short duration of construction activities and distance to existing sensitive receptors. However, new operational TAC sources associated with commercial development may expose existing or new receptors to TAC emissions. This impact would be significant. | S | Mitigation Measure 3.3-4: Incorporate design features to minimize exposure of sensitive receptors to TACs generated at commercial land uses. At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants implement the measures to address TAC exposure identified below. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. To reduce exposure of existing or future receptors to diesel PM generated at commercial loading docks, the following design measures shall be incorporated into land uses developed within the SOIA area: ■ Proposed commercial land uses that have the potential to emit TACs or host TAC-generating activity (e.g., loading docks) shall be located as far away from existing and proposed on-site sensitive receptors as possible such that they do not expose sensitive receptors to TAC emissions that exceed an incremental increase of 10 in 1 million for the cancer risk and/or a noncarcinogenic Hazard Index of 1.0. ■ Commercial facilities with truck loading areas shall be designed such that buildings or walls shield locations of truck activity from nearby residences or other sensitive land uses. ■ Commercial facilities with truck loading areas that accommodate more than 100 trucks per day, or 40 trucks equipped with transportation refrigeration units (TRUs), shall be located further than 1,000 feet of sensitive receptors. ■ Require electrification hook-ups for at all commercial land uses that will receive deliveries from trucks with TRUs so that TRU engines need not be operated at loading docks. ■ Signs shall be posted at all loading docks and truck loading areas which indicate that diesel powered delivery trucks must be shut off when not in use for longer than 5 minutes on the premises to reduce idling emissions of diesel PM. | LTS |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---|--------------------------------------|---|-------------------------------------|
| Impact 3.3-5: Exposure of sensitive receptors to odors. While approval of the SOIA would not result in any physical changes to the environment, future development of the SOIA area upon annexation could introduce new odor sources into the area (e.g., temporary diesel exhaust emissions during construction and delivery trucks associated with commercial land uses). Thus, receptors located near the commercial land uses may be exposed to odorous emissions depending upon the specific land uses developed. As a result, potential exposure of sensitive receptors to odors would be considered a significant impact. | S | Mitigation Measure 3.3-5: Incorporation of design features for suburban center to address potential odor sources. At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants implement the following measures: ▲ Land uses that have the potential to emit objectionable odorous emissions (e.g., dry cleaning establishments, restaurants, and gasoline stations) shall be located as far away as possible from existing and proposed sensitive receptors or downwind of nearby receptors. ▲ If an odor-emitting facility is to occupy space in the retail area, odor control devices shall be installed to reduce the exposure of receptors to objectionable odorous emissions. SMAQMD shall be consulted to determine applicable/feasible control devices to be installed. Use of setbacks, site design considerations, and emission controls are typically sufficient to ensure that receptors located near retail uses would not be exposed to odorous emissions on a frequent basis. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. | LTS |
| 3.4 Biological Resources | | | |
| Impact 3.4-1: Disturbance to or loss of special-status plant species and habitat. Potential land uses and development projects that may be approved and implemented in the future in the proposed SOIA area could result in disturbance or loss of several special-status plant species. Because the loss of special-status plants can substantially affect the abundance, distribution, and viability of local and regional populations of these species, this would be a potentially significant impact. | PS | Mitigation Measure 3.4-1: Protection and mitigation of special-status plants. At the time of submittal of any application to annex territory with the Bilby Ridge SOIA area, the City of Elk Grove shall impose the following conditions on all discretionary projects. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. ■ Prior to construction and during the blooming period for the special-status plant species with potential to occur in the project site and in areas of any required off-site improvements, a qualified botanist shall conduct protocollevel surveys for special-status plants following the most recent CDFW rare plant survey protocols in areas where potentially suitable habitat would be removed or disturbed by project activities. Table 3.4-3 summarizes the normal blooming periods for special-status plant species with potential to occur on the project site, which generally indicates the optimal survey periods when the species are most identifiable. | LTS |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---------|--------------------------------------|---|-------------------------------------|
| | | ■ If no special-status plants are found, the botanist shall document the findings in a letter report to USFWS, CDFW, and the project applicant and no further mitigation shall be required. | |
| | | ✓ If special-status plant species are found that cannot be avoided during construction, the applicant shall consult with CDFW and/or USFWS, as appropriate depending on species status, to determine the appropriate mitigation measures for direct and indirect impacts that could occur as a result of project construction and shall implement the agreed-upon mitigation measures to achieve no net loss of occupied habitat or individuals. Mitigation measures may include preserving and enhancing existing populations, creation of off-site populations on mitigation sites through seed collection or transplantation, and/or restoring or creating suitable habitat in sufficient quantities to achieve no net loss of occupied habitat and/or individuals. A mitigation and monitoring plan shall be developed describing how unavoidable losses of special-status plants will be compensated. ✓ If relocation efforts are part of the mitigation plan, the plan shall include details on the methods to be used, including collection, storage, propagation, receptor site preparation, installation, long-term protection and management, monitoring and reporting requirements, success criteria, and remedial action responsibilities should the initial effort fail to meet long-term monitoring requirements. | |
| | | ▲ Success criteria for preserved and compensatory populations shall include: | |
| | | The extent of occupied area and plant density (number of plants per unit area) in compensatory populations shall be equal to or greater than the affected occupied habitat. | |
| | | Compensatory and preserved populations shall be self-producing. Populations shall be considered self-producing when: | |
| | | plants reestablish annually for a minimum of five years with no human intervention such as supplemental seeding; and | |
| | | reestablished and preserved habitats contain an occupied area and flower density comparable to existing occupied habitat areas in similar habitat types in the project vicinity. | |
| | | If off-site mitigation includes dedication of conservation easements, purchase of mitigation credits, or other off-site conservation measures, the details of these measures shall be included in the mitigation plan, | |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|--|--------------------------------------|---|-------------------------------------|
| | | including information on responsible parties for long-term management, conservation easement holders, long-term management requirements, success criteria such as those listed above and other details, as appropriate to target the preservation of long term viable populations. | |
| Impact 3.4-2: Disturbance to or loss of special-status wildlife species and habitat. Potential land uses and development projects that may be approved and implemented in the future under the proposed SOIA area could adversely affect several special-status wildlife species, including reptiles, nesting birds, invertebrates, and mammals. Future development construction activities such as ground disturbance and vegetation removal, as well as overall conversion of habitat to urban uses, could result in the disturbance or loss of individuals and reduced breeding productivity of these species. Special-status wildlife species are protected under ESA, CESA, California Fish and Game Code, CEQA, or other regulations. The loss of special-status wildlife species and their habitat would be a potentially significant impact. | PS | Mitigation Measure 3.4-2a: Protection of glant gartersnake. At the time of submittal of any application to annex territory with the Bilby Ridge SOIA area, the City of Elk Grove shall impose the following conditions on all discretionary projects. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. ✓ For projects or ground-disturbing activities with potential to disturb suitable aquatic or adjacent upland habitat for giant gartersnake, the following measures will be implemented. ✓ The applicant shall retain a qualified biologist to conduct a field investigation to delineate giant gartersnake aquatic habitat within the project and any required off-site improvements and adjacent areas within 300 feet of the construction footprint. Giant gartersnake aquatic habitat includes agricultural ditches. ✓ During construction, an approved biologist experienced with giant gartersnake identification and behavior shall be on-site daily when construction activities within aquatic habitat or within 300 feet of aquatic habitat are taking place. The biologist shall inspect the project site daily for giant gartersnake prior to construction activities. The biologist will also conduct environmental awareness training for all construction personnel on required avoidance procedures and protocols if a giant gartersnake enters an active construction zone. ✓ All construction activity within giant garter snake aquatic and upland habitat in and around the site shall be conducted between May 1 and September 15, the active period for giant gartersnakes. This would reduce direct impacts on the species because the snakes would be active and respond to construction activities by moving out of the way. ✓ If construction activities occur in giant gartersnake aquatic habitat, aquatic habitat shall be dewatered and then remain dry and absent of aquatic prey (e.g., fish and tadpoles) for 15 days prior to initiation of construction activities. If complete dewatering is not possible, the p | SU |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---------|--------------------------------------|--|-------------------------------------|
| | | consult with CDFW and USFWS to determine what additional measures may be necessary to minimize effects to giant gartersnake. After aquatic habitat has been dewatered 15 days prior to construction activities, exclusion fencing shall be installed extending a minimum of 300 feet into adjacent uplands to isolate both the aquatic and adjacent upland habitat. Exclusionary fencing shall be erected 36 inches above ground and buried at least 6 inches below the ground to prevent snakes from attempting to move under the fence into the construction area. In addition, high-visibility fencing shall be erected to identify the construction limits and to protect adjacent habitat from encroachment of personnel and equipment. Giant gartersnake habitat outside construction fencing shall be avoided by all construction personnel. The fencing and the work area shall be inspected by the approved biologist to ensure that the fencing is intact and that no snakes have entered the work area before the start of each work day. The fencing shall be maintained by the contractor until completion of the project. If a giant gartersnake is observed, the biologist shall notify CDFW and USFWS immediately. Construction activities will be suspended in a 100-foot radius of the gartersnake until the snake leaves the site on its own volition. If necessary, the biologist shall consult with CDFW and USFWS regarding appropriate procedures for relocation. If the animal is handled, a report shall be submitted, including date(s), location(s), habitat description, and any corrective measures taken to protect giant gartersnake within 1 business day to CDFW and USFWS. The biologist shall report any take of listed species to USFWS immediately. Any worker who inadvertently injures or kills a giant gartersnake or who finds one dead, injured, or entrapped must immediately report the incident to the approved biologist. | |
| | | ✓ All excavated steep-walled holes and trenches more than 6 inches deep shall be covered with plywood (or similar material) or provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each work day or 30 minutes prior to sunset, whichever occurs first. All steep-walled holes and trenches shall be inspected by the approved biologist each morning to ensure that no wildlife has become entrapped. All construction pipes, culverts, similar structures, construction equipment, and construction debris left overnight within giant gartersnake modeled | |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---------|--------------------------------------|--|-------------------------------------|
| | | habitat shall be inspected for giant gartersnake by the approved biologist prior to being moved. | |
| | | If erosion control is implemented on the project site, non-entangling erosion control material shall be used to reduce the potential for entrapment. Tightly woven fiber netting (mesh size less than 0.25 inch) or similar material will be used to ensure snakes are not trapped (no monofilament). Coconut coir matting and fiber rolls containing burlap are examples of acceptable erosion control materials. | |
| | | The applicant shall ensure that there is no-net-loss of giant gartersnake habitat by compensating for loss of habitat at a ratio of 1:1, by purchasing credits from a USFWS-approved conservation bank. | |
| | | Prior to construction, USFWS shall be consulted pursuant to Section 7 of the ESA. The activities may qualify to use the "Programmatic Formal Consultation for U.S. Army Corps of Engineers 404 Permitted Projects with Relatively Small Effects on the Giant Garter Snake within Butte, Colusa, Glenn, Fresno, Merced, Sacramento, San Joaquin, Solano, Stanislaus, Sutter and Yolo Counties, California" (USFWS 1999). The Habitat Replacement & Restoration Guidelines (Appendix A), Items Necessary for Formal Consultation (Appendix B), Avoidance & Minimization Measures During Construction (Appendix C), and Monitoring Requirements (Appendix D) shall be followed. | |
| | | Mitigation Measure 3.4-2b: Avoidance of western pond turtle. At the time of submittal of any application to annex territory with the Bilby Ridge SOIA area, the City of Elk Grove shall impose the following conditions on all discretionary projects. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. | |
| | | For projects or ground-disturbing activities (including any required off-site improvements) with potential to disturb suitable aquatic or adjacent upland habitat for western pond turtle, the following measures shall be implemented. | |
| | | ■ Within 24 hours before beginning construction activities within 200 feet of suitable aquatic habitat for western pond turtle, a qualified biologist shall survey areas of anticipated disturbance for the presence of western pond turtle. The construction area shall be re-inspected whenever a lapse in | |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---------|--------------------------------------|---|-------------------------------------|
| | | construction activity of two weeks or more has occurred. If pond turtles are found during the survey or observed within the construction area at any other time, they shall be relocated by a qualified biologist to upstream or adjacent aquatic habitat that would not be disturbed by construction activity. | |
| | | Mitigation Measure 3.4-2c: Protection of burrowing owl. At the time of submittal of any application to annex territory with the Bilby Ridge SOIA area, the City of Elk Grove shall impose the following conditions on all discretionary projects. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. | |
| | | For projects or ground-disturbing activities with potential to disturb suitable habitat for burrowing owl, the following measures shall be implemented. | |
| | | ■ The applicant shall retain a qualified biologist to conduct focused breeding and nonbreeding season surveys for burrowing owls in areas of suitable habitat on and within 1,500 feet of the project site and any required off-site improvements. Surveys shall be conducted prior to the start of construction activities and in accordance with Appendix D of CDFW's Staff Report on Burrowing Owl Mitigation (CDFW 2012) or the most recent CDFW protocols. | |
| | | ■ If no occupied burrows are found, a letter report documenting the survey methods and results shall be submitted to CDFW and no further mitigation will be required. | |
| | | If an active burrow is found during the nonbreeding season (September 1 through January 31), the applicant shall consult with CDFW regarding protection buffers to be established around the occupied burrow and maintained throughout construction. If occupied burrows are present that cannot be avoided or adequately protected with a no-disturbance buffer, a burrowing owl exclusion plan shall be developed, as described in Appendix E of CDFW's 2012 Staff Report. Burrowing owls shall not be excluded from occupied burrows until the project's burrowing owl exclusion plan is approved by CDFW. The exclusion plan shall include a plan for creation, maintenance, and monitoring of artificial burrows in suitable habitat proximate to the burrows to be destroyed, that provide substitute burrows for displaced owls. | |
| | | ▲ If an active burrow is found during the breeding season (February 1 through August 31), occupied burrows shall not be disturbed and will be provided with | |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---------|--------------------------------------|---|-------------------------------------|
| | Mitigation | a 150- to 1,500-foot protective buffer unless a qualified biologist verifies through noninvasive means that either: (1) the birds have not begun egg laying, or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. The size of the buffer shall depend on the time of year and level disturbance as outlined in the CDFW Staff Report (CDFW 2012) or the most recent CDFW protocols. The size of the buffer may be reduced if a broad-scale, long-term, monitoring program acceptable to CDFW is implemented to ensure burrowing owls are not detrimentally affected. Once the fledglings are capable of independent survival, the owls can be evicted and the burrow can be destroyed per the terms of a CDFW-approved burrowing owl exclusion plan developed in accordance with Appendix E of CDFW's 2012 Staff Report or the most recent CDFW protocols. ✔ If active burrowing owl nests are found on the site and are destroyed by project implementation, the project applicant shall mitigate the loss of occupied habitat in accordance with guidance provided in the CDFW 2012 Staff Report or the most recent CDFW protocols, which states that permanent impacts to nesting, occupied and satellite burrows, and burrowing owl habitat shall be mitigated such that habitat acreage, number of burrows, and burrowing owls impacted are replaced through permanent conservation of comparable or better habitat with similar vegetation communities and burrowing mammals (e.g., ground squirrels) present to provide for nesting, foraging, wintering, and dispersal. The applicant shall retain a qualified biologist to develop a burrowing owl mitigation and management plan that incorporates the following goals and standards: ✔ Mitigation lands shall be selected based on comparison of the habitat lost to the compensatory habitat, including type and structure of habitat, disturbance levels, potential for conflicts with humans, pets, and other wildlife, density of burrowing owls, and relative importance of the habitat to the sp | Mitigation |
| | | availability of sufficient suitable habitat to support displaced owls that may be preserved in perpetuity. | |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---------|--------------------------------------|---|-------------------------------------|
| | | ✓ If suitable habitat is not available for conservation adjacent or proximate to the project site, mitigation lands shall be focused on consolidating and enlarging conservation areas outside of urban and planned growth areas and within foraging distance of other conservation lands. Mitigation may be accomplished through purchase of mitigation credits at a CDFW-approved mitigation bank, if available. If mitigation credits are not available from an approved bank and mitigation lands are not available adjacent to other conservation lands, alternative mitigation sites and acreage shall be determined in consultation with CDFW. ✓ If mitigation is not available through an approved mitigation bank and will be completed through permittee-responsible conservation lands, the mitigation plan shall include mitigation objectives, site selection factors, site management roles and responsibilities, vegetation management goals, financial assurances and funding mechanisms, performance standards and success criteria, monitoring and reporting protocols, and adaptive management measures. Success shall be based on the number of adult burrowing owls and pairs using the site and if the numbers are maintained over time. Measures of success, as suggested in the 2012 Staff Report, shall include site tenacity, number of adult owls present and reproducing, colonization by burrowing owls from elsewhere, changes in distribution, and trends in stressors. | |
| | | Mitigation Measure 3.4-2d: Protection measures for Swainson's hawk and other nesting raptors. At the time of submittal of any application to annex territory with the Bilby Ridge SOIA area, the City of Elk Grove shall impose the following conditions on all discretionary projects. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. | |
| | | For projects or ground-disturbing activities (including any required off-site improvements) with potential to affect Swainson's hawk and other raptor nests, or remove Swainson's hawk foraging habitat, the project applicant shall consult with CDFW with respect to the following measures proposed to mitigate for habitat removal and potential nest disturbance. As part of the consultation, the project applicant may seek take authorization under Section 2081 of the Fish and Game | |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---------|--------------------------------------|--|-------------------------------------|
| | | Code. The following measures will be implemented and are intended to avoid, minimize, and fully mitigate impacts to Swainson's hawk, as well as other raptors: ### For construction activities that would occur within 0.25 mile of a known or likely Swainson's hawk nest site (identified based on previous years' use by Swainson's hawk), the project applicant shall attempt to initiate construction activities prior to nest initiation phase (i.e., before March 1). Depending on the timing, regularity, and intensity of construction activity, construction in the area prior to nest initiation may discourage a Swainson's hawk pair from using that site and eliminate the need to implement further nest-protection measures, such as buffers and limited construction operating periods around active nests. Other measures to deter establishment of nests (e.g., reflective striping or decoys) may be used prior to the breeding season in areas planned for active construction. However, if breeding raptors establish an active nest site, as evidenced by nest building, egg laying, incubation, or other nesting behavior, near the construction area, they shall not be harassed or deterred from continuing with their normal breeding activities. ### For project activities, including tree removal, that begin between March 1 and September 15, qualified biologists shall conduct preconstruction surveys for Swainson's hawk and other nesting raptors and to identify active nests on and within 0.5 mile of the project site. The surveys shall be conducted before the beginning of any construction activities between March 1 and September 15, following the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (Swainson's Hawk Technical Advisory Committee 2000). ### Impacts to nesting Swainson's hawks and other raptors shall be avoided by establishing appropriate buffers around active nest sites identified during preconstruction raptor surveys. Project activity shall not commence within the buffer areas until a | |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---------|--------------------------------------|--|-------------------------------------|
| | | construction activities shall be required if the activity has potential to adversely affect the nest. | |
| | | ▲ Trees shall not be removed during the breeding season for nesting raptors unless a survey by a qualified biologist verifies that there is not an active nest in the tree. | |
| | | ■ Mitigation for loss of Swainson's hawk foraging habitat will follow the provisions of City of Elk Grove Municipal Code Chapter 16.130, which requires projects to mitigate loss the of Swainson's hawk foraging habitat through the purchase of conservation easements (if the project will impact greater than 40 acres of habitat) or by paying a mitigation fee (if the project will impact less than 40 acres of habitat). The amount of land preserved shall be governed by a one-to-one (1:1) mitigation ratio for each acre developed as set forth in Chapter 16.130. | |
| | | Mitigation Measure 3.4-2e: Protection measures for tricolored blackbird and song sparrow ("Modesto" population). At the time of submittal of any application to annex territory with the Bilby Ridge SOIA area, the City of Elk Grove shall impose the following conditions on all discretionary projects. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. | |
| | | For projects or ground-disturbing activities that could affect tricolored blackbird and song sparrow nesting habitat (primarily within ruderal vegetation (e.g., blackberry) along irrigation ditches), the following measures shall be implemented to avoid or minimize loss of active tricolored blackbird or song sparrow nests: | |
| | | ■ To minimize the potential for loss of tricolored blackbird nesting colonies, song sparrow nests, or other bird nests, structure and vegetation removal activities shall commence during the nonbreeding season (September 1-January 31). If all suitable nesting habitat is removed during the nonbreeding season, no further mitigation would be required. | |
| | | ■ Prior to removal of any structure or vegetation, or any ground-disturbing activities between February 1 and August 31, a qualified biologist shall conduct preconstruction surveys for nests on any structure or vegetation slated for removal, as well as for potential tricolored blackbird nesting habitat. The surveys shall be conducted no more than 14 days before construction | |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---------|--------------------------------------|--|-------------------------------------|
| | | commences. If no active nests or tricolored blackbird colonies are found during focused surveys, no further action under this measure will be required. If active nests are located during the preconstruction surveys, the biologist shall notify CDFW. If necessary, modifications to the project design to avoid removal of occupied habitat while still achieving project objectives shall be evaluated, and implemented to the extent feasible. If avoidance is not feasible or conflicts with project objectives, construction shall be prohibited within a minimum of 100 feet of the nest to avoid disturbance until the nest colony is no longer active. These recommended buffer areas may be reduced or expanded through consultation with CDFW. Monitoring of all occupied nests shall be conducted by a qualified biologist during construction activities to adjust the 100-foot buffer if agitated behavior by the nesting bird is observed. Mitigation Measure 3.4-2f: Mitigation for aquatic invertebrates; vernal pool fairy shrimp and vernal pool tadpole shrimp. At the time of submittal of any application to annex territory with the Bilby Ridge SOIA area, the City of Elk Grove shall impose the following conditions on all discretionary projects. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. This mitigation measure applies to projects or ground-disturbing activities with potential to disturb habitat for vernal pool crustaceans; it incorporates the conservation measures from the USFWS Programmatic Biological Opinion (USFWS 1996) that provide for both habitat preservation and habitat creation for vernal pool fairy shrimp and vernal pool tadpole shrimp. If suitable wetland or vernal pool habitat is determined to be present on the project site (see Mitigation Measure 3.4-3), the project applicant shall implement the following measures to minimize and compensate for loss of vernal pool fairy shrimp and vernal pool tadpole shrimp at a ratio of 2:1, by purchasing vernal pool preservati | |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---------|--------------------------------------|---|-------------------------------------|
| Impacts | before | conservation bank. Compensation credits shall be purchased prior to any ground-disturbing activities. ✓ Habitat Creation: The applicant shall compensate for the direct effects of the project on potential habitat for vernal pool fairy shrimp and vernal pool tadpole shrimp at a ratio of 1:1, by purchasing vernal pool creation credits from a USFWS-approved conservation bank. ✓ Mitigation shall occur before the approval of any grading or improvement plans for any project phase that would allow work within 250 feet of such habitat, and before any ground-disturbing activity within 250 feet of the habitat. ✓ For seasonal wetlands and drainages that shall be retained on the site (i.e., those not proposed to be filled), a minimum setback of at least 50 feet from these features will be avoided on the project site. The buffer area shall be fenced with high visibility construction fencing prior to commencement of ground-disturbing activities, and shall be maintained for the duration of construction activities. ✓ A worker environmental awareness training shall be conducted to inform onsite construction personnel regarding the potential presence of listed species and the importance of avoiding impacts to these species and their habitat. ✓ The applicant shall secure any necessary take authorization prior to project construction through formal consultation between USACE and USFWS pursuant to Section 7 of the ESA, and shall implement all measures included in the Biological Opinion issued by USFWS. Mitigation 3.4-2g Protection measures for American badger. At the time of submittal of any application to annex territory with the Bilby Ridge SOIA area, the City of Elk Grove shall impose the following conditions on all discretionary projects. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. | after |
| | | This mitigation measure applies to projects or ground-disturbing activities with potential to disturb suitable habitat for American badger. Prior to construction activities within suitable habitat for American badger (e.g., ruderal grassland, gain fields), a qualified wildlife biologist shall conduct surveys to identify any American badger burrows/dens. These surveys shall | |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---|--------------------------------------|---|-------------------------------------|
| | | be conducted not more than 15 days prior to the start of construction. If occupied burrows are not found, further mitigation will be not required. If occupied burrows are found, impacts to active badger dens shall be avoided by establishing exclusion zones around all active badger dens, within which construction-related activities shall be prohibited until denning activities are complete or the den is abandoned. A qualified biologist shall monitor each den once per week to track the status of the den and to determine when a den area has been cleared for construction. | |
| Impact 3.4-3: Disturbance and loss of wetlands, other waters of the United States, and waters of the state. Wetlands, including vernal pools, and other waters of the United States and waters of the state may be present in the SOIA. Future land use changes and development related to the proposed establishment of the SOIA and future annexation could result in conversion of wetland habitat to urban uses. Loss or degradation of wetland habitat would be a potentially significant impact. | PS | Mitigation Measure 3.4-3: Wetlands, other waters of the U.S., and waters of the state. At the time of submittal of any application to annex territory with the Bilby Ridge SOIA area, the City of Elk Grove shall impose the following conditions on all discretionary projects. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. For projects that could disturb wetlands, other waters of the United States, or waters of the state, the project applicant shall retain a qualified biologist to survey the project site for sensitive natural communities, including wetland and vernal pool habitats. Wetlands and vernal pools are of special concern to resource agencies and are afforded specific consideration, based on Section 404 of the CWA and other applicable regulations. If wetlands or vernal pool habitats are determined to be present, a delineation of waters of the United States, including wetlands that would be affected by the project, shall be prepared by a qualified biologist through the formal Section 404 wetland delineation process. The delineation shall be submitted to and verified by USACE. If, based on the verified delineation, it is determined that fill of waters of the United States would result from implementation of the project, authorization for such fill shall be secured from USACE through the Section 404 permitting process. Any waters of the United States that would be affected by project development shall be replaced or restored on a "no-net-loss" basis in accordance with USACE mitigation guidelines (or the applicable USACE guidelines in place at the time of construction). In association with the Section 404 permit (if applicable) and prior to the issuance of any grading permit, Section 401 Water Quality Certification from the RWQCB shall be obtained. | LTS |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|--|--------------------------------------|---|-------------------------------------|
| Impact 3.4-4: Consistency with the South Sacramento Habitat Conservation Plan (SSHCP). The SOIA area is within the proposed SSHCP area, and is designated as an Urban Development Area; however, the City of Elk Grove is not a participant in the SSHCP. Should future developers participate in the HCP, development within the SOIA area would be permitted because it is within an Urban Development Area and is not within a preserve area. Impacts to implementation of the SSHCP would be less than significant. 3.5 Cultural and Paleontological Resources | LTS | None required. | LTS |
| Impact 3.5-1: Change in the significance of an historical resource. The NCIC records search revealed no historical resources on the project site. There are a number of historic-age buildings on the projects site that have not been evaluated for NRHP- or CRHR-eligibility. If the SOIA is approved and subsequent annexation of all or a portion of the site to the City of Elk Grove occurs, development of the SOIA area could result in damage to or destruction to these buildings. If they are found to be historically significant, the impact to historical resources would be potentially significant. | PS | Mitigation Measure 3.5-1: Conduct project-specific level surveys and identify measures to protect identified historic resources. At the time of submittal of any application to annex territory with the Bilby Ridge SOIA area, the City of Elk Grove shall impose the following conditions on all discretionary projects: ■ Prior to construction activities, project sponsors shall identify and evaluate all historic-age (over 45-years in age) buildings and structures that could potentially be impacted by the project. This would include preparation of an historic structure report and evaluation of resources to determine their eligibility for recognition under State, federal, or local historic preservation criteria. The evaluation shall be prepared by an architectural historian, or historical architect meeting the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, Professional Qualification Standards. The evaluation should comply with CEQA Guidelines section 15064.5(b), and, if federal funding or permits are required, with Section 106 of the National Historic Preservation Act (NHPA) of 1966 (16 U.S.C. § 470 et seq.). Study recommendations shall be implemented. ■ If resources eligible for inclusion in the NRHP or CRHR are identified, an assessment of project impacts on these resources shall be included in the report, as well as detailed measures to avoid impacts. If avoidance of a significant architectural/built environment resource is not feasible, additional mitigation options include, but are not limited to, specific design plans for historic districts, or plans for alteration or adaptive re-use of a historical resource that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitation, Restoring, and Reconstructing Historic Buildings and City of Elk Grove General Plan Policy HR-1 and HR-3. | LTS |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|--|--------------------------------------|---|-------------------------------------|
| | | Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. | |
| Impact 3.5-2: Disturb unique archaeological resources. Based on the results of the records search, there are no known archaeological sites within the Bilby Ridge SOIA area. However, ground-disturbing activities from development upon annexation to the City of Elk Grove could result in discovery or damage of as yet undiscovered archaeological resources as defined in CEQA Guidelines Section 15064.5. This would be a potentially significant impact. | PS | Mitigation Measure 3.5-2: Avoid potential effects on unique archaeological resources. At the time of submittal of any application to annex territory with the Bilby Ridge SOIA area, the City of Elk Grove shall impose the following conditions on all discretionary projects: ■ Before construction activities, the applicant shall retain a qualified archaeologist to conduct archaeological surveys for the site and any required off-site improvements, in accordance with the current City of Elk Grove General Plan Policy HR-6-Action 1. Project sponsors shall follow recommendations identified in the survey, which may include activities such as subsurface testing, designing and implementing a Worker Environmental Awareness Program, construction monitoring by a qualified archaeologist, avoidance of sites, or preservation in place. ■ In the event that evidence of any prehistoric or historic-era subsurface archaeological features or deposits are discovered during construction-related earth-moving activities (e.g., ceramic shard, trash scatters, lithic scatters), in accordance with current Elk Grove General Plan Policy HR-6-Action 2, all ground-disturbing activity in the area of the discovery shall be halted and the City of Elk Grove Planning Division shall be notified immediately. A qualified archaeologist shall be retained to assess the significance of the find. If the find is a prehistoric archeological site, the appropriate Native American group shall be notified. If the archaeologist determines that the find does not meet NRHP or CRHR standards of significance, a data recovery plan shall be prepared. If the find is determined to be significant by the qualified archaeologist fies, because the find is determined to constitute either an historical resource or a unique archaeologist determines that further information is needed to evaluate significant to avoid disturbance to the resources, and if complete avoidance is not feasible in light of project design, economics, logistics, and other factors, follow accepted profession | LTS |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---|--------------------------------------|---|-------------------------------------|
| | | Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. | |
| Impact 3.5-3: Accidental discovery of human remains. Although unlikely, construction and excavation activities associated with future development of the SOIA area could unearth previously undiscovered or unrecorded human remains, if they are present. Compliance with California Health and Safety Code Sections 7050.5 and 7052 and PRC Section 5097 in the event that human remains are found would make this impact less than significant. | LTS | None required. | LTS |
| Impact 3.5-4: Disturb a unique paleontological resource. Any future development within the SOIA area could potentially affect undiscovered paleontological resources. This would be a potentially significant impact. | PS | Mitigation Measure 3.5-4: Avoid impact to unique paleontological resources. At the time of submittal of any application to annex territory with the Bilby Ridge SOIA area, the City of Elk Grove shall impose the following conditions on all discretionary projects: Consistent with General Plan Policy HR-6-Action 1 and Action 2, before the start of on- or off-site earthmoving activities that would disturb 1 acre of land or more within the Riverbank Formations, project applicants shall inform all construction personnel involved with earthmoving activities regarding the possibility of encountering fossils, the appearance and types of fossils likely to be seen during construction, and proper notification procedures should fossils be encountered. ✓ If paleontological resources are discovered during earthmoving activities, the construction crew shall immediately cease work near the find and notify the City of Elk Grove. ✓ The applicant shall retain a qualified paleontologist to evaluate the resource and prepare a recovery plan. The recovery plan may include, but is not limited to, a field survey, construction monitoring, sampling and data recovery procedures, museum curation for any specimen recovered, and a report of findings. Recommendations in the recovery plan that are determined by the City to be necessary and feasible shall be implemented before construction activities can resume at the site where the paleontological resource or resources were discovered. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. | LTS |
| Impact 3.5-5: Change in the significance of a tribal cultural resource. Consultation with UIAC has resulted in no resources identified as TCRs as described under AB 52 on or near the SOIA area. However, subsequent discretionary projects | LTS | None required. | LTS |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---|--------------------------------------|---|-------------------------------------|
| upon annexation to the City of Elk Grove may be required to prepare site-specific project-level analysis to fulfill CEQA requirements, which may include additional AB 52 consultation that could lead to the identification of TCRs. Compliance with PRC 21080.3.1 would make this impact less than significant. | | | |
| 3.6 Energy | | | |
| Impact 3.6-1: Wasteful, inefficient, or unnecessary consumption of energy, during project construction or operation. Future development of the SOIA area could increase electricity and natural gas consumption at the site relative to existing conditions. Thus, this impact would be potentially significant. | PS | Mitigation Measure 3.6-1: Implement Mitigation Measures 3.7-1a and 3.13-1. Mitigation Measure 3.7-1a: On-site GHG emission reduction measures. At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants to implement all reduction measures necessary to comply with the City of Elk Grove CAP in place at the time and implement the following additional measures if they are not included in the City of Elk Grove CAP: Construction Enforce idling time restrictions for construction vehicles Require construction vehicles to operate with the highest tier engines commercially available Divert and recycle construction and demolition waste, and use locally-sourced building materials with a high recycled material content to the greatest extent feasible Minimize tree removal, and mitigate indirect GHG emissions increases that occur because of vegetation removal, loss of sequestration, and soil disturbance Utilize existing grid power for electric energy rather than operating temporary gasoline/diesel powered generators Increase use of electric and renewable fuel powered construction equipment and require renewable diesel fuel where commercially available Require diesel equipment fleets to be lower emitting than any current emission standard Operation Comply with lead agency's standards for mitigating transportation impacts under SB 743 Require on-site EV charging capabilities for parking spaces serving the project to meet jurisdiction-wide EV proliferation goals | LTS |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---------|--------------------------------------|---|-------------------------------------|
| | | ■ Allow for new construction to install fewer on-site parking spaces than required by local municipal building code, if appropriate | |
| | | ▲ Dedicate on-site parking for shared vehicles | |
| | | ■ Provide adequate, safe, convenient, and secure on-site bicycle parking and storage in multi-family residential projects and in non-residential projects | |
| | | ■ Provide on- and off-site safety improvements for bike, pedestrian, and transit connections, and/or implement relevant improvements identified in the City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan | |
| | | ▲ Require on-site renewable energy generation | |
| | | ■ Prohibit wood-burning fireplaces in new development, and require replacement of wood-burning fireplaces for renovations over certain size developments | |
| | | ■ Require cool roofs and "cool parking" that promotes cool surface treatment for new parking facilities as well as existing surface lots undergoing resurfacing | |
| | | ▲ Require solar-ready roofs | |
| | | ▲ Require organic collection in new developments | |
| | | ■ Require low-water landscaping in new developments. Require water efficient landscape maintenance to conserve water and reduce landscape waste | |
| | | ▲ Achieve Zero Net Energy performance targets before dates required by CALGreen | |
| | | ■ Where ZNE is deemed infeasible, building energy may also be reduced in the following ways: | |
| | | ▼ Reduce building energy-related GHG emissions through the use of on-site renewable energy (e.g., solar photovoltaic panels) where technologically feasible and at a minimum of 15 percent of the project's total energy demand. Building design, landscape plans, and solar installation shall take into account solar orientation, and building roof size to maximize solar exposure. | |
| | | Provide incentives to future residents to purchase Energy Star™ appliances (including clothes washers, dish washers, fans, and refrigerators). | |
| | | Install high efficiency lighting (i.e., light emitting diodes) in all streetlights, security lighting, and all other exterior lighting applications. | |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---------|--------------------------------------|---|-------------------------------------|
| | | Provide electrical outlets on the exterior of project buildings to allow sufficient powering of electric landscaping equipment. | |
| | | Install low-flow kitchen faucets that comply with CALGreen residential voluntary measures (maximum flow rate not to exceed 1.5 gallons per minute at 60 psi). | |
| | | Install low-flow bathroom faucets that exceed the CALGreen residential mandatory requirements (maximum flow rate not to exceed 1.5 gallons per minute at 60 psi). | |
| | | Install low-flow toilets that exceed the CALGreen residential mandatory requirements (maximum flush volume less not to exceed 1.28 gallons per flush). | |
| | | Install low-flow showerheads that exceed the CALGreen residential mandatory requirements (maximum flow rate not to exceed 2 gallons per minute at 80 psi). | |
| | | Reduce turf area and use water-efficient irrigation systems (i.e., smart sprinkler meters) and landscaping techniques/design. | |
| | | ■ Require new construction, including municipal building construction, to achieve third-party green building certifications, such as the GreenPoint Rated program or the LEED rating system | |
| | | ■ Require the design of bike lanes to connect to the regional bicycle network | |
| | | ■ Expand urban forestry and green infrastructure in new land development | |
| | | ▲ Require preferential parking spaces for park and ride to incentivize carpooling, vanpooling, commuter bus, electric vehicles, and rail service use | |
| | | ■ Require a transportation management plan for specific plans which establishes a numeric target for non-SOV travel and overall VMT | |
| | | ■ Develop a rideshare program targeting commuters to major employment centers | |
| | | ■ Require the design of bus stops/shelters/express lanes in new developments to promote the usage of mass-transit | |
| | | ■ Require gas outlets in residential backyards for use with outdoor cooking appliances such as gas barbeques if natural gas service is available | |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---------|--------------------------------------|--|-------------------------------------|
| | | ■ Require the installation of electrical outlets on the exterior walls of both the front and back of residences to promote the use of electric landscape maintenance equipment | |
| | | ■ Require the design of the electric boxes in new residential unit garages to promote electric vehicle usage | |
| | | ▲ Require electric vehicle charging station (conductive/inductive) and signage for non-residential developments | |
| | | ▲ Provide electric outlets to promote the use of electric landscape maintenance equipment to the extent feasible on parks and public/quasi-public lands | |
| | | ■ Require each residential unit to be "solar ready," including installing the appropriate hardware and proper structural engineering | |
| | | ■ Require the installation of energy conserving appliances such as on-demand tank-less water heaters and whole-house fans | |
| | | ■ Require each residential and commercial building equip buildings with energy efficient AC units and heating systems with programmable thermostats/timers | |
| | | ■ Require large-scale residential developments and commercial buildings to report energy use, and set specific targets for per-capita energy use | |
| | | ▲ Require each residential and commercial building to utilize low flow water fixtures such as low flow toilets and faucets | |
| | | ▲ Require the use of energy-efficient lighting for all street, parking, and area lighting | |
| | | ▲ Require the landscaping design for parking lots to utilize tree cover | |
| | | ▲ Incorporate water retention in the design of parking lots and landscaping | |
| | | ■ Require the development project to propose an off-site mitigation project which should generate carbon credits equivalent to the anticipated GHG emission reductions. This would be implemented via an approved protocol for carbon credits from CAPCOA, CARB, or other similar entities determined acceptable by the local air district | |
| | | ▲ Require the project to purchase carbon credits from the CAPCOA GHG Reduction Exchange Program, American Carbon Registry, Climate Action Reserve or other similar carbon credit registry determined to be acceptable by the local air district | |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|--|--------------------------------------|---|-------------------------------------|
| | | ■ Encourage the applicant to consider generating or purchasing local and California-only carbon credits as the preferred mechanism to implement its off-site mitigation measure for GHG emissions and that will facilitate the State's efforts in achieving the GHG emission reduction goal | |
| | | Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. | |
| | | Mitigation Measure 3.13-1: Participation in transportation system improvements. At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall consult with Sacramento County and Caltrans to establish local and state highway transportation improvement plans and funding mechanisms to provide service levels consistent with the City's and County's general plans consistent with City of Elk Grove General Plan Policy CI-2. This will include on-site transportation improvements for pedestrian, bicycle, and transit facilities that will interconnect with existing and planned City pedestrian, bicycle, and transit improvements consistent with the City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan. | |
| | | Future development within the SOIA area will be responsible for constructing or contributing on a fair-share basis to roadway improvements necessary to serve development within the SOIA area. This may include participation in the I-5 Freeway Subregional Corridor Mitigation Program. | |
| | | In addition, a detailed traffic study will be completed after a more defined land use plan has been developed. Improvements needed from development in the SOIA area will be established by subsequent traffic studies and LOS standards of affected agencies in effect at the time. Annexation and development activity within the SOIA area will require the preparation of traffic impact report/s to establish the fair share and costing of required improvements. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. | |
| Impact 3.6-2: Demand for energy services and facilities. Electrical and natural gas infrastructure would need to be extended by PG&E and SMUD to meet the energy needs of future development within the SOIA area upon annexation. If determined to be necessary, off-site improvements to electrical and natural gas facilities would be the responsibility of the utility and would be analyzed by the utility provider under separate environmental review. Physical environmental | S | Mitigation Measure 3.6-2: Prepare utility service plans that demonstrate adequate electrical and natural gas service and infrastructure are available. At the time of submittal of any application to annex territory within the SOIA area, the City of Elk Grove shall require that the applicants prepare utility service plans that identify the projected electrical and natural gas demands and that appropriate infrastructure sizing and locations to serve future development will be provided. The | SU |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---|--------------------------------------|---|-------------------------------------|
| impacts from construction or operation of off-site improvements could remain significant after implementation of mitigation (i.e., significant and unavoidable) or no feasible mitigation may be available to fully reduce impacts to a less-than-significant level. Neither LAFCo nor the City of Elk Grove would have control over the approval, timing, or implementation of any electrical or natural gas facility improvements. This impact would be significant. | | utility service plans shall verify that SMUD and PG&E have adequate electrical and natural gas supplies and infrastructure to serve the annexation territory. For any new off-site facility improvements, the City shall provide LAFCo information on the environmental review for the improvement and mitigation measures have been identified to address identified significant environmental impacts. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. | |
| 3.7 Greenhouse Gas Emissions | | | - |
| Impact 3.7-1: Project-generated greenhouse gas emissions. Future development of the SOIA area upon annexation is estimated to generate 5,116 MTCO2e from construction activities and 71,113 MTCO2e operation-related emissions at assumed buildout of the conceptual land use plan. Total emissions attributed to the conceptual land use plan would be 71,318 MTCO2e/year with combined amortized construction emissions. This level of GHG emissions has the potential to result in a considerable contribution to cumulative emissions related to global climate change and conflict with State GHG reduction targets established for 2030 and 2050. This cumulative impact would be significant and the project's contribution would be cumulatively considerable. | cc | Mitigation Measure 3.7-1a: On-site GHG emission reduction measures. At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants to implement all reduction measures necessary to comply with the City of Elk Grove CAP in place at the time and implement the following additional measures if they are not included in the City of Elk Grove CAP: Construction ■ Enforce idling time restrictions for construction vehicles ■ Require construction vehicles to operate with the highest tier engines commercially available ■ Divert and recycle construction and demolition waste, and use locally-sourced building materials with a high recycled material content to the greatest extent feasible ■ Minimize tree removal, and mitigate indirect GHG emissions increases that occur because of vegetation removal, loss of sequestration, and soil disturbance ■ Utilize existing grid power for electric energy rather than operating temporary gasoline/diesel powered generators ■ Increase use of electric and renewable fuel powered construction equipment and require renewable diesel fuel where commercially available ■ Require diesel equipment fleets to be lower emitting than any current emission standard Operation ■ Comply with lead agency's standards for mitigating transportation impacts under SB 743 | CC SU |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---------|--------------------------------------|---|-------------------------------------|
| | | ▲ Require on-site EV charging capabilities for parking spaces serving the project to meet jurisdiction-wide EV proliferation goals | |
| | | ▲ Allow for new construction to install fewer on-site parking spaces than required by local municipal building code, if appropriate | |
| | | ▲ Dedicate on-site parking for shared vehicles | |
| | | ▲ Provide adequate, safe, convenient, and secure on-site bicycle parking and storage in multi-family residential projects and in non-residential projects | |
| | | ■ Provide on- and off-site safety improvements for bike, pedestrian, and transit connections, and/or implement relevant improvements identified in the City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan | |
| | | ▲ Require on-site renewable energy generation | |
| | | ✓ Prohibit wood-burning fireplaces in new development, and require replacement of wood-burning fireplaces for renovations over certain size developments | |
| | | ■ Require cool roofs and "cool parking" that promotes cool surface treatment for new parking facilities as well as existing surface lots undergoing resurfacing | |
| | | ▲ Require solar-ready roofs | |
| | | ▲ Require organic collection in new developments | |
| | | ▲ Require low-water landscaping in new developments. Require water efficient landscape maintenance to conserve water and reduce landscape waste. | |
| | | ▲ Achieve Zero Net Energy performance targets before dates required by CALGreen | |
| | | ■ Where ZNE is deemed infeasible, building energy may also be reduced in the following ways: | |
| | | ■ Reduce building energy-related GHG emissions through the use of on-site renewable energy (e.g., solar photovoltaic panels) where technologically feasible and at a minimum of 15 percent of the project's total energy demand. Building design, landscape plans, and solar installation shall take into account solar orientation, and building roof size to maximize solar exposure. | |
| | | ■ Provide incentives to future residents to purchase Energy Star [™] appliances (including clothes washers, dish washers, fans, and refrigerators). | |

Table ES-1 Summary of Impacts and Mitigation Measures

| before Mitigation | Mitigation Measure | Significance after Mitigation |
|----------------------|---|-------------------------------------|
| | Mitigation Measure ✓ Install high efficiency lighting (i.e., light emitting diodes) in all streetlights, security lighting, and all other exterior lighting applications. ✓ Provide electrical outlets on the exterior of project buildings to allow sufficient powering of electric landscaping equipment. ✓ Install low-flow kitchen faucets that comply with CALGreen residential voluntary measures (maximum flow rate not to exceed 1.5 gallons per minute at 60 psi). ✓ Install low-flow bathroom faucets that exceed the CALGreen residential mandatory requirements (maximum flow rate not to exceed 1.5 gallons per minute at 60 psi) ✓ Install low-flow toilets that exceed the CALGreen residential mandatory requirements (maximum flush volume less not to exceed 1.28 gallons per flush) ✓ Install low-flow showerheads that exceed the CALGreen residential mandatory requirements (maximum flow rate not to exceed 2 gallons per minute at 80 psi) | |
| | ✓ Reduce turf area and use water-efficient irrigation systems (i.e., smart sprinkler meters) and landscaping techniques/design. ✓ Require new construction, including municipal building construction, to achieve third-party green building certifications, such as the GreenPoint Rated program or the LEED rating system ✓ Require the design of bike lanes to connect to the regional bicycle network ✓ Expand urban forestry and green infrastructure in new land development ✓ Require preferential parking spaces for park and ride to incentivize carpooling, vanpooling, commuter bus, electric vehicles, and rail service use ✓ Require a transportation management plan for specific plans which establishes a numeric target for non-SOV travel and overall VMT ✓ Develop a rideshare program targeting commuters to major employment centers ✓ Require the design of bus stops/shelters/express lanes in new developments to promote the usage of mass-transit ✓ Require gas outlets in residential backyards for use with outdoor cooking | |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---------|--------------------------------------|--|-------------------------------------|
| | | ■ Require the installation of electrical outlets on the exterior walls of both the front and back of residences to promote the use of electric landscape maintenance equipment | |
| | | ■ Require the design of the electric boxes in new residential unit garages to promote electric vehicle usage | |
| | | ▲ Require electric vehicle charging station (conductive/inductive) and signage for non-residential developments | |
| | | ▲ Provide electric outlets to promote the use of electric landscape maintenance equipment to the extent feasible on parks and public/quasi-public lands | |
| | | ■ Require each residential unit to be "solar ready," including installing the appropriate hardware and proper structural engineering | |
| | | ■ Require the installation of energy conserving appliances such as on-demand tank-less water heaters and whole-house fans | |
| | | ■ Require each residential and commercial building equip buildings with energy efficient AC units and heating systems with programmable thermostats/timers | |
| | | ■ Require large-scale residential developments and commercial buildings to report energy use, and set specific targets for per-capita energy use | |
| | | ▲ Require each residential and commercial building to utilize low flow water fixtures such as low flow toilets and faucets | |
| | | ■ Require the use of energy-efficient lighting for all street, parking, and area lighting | |
| | | ▲ Require the landscaping design for parking lots to utilize tree cover | |
| | | ▲ Incorporate water retention in the design of parking lots and landscaping | |
| | | ▲ Require the development project to propose an off-site mitigation project which should generate carbon credits equivalent to the anticipated GHG emission reductions. This would be implemented via an approved protocol for carbon credits from CAPCOA, CARB, or other similar entities determined acceptable by the local air district | |
| | | ■ Require the project to purchase carbon credits from the CAPCOA GHG Reduction Exchange Program, American Carbon Registry, Climate Action Reserve or other similar carbon credit registry determined to be acceptable by the local air district | |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---------|--------------------------------------|--|-------------------------------------|
| | | ■ Encourage the applicant to consider generating or purchasing local and California-only carbon credits as the preferred mechanism to implement its off-site mitigation measure for GHG emissions and that will facilitate the State's efforts in achieving the GHG emission reduction goal | |
| | | Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. | |
| | | Mitigation Measure 3.7-1b: Purchase carbon offsets. In addition to Mitigation Measure 3.7-1a, at the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants offset GHG emissions to zero by funding activities that directly reduce or sequester GHG emissions or, if necessary, obtaining carbon credits. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. | |
| | | To the degree a project relies on GHG mitigation measures, SMAQMD and CARB recommend that lead agencies prioritize on-site design features (Mitigation Measures 3.7-1a and 3.3-2) and direct investments in GHG reductions near the project, to help provide potential air quality and economic co-benefits locally. For example, direct investment in a local building retrofit program can pay for cool roofs, solar panels, solar water heaters, smart meters, energy efficient lighting, energy efficient appliances, energy efficient windows, insulation, and water conservation measures for homes within the geographic area of the project. Other examples of local direct investments include financing installation of regional electric vehicle charging stations, paying for electrification of public school buses, and investing in local urban forests. However, it is critical that any such investments in actions to reduce GHG emissions are real and quantifiable. Where further project design or regional investments are infeasible or not proven to be effective, it may be appropriate and feasible to mitigate project emissions through purchasing and retiring carbon credits | |
| | | issued by a recognized and reputable accredited carbon registry. The CEQA Guidelines recommend several options for mitigating GHG emissions. State CEQA Guidelines Section 15126.4(C)(3) states that measures to mitigate the significant effects of GHG emissions may include "off-site measures, including offsets that are not otherwise required" Through the purchase of GHG credits through | |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---------|--------------------------------------|--|-------------------------------------|
| Impacts | before | woluntary participation in an approved registry, GHG emissions may be reduced at the project level. GHG reductions must meet the following criteria: ■ Real—represent reductions actually achieved (not based on maximum permit levels), ■ Additional/Surplus—not already planned or required by regulation or policy (i.e., not double counted), ■ Quantifiable—readily accounted for through process information and other reliable data, ■ Enforceable—acquired through legally-binding commitments/agreements, ■ Validated—verified through accurate means by a reliable third party, and ■ Permanent—will remain as GHG reductions in perpetuity. In partnership with offset providers, any future project applicant shall purchase carbon offsets (from available programs that meet the above criteria) that fully offset the project's remaining (i.e., post implementation of Mitigation Measures 3.7-1a and 3.3-2) operational GHG emissions over the 25-year project life. It should be noted that purchases of offsets would occur once and remain effective throughout the lifetime of the project (i.e., 25 years per SMAQMD guidance). In order for an offset to be considered viable, it must exhibit "permanence." To adequately reduce emissions of GHGs, carbon offsets must be able to demonstrate the ability to counterbalance GHG emissions over the lifespan of a project or "in perpetuity." For example, the purchase of a carbon offset generated by a reforestation project would entail the replanting or maintenance of carbon-sequestering trees, which would continue to sequester carbon over several years, decades, or centuries (Forest Trends 2015). It is important to note that the offsets purchased must offer an equivalent GHG reduction benefit annually, as opposed to a one-time reduction. Before issuing building permits for development within the SOIA area, the City of Elk Grove shall confirm that the project applicant or its designee has fully offset the project's remaining (i.e., post implementation of Mitigation Measures 3.7-1a and 3.3- | after |
| | | 2) operational GHG emissions over the 25-year project life associated with such building permits by relying upon one of the following compliance options, or a combination thereof: | |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|--|--------------------------------------|--|-------------------------------------|
| | | demonstrate that the project applicant has directly undertaken or funded activities that reduce or sequester GHG emissions that are estimated to result in GHG reduction credits (if such programs are available), and retire such GHG reduction credits in a quantity equal to the remaining operational GHG emissions; provide a guarantee that it shall retire carbon credits issued in connection with direct investments (if such programs exist at the time of building permit issuance) in a quantity equal to the remaining operational GHG emissions; undertake or fund direct investments (if such programs exist at the time of building permit issuance) and retire the associated carbon credits in a quantity equal to the remaining operational GHG emissions; or if it is impracticable to fully offset operational emissions through direct investments or quantifiable and verifiable programs do not exist, the project applicant or its designee may purchase and retire carbon credits that have been issued by a recognized and reputable, accredited carbon registry in a quantity equal to the remaining operational GHG Emissions. | |
| Impact 3.7-2: Impacts of climate change on the project. The project is not located within an area projected to experience a substantial increase in wildland fire risk or flooding as a result of climate changes in the future. Anticipated changes in future climate patterns are not anticipated to have any substantial adverse effects on the project. Therefore, the impacts of climate change on the project would be less than significant. | LTS | None required. | LTS |
| 3.8 Hydrology Drainage, and Water Quality | | | |
| Impact 3.8-1: Short-term construction-related and operational water quality degradation. Development of the SOIA area as a result of future annexation could result in water quality degradation from construction activities, as well as from operational sources of water pollutants. This impact would be potentially significant. | PS | Mitigation Measure 3.8-1: Development of a drainage master plan for the SOIA area. At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants prepare and implement an updated to the City of Elk Grove Storm Drainage Master Plan that incorporates the SOIA area or a drainage master plan for the entire SOIA area that includes the following items and shall be consistent with the City of Elk Grove Storm Drainage Master Plan: ■ an accurate calculation of pre-project and post-development runoff scenarios, obtained using appropriate engineering methods that accurately evaluate potential changes to runoff, including increased surface runoff; | LTS |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---|--------------------------------------|--|-------------------------------------|
| | | ■ details on on-site detention basin and drainage channel design that are consistent with the requirements of the City of Elk Grove and provide enough storage to accommodate peak storm events and no increase post- development flows or flood conditions off-site; | |
| | | ■ identification of any drainage facility connections or coordination with the planned Southeast Area Plan drainage channel east of the SOIA area; | |
| | | ■ identification of design features that avoid site development from occurring in the 200-year floodplain; | |
| | | ■ implementation of appropriate BMPs to address construction and operational stormwater quality consistent with City requirements; | |
| | | a description of any treatments necessary to protect earthen channels from erosion, and modifications that may be needed to existing underground pipe and culvert capacities; | |
| | | ■ a description of the proposed maintenance program for the on-site drainage system; and | |
| | | ▲ a description of the project-specific standards for installing drainage systems. | |
| | | Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. | |
| Impact 3.8-2: Deplete groundwater supplies or interfere substantially with groundwater recharge. Future development of the SOIA area upon annexation could result in groundwater usage and creation of impervious surfaces that could block groundwater recharge. Sacramento County Water Agency manages its water supply in a conjunctive manner to protect groundwater resources and has adequate water supplies available for the project. Further, the SOIA area soil conditions do not provide for effective groundwater recharge in the region. Project groundwater impacts would be less than significant. | LTS | None required. | LTS |
| Impact 3.8-3: Alteration of drainage pattern or increase in rate or amount of surface runoff in a manner that would result in substantial erosion or siltation. Future development of the SOIA area upon annexation could lead to alteration of the drainage pattern of the site. This could result in increased stormwater runoff and an increase in susceptibility to downstream flooding and sediment issues. This would be a potentially significant impact. | PS | Implement Mitigation Measure 3.8-1. | LTS |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|--|--------------------------------------|---|-------------------------------------|
| Impact 3.8-4: Place structures or housing within a flood hazard area or result in loss, injury, or death due to flooding. A portion of the SOIA area is mapped as 200-year floodplain that could expose future SOIA area residents to flooding. This would be a potentially significant impact. | PS | Implement Mitigation Measure 3.8-1. | LTS |
| 3.9 Land Use | | | |
| Impact 3.9-1: Consistency with Sacramento County and City of Elk Grove general plans and zoning. Establishment of the SOIA area and future annexation and development would not conflict with adopted County or City general plan policies, land use designations, or zoning that would generate any adverse physical impacts beyond those addressed in detail in the environmental sections of this EIR. Thus, this impact would be less than significant. | LTS | None required. | LTS |
| Impact 3.9-2: Consistency with SACOG Metropolitan Transportation Plan/Sustainable Communities Strategy. The SOIA area is included in the MTP/SCS as an area not identified for development by 2036. However, it anticipated for eventual development under the SACOG Blueprint. As such, the impact related to consistency with the MTP/SCS would be less than significant. | LTS | None required. | LTS |
| Impact 3.9-3: Consistency with Sacramento LAFCo Policy, Standards, and Procedures Guidelines. Establishment of the SOIA and the future annexation and development of the area would not conflict with Sacramento LAFCo Policy, Standards, and Procedure Guidelines Manual. Therefore, this impact would be less than significant. | LTS | None required. | LTS |
| Impact 3.9-4: Conversion of open space. Establishment of the SOIA and the future annexation and development of the area could result in the loss of open space resources, as defined by Sacramento LAFCo, to urban uses. Therefore, this impact would be significant. | S | Implement Mitigation Measure 3.2-1 (protection of 1 acre of existing agricultural land of equal or higher quality for each acre of Farmland of Statewide Importance, Farmland of Local Importance, and prime agricultural land that would be developed by the project). | SU |
| 3.10 Noise | | | |
| Impact 3.10-1: Construction-generated noise Short-term construction-generated noise levels associated with the future development of the SOIA area upon annexation could expose nearby noise-sensitive receptors to noise levels that exceed applicable local standards. In addition, if construction activity | S | Mitigation Measure 3.10-1a: Implement construction-noise reduction measures. At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants to comply with the following | SU |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|--|--------------------------------------|--|-------------------------------------|
| were to occur during more noise-sensitive nighttime hours it could result in annoyance and sleep disruption to occupants of nearby residential land uses and substantial periodic increases in ambient noise levels. This would be a significant impact. | | construction noise requirements. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. To minimize noise levels during construction activities, the applicant and their construction contractors to comply with the following measures during all construction work: | |
| | | ■ Consistent with Elk Grove General Plan Policy NO-3-Action 3, all construction equipment and equipment staging areas shall be located as far as feasible from nearby noise-sensitive land uses. | |
| | | ▲ All construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturer's recommendations. Equipment engine shrouds shall be closed during equipment operation. | |
| | | ▲ Individual operations and techniques shall be replaced with quieter procedures (e.g., using welding instead of riveting, mixing concrete off-site instead of on-site) where feasible and consistent with building codes and other applicable laws and regulations. | |
| | | ■ Consistent with Elk Grove General Plan Policy NO-3-Action 1, and to the maximum extent feasible, construction activity shall take place within the City of Elk Grove construction noise exemption timeframes (i.e., 7:00 a.m. and 7:00 p.m., Monday through Sunday). Noise associated with construction activities not located adjacent residential uses may occur between the hours of 6:00 a.m. and 8:00 p.m., Monday through Sunday. | |
| | | Mitigation Measure 3.10-1b: Implement construction-noise reduction measures during noise-sensitive time periods. At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants to comply with the following construction noise requirements. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. For all construction activity that would take place outside of the City of Elk Grove construction noise exemption timeframe when located adjacent to residential uses (i.e., 7:00 a.m. and 7:00 p.m., Monday through Sunday), and that is anticipated to generate more than 45 Leq, the City shall require the applicant and their construction contractors to comply with the following measures: | |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---|--------------------------------------|--|-------------------------------------|
| | | ✓ Implement noticing to adjacent landowners at least one week in advance if construction activity would take place outside of the City of Elk Grove's construction noise exemption timeframe when located adjacent to residential uses (i.e., 7:00 a.m. and 7:00 p.m., Monday through Sunday, as identified in General Plan Policy NO-3 – Action 1), and is anticipated to generate more than 45 Leq. ✓ Install temporary noise curtains as close as feasible to noise-generating activity and that blocks the direct line of sight between the noise source and the nearest noise-sensitive receptor(s). Temporary noise curtains shall consist of durable, flexible composite material featuring a noise barrier layer bounded to sound-absorptive material on one side. The noise barrier layer shall consist of rugged, impervious, material with a surface weight of at least one pound per square foot. ✓ Noise-reducing enclosures and techniques shall be used around stationary noise-generating equipment (e.g., concrete mixers, generators, compressors). ✓ Operate heavy-duty construction equipment at the lowest operating power possible. | |
| Impact 3.10-2: Exposure of existing sensitive receptors to excessive traffic noise levels and/or substantial increases in traffic noise. Future development within the SOIA area upon annexation could generate vehicle trips and result in an increase in ADT volumes on affected roadway segments and an increase in traffic source noise levels. However, existing receptors would not be exposed to traffic noise levels or traffic noise level increases that exceed applicable City of Elk Grove or Sacramento County noise standards. This impact would be less than significant. | LTS | None required. | LTS |
| Impact 3.10-3: Long-term operational non-transportation noise levels The SOIA area could result in the future development of commercial land uses in proximity to existing noise-sensitive land uses. Noise sources generally associated with commercial/retail land uses include vehicular and human activity in parking lots, and loading dock and delivery activities. Existing off-site receptors could experience commercial-related noise levels that exceed the City and County's daytime and nighttime noise levels standards. This impact would be significant. | S | Mitigation Measure 3.10-3: Reduce noise exposure to existing sensitive receptors from proposed stationary noise sources. At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants to comply with the following noise requirements in the design of the development. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. The applicant shall locate and design loading docks so that noise emissions do not exceed the applicable stationary noise source criteria (i.e., exterior daytime [7:00 a.m. to 10:00 p.m.] standards of 55 Leq for receptors within the City and County, exterior | LTS |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|--|--------------------------------------|---|-------------------------------------|
| | | nighttime [10:00 p.m. to 7:00 a.m.] standards of 45 Leq for receptors within the City, and exterior nighttime [10:00 p.m. to 7:00 a.m.] standards of 50 Leq for receptors within the County). At the time of approval of special permits and/or development plan review, the project applicant shall provide to the City a site-specific noise analysis to evaluate design and ensure compliance with City of Elk Grove and Sacramento County noise standards. Reduction of loading dock noise can be achieved by locating loading docks as far away as feasible from noise-sensitive land uses, or using noise barriers between loading docks and noise-sensitive land uses, or using buildings and topographic features to provide acoustic shielding for noise-sensitive land uses. If needed, loading dock activity shall be prohibited during nighttime hours (i.e., 10:00 p.m. to 7:00 a.m.). This time-of-day restriction would be consistent with Section 6.32.140 Prohibited Activities of the City of Elk Grove Code, which states, "loading, unloading, opening, closing or other handling of boxes, crates, containers, building materials, garbage cans, or similar objects on private property between the hours of 10:00 p.m. and 7:00 a.m. in a manner to cause a noise disturbance," is prohibited. Additionally, as stated in City of Elk Grove General Plan, Policy NO-3 – Action 2, limiting the hours of operation for loading docks, trash compactors, and other noise-producing uses in commercial areas which are adjacent to residential uses should be considered. Final design, location, orientation and use restrictions shall be dictated by findings in the noise analysis and approved by City staff. | |
| Impact 3.10-4: Compatibility of project with on-site noise levels Future annexation of the SOIA area could enable the development of a mix of various land uses, including residential, commercial, office, park, and school uses. Traffic and stationary noise sources near the project could expose newly developed noise-sensitive uses in the SOIA area to noise levels generated by generated by traffic on adjacent roadways and by stationary sources that exceed applicable noise standards established by the City of Elk Grove. This impact would be significant. | S | Mitigation Measure 3.10-4a: Reduce transportation noise exposure to new on-site noise-sensitive receptors At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants to comply with the following noise requirements in the design of the development. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. For new noise-sensitive receptors developed on the SOIA site and located within 77 feet of the centerline of Bruceville Road, within 211 feet of the centerline of Bilby Road between Willard Parkway and Coop Drive, within 524 feet of the centerline of Bilby Road between Coop Drive and Bruceville Road, within 182 feet of the centerline of Willard Parkway, or within 433 feet of the centerline of Kammerer Road between Willard Parkway and Bruceville Road (i.e., the distance from the centerline that is estimated, based on the noise modelling, to result in exceedance of the City of Elk | LTS |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---------|--------------------------------------|---|-------------------------------------|
| | | Grove exterior noise compatibility standard of 60 Ldn for low density residential), the following design criteria shall be adhered to: ✓ Where feasible, locate new sensitive receptors such that the primary outdoor activity area (e.g., backyard, balcony, or porch) is on the opposite side of the structure from major roadways such that the structure itself would provide a barrier between transportation noise and the primary outdoor activity area. ✓ Locate new sensitive receptors such that buildings/structures are located between the sensitive land use and nearby major roadways. ✓ Setback sensitive receptors from major roadways sufficient distance to ensure they will not be exposed to noise levels that exceed the City of Elk Grove's exterior noise compatibility standard of 60 Ldn for low-density residential land uses. Consistent with City of Elk Grove General Plan, Policy NO-8, if, and only if, implementation of the above measures does not reduce transportation-related noise levels to comply with the City of Elk Grove exterior noise compatibility standard of 60 Ldn for low-density residential and 70 Ldn school uses, and City of Elk Grove interior noise compatibility standards of 45 Leq for office and school uses, then as part of improvement plans for land uses along Bilby Road, Bruceville Road, Willard Parkway, and Kammerer Road, landscaped noise barriers that demonstrate compliance with City noise standards (interior and exterior) shall be implemented. Mitigation Measure 3.10-4b: Reduce noise exposure to proposed sensitive receptors from proposed stationary noise sources. At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants to comply with the following noise requirements in the design of the development. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. The applicant shall locate and design loading docks so that noise emissions do not | |
| | | exceed the applicable stationary noise source criteria (i.e., exterior daytime [7:00 a.m. to 10:00 p.m.] standards of 55 Leq for receptors, and exterior nighttime [10:00 p.m. to 7:00 a.m.] standards of 45 Leq for receptors, within the City of Elk Grove). At the time of approval of special permits and/or development plan review, the project applicant shall provide to the City a site-specific noise analysis to evaluate design and ensure compliance with City of Elk Grove and Sacramento County noise standards. | |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|--|--------------------------------------|--|-------------------------------------|
| | | Reduction of loading dock noise can be achieved by locating loading docks as far away as feasible from noise-sensitive land uses, constructing noise barriers between loading docks and noise-sensitive land uses, or using buildings and topographic features to provide acoustic shielding for noise-sensitive land uses. If needed, loading dock activity shall be prohibited during nighttime hours (i.e., 10:00 p.m. to 7:00 a.m.). This time-of-day restriction would be consistent with Section 6.32.140 Prohibited Activities of the City of Elk Grove Code, which states, "loading, unloading, opening, closing or other handling of boxes, crates, containers, building materials, garbage cans, or similar objects on private property between the hours of 10:00 p.m. and 7:00 a.m. in a manner to cause a noise disturbance," is prohibited. Additionally, as stated in City of Elk Grove General Plan, Policy NO-3 – Action 2, limiting the hours of operation for loading docks, trash compactors, and other noise-producing uses in commercial areas which are adjacent to residential uses should be considered. Final design, location, orientation and use restrictions shall be dictated by findings in the noise analysis and approved by City staff. | |
| 3.11 Population and Housing | | | |
| Impact 3.11-1: Induce substantial population growth. The SOIA could indirectly induce substantial population growth through removing an obstacle to future annexation of the SOIA area and development. This would be a significant impact. | S | None available. | SU |
| 3.12 Public Services and Recreation | | | |
| Impact 3.12-1: Increased demand for fire protection and emergency medical services. Future development within the Bilby Ridge SOIA area could result in an increase in demand for fire protection and emergency services, which could require construction of new facilities that would result in environmental impacts. This impact would be a potentially significant. | PS | Mitigation Measure 3.12-1: Demonstrate adequate fire protection facilities are available before annexation of territory within the SOIA area. At the time of submittal of any application to annex territory within the SOIA area, the City of Elk Grove shall demonstrate that CCSD fire protection and life safety facilities will meet the service demands of development identified for the annexation territory, or that fair-share funding will be provided for the construction of new or expansion of existing fire protection facilities, as needed, to accommodate the increase in demand resulting from development of the annexation territory. The City of Elk Grove shall demonstrate future development has incorporated adequate water supply and fire flow pressure, fire hydrants, and access to structures by firefighting equipment and personnel and where appropriate, identified on-site fire suppression systems for all new commercial and industrial development into design plans consistent with | SU |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---|--------------------------------------|---|-------------------------------------|
| | | General Plan polices PF-7, PF-21, and SA-32 and Action SA-37-Action 1, SA-37-Action 2, and SA-37-Action 4. Any expansion of service shall not adversely affect current service levels. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. | |
| Impact 3.12-2: Increased demand for law enforcement services. Future development within the Bilby Ridge SOIA area could result in an increase in demand for law enforcement services, which could require construction of new facilities that would result in environmental impacts. This would be a potentially significant impact. | PS | Mitigation Measure 3.12-2: Prepare a plan for service that demonstrates adequate police protection facilities are available before the annexation of territory within the SOIA area. At the time of submittal of any application to annex territory within the SOIA area, the City of Elk Grove shall demonstrate that EGPD police protection and public safety facilities will meet the service demands of development identified for the annexation territory, or that fair-share funding will be provided for the construction of new on-site or off-site police protection facilities or expansion of existing police protection facilities, as needed, to accommodate the increase in demand resulting from development of the annexation territory. For any new off-site facility improvements, the City will demonstrate to LAFCo that the environmental review for the improvement has been completed and mitigation measures have been adopted to address identified significant environmental impacts. Any expansion of service shall not adversely affect current service levels. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. | SU |
| Impact 3.12-3: Increased demand for schools. Future development within the Bilby Ridge SOIA area could result in an increase in demand for schools, which could also require construction of new facilities that would result in environmental impacts. Payment of a school impact fee would reduce school demand impacts to less than significant. | LTS | None required. | LTS |
| Impact 3.12-4: Increased demand for park and recreation facilities. Future development within the Bilby Ridge SOIA area could result in an increase in demand for park and recreation facilities, which would require construction of new facilities that would result in environmental impacts. New residential development within the SOIA Area would be required to comply with the Elk Grove Municipal Code Chapter 22.40, General Plan policies listed above, and Elk Grove Trails Master Plan requiring the dedication of park, recreation and trails facilities and/or the payment of an in-lieu fees. These impact fees could fund the development of new recreational facilities, or the maintenance of existing recreational facilities. Impacts would be less than significant. | LTS | None required. | LTS |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation | | |
|--|---|--|-------------------------------------|--|--|
| 3.13 Traffic, Transportation, and Circulation | 3.13 Traffic, Transportation, and Circulation | | | | |
| Impact 3.13-1: Impacts to Roadway Operation. Approval of the SOIA and future development of the SOIA area upon annexation could result in unacceptable operations and add traffic to study roadway segments that are projected to operate unacceptably. Potential future development of the SOIA would also result in an increase in VMT in the project area. This would be a significant impact. | S | Mitigation Measure 3.13-1: Participation in transportation system improvements. At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall consult with affected agencies to establish local and state highway transportation improvement plans and funding mechanisms to provide service levels consistent with the City's and County's general plans consistent with City of Elk Grove General Plan Policy CI-2. This shall include on-site transportation improvements for pedestrian, bicycle, and transit facilities that will interconnect with existing and planned City pedestrian, bicycle, and transit improvements consistent with the City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan. This will also include measures to achieve compliance with adopted VMT standards that may be established under the City of Elk Grove General Plan Update. Future development within the SOIA area shall be responsible for constructing or contributing on a fair-share basis to roadway improvements necessary to serve development within the SOIA area. This may include participation in the I-5 Freeway Subregional Corridor Mitigation Program. In addition, a detailed traffic study shall be completed after a more defined land use plan has been developed. Improvements needed from development in the SOIA area shall be established by subsequent traffic studies and LOS standards of affected agencies in effect at the time. Annexation and development activity within the SOIA area shall require the preparation of traffic impact report/s to establish the fair share and costing of required improvements. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. | SU | | |
| Impact 3.13-2: Impacts to Freeway Facilities. Approval of the SOIA and future development of the SOIA area upon annexation would add traffic to segments of SR 99 and I-5 that are projected to operate unacceptably. This would be a significant impact. | S | Implement Mitigation Measure 3.13-1. | SU | | |
| Impact 3.13-3: Impacts to Transit. Approval of the SOIA and future development of the SOIA area upon annexation would increase demand for public transit service. No transit services or facilities are currently planned for the SOIA area. This would be a significant impact. | S | Implement Mitigation Measure 3.13-1. | LTS | | |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|---|--------------------------------------|--------------------------------------|-------------------------------------|
| Impact 3.13-4: Impacts to Bicycle and Pedestrian Facilities Approval of the SOIA and future development of the SOIA area upon annexation would increase demand for bicycle and pedestrian facilities. This would be a significant impact. | S | Implement Mitigation Measure 3.13-1. | LTS |
| Impact 3.13-5: Hazardous Design Features All roadway improvements associated with future development of the SOIA area would be constructed in accordance with applicable City, County, and Caltrans design and safety standards. Thus, the project would not increase hazards because of a design feature or incompatible uses. This would be a less-than-significant impact. | LTS | None required. | LTS |
| Impact 3.13-6: Impair Emergency Vehicle Access Emergency access would be subject to review by the City of Elk Grove and responsible emergency service agencies; thus, ensuring any future development with the SOIA area would be designed to meet all City of Elk Grove emergency access and design standards. Therefore, adequate emergency access would be provided. This would be a less-than-significant impact. | LTS | None required. | LTS |
| 3.14 Utilities | | | |
| Impact 3.14-1: Require or result in the construction of new or expanded water or wastewater treatment facilities, the construction of which could cause significant environmental effects. The SOIA would not directly require or result in the construction of new utilities. Rather, the SOIA and associated conceptual land use plan informs the long-term planning of applicable utility providers. If determined to be necessary, off-site improvements to water or wastewater treatment or conveyance facilities would be the responsibility of the utility and would be analyzed by the utility provider under separate environmental review. Physical environmental impacts from construction or operation of off-site improvements could remain significant after implementation of mitigation (i.e., significant and unavoidable) or no feasible mitigation may be available to fully reduce impacts to a less-than-significant level. This impact would be significant. | S | None available. | SU |
| Impact 3.14-2: Require new or expanded entitlements to water. Presently, there are no public water supply facilities within the SOIA area and water supplies are provided by irrigation wells. There are no changes to land uses proposed as part of this SOIA application. Therefore, the project would not immediately increase the demand for water. Future development of the SOIA area would require new water | LTS | None required. | LTS |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|--|--------------------------------------|---|-------------------------------------|
| supply facilities to serve the site. Because there are identified adequate sources of water supply and the City would be required to demonstrate water availability prior to annexation, this impact would be less than significant. | | | |
| Impact 3.14-3: Exceed the capacity or the wastewater treatment provider. The SRWTP has a design capacity of 181 mgd with the potential to expand to 218 mgd. Future development of the SOIA area according to the conceptual land use plan is estimated to generate less than 1 mgd of wastewater. It is anticipated that the SRWTP would have adequate capacity to treat wastewater flows generated by future development. This impact would be less than significant. | LTS | None required. | LTS |
| Impact 3.14-4: Generate solid waste that would exceed the permitted capacity of the landfill serving the area. The SOIA would not change the existing rate of solid waste generation on the project site. If annexation and development occurs in the future, it would be required to be compliant with regulations pertaining to the reduction of solid waste. Based on the current rates of solid waste generation and the capacity of the landfills that serve the area, development of the project site in a manner consistent with the conceptual land use plan would have a less-than-significant impact on the permitted capacity of the affected landfills. | LTS | None required. | LTS |
| 3.15 Hazards and Hazardous Materials | | | |
| Impact 3.15-1: Create a significant hazard through transport, use, or disposal of hazardous materials. Future development of the SOIA area upon annexation could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials during demolition, construction, or operation activities. However, because of compliance with applicable rules and regulations specifically designed to protect the public health through improved procedures for the handling of hazardous materials, the impact to the public through routine, transport, use, and disposal would be less than significant. | LTS | None required. | LTS |
| Impact 3.15-2: Create potential human hazards from exposure to existing on-site hazardous materials. Future development of the SOIA area upon annexation could expose construction workers to hazardous materials present on-site during construction activities and | PS | Mitigation Measure 3.15-2a: Prepare Environmental Site Assessments At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require a site assessment, including an updated review of environmental risk databases, for the presence of potential hazardous materials. If this assessment indicates the presence or likely presence of contamination, the | LTS |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|--|--------------------------------------|---|-------------------------------------|
| hazardous materials on-site could create an environmental or health hazard for later residents or occupants, if left in place. This impact would be potentially significant. | | project sponsor shall prepare a Phase I ESA in accordance with the American Society for Testing and Materials' E-1527-05 standard. For work requiring any demolition, the Phase I ESA shall make recommendations for any hazardous building materials survey work that shall be done. All recommendations included in a Phase I ESA prepared for a site shall be implemented. If a Phase I ESA indicates the presence or likely presence of contamination, the City of Elk Grove shall require a Phase II ESA, and recommendations of the Phase II ESA shall be fully implemented prior to ground disturbance. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. | |
| | | Mitigation Measure 3.15-2b: Prepare a Hazardous Materials Contingency Plan for Construction Activities At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants provide a hazardous materials contingency plan to Sacramento County EMD. The plan will describe the necessary actions that would be taken if evidence of contaminated soil or groundwater is encountered during construction. The contingency plan shall identify conditions that could indicate potential hazardous materials contamination, including soil discoloration, petroleum or chemical odors, and presence of underground storage tanks or buried building material. | |
| | | The plan shall include the provision that, if at any time during the course of constructing the project, evidence of soil and/or groundwater contamination with hazardous material is encountered, the project applicant shall immediately halt construction and contact Sacramento County EMD. Work shall not recommence until the discovery has been assessed/treated appropriately (through such mechanisms as soil or groundwater sampling and remediation if potentially hazardous materials are detected above threshold levels) to the satisfaction of Sacramento County EMD, RWQCB, and DTSC (as applicable). The plan, and obligations to abide by and implement the plan, shall be incorporated into the construction and contract specifications of the project. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo. | |

Table ES-1 Summary of Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measure | Significance after Mitigation |
|--|--------------------------------------|--------------------|-------------------------------------|
| Impact 3.15-3: Create a significant hazard to the public or environment due to upset and accident conditions. Future development of the SOIA area upon annexation 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 through compliance with existing regulations. This impact would be less than significant. | LTS | None required. | LTS |
| Impact 3.15-4: Emit hazardous emissions or handle hazardous materials within 0.25 mile of a school. Future development of the SOIA area upon annexation could include the construction of new on-site schools. However, compliance with CDE school siting criteria ensures schools would not be located near hazardous material handlers and emitters. This impact would be less than significant. | LTS | None required. | LTS |
| Impact 3.15-6: Create a significant risk from wildfires. Future development of the SOIA area upon annexation would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. This impact would be less than significant. | LTS | None required. | LTS |

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1 INTRODUCTION

This environmental impact report (EIR) describes the potential environmental consequences of amending the City of Elk Grove's sphere of influence (SOI) to include the 480-acre Bilby Ridge area (Sphere of Influence Amendment [SOIA]). The California Environmental Quality Act (CEQA) requires that state and local government agencies consider the environmental effects of projects over which they have discretionary authority before taking action on those projects. The purpose of an EIR is to evaluate the project's effects on environmental resources, both singularly and in a cumulative context, to examine alternatives to the project as proposed, and identify mitigation measures to reduce or avoid potentially significant effects. Projects with potential to result in significant and unavoidable environmental impacts that cannot be feasibly mitigated to less-than-significant levels can be approved, but the lead agency's decision-making body must issue a "statement of overriding considerations" explaining, in writing, the specific economic, social, or other considerations that they believe make those significant effects acceptable (Section 21002 of the Public Resources Code [PRC]; Section 15093 of the of the California Code of Regulations [CCR]).

This document has been prepared in compliance CEQA (PRC Sections 21000-21189) and the State CEQA Guidelines (CCR Title 14, Sections 15000-15387 of the California Code of Regulations).

1.1 AGENCY ROLES AND RESPONSIBILITIES

1.1.1 Lead Agency

The lead agency is the public agency with the principal responsibility for carrying out or disapproving a project. The lead agency is also responsible for scoping the analysis, preparing the EIR, and responding to comments received on the draft EIR. Before making a decision to approve a project, the lead agency is required to certify that the EIR has been completed in compliance with CEQA, that the decision-making body reviewed and considered the information in the EIR, and that the EIR reflects its independent judgment. The Sacramento Local Agency Formation Commission (LAFCo) is the lead agency for the evaluation of the Bilby Ridge SOIA.

LAFCO'S AUTHORITY

LAFCo's authority is defined in the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000. Government Code Section 56300 requires that each LAFCo establish policies to provide well-planned urban development, preservation of open space, and orderly formation of local agencies. Therefore, the proposed SOIA must be reviewed and approved by LAFCo (Government Code Section 56425[a], PRC Section 21067). The Cortese-Knox-Hertzberg Act contains the following specific "policy elements" for LAFCo review:

- encourage orderly growth and development patterns (Government Code Section 56001);
- discourage urban sprawl, preserve open-space and prime agricultural lands, efficiently provide government services, and encourage the orderly formation and development of local agencies based upon local conditions and circumstances (Government Code Section 56301); and
- guide development away from open space and prime agricultural land uses unless such action would not promote planned, orderly, and efficient development (Government Code Section 56377).

LAFCo has review authority for annexations to, or detachment from, cities or special 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, SOIs. LAFCo can

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approve, modify and approve, or disapprove applications and impose terms and conditions (Government Code Section 56885.5).

1.1.2 Responsible and Trustee Agencies

Responsible agencies are public agencies that have discretionary approval power over the project. Sacramento LAFCo has sole authority to consider local agency reorganizations, including requests to amend an existing SOI under the Cortese-Knox Hertzberg Act. This project would be subject to review and approval by Sacramento LAFCo. No other governmental approvals would be required as part of this action.

Under CEQA, a trustee agency is a state agency that has jurisdiction by law over natural resources that are held in trust for the people of the State of California (PRC Section 21070). The California Department of Fish and Wildlife is a trustee agency with jurisdiction over fish and wildlife and their habitats that may be affected by this project.

1.2 PROJECT REVIEW AND CEQA PROCESS

Public input is an important aspect of LAFCo's environmental review process. In accordance with State CEQA Guidelines Section 15083, LAFCo provides opportunities for individual members of the public, as well as organization and agency representatives, to consider proposed actions and provide input and recommendations concerning the content of an EIR. The following sections summarize the public involvement efforts conducted by LAFCo.

1.2.1 EIR Scoping

LAFCo prepared and distributed a notice of preparation (NOP) for this EIR on April 27, 2017. The NOP provided a brief description of the project, a map of the project location, and an overview of the environmental review process. The purpose of the NOP was to provide notification that an EIR for the project would be prepared and to solicit guidance on the scope and content of the document. The NOP invited all interested parties to provide comments during a 30-day period. The NOP was mailed to individuals and organizations, including property owners and/or residents within the vicinity of the project site. The NOP was also filed with the State Clearinghouse and Sacramento County Recorder-Clerk's Office, and was posted on LAFCo's website (www.SacLAFCo.org). A public notice announcing the NOP's availability was posted in April 27, 2017.

The scoping meeting was held on May 16, 2017 from 5:30 p.m. to 7:30 p.m. at the Wackford Community and Aquatic Complex. Sacramento LAFCo held a public workshop at the regular Commission meeting on June 7, 2017 to receive Commission and public input on the scope of the EIR. Responsible agencies and members of the public were invited to provide input on the scope of the EIR. The comments received on the NOP and at the hearing are addressed, as applicable, in each technical section of this EIR. Table 1-1 lists the comments received on the NOP. Appendix A contains a copy of the NOP and comment letters received on the NOP.

| Table 1-1 | List of Commenters |
|-----------|--------------------|
| Table 1-1 | List of Commenters |

| Commenter | Affiliation | Date of Comment |
|---|---|-----------------|
| State Agencies | | |
| Sharaya Souza, Staff Services Analyst | Native American Heritage Commission | June 2, 2017 |
| Stephanie Tadlock, Environmental Scientist | Central Valley Regional Water Quality Control Board | June 2, 2017 |
| Local Agencies | • | • |
| Angela C. McIntire, Regional & Local Government Affairs | Sacramento Municipal Utilities District | June 9, 2017 |

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Table 1-1 List of Commenters

| Commenter | Affiliation | Date of Comment | | |
|--|---|-----------------|--|--|
| Chrisandra J. Flores, Chief Deputy Agricultural Commissioner | Sacramento County Department of Agriculture | June 1, 2017 | | |
| James Corless, Chief Executive Officer | Sacramento Area Council of Governments | June 2, 2017 | | |
| Joanne Chan, Air Quality Planner/Analyst | Sacramento Metropolitan Air Quality Management District | May 31, 2017 | | |
| Leighann Moffitt, Planning Director | Sacramento County Office of Planning and Environmental Review | May 16, 2017 | | |
| Mathew G. Darrow, Senior Transportation Engineer | Sacramento County Department of Transportation | May 10, 2017 | | |
| Mike Huot, Principal Civil Engineer | Sacramento County Water Agency | May 3, 2017 | | |
| Sarenna Moore, Policy and Planning | Sacramento Regional Sanitation District and Sacramento Area Sewer District | May 9, 2017 | | |
| Organizations | | | | |
| Brandon Rose, Environmental Council of Sacramento Board President Rob Burness, Friends of Stone Lanes National Wildlife Refuge Sean Wirth, Co-Chair, Habitat 2020 | Environmental Council of Sacramento, Friends of Stone Lakes National Wildlife Refuge, and Habitat 2020 | June 9, 2017 | | |
| Individuals | | | | |
| Jim Gillum, on behalf of the owners of APN 132-0132-007 | Gillum Consulting | June 9, 2017 | | |
| May 16, 2017 Scoping Meeting | | | | |
| No formal comments were received at this meeting. | | | | |
| June 7, 2017 Sacramento LAFCo Meeting | | | | |
| Gay Jones | Sacramento LAFCo Commissioner | June 7, 2017 | | |
| Michael Monasky | Elk Grove Resident | June 7, 2017 | | |
| Katherine Bardis | Applicant | June 7, 2017 | | |
| Patrick Hume | Sacramento LAFCo Commissioner | June 7, 2017 | | |

1.2.2 Review of the Draft EIR

Upon completion of the draft EIR, the Sacramento LAFCo filed a notice of completion with the Governor's Office of Planning and Research to begin the public review period (PRC Section 21161). Concurrent with the notice of completion, this draft EIR has been distributed to affected agencies, surrounding cities, and interested parties, as well as to all parties requesting a copy of the draft EIR, in accordance with PRC Section 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. Written comments on this draft EIR are due by 4:00 p.m. on Monday February 12, 2018, and should be addressed to:

Don Lockhart, AICP, Executive Officer Sacramento Local Agency Formation Commission 1112 | Street, Suite 100 Sacramento, CA 95814

Phone: (916) 874-2937 Fax: (916) 854-2939

Email: Don.Lockhart@SacLAFCo.org

Submittal of electronic comments in Microsoft Word or Adobe PDF format is encouraged.

Following the public review period, a final EIR will be prepared that will include comments on the draft EIR received during the public review period and LAFCo's responses to those comments. The final EIR will

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address any revisions to the draft EIR made in response to public comments. The draft EIR and final EIR together will comprise the EIR for the SOIA.

1.2.3 Final EIR Certification Process

Before LAFCo can approve the project, it must first certify that the EIR was completed in compliance with CEQA, that the decision-making body reviewed and considered the information in the EIR, and that the EIR reflects LAFCo's independent judgment. LAFCo will also be required to adopt Findings of Fact describing the disposition of each significant impact and alternatives. For any impacts determined to be significant and unavoidable, LAFCo will be required to adopt a Statement of Overriding Considerations. Certification of the EIR does not approve the project and LAFCo will consider the SOIA as a separate action. If the EIR is certified, LAFCo would adopt and implement a Mitigation Monitoring and Reporting Plan that specifies the methods for monitoring mitigation measures required to eliminate or reduce the project's significant effects on the environment.

1.3 SCOPE OF ENVIRONMENTAL ANALYSIS

1.3.1 Type of EIR

This EIR includes a program-level, or "first-tier," analysis for future development, consistent with PRC Sections 21093 and 21094 and CEQA Guidelines Sections 15152 and 15168. This EIR provides an evaluation of the potential environmental impacts of the proposed SOIA and future development in the area. The potential direct, indirect, and cumulative environmental impacts of the project are analyzed in a way that is appropriate, given the level of detail provided to LAFCo in the SOIA application, in accordance with CEQA Guidelines Section 15146. This program-level or "programmatic" analysis relates to the broad environmental effects of future uses. It identifies policies and mitigation measures that would apply to subsequent projects. The program-level evaluation is warranted because no specific land use entitlements have been proposed. However, the EIR acknowledges future urbanization as a connected action. Thus, this EIR provides the public and agency decision makers with information on the potential impacts of future development. Future applications for development within the SOIA area (if approved) would require subsequent project-specific CEQA review.

1.3.2 Scope of the Draft EIR

Pursuant to CEQA and the State CEQA Guidelines, a lead agency shall focus the EIR's discussion on significant environmental effects (PRC Section 21002.1, State CEQA Guidelines Section 15143). Furthermore, the EIR must also discuss the manner in which significant impacts can be feasibly mitigated or avoided. The purpose of an EIR is not to recommend approval or denial of a project, but to provide decision-makers, public agencies, and the general public with information about the project. A determination of which impacts would be potentially significant was made for this project based on review of the information presented in the NOP, comments received as part of the public review process for the project, and additional research and analysis of relevant project data during preparation of this draft EIR.

This EIR addresses the following technical issue areas:

- ▲ Aesthetics:
- ▲ Agricultural Resources;
- ▲ Air Quality;
- Biological Resources;

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- Cultural Resources:
- Energy;
- Hazards and Hazardous Materials;
- Hydrology, Drainage, and Water Quality;
- ▲ Land Use:
- Noise and Vibration:
- Population and Housing;
- Public Services;
- ▲ Traffic, Transportation, and Circulation; and
- Utilities.

TECHNICAL ISSUES NOT ADDRESSED FURTHER

CEQA requires that the discussion of any significant effect on the environment address substantial, or potentially substantial, adverse changes in the physical conditions that exist within the affected area. A lead agency is not required to provide a detailed discussion of the environmental effects that would not be significant, and may instead provide a brief statement of dismissal (PRC Section 21100, State CEQA Guidelines Sections 15126.2[a] and 15128). Based on a review of the information presented in the NOP and comments received as part of the public review process (Appendix A), review by LAFCo of the project, and the resources at the site and in the region, the project would not result in significant environmental effects on the following resources.

Geology and Soils

The California Building Standards Code (CBC) establishes minimum requirements for construction of new buildings. The CBC contains provisions intended to regulate grading activities, drainage and erosion control, and construction on unstable soil (expansive soils or areas subject to liquefaction). When no other building codes apply, Chapter 29 regulates excavations, foundations, and retaining walls. Chapter 18 of the Building Code contains provisions related to Soils and Foundations, including geotechnical investigations (Section 1803); excavation, grading, and fill (Section 1804); assessing soil load-bearing capacity (Section 1806); and foundation design (Sections 1808-1810). The Residential Code contains provisions regarding soil testing, geotechnical evaluations for building foundations, and excavations for compressible or shifting soils (Section R401), foundations on expansive soils (Section R403), and seismic provisions (Section R301). In addition, the Green Building Standards Code contains provisions regarding soil erosion and stormwater runoff, and grading activities.

Areas surrounding active earthquake faults with the potential to be adversely affected by fault rupture are delineated as Alquist-Priolo Fault Zones. The proposed SOIA area is not located in an area classified as an Alquist-Priolo Fault Zone (California Geological Survey 2010). According to the Sacramento County General Plan, the SOIA area is ranked as a "low" severity zone for earthquake intensity. The likelihood that an earthquake with strong seismic ground shaking would occur in the SOIA area is low. Further, the project site is characterized by an entirely flat topography; therefore, landslides are not anticipated.

The SOIA would not have the potential to affect geology or soils on the project site, because no development is linked with this discretionary action. Future annexation of the project site (if the project is approved) could, however, result in the construction of public, residential, and commercial buildings in an area that could experience some seismic shaking. As discussed above, the risk of exposing people or structures to substantial adverse effects associated with rupture of a known fault, strong seismic ground shaking, seismic-related ground failure, or landslides is low. Subsequent development would be required to comply with the seismic design standards of the CBC, and may be required to complete geotechnical investigations in accordance with the CBC. These standards account for the shaking hazard of an area and the type of occupancy and are designed to minimize the potential risk to life and property. Through completion of any required geotechnical report and adherence to its recommendations, the potential to expose users to risk related to liquefaction and expansive soils would also be minimized. Additionally, development of the project

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site as part of future proposals would be required to comply with City of Elk Grove construction permitting and Central Valley Regional Water Quality Control Board National Pollutant Discharge Elimination System permit conditions requiring temporary and permanent erosion control best management practices.

Any future development would be designed in compliance with current building code requirements, including the preparation of site-specific geotechnical studies, which would identify specific recommendations for compaction and soils so as to minimize risks associated with local soils, geology, and seismicity. These requirements would be enforced by appropriate state and local agencies and documented in subsequent environmental reviews. For these reasons, analysis of potential impacts to geology and soils is not included in this program EIR.

Mineral Resources

The SOIA area is not in an area of known mineral resources. The Sacramento County General Plan (Sacramento County 2011) does not map any mineral resources on the project site. As such, the SOIA would not have the potential to result in the loss of a known mineral resource or recovery site. Therefore, analysis of potential impacts to mineral resources is not included in this program EIR.

1.4 ORGANIZATION OF THIS DRAFT EIR

This draft EIR is organized as follows:

Executive Summary, summarizes the EIR process and the objectives of the project; provides a brief overview of the project description; describes the project alternatives; identifies areas of controversy; and summarizes the next steps in the public review process. The Executive Summary also contains a table that summarizes the significance of the environmental impacts that would result from the project.

Chapter 1: Introduction, introduces the environmental review process; describes the purpose of the EIR; identifies lead, responsible, and trustee agencies; and outlines the organization of the draft EIR.

Chapter 2: Project Description, describes the background and need for the project, identifies project objectives, and provides a detailed description of the project.

Chapter 3: Environmental Setting, Impacts, and Mitigation Measures, is divided into sections for each environmental issue area that was not scoped out as part of the environmental review process. For each environmental issue area, the section describes the existing environmental setting and regulatory framework, presents significance criteria or thresholds for determining the significance of impacts, evaluates environmental impacts, identifies mitigation for any potentially significant and significant impacts, and identifies the level of significance following implementation of the mitigation.

Chapter 4: Cumulative Impacts, considers existing and reasonably foreseeable projects in the vicinity of the SOIA and describes the project's potential to substantially contribute to potential environmental effects.

Chapter 5: Other CEQA Considerations, identifies impacts associated with growth inducement and significant and irreversible environmental changes. This chapter also summarizes the project's significant and unavoidable impacts.

Chapter 6: Project Alternatives, describes alternatives to the project, including the No-Project Alternative and potentially feasible alternatives that would avoid, reduce, or eliminate significant impacts, and identifies the environmentally superior alternative. Alternatives that have been proposed and rejected from further consideration are also identified, along with an explanation of the reasons for their rejection.

Chapter 7: Report Preparation, identifies report preparers.

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Chapter 8: References, lists the references used in preparation of this draft EIR.

1.5 STANDARD TERMINOLOGY

This draft EIR uses the following terminology to describe environmental effects of the project:

Less-Than-Significant Impact: A project impact is considered less than significant when it does not reach the standard of significance and would, therefore, cause no substantial change in the environment (no mitigation required).

Potentially Significant Impact: A potentially significant impact is an environmental effect that may cause a substantial adverse change in the environment; however, additional information is needed regarding the extent of the impact to make the determination of significance. For CEQA purposes, a potentially significant impact is treated as if it were a significant impact.

Significant Impact: A project impact is considered significant if it results in a substantial adverse change in the physical conditions of the environment. Significant impacts are identified by the evaluation of project effects in the context of specified significance criteria. Mitigation measures and/or project alternatives are identified to reduce these effects to the environment where feasible.

Significant and Unavoidable Impact: A project impact is considered significant and unavoidable if it would result in a substantial adverse change in the environment that cannot be feasibly avoided or mitigated to a less-than-significant level if the project is implemented. If a lead agency proposes to approve a project with significant unavoidable impacts, it must adopt a statement of overriding considerations to explain its actions (State CEQA Guidelines Section 15093(b)).

Cumulative Impacts: According to CEQA, "cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (State CEQA Guidelines Section 15355). CEQA requires that cumulative impacts be discussed when the "project's incremental effect is cumulatively considerable... [or] ... provide a basis for concluding that the incremental effect is not cumulatively considerable (State CEQA Guidelines Section 15130 [a])."

Mitigation Measures: The State CEQA Guidelines (Section 15370) define mitigation as:

- a) avoiding the impact altogether by not taking a certain action or parts of an action;
- b) minimizing impacts by limiting the degree of magnitude of the action and its implementation;
- c) rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
- d) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and
- e) compensating for the impact by replacing or providing substitute resources or environments.

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2 PROJECT DESCRIPTION

2.1 PROJECT LOCATION

The Bilby Ridge Sphere of Influence Amendment (SOIA) (Bilby Ridge site or project site) consists of approximately 480 acres and is located in the unincorporated area of Sacramento County, just south of the City of Elk Grove (City) (see Exhibit 2-1). The City's existing jurisdictional boundaries are adjacent to the project site's western, northern, and eastern boundaries. Roadway access to the project site is provided by Willard Parkway, Bilby Road, Bruceville Road, and Kammerer Road.

2.2 PROJECT BACKGROUND

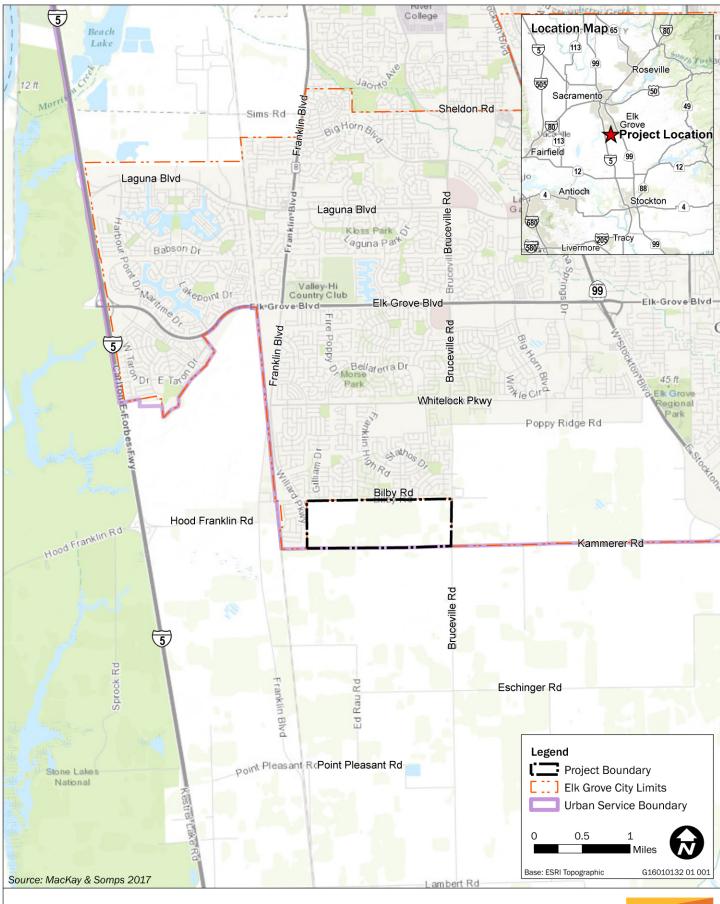
2.2.1 Cortese-Knox-Hertzberg Local Government Reorganization Act

Local agency formation commissions (LAFCos) are state-mandated quasi-judicial county-wide commissions who have the sole discretion to approve, modify and approve, or disapprove boundary changes of cities and special districts, the formation of new agencies, including the incorporation of new cities and districts, and the consolidation or reorganization of special districts and or cities as provided for under the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000. LAFCos are charged to ensure the orderly formation of local governmental agencies, to preserve agricultural and open space lands, and to discourage urban sprawl.

A SOI is defined under California Government Code Section 56425 as a plan for the probable physical boundary and service area of a local governmental agency. This includes areas adjacent to the existing service area of the jurisdiction where services might be reasonably be expected to be provided in the next 20 years.

2.2.2 Previous Sphere of Influence Amendment Application

The Bilby Ridge site was originally part of the 2008 City of Elk Grove SOIA application to the Sacramento LAFCo that requested the amendment of the City's SOI for approximately 10,536 acres (LAFCo application LAFC#04-08). Through that process, the application was subsequently modified to reduce the area under consideration for a SOI amendment to approximately 7,869 acres (LAFCo application LAFC#09-10). Ultimately, the application was withdrawn by the City in 2013. Currently, the City's SOI boundary is coterminous with its existing jurisdictional boundaries (i.e., city limit boundaries) and consist of the project site's western, northern, and eastern boundaries.



Project Location



Ascent Environmental Project Description

2.3 EXISTING CONDITIONS

2.3.1 Bilby Ridge Site

Most of the Bilby Ridge site is currently in agricultural production (e.g., row crops, irrigated and non-irrigated pasture land) (see Exhibit 2-2). Two of the seven project site parcels are currently under Williamson Act contracts¹. There are currently 10, single-family residences on the site as well as several accessory structures. The Sacramento County General Plan land use designation for the site is Agricultural Cropland, which designates lands most suitable for intensive agricultural activities, including row crops, tree crops, irrigated grains, and dairies. The project site is located within the County's Urban Services Boundary. Sacramento County's General Plan Land Use Element specifically designates the Urban Services Boundary as the ultimate boundary of the urban area of the County.

2.3.2 Surrounding Land Uses

Adjacent land uses to the project site include agricultural operations to the south and east, and single-family residential and related uses to the west and north. The City of Elk Grove East Franklin Specific Plan, Laguna Ridge Specific Plan, the Southeast Policy Area border the site and designate residential, park, and open space uses adjacent to the site (see Exhibit 2-3). Land areas south of the project site are designated Agricultural Cropland by the Sacramento County General Plan.

The alignment of the approved Capital SouthEast Connector (planned 35-mile multi-lane limited access roadway connecting Interstate 5, State Route 99, and US Highway 50 in El Dorado County) is located south of the Bilby Ridge site (see Exhibit 2-3). The Capital SouthEast Connector Joint Powers Authority (Connector JPA), City of Elk Grove, and Sacramento County are coordinating on the proposed Kammerer Road Extension Project that is located south of the project site and would consist of a four-lane expressway with a Class 1 bicycle and pedestrian trail along the expressway.

The project site is located within the current boundaries of the South Sacramento Habitat Conservation Plan (SSHCP) area that is under preparation. 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 important habitat areas to provide ecologically viable conservation areas while streamlining the environmental permitting process for development projects.

Please refer to Section 3.9, "Land Use," for more detailed information about the specific surrounding uses and adopted land use plans.

Sacramento LAFCo

¹ A Williamson Act contract is a long-term landowner commitment to maintain farmland in agricultural uses in exchange for the tax assessment of the property based upon use rather than market value. See Section 3.2, "Agricultural Resources," for further discussion.



Exhibit 2-2

Existing Site Conditions





Exhibit 2-3

Surrounding Land Uses



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2.4 PROJECT OBJECTIVES

Sacramento LAFCo has identified the following project objectives for the project:

amend the Sphere of Influence (SOI) boundary beyond the existing Elk Grove city limits to accommodate orderly and sustainable growth compatible with the Sacramento LAFCo, City of Elk Grove, and Sacramento County growth goals and policies, including promoting a sustainable jobs to housing ratio;

- implement the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 consistent with public service conditions present or reasonably foreseeable in the proposed Bilby Ridge SOIA area;
- establish a logical boundary within which future and annexation requests to the City of Elk Grove may be considered; and
- establish an expanded SOI for the City of Elk Grove that will facilitate the protection of important environmental, cultural, and agricultural resources.

2.5 PROJECT CHARACTERISTICS

2.5.1 Sphere of Influence Amendment

The Bilby Ridge SOIA would allow the City of Elk Grove and other service providers to plan for future urbanization of the approximately 480-acre site as an area planned for potential urban growth. However, approval of the SOIA would not authorize changes in land use or governance by the City unless the project site is annexed to the City. Annexation of the project site to the City is not an action under consideration for this project. Rather, LAFCo is requested to consider whether the Bilby Ridge site should be included in the SOI for the City as a logical expansion of potential urban growth for the City. If the SOIA were approved, land use activities within the project site would remain under the jurisdiction of Sacramento County until annexation is approved by LAFCo at some future time.

2.5.2 Land Use Assumptions

The Bilby Ridge SOIA does not include land use designations or zoning as specific approval actions. Proposed land use and zoning designations for a site are provided at the time a request for annexation of the site is submitted to LAFCo. However, for LAFCo to understand and fully evaluate the direct and indirect impacts associated with consideration of the Bilby Ridge SOIA, it must also consider the reasonable development pattern and intensity that could occur at the site from subsequent land use approvals.

To provide a framework for project evaluation, the project applicant has identified the following land use and development capacities for the project site (Table 2-1 and Exhibit 2-4). These proposed land uses are the applicant's representations of intended development for the site. However, it should be noted that this is not the City's official intention for development. The City's intention for development, and evaluation of a project's consistency with that development intention, would occur at the time an annexation application is submitted. Nonetheless, for purposes of evaluation of a reasonable development scenario that could occur on the project site, the land uses proposed by the applicant and identified in Table 2-1 and Exhibit 2-4 are intended to be consistent with existing adjacent City land use designations and development patterns.



Exhibit 2-4

Bilby Ridge SOIA Conceptual Land Use Plan

Project Description Ascent Environmental

Table 2-1 Conceptual Land Use Plan for Bilby Ridge SOIA Area

| Land Use | City Zoning | Acreage ¹ | Maximum Development Potential ^{2,3} | | |
|---|---|----------------------|--|--|--|
| Low Density Residential | Single-Family Residential Detached (RD-4) 4.0 dwelling units per acre | 190.7 - 201.3 | 805 dwelling units 2,415 residents | | |
| | Single-Family Residential Detached (RD-5) 5.0 dwelling units per acre | 203.1 - 208.1 | 1,041 dwelling units 3,125 residents | | |
| Commercial/Office/Business Professional | Business Professional (BP) ² | 19.3 | 3,474 employees | | |
| Commercial | Commercial (C) ² | 31.6 | 885 employees | | |
| Public Schools | - | 10.0 | - | | |
| Public Parks | Park (O) | 9.0 - 24.6 | - | | |
| | Total | 479.3 | 1,846 dwelling units 5,540 residents 4,359 employees | | |

¹Acreage range for residential uses and parks accounts for deviations based on anticipated park requirements. Development potential assumes the maximum amount of residential land.

Source: Compiled by Ascent Environmental 2017

2.6 APPROVALS AND PERMITS

Sacramento LAFCo has sole authority to consider local agency reorganizations, including requests to amend an existing SOI under the Cortese-Knox Hertzberg Act. This project would be subject to review and approval by Sacramento LAFCo. No other governmental approvals would be required as part of this action.

If in the future, annexation is approved by Sacramento LAFCo, the site would be in the City's jurisdiction. Any proposed construction could require demolition and disposal of existing structures, grading and excavation, building foundations, trenching and installation of utilities, paving of parking lots and internal roadways, and lighting, subject to review under the City's zoning regulations and design requirements.

² Population was estimated assuming three persons per dwelling unit.

³ Employment assumptions based on SACOG Placetype model data for "Community/Neighborhood Commercial" (28 employees per acre) and "Moderate-Intensity Office" (180 employees per acre).

3 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

FORMAT OF THE ENVIRONMENTAL ANALYSIS

Sections 3.1 through 3.14 of this draft EIR disclose the potential environmental impacts that could result from the approval of the Bilby Ridge Sphere of Influence Amendment (SOIA). Each section begins with descriptions of the pertinent environmental and regulatory settings. The setting description in each section is followed by an impacts and mitigation discussion. The degree to which the identified mitigation measure(s) would reduce the impact is also described.

Environmental Setting

According to Section 15125 of the State CEQA Guidelines, an EIR must include a description of the existing physical environmental conditions near the project to provide the "baseline condition" against which project-related impacts are compared. The baseline condition is typically the physical condition that exists when the Notice of Preparation (NOP) is published. The NOP for the Bilby Ridge SOIA was published on April 27, 2017. This baseline condition is utilized in the environmental impact analysis.

The proposed Bilby Ridge SOIA would expand the City of Elk Grove's current sphere of influence boundary, but does not include a request for annexation or the establishment of urban land use zoning that would allow development of the area. Approval of this project would not change current allowed land uses (currently designated and zoned for agricultural uses) or change the local land use authority that resides with Sacramento County. The request for annexation to the City would be a subsequent request that could be initiated by the landowners, or the City, if this project is approved.

Regulatory Framework

This section describes the federal, State, and local regulations that would apply to the project and that could reduce or eliminate potentially significant impacts. This section also informs the reader of the applicable Sacramento County and City of Elk Grove General Plan policies.

Environmental Impacts and Mitigation Measures

This section includes subsections that describe the methodology used in the analysis, the thresholds used to determine impact significance, and an impact analysis. The significance criteria are based on the environmental checklist in Appendix G of the State CEQA Guidelines; best available data; and regulatory standards of federal, state, and local agencies. The potential impacts of the Bilby Ridge SOIA are determined by comparing the project to the baseline condition, as described in the environmental setting, considering the established thresholds. Project impacts are numbered sequentially in each section (e.g., Impact 3.1-2, Impact 3.1-3). A summary precedes a more detailed discussion of the environmental impact. The discussion includes the analysis, rationale, and substantial evidence upon which conclusions are drawn. The determination of level of significance of the impact is defined in bold text.

The impact analyses are generally two-fold. The analyses first consider the effects of implementing the project itself (i.e., the SOIA), then consider the anticipated effects of annexation and implementing the conceptual land use plan. Although annexation and development are not proposed at this time, this

additional analysis serves to inform readers and decisionmakers about the impacts that can be reasonably anticipated to result from approval of the SOIA.

Where an existing law, regulation, or permit specifies mandatory and prescriptive actions about how to fulfill the regulatory requirement as part of the project definition, leaving little discretion in its implementation, and would avoid an impact or maintain it at a less-than-significant level, the environmental protection afforded by the regulation is considered before determining impact significance. Where existing laws or regulations specify a mandatory permit process for future projects, performance standards without prescriptive actions to accomplish them, or other requirements that allow substantial discretion in how the they are accomplished, or have a substantial compensatory component, the level of significance is determined before applying the influence of the regulatory requirements. In this circumstance, the impact would be potentially significant or significant, and the regulatory requirements would be included as a mitigation measure.

Mitigation measures are provided where potentially significant impacts are identified. The measures are numbered to correspond with the impacts they mitigate. In accordance with Public Resources Code Section 21081.6(b), mitigation measures must be fully enforceable through permit conditions, agreements, other legally binding instruments, or by incorporating the measures into the project design.

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3.1 AESTHETICS

This section describes the aesthetic and visual qualities of the SOIA area and provides a qualitative evaluation of the project's potential impacts on the area's visual character, scenic vistas, and scenic resources, as well as potential impacts from light and glare. The analysis includes a description of the existing environmental conditions, the methods used for assessment, and the potential direct and indirect impacts of project implementation.

No comments in response to the Notice of Preparation were received regarding aesthetics.

3.1.1 Environmental Setting

CONCEPTS RELATED TO SCENIC RESOURCES

Visual changes, and whether they are considered adverse, are highly subjective. One person may conclude that any change in a pleasing visual setting is adverse. Others may find the same changes to be acceptable or even an improvement. Further, there are few formal tools available to evaluate changes to the visual environment and conclude significance. This discussion uses general terms and concepts that draw upon the methodologies of the U.S. Forest Service (1995) and the Federal Highway Administration (1981), two of the relatively few public agencies that have formalized visual resource assessment.

In this section, the viewshed is comprised of short-range, medium-range, and long-range views. Short-range views include the immediate foreground (from 0 feet to approximately 300 feet). Medium-range views include everything within the viewer's general vicinity (from approximately 300 feet to about 0.5 mile). Long-range views are anything further than 0.5 mile from the viewer. A scenic vista is a location from which the public can experience unique and exemplary high-quality views, including panoramic views of great breadth and depth.

Scenic or visual resources can include both the natural and built features of the landscape that contribute to the experience and appreciation of the environment by the general public. Therefore, the landscape is understood to include the built environment (i.e., developed features), the natural environment (i.e., undeveloped land in its natural state), and the managed environment (i.e., agriculture and any other use where vegetation provides the dominant visual character, but the uniformity required by farming and the associated infrastructure keep the landscape from appearing completely natural).

Visual Quality

Visual quality is defined as the overall visual impression or attractiveness of an area as determined by the landscape characteristics, including landforms, rock forms, water features, and vegetation patterns. The attributes of line, form, and color combine in various ways to create landscape characteristics whose variety, vividness, coherence, uniqueness, harmony, and pattern contribute to the overall visual quality of an area.

Viewer Exposure

Viewer exposure addresses the variables that affect viewing conditions from potentially sensitive areas. Viewer exposure considers the following factors:

- landscape visibility;
- ▲ the proximity of viewers to the project:
- whether the project would be viewed from above, below, or from a level line of sight;

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■ whether the line of sight is open and panoramic to the project area or restricted by terrain, vegetation, and/or structures;

- ▲ the duration that the project area would be visible to a particular viewer; and
- whether the view is publicly accessible, with large numbers of viewers, or is a private view and experienced by a small number of viewers.

Viewer Sensitivity

Viewer sensitivity is the overall measure of the variable receptivity of viewers to adverse visual changes in an existing landscape. Individuals have varying degrees of sensitivity to changes in visual conditions, often depending on the character of the land use from which they are viewing the scene and the overall visual characteristics of the place. In areas of more distinctive visual quality, such as designated scenic roads, parks, and recreation and natural areas, viewer sensitivity is characteristically more pronounced. In areas of more indistinctive visual quality or visual quality that is generally representative of the setting, sensitivity to change tends to be less pronounced. This analysis of viewer sensitivity is based on the combined factors of visual quality before and after project implementation, viewer types and numbers of viewers, and visual exposure to the project.

Light Pollution

Views of the night sky can be an important part of the natural environment, particularly in communities surrounded by extensive open space. Light pollution refers to all forms of unwanted light in the night sky, including glare, light trespass, skyglow, and over-lighting.

The terms "glare" and "skyglow" are used in this analysis to describe the visual effects of lighting. Glare is direct exposure to bright lights. Light that is either emitted directly upward by luminaires or reflected from the ground is scattered by dust and gas molecules in the atmosphere, producing a luminous background known as skyglow. Skyglow is highly variable depending on immediate weather conditions, quantity of dust and gas in the atmosphere, amount of light directed skyward, and the direction from which it is viewed. In poor weather conditions, more particles are present in the atmosphere to scatter the upward-bound light (National Lighting Product Information Program 2007).

EXISTING VISUAL CHARACTER

Regional Viewshed

Sacramento County lies near the center of California's Central Valley, at the southern end of the Sacramento Valley. Views in the 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.

Project Site

The project is located at the southern boundary of the City of Elk Grove, within an area that has been transforming from rural residential and agricultural uses to suburban uses. Views of the project site from the existing residential areas to the west and north are limited by vegetation and sound walls constructed along Willard Parkway and Bilby Road. Open views of the site are provided to motorists on Bilby Road, Bruceville Road, and Willard Parkway; as well as those recreating at Backer Park north of the site.

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Exhibit 3.1-1 shows the location of representative photos taken at the SOIA area. As shown in Exhibit 3.1-2 through Exhibit 3.1-5, the SOIA area is currently graded flat, and used for dry farmed and irrigated croplands. A few rural residences are also present on the SOIA area. The primary visual features of the SOIA area are associated with these uses: several trees, croplands, vineyards, and a few buildings. There are several irrigation canals that occur on the site and power distribution lines are present. The SOIA area has no rock outcroppings and is not located on a state scenic highway.

Views of the site from the southern end of Backer Park are depicted in Exhibits 3.1-2 and 3.1-3. From the center of the park, the view across Bilby Road to the south is open and relatively unobstructed (Exhibit 3.1-2). The area is agricultural in character, with infrastructure (e.g., roads, fence posts, gates, and electrical lines) in the foreground, managed open space in the middle ground, and the rooflines of a few agricultural structures and distant trees in the background. These same general characteristics are true looking southeast from the western end of the park, an area where there is parking available and visitors are likely to observe the site (Exhibit 3.1-3). However, from viewing locations within the park, intervening landscaping partially obstructs views of the site.

From the western edge of the site looking east from Willard Parkway, there are fewer obstructions in the foreground and the site provides open views of agricultural fields with the rooflines of nearby residences partially obstructed by treetops in the distance (Exhibit 3.1-4). Looking northeast, the residences on the north side of Bilby Road are more apparent in the background of the open agricultural fields (Exhibit 3.1-5). From the western edge of the site, views are similar, although more obstructed by the existing residences that front Bruceville Road. Views of the site from the south are limited because the existing agricultural use of the properties limits viewing opportunities to those managing the land. There are no residences or existing cross streets between Franklin Boulevard and Bruceville Road near the southern boundary of the site.

EXISTING VISUAL QUALITY AND VIEWER SENSITIVITY

The site provides views of moderate visual quality. For viewers accustomed to the busy views associated with working and residing in urban and suburban areas, the openness and simplicity of the views of the site from nearby residences, roadways, and Backer Park may be particularly attractive. These viewers are also more likely to reside in the area and are, therefore, more likely to develop a familiarity with the site. Motorists on the adjacent roadways are generally less likely to be sensitive to changes in the character of the site because they pass it relatively quickly, they may not be familiar with the area, and the site is located along roadways that are currently checkered with new developments, established rural homes, and open farmland.

LIGHT AND GLARE

Existing sources of light and reflective surfaces are limited in the SOIA area. Most of the area is used for farming and the use of exterior lighting is generally limited to the area around the rural residences. Light sources outside of the SOIA area include street lights and indoor and outdoor lights associated with the residential land uses to the west and north. Vehicles traveling along Bilby Road and Bruceville Road may also 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.





Location of Representative Viewpoints





Exhibit 3.1-2

Viewpoint 1: South from Henry Backer Sr. Park





Exhibit 3.1-3

Viewpoint 2: Southeast from Henry Backer Sr. Park





Exhibit 3.1-4

Viewpoint 3: East from south end of Willard Parkway





Exhibit 3.1-5

Viewpoint 4: Northeast from south end of Willard Parkway



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3.1.2 Regulatory Framework

FEDERAL

No federal plans, policies, regulations, or laws apply to the project.

STATE

California Scenic Highway Program

The California Department of Transportation 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.

State Route 160 (River Road) is a State-designated scenic highway that traverses on top of levees along the Sacramento River from the Contra Costa County line to Sacramento's southern city limit. River Road meanders through the historic Delta agricultural areas and small towns along the Sacramento River. State Route 160 is over 4 miles west of the project site.

LOCAL

The project site lies within the jurisdictional boundaries of Sacramento County; therefore, the County's policies, as well as the Sacramento LAFCo's polices, would apply. Furthermore, if the SOIA is approved, it would likely lead to annexation to the City of Elk Grove. Thus, applicable policies of the City of Elk Grove's General Plan are described below.

Sacramento County General Plan

The following policy from the Sacramento County General Plan would apply to the SOIA.

■ Policy LU-31: Strive to achieve a natural nighttime environment and an uncompromised public view of the night sky by reducing light pollution.

Sacramento County Zoning Code

Title 1 (General Provisions) of the Zoning Code contains standards requiring that illumination of buildings, landscaping, signs, and parking and loading areas be shielded and directed so that no light trespasses onto adjacent properties. Title III (Use Regulations and Development Standards) requires that lighting is be directed away from residential areas and public streets so that glare is not produced that could impact the general safety of vehicular traffic and the privacy and well-being of residents.

City of Elk Grove General Plan

The following policies from the City of Elk Grove's General Plan would apply to future annexation and development of the project site.

■ 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 on-site, off-site 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.

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Trees that cannot be protected shall be replaced either on-site or off-site as required by the City.

- 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.
- Policy LU-38: Reduce the unsightly appearance of overhead and aboveground utilities.
- ✓ Policy PTO-15: The City views open space lands of all types as important resource which should be preserved in the region, and supports the establishment of multipurpose open space areas to address a variety of needs, including, but not limited to:
 - maintenance of agricultural uses,
 - wildlife habitat,
 - recreational open space,
 - aesthetic benefits, and
 - flood control.

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

Elk Grove Municipal Code

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

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

The Elk Grove Zoning Code (Elk Grove Municipal Code Title 23) provides development standards that address building mass, setbacks, landscaping, lighting, and signage to achieve an aesthetically-pleasing appearance.

City of Elk Grove Design Guidelines

The City Design Review process is established under Section 23.16.080 of the City's Municipal Code. This section and corresponding Elk Grove Design Guidelines established a design review process and guidelines for site planning, architecture, lighting, and landscaping, as well as preservation of significant natural features and compatibility with surrounding property. The City strongly encourages incorporating natural features and using landscaping to reduce the potential impacts of lighting from parking areas on both project areas and adjacent vacant land, and that landscaping be designed to maximize screening and buffering between adjacent uses. Design Review is required for development types listed below.

- single-family residential subdivision maps;

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- non-residential development (e.g., commercial, office, industrial, and public/quasi-public development).

Any future development that fell under one of the above categories would undergo Elk Grove Design Review and comply with any Elk Grove conditions of approval.

3.1.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

Visual impacts were evaluated by comparing the expected visual changes that the project would generate against the existing visual character of the site. Visual character is defined narrowly to include only analysis of viewsheds, physical site characteristics, and lighting. This analysis does not include a subjective evaluation of design characteristics such as colors, architectural styles, building materials, or other matters of personal preference. The analysis assumes that open space and rural areas are typically of higher visual quality than urban areas, because the open character preserves visual continuity (the blending of visual elements) and a farther horizon of sight.

The analysis focuses on views of the project site from offsite sensitive receptors and public viewpoints. In determining the extent and implications of the anticipated visual changes, consideration was given to:

- existing visual qualities of the affected environment and specific changes in the visual character and qualities of the affected environment;
- the visual context of the affected environment:
- the extent to which the affected environment contains places or features that provide unique visual experiences or that have been designated in plans and policies for protection or special consideration; and
- the sensitivity of viewers, access of viewers, their activities, and the extent to which these activities are related to the aesthetic qualities affected by the project-related changes.

It should be noted that an assessment of visual quality is a subjective matter, and reasonable people can disagree as to whether alteration of visual character would be adverse or beneficial. For this analysis, a conservative approach was taken, and the potential for substantial change to the visual character of the project site is generally considered a significant impact.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, a visual resource impact is considered significant if implementation of the project would do any of the following:

- ▲ have a substantial adverse effect on a scenic vista;
- substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and
 historic buildings within a state scenic highway;
- substantially degrade the existing visual character or quality of the site and its surroundings; or
- create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

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ISSUES NOT EVALUATED FURTHER

Scenic Vistas

The SOIA area does not include any scenic vistas that have been officially designated by either Sacramento County or the City of Elk Grove. General changes to views of the SOIA area, which provides relatively open, expansive views of agricultural land from public viewing locations (including Backer Park and area roadways) are discussed below with respect to changes in visual quality and community character. There would be no impact to designated scenic vistas, and this impact is not discussed further.

Scenic Resources

Future annexation and development of the SOIA area would not have the potential to affect scenic resources, rock outcroppings, or historic buildings within a State scenic highway. The closest State-designated scenic highway segment is a portion of State Route 160 along the Sacramento River, approximately 4 miles west of the SOIA area. The SOIA area is not visible from the scenic highway segment because of intervening vegetation, development, and Interstate 5. There would be no impact to views from a state-designated scenic highway, and this impact is not discussed further.

IMPACT ANALYSIS

Impact 3.1-1: Substantially degrade the existing visual character or quality of the site and its surroundings.

The visual character surrounding the SOIA area consists of suburban uses that transition to rural residential and agricultural conditions. While approval of the SOIA alone would not result in physical visual changes to the site, future development of the SOIA area could convert the open space character of project site to suburban uses, which would further expand suburban development conditions south of the existing City of Elk Grove. This may substantially alter public views. Because of the size of SOIA area and its location adjacent to agricultural lands in unincorporated Sacramento County, the change in visual character would be considered a **significant** impact.

From public viewing locations, including Backer Park and area roadways, the SOIA area provides relatively open, expansive views of agricultural land. The project site may provide a valuable scenic resource for the general public, and agricultural land is valued by Sacramento County and the City of Elk Grove for its aesthetic properties. Although not completely natural in appearance, the managed environment provides views wherein vegetation provides the dominant visual character.

Residents are generally considered to be the most sensitive to changes in the adjacent visual environment because of their familiarity with the area. Recreationalists may also be more sensitive because they may have an expectation of visual quality. In the case of Backer Park, a suburban sports park, the expectation for natural views is likely low. In addition, the areas of most intense use (i.e., playground, picnic facilities, basketball, and tennis courts) are oriented inward. The southern portion of the park located closest to the SOIA area is used for parking and grass fields.

Views of the site are generally considered to be of moderate visual quality. These views may be valued by residents whose daily exposure to natural areas would be otherwise limited, as well as by motorists familiar with the agricultural aesthetic of the rural areas south of the site. However, exposure to views afforded by the site is generally limited. The existing residential developments are oriented away from the roadways, with sound walls and landscaping that are designed to limit the interface with adjacent properties. Motorist exposure would also be limited because of the relatively low volume of traffic and the speed of travel on adjacent roadways. Individuals recreating at Backer Park would have the most pronounced exposure to the project site; however, views of adjacent open space are not generally core components of an individual's visit to a suburban park where key activities include organized sports and use of the playground.

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The SOIA would not directly result in changes to the existing character or quality of the site. However, if the project site is annexed and developed in a manner consistent with the conceptual land use plan, future buildout of the SOIA area would change the perceived visual character and quality of the environment by adding urban elements to a largely agricultural area. Views of open areas would be replaced by views of residential and commercial uses. Residents, motorists, and others who have views of the SOIA area would be affected by these future changes. Agricultural fields could be replaced with buildings, roads, parks, and urban landscaping. Although the current land uses provide views of an agricultural landscape that is of moderate quality and representative of the region, the project area does not contain resources that exemplify the agricultural history of the area; nor are viewers considered to have extended exposure or particular sensitivity to changes in views of the project site.

Nevertheless, development would entail a significant change from the existing visual character of the site and an individual's response to such changes can be variable and highly personal. Further, because LAFCo would not have direct authority over the design of subsequent development, the consistency of the character of such development with adjacent land uses cannot be assured. This impact would be **significant**.

Mitigation Measure 3.1-1: Design future projects consistent with City development standards.

At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants demonstrate compliance with the City's Design Guidelines in effect at the time of the annexation application or the establishment of its own design guidelines that are consistent with the City's Design Guidelines to ensure that future development will be compatible with the desired character of the City and to ensure physical, visual, and functional compatibility between uses. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

Significance after Mitigation

The City of Elk Grove has policies in place to preserve the aesthetic quality and character of areas within its jurisdiction. These include Policy CAQ-8, which requires avoidance or replacement of large trees, and Policies LU-35 and LU-38, which require that new development is attractive and the appearance of aboveground utilities is reduced. Implementation of Mitigation Measure 3.1-1 and Mitigation Measure 3.4-4 (preservation and mitigation of trees) would ensure that future development would be compatible with adjoining development in the City through requiring development design consistent with the character of the City and retain trees considered important to the City. However, future development of the Bilby Ridge SOIA would still result in the conversion of 480 acres of open space and agricultural land to suburban development. While minimized to the degree feasible through the local land use agency's control, effects on the visual character and quality of the site would be **significant and unavoidable** because of the substantial alteration of the existing visual character of the SOIA area from future development once annexation occurs.

Impact 3.1-2: Create a new source of substantial light or glare.

The SOIA would not result in any changes in existing land uses and, as such, would not result in new sources of substantial light or glare. If the site is annexed and developed in the future, development could result in the introduction of buildings and facilities that may create lighting and glare on adjoining areas. This impact would be **significant**.

The SOIA would not result in any changes in existing land uses and, as such, would not result in new sources of substantial light or glare. As such, it would be consistent with Policy LU-31 in the Sacramento County General Plan related to preserving the natural nighttime environment and reducing light pollution. The following analysis considers the potential for the creation of light and glare if the project site is annexed and developed in a manner consistent with the conceptual land use plan in the future.

The development of the project site would introduce new sources of daytime glare (e.g., sunlight reflecting from structures and other reflective surfaces and windows) and nighttime lighting (e.g., new residential developments, street lighting, parking lot lights, and security related lighting for nonresidential uses). Daytime glare would have the greatest adverse effects adjacent undeveloped land. In existing residential areas and on

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adjacent roadways, the relatively small amount of glare generated by reflection off of typical buildings constructed in a manner consistent with the City of Elk Grove's standards is unlikely to substantially affect use of the area. In the agricultural area to the south, there are no existing receptors near the site and the area is unlikely to be substantially affected by any increase in glare produced by future development.

Future projects would be required to limit outdoor lighting, which would be directed downward and shielded to minimize light spillover and skyglow, and to minimize the use of reflective materials in building design, as described in Elk Grove Zoning Code 23.56 and General Plan LU-35 Action 2 and LU-35 Action 3. Compliance with City General Plan policies, zoning regulations, and design guidelines would minimize lighting and glare. However, future development would still create a new source of light and glare and would adversely affect day and nighttime views in the area that currently do not exist. This impact would be **significant**.

Mitigation Measure 3.1-2: Design development to reduce lighting and glare.

At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants demonstrate compliance with the City's Design Guidelines and City Municipal Code standards in effect at the time of the project approval associated with reflective building materials and lighting fixture design and orientation that avoid day time glare and nighttime spillover effects on adjacent areas and nighttime sky glow conditions. Compliance with this mitigation measure may be combined with Mitigation Measure 3.1-1 and shall be provided in the annexation application to LAFCo.

Significance after Mitigation

Complying with Mitigation Measure 3.1-2 would reduce potential glare and adverse effects related to lighting. However, development would still require lighting for security and other purposes that would expand the footprint of suburban lighting conditions associated with the City. This would still contribute to skyglow. Further, compliance with City design guidelines and standards would not necessarily completely eliminate glare in all circumstances. There is no additional feasible mitigation to completely offset this impact. Thus, impacts have been determined to be **significant and unavoidable**.

Ascent Environmental Agricultural Resources

3.2 AGRICULTURAL RESOURCES

This section evaluates the direct and indirect environmental impacts to agricultural resources that may result from the proposed Bilby Ridge Sphere of Influence Amendment (SOIA). It describes Sacramento County's agricultural land uses; the significance, quality, and extent of agricultural land on-site and within the county; and conversion of Important Farmland in the county to other uses. This section also addresses the project's consistency with Sacramento County and the City of Elk Grove's general plans, as well as the Sacramento Local Agency Formation Commission's (LAFCo's) policies pertaining to agricultural resources as identified in Sacramento LAFCo Policies, Standards, and Procedures Guidelines (LAFCo 2007). The analysis includes a description of the existing environmental conditions, the methods used for assessment, and the potential direct and indirect impacts of project implementation. Where feasible, mitigation measures are recommended to address impacts determined to be significant or potentially significant.

Comments were received on the Notice of Preparation from the Sacramento County Office of Planning and Environmental Review, Sacramento County Department of Agriculture, and the Environmental Council of Sacramento. The relevant concerns raised in those comments are addressed in this section.

3.2.1 Environmental Setting

Sacramento County is the state's 24th largest agricultural producer, in total value of agricultural production. The gross valuation for all agricultural commodities produced in Sacramento County was approximately \$470 million in 2015 (California Department of Food and Agriculture 2016). Wine grapes had the highest crop value (\$128 million) followed by milk (\$49 million), Bartlett pears (\$40 million), and poultry (\$39 million) (Sacramento County Agricultural Commission 2015).

Most of the Bilby Ridge site is in agricultural production. Significant agricultural activities include field crops (hay) and grazing land. A small portion of the site associated with a residential property includes viniculture. Adjacent land uses to the project site include agricultural operations to the south and east, a large cattle facility 0.5 mile to the south, and single-family residential and related uses to the west and north. As shown on Exhibit 3.2-1, the site and adjacent lands to the south are zoned AG20 and AG80 by the Sacramento County General Plan (2011).

FARMLAND CLASSIFICATION

The State of California maps and classifies farmland through the California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP). Classifications are based on a combination of physical and chemical characteristics of the soil and climate that determine the degree of suitability of the land for crop production. The classifications under the FMMP are as follows:

- Prime Farmland—land that has the best combination of features to produce agricultural crops;
- ▲ Farmland of Statewide Importance—land other than Prime Farmland that has a good combination of physical and chemical features to produce agricultural crops, but that has more limitations than Prime Farmland, such as greater slopes or less ability to store soil moisture;
- Unique Farmland—land of lesser quality soils used to produce the state's leading agricultural cash crops;
- Farmland of Local Importance—land of importance to the local agricultural economy;
- Grazing Land—existing vegetation that is suitable for grazing;

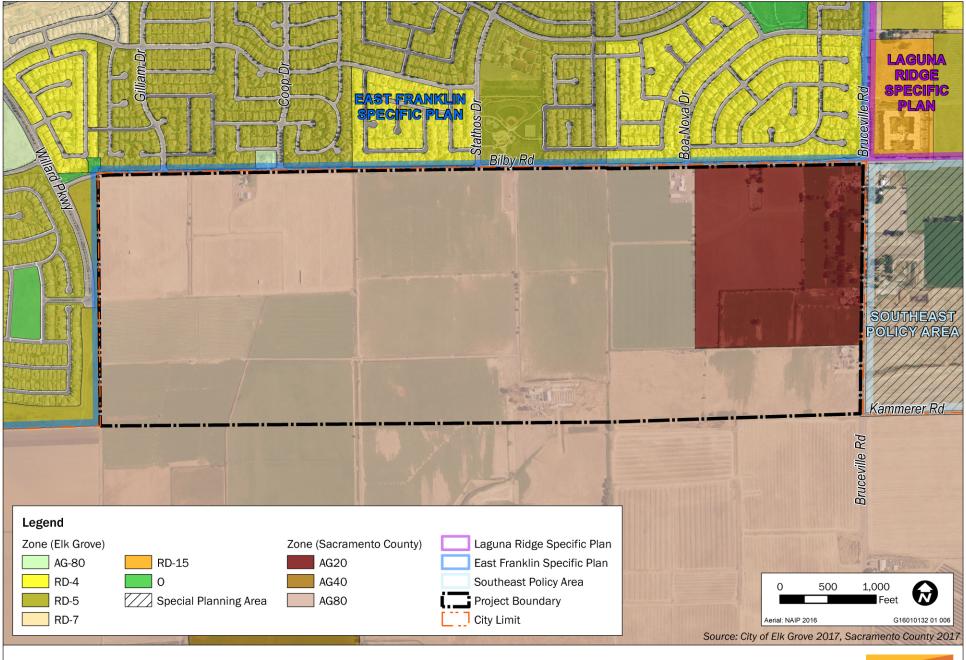


Exhibit 3.2-1 Surrounding Zoning



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■ Urban and Built-Up Land—land occupied by structures in density of at least one dwelling unit per 1.5 acres;

- ▲ Land Committed to Nonagricultural Use—vacant areas; existing land that has a permanent commitment to development but has an existing land use of agricultural or grazing lands; and
- Other Land— land not included in any other mapping category, common examples of which include low-density rural developments, brush, timber, wetland, and vacant and nonagricultural land surrounded by urban development.

According to the Natural Resource Conservation Service's (NRCS's) Sacramento County Important Farmland Map, the project site is identified as Farmland of Statewide Importance and Farmland of Local Importance, as shown on Exhibit 3.2-2. The site is composed of roughly 113 acres of Farmland of Local Importance, 362 acres of Farmland of Statewide Importance, 1 acre of Other Land, and 3 acres of Urban and Built-Up Land (FMMP 2014). Lands to the east and south of the Bilby Ridge project site are also classified as Farmland of Statewide Importance and Farmland of Local Importance.

FARMLAND CONVERSION

Over the 12-year period from 2004 to 2016, the Department of Conservation estimated that the total acreage of Important Farmland in Sacramento County decreased by approximately 5.8 percent. Furthermore, the most productive categories of farmland, Prime Farmland and Farmland of Statewide Importance, experienced declines of 17 percent and 23 percent, respectively, over the same period. Table 3.2-1, below, summarizes the acreages of agricultural land in Sacramento County between 2004 and 2016 (California Department of Conservation [DOC] 2006, 2008, 2010, 2012, 2014a, 2016a).

Table 3.2-1 Agricultural Land Conversion in Sacramento County

| Important Farmland Category | Acres | | | | | | Net Change | Percent | |
|-------------------------------------|---------|---------|---------|---------|---------|---------|------------|-------------|------------------------|
| | 2004 | 2006 | 2008 | 2010 | 2012 | 2014 | 2016 | (2004-2016) | Change (2004- 2016) |
| Prime Farmland | 110,278 | 106,667 | 104,367 | 97,476 | 93,916 | 91,569 | 90,691 | -19,587 | -17.8 |
| Farmland of Statewide Importance | 56,141 | 51,218 | 49,470 | 45,264 | 43,580 | 43,104 | 43,342 | -12,799 | -23.8 |
| Unique Farmland | 15,188 | 15,267 | 15,462 | 15,076 | 15,060 | 15,125 | 15,540 | 352 | 2.3 |
| Farmland of Local Importance | 39,873 | 41,960 | 43,819 | 53,928 | 56,981 | 58,852 | 57,910 | 18,037 | 45.2 |
| Important Farmland Subtotal | 221,480 | 215,112 | 213,118 | 211,744 | 209,537 | 208,650 | 207,483 | -13,997 | -6.3 |
| Grazing Land | 163,173 | 156,979 | 156,146 | 155,822 | 154,744 | 153,454 | 153,174 | -9,999 | -6.1 |
| Agricultural Land Total | 384,653 | 372,091 | 369,264 | 367,566 | 364,281 | 362,102 | 360,657 | -23,996 | -6.2 |

Source: DOC 2006, 2008, 2010, 2012, 2014a, 2016a

According to the Department of Conservation's most recent field report, conversion of Important Farmland to Other Land in Sacramento County resulted from the construction of new houses, commercial and industrial buildings, and parkland; the build-out of solar facilities; and plots of irrigated farmland or pastureland left fallow for three of more update cycles. Conversions from non-irrigated land uses to Irrigated Farmland resulted from additions of vineyards, corn, alfalfa, various row crops, and irrigated pasture in the southern part of the county; multiple rice plantings east of the Sacramento International Airport; and corn and irrigated hay near Twin Cities Road (DOC 2014b).

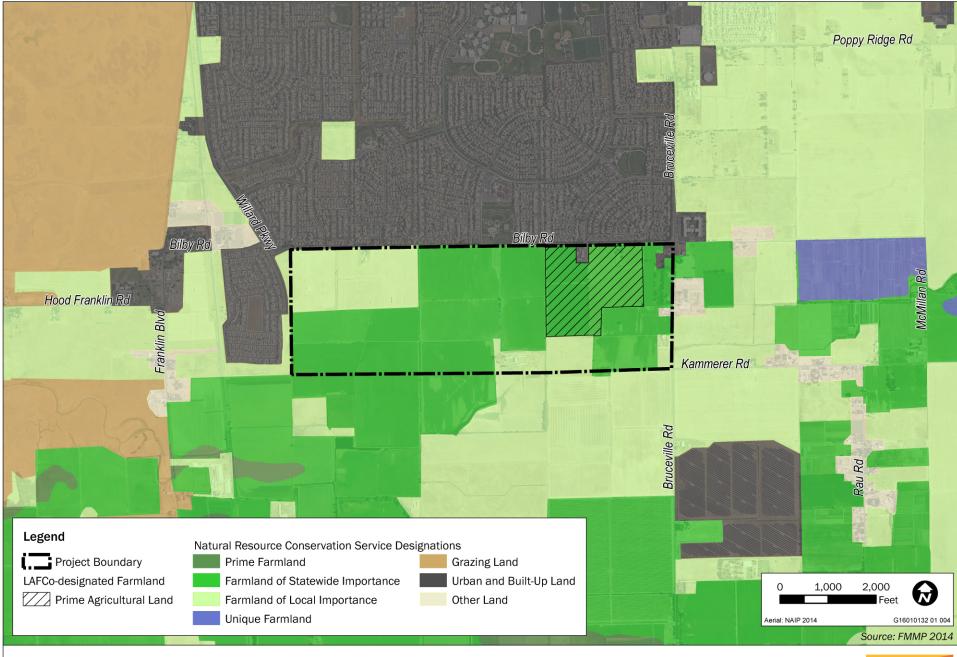


Exhibit 3.2-2 Important Farmland



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3.2.2 Regulatory Framework

FEDERAL

There are no federal plans, policies, regulation, or laws applicable to this project.

STATE

California Department of Conservation Farmland Mapping and Monitoring Program

The FMMP was established by the State of California in 1982 to continue the Important Farmland mapping efforts begun in 1975 by the U.S. Soil Conservation Service (now called NRCS under the U.S. Department of Agriculture). The California Department of Conservation, Office of Land Conservation, maintains a statewide inventory of farmlands. Authority for the FMMP comes from Government Code Section 65570(b) and Public Resources Code Section 612. Government Code Section 65570(b) requires the Department of Conservation to collect or acquire information on the amount of land converted to or from agricultural use for every mapped county and to report this information to the Legislature. The maps are updated every 2 years with the use of aerial photographs, a computer mapping system, public review, and field reconnaissance.

California Land Conservation Act of 1965

The California Land Conservation Act of 1965, or Williamson Act (California Government Code Section 51200 et seq.), preserves agricultural and open space lands through property tax incentives and voluntary restrictive use contracts (DOC 2016b). Private landowners voluntarily restrict their land to agricultural and compatible open-space uses under minimum 10-year rolling term contracts. In return, restricted parcels are assessed for property tax purposes at a rate consistent with their actual use, rather than potential market value.

As shown in Exhibit 3.2-3, two of the seven project site parcels (73-AP-014 and 81-AP-001) are currently under Williamson Act contracts.

Public Resources Code

Public Resources Code Section 21060.1 defines "agricultural land" as:

prime farmland, farmland of statewide importance or unique farmland, as defined by the United States Department of Agriculture land inventory and monitoring criteria, as modified for California.

Cortese-Knox-Hertzberg Local Government Reorganization Act

LAFCo utilizes a definition of agricultural lands that differ from those utilized under CEQA. Section 56064 of the Cortese-Knox-Hertzberg Local Government Reorganization Act defines "prime agricultural land" as:

"Prime agricultural land" means an area of land, whether a single parcel or contiguous parcels, that has not been developed for a use other than an agricultural use and that meets any of the following qualifications:

- (a) Land that qualifies, if irrigated, for rating as class I or class II in the U.S. Department of Agriculture (USDA) NRCS land use capability classification, whether or not land is actually irrigated, provided that irrigation is feasible.
- (b) Land that qualifies for rating 80 through 100 Storie Index Rating.
- (c) Land that supports livestock used for the production of food and fiber and that has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the USDA in the National Range and Pasture Handbook, Revision 1, December 2003.

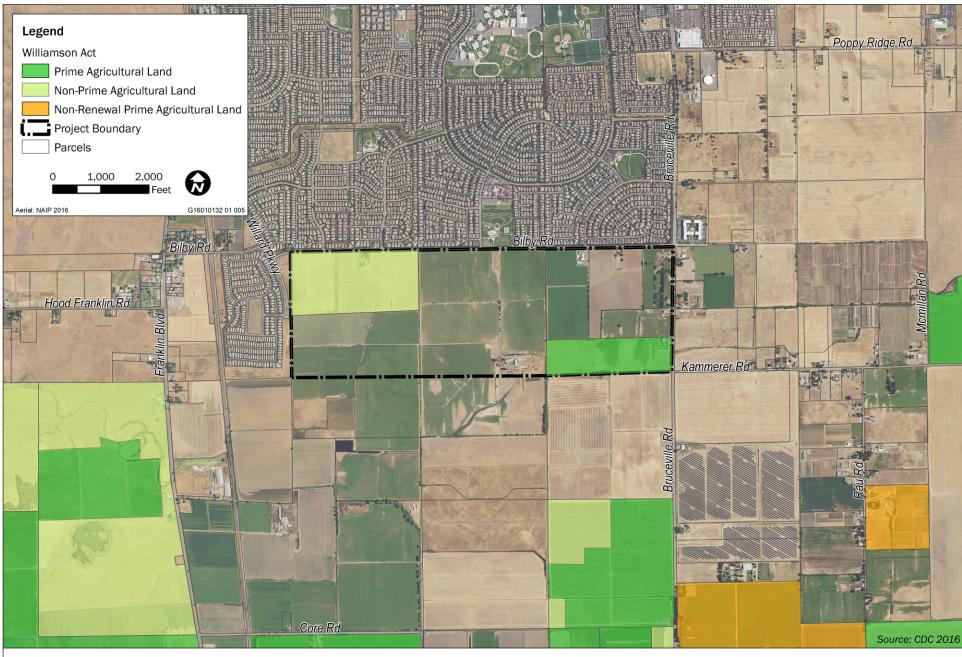


Exhibit 3.2-3 Williamson Act Map



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(d) Land planted with fruit or nut-bearing trees, vines, bushes, or crops that have a nonbearing period of less than five years and that will return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than four hundred dollars (\$400) per acre.

(e) Land that has returned from the production of unprocessed agricultural plant products an annual gross value of not less than four hundred dollars (\$400) per acre for three of the previous five calendar years.

The SOIA area is rated class III in the NRCS land use capability classification for irrigation and has a rating of 11-40 on the Storie Index (NRCS 2017). Based on NRCS soil productivity data, certain soils in the SOIA area could produce up to 234 pounds of dry forage per acre per month (NRCS 2017). The USDA National Range and Pasture Handbook specifies that 1 animal unit month is equal to 790 pounds of dry forage per acre per month (USDA 2003). Therefore, the project site does not contain lands that could support at least one animal unit per acre. The project site is not planted with fruit or nut-bearing plants. Production values from the past 5 years indicate that 70 acres of the site produced alfalfa in 2012, 2013, and 2014 with an annual gross value of \$1309.44, \$978.50, and \$1,172.49 per acre, respectively (Sacramento County Agricultural Commission 2017). Because the Bilby Ridge site contains 70 acres of lands that meet qualification (e) above, it is considered prime agricultural land by LAFCo (See Exhibit 3.2-1).

LOCAL

The project site lies within the jurisdictional boundaries of Sacramento County; therefore, the County's policies with respect to agricultural resources, as well as the Sacramento LAFCo's polices, would apply. Furthermore, if the SOIA is approved, it could lead to annexation to the City of Elk Grove and urbanization. Thus, applicable policies of the City of Elk Grove's General Plan are described below.

Sacramento LAFCo

The project would be subject to the following standards related to agricultural resources from LAFCo's Policies, Standards, and Procedures Manual (2007). LAFCo may make exceptions to these general and specific standards if it determines that such exceptions: are necessary because of unique circumstances; are required to resolve conflicts between general and specific standards; result in improved quality or lower cost of services available; or there exists no feasible or logical alternative.

Chapter IV, Selected General Standards, Standard E. Agricultural Land Conservation. LAFCo will exercise its powers to conserve agricultural land pursuant to the following standards:

- Standard E.1. 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:
 - a. The land subject to the change of organization or reorganization is contiguous to either lands developed with an urban use or lands which have received all discretionary approvals for urban development.
 - 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;
 - 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.

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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.

- 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:
 - (1) The agricultural significance of the subject and adjacent areas relative to other agricultural lands in the region.
 - (2) The use of the subject and adjacent areas.
 - (3) Whether public facilities related to the proposal would be sized or situated so as to facilitate the conversion of adjacent to nearby agricultural land, or will be extended through or adjacent to, any other agricultural lands which lie between the project site and existing facilities.
 - (4) Whether natural or man-made barriers serve to buffer adjacent or nearby agricultural lands from the effects of the proposed development.
 - (5) Applicable provisions of the General Plan open space and land use elements, applicable growth-management policies, or other statutory provisions designed to protect agriculture.
- Standard E.2. LAFCo will not make the affirmative findings that the proposed development of the subject lands is consistent with the Spheres of Influence in the absence of an approved Sphere of Influence Plan. LAFCo will not make the affirmative findings that sufficient non- prime land exists within the Spheres of Influence Plan unless the applicable jurisdiction has:
 - a. Identified within its Spheres of Influence all "prime agricultural land" as defined herein;
 - b. Enacted measures to preserve prime agricultural land identified within its Sphere of Influence for agricultural use; and
 - c. Adopted as part of its General Plan specific measures to facilitate and encourage infill development as an alternative to development of agricultural lands.

Chapter V, Specific Standards by Type of Action, Standard I. Amendments to Spheres of Influence

■ Standard I.6. Amendment proposals involving Sphere expansion which contain prime agricultural land will not be approved by the LAFCo if there is sufficient alternative lands available for annexation within the existing Sphere of Influence.

Sacramento County General Plan

The Agricultural and Conservation Elements of the Sacramento County General Plan (Sacramento County 2011) contain the following policies related to agricultural resources that may be applicable to the project:

- Policy AG-5: Projects resulting in the conversion of more than fifty (50) acres of farmland shall be mitigated within Sacramento County, except as specified in the paragraph below, based on a 1:1 ratio, for the loss of the following farmland categories through the specific planning process or individual project entitlement requests to provide in-kind or similar resource value protection (such as easements for agricultural purposes):
 - prime, statewide importance, unique, local importance, and grazing farmlands located outside the USB; and
 - prime, statewide importance, unique, and local importance farmlands located inside the USB.

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The Board of Supervisors retains the authority to override impacts to Unique, Local, and Grazing farmlands, but not with respect to Prime and Statewide farmlands.

However, if that land is also required to provide mitigation pursuant to a Sacramento County endorsed or approved Habitat Conservation Plan (HCP), then the Board of Supervisors may consider the mitigation land provided in accordance with the HCP as meeting the requirements of this section including land outside of Sacramento County.

Note: This policy is not tied to any maps contained in the Agricultural Element. Instead, the most current Important Farmland map from the Department of Conservation should be used to calculate mitigation.

The County protects a broader category of farmland quality than the State in CEQA statute or the Guidelines, by also including farmland of local importance and grazing farmlands in its policy requiring mitigation for conversion. Sacramento County defines locally important farmlands as "lands which do not qualify as Prime, Statewide, or Unique designation but are currently irrigated crops or pasture or nonirrigated crops; lands that would be Prime or Statewide designation and have been improved for irrigation but are now idle; and lands which currently support confined livestock, poultry operations, and aquaculture" (Sacramento County 2011).

▶ Policy CO-51: Direct development away from prime or statewide importance farmland or otherwise provide for mitigation as required by AG-5 slowing the loss of additional farmland conversion to other uses.

City of Elk Grove General Plan

If there is annexation and future development in the project area, it would be subject to the following policies from the Elk Grove General Plan Conservation and Air Quality Element (City of Elk Grove 2016) related to agricultural resources.

- ▼ 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 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.

City of Elk Grove Municipal Code

Chapter 14.05, "Agricultural Activities," of the City of Elk Grove Municipal Code ensures that agricultural operations which are operated in a manner consistent with proper and accepted customs and standards are allowed to continue and requires that notification be provided to residents of property located near properties designated for agricultural use; that these agricultural uses are encouraged; that accepted agricultural practices may continue; and that efforts to prohibit, ban, restrict, or otherwise eliminate established

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agricultural uses will not be favorably received. It also includes notification and mediation procedures for cases in which agricultural activities are not being conducted in a reasonable manner, or when the operator of an agricultural operation is not using currently acceptable methods in the conduct of the farm.

3.2.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

Evaluation of the project's potential impacts on agricultural resources was based on review of the project description as well as FMMP designations of land within the project site. In addition, relevant goals and policies from the Sacramento County General Plan, City of Elk Grove General Plan, and LAFCo were reviewed. In determining the level of significance, this analysis assumes that the project would comply with relevant state and local ordinances and regulations, as well as the adopted policies presented above.

Although there are no changes to land use proposed as part of this SOIA, the analysis assumes that the Bilby Ridge site would be developed, as described in the Chapter 2, "Project Description," upon approval of the SOIA and annexation to the City at some future time.

According to Government Code Section 56668, the Sacramento LAFCo must evaluate effects on maintaining the physical and economic integrity of agricultural lands based on five factors identified in Policies, Standards, and Procedures Manual Standard E.1 below, and this EIR has considered all of the factors outlined in that policy below.

- Factor 1. The agricultural significance of the subject and adjacent areas relative to other agricultural lands in the region.
 - ▼ Analysis: Subsection 3.2.1, "Environmental Setting," identifies that the SOIA and adjacent land areas south of the site are classified as Prime Farmland, Farmland of Statewide Importance, or Farmland of Local Importance.
- ▲ Factor 2. The use of the subject and adjacent areas.
 - ▼ Analysis: The SOIA consists of field crops, viniculture, and grazing land. Land areas south and east of the site include grazing and field crops as well.
- Factor 3. 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 through or adjacent to any other agricultural lands which lie between the project site and existing facilities.
 - Analysis: The project does not involve any changes to land use nor propose specific public facilities. Growth-inducing effects of the SOIA is addressed in Chapter 5 of this EIR, "Other CEQA Considerations."
- Factor 4. Whether natural or man-made barriers serve to buffer adjacent or nearby agricultural lands from the effects of the proposed development.
 - Analysis: The SOIA is bounded on the north, west, and east by the City of Elk Grove. However, areas south of the site do not contain any current natural or manmade barriers to buffer adjacent or nearby agricultural lands from potential impacts of future, indirect growth development within the SOIA. The future extension of Kammerer Road as part the Capital South East Connector may provide barrier for the SOIA.
- Factor 5. Applicable provisions of the General Plan open space and land use elements, applicable growth management policies, or other statutory provisions designed to protect agriculture.

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▼ Analysis: The City of Elk Grove General Plan policies and Chapter 14.05, "Agricultural Activities," of the City Municipal Code related to agricultural resources is provided in Subsection 3.2.2, "Regulatory Framework." Consistency analysis of adopted City of Elk Grove and Sacramento County land use policies is provided in Tables 3.9-1 and 3.9-2.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, the project would result in a potentially significant impact on agriculture and forest resources if it would:

- convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Important Farmlands), as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to non-agricultural use, or convert prime agricultural land as defined by the Cortese-Knox-Hertzberg Local Government Reorganization Act;
- conflict with existing zoning for agricultural use or a Williamson Act contract;
- 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));
- result in the loss of forest or agricultural land or conversion of forest land to non-forest or non-agricultural use; or
- 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.

ISSUES NOT EVALUATED FURTHER

The project site is zoned by the County as AG-80 and AG-20. The project would not change the zoning designations nor would it allow land use change that would be inconsistent with this zoning designation. The project would not change any land use authority. Thus, the project would not conflict with zoning for agricultural use, and this issue is not evaluated further.

There are no forestry resources on or adjacent to the project site. Because no forest land, timberland, or timberland production areas, as zoned by applicable state regulations, exist on the project site, the project would not conflict with forest land zoning or result in the conversion or loss of forest land. Therefore, no impacts would occur related to forest land resources, and this issue is not evaluated further.

IMPACT ANALYSIS

Impact 3.2-1: Direct conversion of Important Farmland and prime agricultural land to non-agricultural use.

While the SOIA would not result in direct physical changes to the site, future development facilitated by subsequent annexation within the Bilby Ridge site could result in the direct conversion of up to 362 acres of Farmland of Statewide Importance and 113 acres of Farmland of Local Importance, 70 of which are also considered prime agricultural land by LAFCo, to nonagricultural urban uses. This impact would be a significant impact.

The project consists of an expansion of the City of Elk Grove's Sphere of Influence to include the Bilby Ridge site. Although the SOIA does not propose any land use changes or development, the SOIA would facilitate the potential future development could occur if the property is annexed. A preliminary land use scenario map

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includes commercial elements at the corner of Bilby and Bruceville Road as well as Kammerer Road and Willard Parkway; residential component (roughly 1,800 units); a business professional area on the corner of Kammerer and Bruceville Road; and accompanying parks, supporting master-planned infrastructure providing transportation, public lands, associated retail use. The preliminary land use scenario map would result in the direct conversion of existing agricultural uses to non-agricultural urban uses.

As identified in Exhibit 3.2-1, the project site contains 362 acres of Farmland of Statewide Importance, 70 acres of which are also considered prime agricultural land by LAFCo. The loss of this farmland type to urban uses is considered a significant impact under CEQA. Furthermore, the project would also result in the loss 113 acres of Farmland of Local Importance. While this is not considered important farmland under CEQA, Sacramento County requires mitigation for the loss of this farmland type for County projects under General Plan Policy AG-5. Therefore, this impact would be **significant**.

Mitigation Measure 3.2-1: Preserve agricultural land.

At the time of submittal of any application to annex territory within the Bilby Ridge site, the City of Elk Grove shall require that applicants protect 1 acre of existing farmland land of equal or higher quality for each acre of Farmland of Statewide Importance, Farmland of Local Importance, and prime agricultural land that would be developed as a result of the project. In quantifying the amount of protected farmland needed to mitigate impacts, 1 acre of protected farmland that is designated as both Farmland of Statewide Importance and prime agricultural land, for example, would count towards mitigation in both categories. This protection may consist of the establishment of a farmland conservation easement, farmland deed restriction, or other appropriate farmland conservation mechanism to ensure the preservation of the land from conversion in perpetuity, but may also be utilized for compatible wildlife habitat conservation efforts (e.g., Swainson's hawk foraging habitat mitigation) that do not substantially impair or diminish the agricultural productivity of the land. The farmland/wildlife habitat land to be preserved must have adequate water supply to support agricultural use. The City shall consider the benefits of preserving farmlands in proximity to other protected lands.

The total acres of land conserved shall be based on the total on-site agriculture acreage converted to urban uses. Conserved agriculture areas may include areas on the project site, lands secured for permanent habitat enhancement (e.g., giant garter snake habitat, Swainson's hawk habitat), or additional land identified by the City. The City shall attempt to locate preserved farmland within 5 miles of the Bilby Ridge site; however, the preserved farmland shall at a minimum be located inside Sacramento County. The City shall impose the conservation easement content standards to include, at a minimum: land encumbrance documentation; documentation that the easements are permanent, monitored, and appropriately endowed; prohibition of activity which substantially impairs or diminishes the agricultural productivity of the land; and protection of water rights.

In addition, the City shall impose the following minimum conservation easement content standards upon annexation:

- All owners of the agricultural/wildlife habitat mitigation land shall execute the document encumbering the land.
- The document shall be recordable and contain an accurate legal description of the agricultural/wildlife habitat mitigation land.
- The document shall prohibit any activity that substantially impairs or diminishes the agricultural productivity of the land. If the conservation easement is also proposed for wildlife habitat mitigation purposes, the document shall also prohibit any activity that substantially impairs or diminishes the wildlife habitat suitability of the land.
- The document shall protect any existing water rights necessary to maintain agricultural uses on the land covered by the document and retain such water rights for ongoing use on the agricultural/wildlife habitat mitigation land.

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■ Interests in agricultural/habitat mitigation land shall be held in trust by an entity acceptable to the City and/or by the City in perpetuity. The entity shall not sell, lease, or convey any interest in agricultural/wildlife habitat mitigation land that it acquires without the City's prior written approval.

- The applicant shall pay to the City an agricultural/wildlife habitat mitigation monitoring fee to cover the costs of administering, monitoring, and enforcing the document in an amount determined by the receiving entity or City.
- The City shall be named a beneficiary under any document conveying the interest in the agricultural/wildlife habitat mitigation land to an entity acceptable to the City.
- If any qualifying entity owning an interest in agricultural/wildlife habitat mitigation land ceases to exist, the duty to hold, administer, monitor, and enforce the interest shall be transferred to another entity acceptable to the City or transferred to the City.

Before committing to the preservation of any particular farmland pursuant to this measure, the applicant shall obtain the City's approval of the farmland proposed for preservation. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

Significance after Mitigation

Should the Bilby Ridge SOIA be approved and subsequently annexed, the City of Elk Grove would be the land use entitlement agency. Elk Grove General Plan Policy CAQ-2 indicates that the City accepts the loss of agricultural land within the City limits as of 2004, which does not include the project site. Policy CAQ-3 indicates that the City only considers the creation of new agricultural land to be mitigation for the loss of agricultural land and that the City does not consider the purchase of land for agricultural use or conservation easements to be mitigation. The City's General Plan does not indicate in what circumstances the City would apply the mitigation strategy of creating new agricultural land.

While conservation easements for the same area and quality of farmland placed elsewhere in the region could partially offset the direct conversion of Important Farmland and prime agricultural land that could occur within the Bilby Ridge site, this approach would not create new farmland to replace farmland that could be lost. There is no additional feasible mitigation. The impact would remain **significant and unavoidable.**

Impact 3.2-2: Conflict with existing Williamson Act contracts.

Future development within the Bilby Ridge site could result in conflicts with existing Williamson Act contracts that that protect farmland in the SOIA and require filing of non-renewals or cancelations of the contracts. This impact would be a **significant** impact.

Two of the seven project site parcels are currently under Williamson Act contracts (73-AP-014 and 81-AP-001). Approval of the SOIA itself would not directly prompt Williamson Act contract cancellations or non-renewals. However, future annexations to the City could prompt such actions if annexation proceeded prior to non-renewal applications were in place. As such, this impact would be **significant**.

Mitigation Measures

Implementation of Mitigation Measure 3.2-1, as noted above, would reduce the conversion of farmland, including Williamson Act contract land, by setting aside lands in permanent conservation easements. However, this mitigation would not reduce the impact to a less than significant level because the Bilby Ridge SOIA may result in the permanent loss of Williamson Act contract land and would not create additional replaced farmland because it is a finite resource. There are no other feasible mitigation measures available to address this impact.

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Significance after Mitigation

The Bilby Ridge SOIA may result in the permanent loss of Williamson Act contract land. There is no mechanism to create additional farmland as it is a finite resource. As such, this impact would remain significant and unavoidable.

Impact 3.2-3: Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.

The project would establish an expanded sphere of influence for the City of Elk Grove that would likely facilitate the subsequent annexation and development of the project site. New urban land uses in the project area could impair or result in conflicts with adjacent agricultural activities. This impact would be **significant**.

As discussed in Impact 3.2-1, the project consists of an expansion of the City of Elk Grove's Sphere of Influence to include the Bilby Ridge site. Although the SOIA does not propose any land use changes or development, the SOIA would facilitate the potential future annexation and development of the site. If development were to occur as shown in the preliminary land use scenario map (Exhibit 2-4), the project would facilitate the conversion of existing agricultural uses to non-agricultural urban uses.

Land areas to the north and west of the project are urban and residential, thus no agricultural use conflicts would occur. Land area to the east of the project site is currently in agricultural production. However, this area is contained within the City of Elk Grove's approved South East Policy Area that is planned for urban uses. Thus, no conflicts would occur.

Land areas to the south of the project site are in agricultural use (mainly grazing and field crops) and are designated Agricultural Cropland by the Sacramento County General Plan. A large cattle facility is located 0.5 mile south of the project site. Potential future development of the Bilby Ridge site would likely conflict with these agricultural uses. Agricultural operations may create risks and nuisances for urban residences, schools, and businesses. Conversely, urban land uses and the associated population create operational difficulties for agriculture. Health risks and nuisances potentially created by agricultural operations in the project area include the following:

- exposure to pesticide and herbicide applications,
- exposure to smoke (from burning) and dust (from soil preparation),
- exposure to noise (from machinery and trucks).
- ▲ hazards to children (irrigation channels and ditches), and
- exposure to mosquitoes breeding in flooded fields.

These potential nuisances and other aspects of urban land uses, including rising land values, can affect agriculture negatively. Negative effects of urban uses on agriculture could include the following:

- interference with agricultural operations (e.g., limitations on pesticide/herbicide applications, burning, operational hours);
- ▲ trespassing, vandalism, and theft because of the proximity of urban uses to agricultural areas; and
- land value impacts because of the proximity to urban areas which tends to increase land values in anticipation of future urban development. This increase reduces the probability that farmers would make long-term investments to maintain the productive potential of the land.

Conflicts between agriculture and urban uses would affect the agricultural areas that would remain to the south of the Bilby Ridge site. The efforts of future urban residents to reduce potential risks and nuisances emanating from surrounding agricultural areas could become a major constraint on agricultural operations. These constraints could result in increasing operational costs, phasing out of crops, moving operations that

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create nuisances for adjacent urban areas, and, ultimately, removing lands from production. This would be a **significant** impact.

Mitigation Measure 3.2-3 Provision of agricultural buffering as part of future project design.

At the time of submittal of any application to annex territory within the Bilby Ridge SOIA area, the City shall require the applicant to establish agricultural buffering features in the development site design. This shall include implementation of City Municipal Code, Chapter 14.05, "Agricultural Activities," in effect at the time of the annexation application that may include screening, fencing, landscaping, setbacks, and other provisions to buffer agricultural uses. 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. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

Significance after Mitigation

Mitigation Measure 3.2-3 would reduce potential conflicts that could adversely affect agricultural operations by establishing buffering from existing agricultural uses and disclosure to future residents of adjacent agricultural activities. However, it is not feasible to fully mitigate agriculture/urban interface conflicts, especially as this relates to farm equipment and vehicle conflicts on area roadways and potential trespassing and vandalism to active farmlands and growth pressures on farmland in proximity to urban uses. Thus, this impact would be **significant and unavoidable**.

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3.3 AIR QUALITY

This section includes a discussion of existing air quality conditions, a summary of applicable regulations, and an analysis of potential construction and operational air quality impacts caused by potential annexation and development of the Bilby Ridge Sphere of Influence Amendment (SOIA) area (or "project site"). The method of analysis for short-term construction, long-term regional (operational), local mobile-source, and toxic air emissions is consistent with the recommendations of the Sacramento Metropolitan Air Quality Management District (SMAQMD), the California Air Resources Board (CARB), and the U.S. Environmental Protection Agency (EPA). In addition, mitigation measures are recommended as necessary to reduce significant air quality impacts.

Comments received in response to the Notice of Preparation expressed concerns about evaluating the project's consistency with existing plans, examining the project's effect on vehicle miles traveled (VMT) by directing growth to an area with higher VMT per household than the regional average, and ensuring that short-term construction emissions and the appropriate mitigation measures are addressed. Additionally, it was recommended that the preparation of an Air Quality Mitigation Plan be required for projects annexed within the SOIA area (or project site).

3.3.1 Environmental Setting

The SOIA area is located within Sacramento County, California, which is within the Sacramento Valley Air Basin (SVAB). The SVAB also includes all of Butte, Colusa, Glenn, Sacramento, Shasta, Sutter, Tehama, Yolo, and Yuba Counties; the western portion of Placer County; and the eastern portion of Solano County. The ambient concentrations of air pollutant emissions are determined by the amount of emissions released by the sources of air pollutants and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and sunlight. Therefore, existing air quality conditions in the area are determined by such natural factors as topography, meteorology, and climate, in addition to the amount of emissions released by existing air pollutant sources, as discussed separately below.

CLIMATE AND METEOROLOGY

The SVAB is a relatively flat area bordered by the north Coast Ranges to the west and the northern Sierra Nevada to the east. Air flows into the SVAB through the Carquinez Strait, the only breach in the western mountain barrier, and moves across the Sacramento River–San Joaquin River Delta (Delta) from the San Francisco Bay area.

The Mediterranean climate type of the SVAB is characterized by hot, dry summers and cool, rainy winters. During the summer, daily temperatures range from 50 degrees Fahrenheit (°F) to more than 100°F. The inland location and surrounding mountains shelter the area from much of the ocean breezes that keep the coastal regions moderate in temperature. Most precipitation in the area results from air masses that move in from the Pacific Ocean, usually from the west or northwest, during the winter months. More than half the total annual precipitation falls during the winter rainy season (November through February); the average winter temperature is a moderate 49°F. Also, characteristic of SVAB winters are periods, of dense and persistent low-level fog, which are most prevalent between storms. The prevailing winds are moderate in speed and vary from moisture-laden breezes from the south to dry land flows from the north.

The mountains surrounding the SVAB create a barrier to airflow, which leads to the entrapment of air pollutants when meteorological conditions are unfavorable for transport and dilution. The highest frequency of poor air movement occurs in the fall and winter when high-pressure cells are present over the SVAB. The lack of surface wind during these periods, combined with the reduced vertical flow caused by a decline in

surface heating, reduces the influx of air and leads to the concentration of air pollutants under stable metrological conditions. Surface concentrations of air pollutant emissions are highest when these conditions occur in combination with agricultural burning activities or with temperature inversions, which hamper dispersion by creating a ceiling over the area and trapping air pollutants near the ground.

May through October is ozone season in the SVAB. This period is characterized by poor air movement in the mornings with the arrival of the Delta sea breeze from the southwest in the afternoons. In addition, longer daylight hours provide a plentiful amount of sunlight to fuel photochemical reactions between reactive organic gases (ROG) and nitrogen oxides (NOx), which result in ozone formation. Typically, the Delta breeze transports air pollutants northward out of the SVAB; however, a phenomenon known as the Schultz Eddy prevents this from occurring during approximately half of the time from July to September. The Schultz Eddy phenomenon causes the wind to shift southward and blow air pollutants back into the SVAB. This phenomenon exacerbates the concentration of air pollutant emissions in the area and contributes to the area violating the ambient-air quality standards.

The local meteorology of the SOIA area and surrounding area is represented by measurements recorded at the Western Regional Climate Center (WRCC) Clarksburg station. The normal annual precipitation is approximately 18 inches. January temperatures range from a normal minimum of 38°F to a normal maximum of 54°F. July temperatures range from a normal minimum of 58°F to a normal maximum of 93°F (WRCC 2016). The predominant wind direction is from the south (WRCC 2017).

CRITERIA AIR POLLUTANTS

Concentrations of emissions from criteria air pollutants are used to indicate the quality of the ambient air. A brief description of key criteria air pollutants in the SVAB and their health effects is provided below. Criteria air pollutants include ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), respirable and fine particulate matter (respectively PM_{10} and $PM_{2.5}$), and lead. However, for the purposes of this analysis, criteria air pollutants of primary concern because of their nonattainment status include ozone (and ozone precursors) and particulate matter. Sacramento County's attainment status for the California ambient air quality standards (CAAQS) and the national ambient air quality standards (NAAQS) are shown in Table 3.3-1. Monitoring data applicable to the SOIA area is provided in Table 3.3-2.

| Table 3.3-1 | Attainment Status Designations for Sacramento County |
|-------------|--|
|-------------|--|

| Pollutant | Federal Standard | State Standard |
|---|--|--|
| | Attainment (1-hour) ¹ | Nonattainment (1-hour) Classification-Serious ² |
| Ozone | Nonattainment (8-hour) ³ Classification, Severe | Nonottoinment (9 hour) |
| | Nonattainment (8-hour) ⁴ Classification, Severe | Nonattainment (8-hour) |
| Despirable particulate matter (DM) | Attainment (OA haur) | Nonattainment (24-hour) |
| Respirable particulate matter (PM ₁₀) | Attainment (24-hour) | Nonattainment (Annual) |
| Fine particulate matter (PM _{2.5}) | Nonattainment (24-hour) | (No State Standard for 24-Hour) |
| | Attainment (Annual) | Attainment (Annual) |
| 0.1. (00) | Attainment (1-hour) | Attainment (1-hour) |
| Carbon monoxide (CO) | Attainment (8-hour) | Attainment (8-hour) |
| Nitrogon diavido (NO) | Unclassified/Attainment (1-hour) | Attainment (1-hour) |
| Nitrogen dioxide (NO ₂) | Unclassified/Attainment (Annual) | Attainment (Annual) |
| 0.16 11 (00.15 | (Attainment Danding) (4 Llaur) | Attainment (1-hour) |
| Sulfur dioxide (SO ₂) ⁵ | (Attainment Pending) (1-Hour) | Attainment (24-hour) |
| Lead (Particulate) | Attainment (3-month rolling avg.) | Attainment (30-day average) |

Table 3.3-1 Attainment Status Designations for Sacramento County

| Pollutant | Federal Standard | State Standard |
|----------------------------|---------------------|------------------------|
| Hydrogen Sulfide | | Unclassified (1-hour) |
| Sulfates | No Fodoval Chandovd | Attainment (24-hour) |
| Visibly Reducing Particles | No Federal Standard | Unclassified (8-hour) |
| Vinyl Chloride | | Unclassified (24-hour) |

Notes:

- ¹ Air Quality meets federal 1-hour Ozone standard (77 FR 64036). EPA revoked this standard, but some associated requirements still apply. SMAQMD attained the standard in 2009. SMAQMD has requested EPA recognize attainment to fulfill the requirements.
- Per Health and Safety Code (HSC) § 40921.5(c), the classification is based on 1989 1991 data, and therefore does not change.
- 1997 Standard
- 4 2008 Standard.
- 5 2010 Standard.

Source: SMAQMD 2016a

Ozone

Ozone is a photochemical oxidant (a substance whose oxygen combines chemically with another substance in the presence of sunlight) and the primary component of smog. Ozone is not directly emitted into the air but is formed through complex chemical reactions between precursor emissions of ROG and NO_x in the presence of sunlight. ROG are volatile organic compounds that are photochemically reactive. ROG emissions result primarily from incomplete combustion and the evaporation of chemical solvents and fuels. NO_x are a group of gaseous compounds of nitrogen and oxygen that result from the combustion of fuels. Emissions of the ozone precursors ROG and NO_x have decreased over the past several years because of more stringent motor vehicle standards and cleaner burning fuels. Emissions of ROG and NO_x decreased from 2000 to 2010 and are projected to continue decreasing from 2010 to 2035 (CARB 2013).

Acute health effects of ozone exposure include increased respiratory and pulmonary resistance, cough, pain, shortness of breath, and lung inflammation. Chronic health effects include permeability of respiratory epithelia and possibility of permanent lung impairment (EPA 2016).

Nitrogen Dioxide

 NO_2 is a brownish, highly reactive gas that is present in all urban environments. The major human-made sources of NO_2 are combustion devices, such as boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines. Combustion devices emit primarily nitric oxide (NO), which reacts through oxidation in the atmosphere to form NO_2 . The combined emissions of NO and NO_2 are referred to as NO_X and are reported as equivalent NO_2 . Because NO_2 is formed and depleted by reactions associated with photochemical smog (ozone), the NO_2 concentration in a particular geographical area may not be representative of the local sources of NO_X emissions (EPA 2012).

Acute health effects of exposure to NO_x includes coughing, difficulty breathing, vomiting, headache, eye irritation, chemical pneumonitis or pulmonary edema, breathing abnormalities, cough, cyanosis, chest pain, rapid heartbeat, and death. Chronic health effects include chronic bronchitis and decreased lung function (EPA 2016).

Particulate Matter

Respirable particulate matter with an aerodynamic diameter of 10 micrometers or less is referred to as PM₁₀. PM₁₀ consists of particulate matter emitted directly into the air, such as fugitive dust, soot, and smoke from mobile and stationary sources, construction operations, fires and natural windblown dust, and particulate matter formed in the atmosphere by reaction of gaseous precursors (CARB 2013). Fine particulate matter (PM_{2.5}) includes a subgroup of smaller particles that have an aerodynamic diameter of 2.5 micrometers or less. PM₁₀ emissions in the SVAB are dominated by emissions from area sources, primarily fugitive dust from vehicle travel on unpaved and paved roads, farming operations, construction and

demolition, and particles from residential fuel combustion. Direct emissions of PM_{10} are projected to remain relatively constant through 2035. Direct emissions of $PM_{2.5}$ have steadily declined in the SVAB between 2000 and 2010 and then are projected to increase very slightly through 2035. Emissions of $PM_{2.5}$ in the SVAB are dominated by the same sources as emissions of PM_{10} (CARB 2013).

Acute health effects of PM_{10} exposure include breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular diseases, and premature death. Chronic health effects include alterations to the immune system and carcinogenesis (EPA 2016).

EMISSIONS INVENTORY

Monitoring Station Data and Attainment Area Designations

Criteria air pollutant concentrations are measured at several monitoring stations in the SVAB. The Elk Grove-Bruceville Road station is the closest station to the SOIA area with recent data for ozone, $PM_{2.5}$, and PM_{10} . Where there was no data available for the Elk Grove-Bruceville Road station, data from the next closest station (Sacramento Health Department Stockton Boulevard) was used. Table 3.3-2 summarizes the air quality data from the last 3 years (2013-2015).

| iubio 0:0 2 | Table 3.3-2 Su | ummary of Annual Data on | Ambient Air Qualit | ty (2013-2015) ¹ |
|-------------|----------------|--------------------------|---------------------------|-----------------------------|
|-------------|----------------|--------------------------|---------------------------|-----------------------------|

| | 2013 | 2014 | 2015 |
|---|-------------------|-------------|------------------|
| Ozone | · | | |
| Maximum concentration (1-hr/8-hr avg, ppm) | 0.086/0.069 | 0.089/0.072 | 0.091/0.082 |
| Number of days state standard exceeded (1-hr/8-hr) | 0/0 | 0/2 | 0/2 |
| Number of days national standard exceeded (8-hr) | 0 | 1 | 2 |
| Fine Particulate Matter (PM _{2.5}) | · | | |
| Maximum concentration (24-hour μg/m³) | 38.0 | 52.2 | 36.5 |
| Number of days national standard exceeded (24-hour measured²) | 10.22 | 02 | 3.5 ² |
| Respirable Particulate Matter (PM ₁₀) | · | | |
| Maximum concentration (µg/m³) | 50.0 ² | 41.02 | 42.02 |
| Number of days state standard exceeded | 6.1 | 0 | 0 |
| Number of days national standard exceeded | 0 | 0 | 0 |

Notes: µg/m³ = micrograms per cubic meter; ppm = parts per million

Both CARB and EPA use this type of monitoring data to determine their attainment status with respect to the CAAQS and NAAQS for criteria air pollutants (attainment designations are summarized above in Table 3.3-1).

TOXIC AIR CONTAMINANTS

According to the *California Almanac of Emissions and Air Quality* (CARB 2013), the majority of the estimated health risks from toxic air contaminants (TACs) can be attributed to relatively few compounds, the most important being diesel PM. Diesel PM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances. Although diesel PM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emissions control system is being used. Unlike

¹ Measurements from the Elk Grove-Bruceville Road Court station for ozone, respirable particulate matter (PM10), and fine particulate matter (PM2.5).

² Data was unavailable for Elk Grove-Bruceville Road station, thus next closest station data was used (Sacramento Health Department Stockton Boulevard station). Source: CARB 2016a

the other TACs, no ambient monitoring data are available for diesel PM because no routine measurement method currently exists. However, CARB has made preliminary concentration estimates based on a PM exposure method. This method uses the CARB emissions inventory's PM_{10} database, ambient PM_{10} monitoring data, and the results from several studies to estimate concentrations of diesel PM. In addition to diesel PM, the TACs for which data are available that pose the greatest existing ambient risk in California are benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene.

Diesel PM poses the greatest health risk among these 10 TACs mentioned. Based on receptor modeling techniques, CARB estimated its health risk to be 360 excess cancer cases per million people in the SVAB in the year 2000. Since 1990, the health risk associated with diesel PM has been reduced by 52 percent. Overall, levels of most TACs, except para-dichlorobenzene and formaldehyde, have decreased since 1990 (CARB 2013).

ODORS

Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals can smell very minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; an odor that is offensive to one person may be perfectly acceptable to another (e.g., fast food restaurant). It is important to also note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Sources of odor in the area consist of agricultural operations, including cattle operations, including a large-scale cattle operation approximately 0.70 mile southwest of the SOIA area.

SENSITIVE RECEPTORS

Sensitive receptors are generally considered to include those land uses where exposure to pollutants could result in health-related risks to sensitive individuals, such as children or the elderly. Residential dwellings, schools, hospitals, playgrounds, and similar facilities are of primary concern because of the presence of individuals particularly sensitive to pollutants and/or the potential for increased and prolonged exposure of individuals to pollutants.

The closest nearby existing sensitive receptors consist primarily of residential land uses located along the northern, western, and eastern boundaries of the SOIA area, and existing residences within the SOIA area. Additionally, Henry Backer Sr. Park is located adjacent to the northern boundary of the SOIA area, along Bilby Road.

3.3.2 Regulatory Framework

Air quality within the SOIA area is regulated through the efforts of various federal, State, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, planning, policy-making, education, and a variety of other programs. The agencies responsible for improving the air quality within the air basins are discussed below.

FEDERAL

U.S. Environmental Protection Agency

The EPA has been charged with implementing national air quality programs. EPA's air quality mandates are drawn primarily from the federal Clean Air Act (CAA), which was enacted in 1970. The most recent major amendments made by Congress were in 1990.

Criteria Air Pollutants

The CAA required EPA to establish NAAQS. As shown in Table 3.3-3, EPA has established primary and secondary NAAQS for the following criteria air pollutants: ozone, CO, NO₂, SO₂, PM₁₀, PM_{2.5}, and lead. The primary standards protect the public health and the secondary standards protect public welfare. The CAA also required each state to prepare a State implementation plan (SIP) for attaining and maintaining the NAAQS. The federal Clean Air Act Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments, and whether implementation will achieve air quality goals. If EPA determines a SIP to be inadequate, a federal implementation plan that imposes additional control measures may be prepared for the nonattainment area. If an approvable SIP is not submitted or implemented within the mandated time frame, sanctions may be applied to transportation funding and stationary air pollution sources in the air basin.

Table 3.3-3 Ambient Air Quality Standards

| Dollutont | Averaging Time | Californiash | National ^c | | |
|--|-------------------------|-----------------------------------|------------------------|--------------------------|--|
| Pollutant | Averaging Time | California ^{a,b} | Primary ^{b,d} | Secondary ^{b,e} | |
| 0 | 1-hour | 0.09 ppm (180 μg/m³) | _e | Company of the devel | |
| Ozone | 8-hour | 0.070 ppm (137 µg/m³) | 0.070 ppm (147 µg/m³) | Same as primary standard | |
| 0 1 (00) | 1-hour | 20 ppm (23 mg/m³) | 35 ppm (40 mg/m³) | | |
| Carbon monoxide (CO) | 8-hour | 9 ppmf (10 mg/m ³) | 9 ppm (10 mg/m³) | Same as primary standard | |
| Nitro con diquido (NO.) | Annual arithmetic mean | 0.030 ppm (57 μg/m ³) | 53 ppb (100 μg/m³) | Same as primary standard | |
| Nitrogen dioxide (NO ₂) | 1-hour | 0.18 ppm (339 μg/m³) | 100 ppb (188 μg/m³) | _ | |
| | 24-hour | 0.04 ppm (105 μg/m³) | _ | _ | |
| Sulfur dioxide (SO ₂) | 3-hour | _ | _ | 0.5 ppm (1300 µg/m³) | |
| | 1-hour | 0.25 ppm (655 μg/m³) | 75 ppb (196 µg/m³) | _ | |
| Respirable particulate | Annual arithmetic mean | 20 μg/m ³ | _ | 0 | |
| matter (PM ₁₀) | 24-hour | 50 μg/m ³ | 150 μg/m³ | Same as primary standard | |
| Fine particulate matter | Annual arithmetic mean | 12 µg/m³ | 12.0 μg/m³ | 15.0 μg/m ³ | |
| (PM _{2.5}) | 24-hour | _ | 35 µg/m³ | Same as primary standard | |
| | Calendar quarter | _ | 1.5 μg/m³ | Same as primary standard | |
| Lead ^f | 30-Day average | 1.5 μg/m³ | _ | _ | |
| | Rolling 3-Month Average | - | 0.15 μg/m³ | Same as primary standard | |
| Hydrogen sulfide | 1-hour | 0.03 ppm (42 μg/m³) | No national | | |
| Sulfates | 24-hour | 25 µg/m³ | | | |
| Vinyl chloride ^f | 24-hour | 0.01 ppm (26 µg/m³) | | | |
| Visibility-reducing particulate matter | 8-hour | Extinction of 0.23 per km | sta | andards | |

Table 3.3-3 Ambient Air Quality Standards

Notes: µg/m³ = micrograms per cubic meter; km = kilometers; ppb = parts per billion; ppm = parts per million.

a California standards for ozone, carbon monoxide, SO₂ (1- and 24-hour), NO₂, particulate matter, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

- b Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over three years, is equal to or less than the standard. The PM₁₀ 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. The PM_{2.5} 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. Environmental Protection Agency for further clarification and current federal policies.
- d National primary standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- e National secondary standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- The California Air Resources Board has identified lead and vinyl chloride as toxic air contaminants with no threshold of exposure for adverse health effects determined.

 These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

Source: CARB 2016b

Hazardous Air Pollutants and Toxic Air Contaminants

TACs, or in federal parlance, hazardous air pollutants (HAPs) are a defined set of airborne pollutants that may pose a present or potential hazard to human health. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

A wide range of sources, from industrial plants to motor vehicles, emit TACs. The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis or genetic damage; or short-term acute affects such as eye watering, respiratory irritation (a cough), running nose, throat pain, and headaches.

For evaluation purposes, TACs are separated into carcinogens and non-carcinogens based on the nature of the physiological effects associated with exposure to the pollutant. Carcinogens are assumed to have no safe threshold below which health impacts would not occur. This contrasts with CAPs for which acceptable levels of exposure can be determined and for which the ambient standards have been established (Table 3.3-3). Cancer risk from TACs is expressed as excess cancer cases per one million exposed individuals, typically over a lifetime of exposure.

EPA and, in California, CARB regulate HAPs and TACs, respectively, through statutes and regulations that generally require the use of the maximum available control technology or best available control technology for toxics to limit emissions.

STATE

CARB is the agency responsible for coordination and oversight of State and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA). The CCAA, which was adopted in 1988, required CARB to establish CAAQS (Table 3.3-3).

Criteria Air Pollutants

CARB has established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, visibility-reducing particulate matter, and the above-mentioned criteria air pollutants. In most cases the CAAQS are more stringent than the NAAQS. Differences in the standards are generally explained by the health effects studies considered

during the standard-setting process and the interpretation of the studies. In addition, the CAAQS incorporate a margin of safety to protect sensitive individuals.

The CCAA requires that all local air districts in the state endeavor to attain and maintain the CAAQS by the earliest date practical. The CCAA specifies that local air districts should focus particular attention on reducing the emissions from transportation and area-wide emission sources, and provides air districts with the authority to regulate indirect sources.

Toxic Air Contaminants

TACs in California are regulated primarily through the Tanner Air Toxics Act (Assembly Bill [AB] 1807, Chapter 1047, Statutes of 1983) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588, Chapter 1252, Statutes of 1987). AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. Research, public participation, and scientific peer review are required before CARB can designate a substance as a TAC. To date, CARB has identified more than 21 TACs and adopted EPA's list of HAPs as TACs. Most recently, PM exhaust from diesel engines (diesel PM) was added to CARB's list of TACs.

After a TAC is identified, CARB then adopts an airborne toxics control measure for sources that emit that particular TAC. If a safe threshold exists for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If no safe threshold exists, the measure must incorporate best available control technology for toxics to minimize emissions.

The Hot Spots Act requires that existing facilities that emit toxic substances above a specified level prepare an inventory of toxic emissions, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures.

CARB has adopted diesel exhaust control measures and more stringent emissions standards for various transportation-related mobile sources of emissions, including transit buses, and off-road diesel equipment (e.g., tractors, generators). Over time, the replacement of older vehicles will result in a vehicle fleet that produces substantially lower levels of TACs than under current conditions. Mobile-source emissions of TACs (e.g., benzene, 1-3-butadiene, diesel PM) have been reduced significantly over the last decade and will be reduced further in California through a progression of regulatory measures (e.g., Low Emission Vehicle/Clean Fuels and Phase II reformulated gasoline regulations) and control technologies. With implementation of CARB's Risk Reduction Plan, it is expected that diesel PM concentrations will be 85 percent less in 2020 in comparison to year 2000 (CARB 2000). Adopted regulations are also expected to continue to reduce formaldehyde emissions emitted by cars and light-duty trucks. As emissions are reduced, it is expected that risks associated with exposure to the emissions will also be reduced.

LOCAL

Sacramento Metropolitan Air Quality Management District

Criteria Air Pollutants

SMAQMD is the primary agency responsible for planning to meet NAAQS and CAAQS in Sacramento County. SMAQMD works with other local air districts in the Sacramento region to maintain the region's portion of the SIP for ozone. The SIP is a compilation of plans and regulations that govern how the region and State will comply with the federal Clean Air Act requirements to attain and maintain the NAAQS for ozone. The Sacramento Region has been designated as a "severe" 8-hour ozone nonattainment area with an extended attainment deadline of June 15, 2019.

SMAQMD has developed a set of guidelines for use by lead agencies when preparing environmental documents. The guidelines contain thresholds of significance for criteria pollutants and TACs, and also make recommendations for conducting air quality analyses. After SMAQMD guidelines have been consulted and the air quality impacts of a project have been assessed, the lead agency's analysis undergoes a review by

SMAQMD. SMAQMD submits comments and suggestions to the lead agency for incorporation into the environmental document.

All projects are subject to adopted SMAQMD rules and regulations in effect at the time of construction. Specific rules applicable to the construction of future projects within the SOIA area, if annexed, may include but are not limited to the following:

- Rule 201: General Permit Requirements. Any project that includes the use of equipment capable of releasing emissions to the atmosphere may be required to obtain permit(s) from SMAQMD before equipment operation. The applicant, developer, or operator of a project that includes an emergency generator, boiler, or heater should contact SMAQMD early to determine whether a permit is required, and to begin the permit application process. Portable construction equipment (e.g., generators, compressors, pile drivers, lighting equipment) with an internal combustion engine greater than 50 horsepower must have a SMAQMD permit or CARB portable equipment registration.
- Rule 202: New Source Review. The purpose of this rule is to provide for the issuance of authorities to construct and permits to operate at new and modified stationary air pollution sources and to provide mechanisms, including emission offsets, by which authorities to construct such sources may be granted without interfering with the attainment or maintenance of ambient air quality standards.
- Rule 402: Nuisance. A person shall not discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause or have natural tendency to cause injury or damage to business or property.
- Rule 403: Fugitive Dust. The developer or contractor is required to control dust emissions from earthmoving activities or any other construction activity to prevent airborne dust from leaving the project area.
- Rule 902: Asbestos. The developer or contractor is required to notify SMAQMD of any regulated renovation or demolition activity. Rule 902 contains specific requirements for surveying, notification, removal, and disposal of material containing asbestos.

Toxic Air Contaminants

At the local level, air districts may adopt and enforce CARB control measures. Under SMAQMD Rule 201 ("General Permit Requirements"), Rule 202 ("New Source Review"), and Rule 207 ("Federal Operating Permit"), all sources that possess the potential to emit TACs are required to obtain permits from SMAQMD. Permits may be granted to these operations if they are constructed and operated in accordance with applicable regulations, including New Source Review standards and air toxics control measures. SMAQMD limits emissions and public exposure to TACs through a number of programs. SMAQMD prioritizes TAC-emitting stationary sources based on the quantity and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors. Sensitive receptors are people, or facilities that generally house people (e.g., schools, hospitals, residences), that may experience adverse effects from unhealthful concentrations of air pollutants.

Odors

Although offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable stress among the public and often generating citizen complaints to local governments and SMAQMD. SMAQMD's Rule 402 (Nuisance) regulates odorous emissions.

Sacramento County General Plan

The goal of the Air Quality Element of the General Plan is to improve air quality to promote the public health, safety, welfare, and environmental quality of the community (Sacramento County 2011). There are 22 air quality-specific policies, including the following policies that may be applicable to the project:

■ Policy AQ-1. New development shall be designed to promote pedestrian/bicycle access and circulation to encourage community residents to use alternative modes of transportation to conserve air quality and minimize direct and indirect emission of air contaminants.

- Policy AQ-3. Buffers and/or other appropriate mitigation shall be established on a project-by-project basis and incorporated during review to provide for protection of sensitive receptors from sources of air pollution or odor. The CARB's "Air Quality and Land Use Handbook: A Community Health Perspective," and the AQMD's approved Protocol (Protocol for Evaluating the Location of Sensitive Land uses Adjacent to Major Roadways) shall be utilized when establishing these buffers.
- Policy AQ-4. Developments which meet or exceed thresholds of significance for ozone precursor pollutants as adopted by the SMAQMD, shall be deemed to have a significant environmental impact. An Air Quality Mitigation Plan shall be submitted to the County of Sacramento prior to project approval, subject to review and recommendation as to technical adequacy by the Sacramento Metropolitan Air Quality Management District.
- ✓ Policy AQ-5. Reduce emissions associated with vehicle miles travelled and evaporation by reducing the surface area dedicated to parking facilities; reduce vehicle emissions associated with "hunting" for onstreet parking by implementing innovative parking innovative parking solutions including shared parking, elimination of minimum parking requirements, creation of maximum parking requirements, and utilize performance pricing for publicly owned parking spaces both on- and off-street, as well as creating parking benefit districts.
- Policy AQ-10. Encourage vehicle trip reduction and improved air quality by requiring development projects that exceed the SMAQMD's significance thresholds for operational emissions to provide ongoing, cost-effective mechanisms for transportation services that help reduce the demand for existing roadway infrastructure.
- Policy AQ-11. Encourage contractors operating in the county to procure and to operate low-emission vehicles, and to seek low emission fleet status for their off-road equipment.
- Policy AQ-16. Prohibit the idling of on-and off-road engines when the vehicle is not moving or when the off-road equipment is not performing work for a period of time greater than five minutes in any one-hour period.
- Policy AQ-17. Promote optimal air quality benefits through energy conservation measures in new development.
- Policy AQ-19. Require all feasible reductions in emissions for the operation of construction vehicles and equipment on major land development and roadway construction projects.
- Policy AQ-21. Support SMAQMD's particulate matter control measures for residential wood burning and fugitive dust.

City of Elk Grove General Plan

The SOIA area lies in an unincorporated area of Sacramento County; however, the site could potentially be annexed by the City of Elk Grove. Therefore, the City's policies with respect to air quality would be applicable. Relevant policies and standards related to air quality are described 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.
- Policy CAQ-27. The City shall promote energy conservation measures in new development to reduce onsite 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.

- 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.
- 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 tripreduction, energy conservation, or similar features, including any such features which may be required by the Zoning Code or other applicable codes.
- ▲ 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.]
- 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.
- 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.

City of Elk Grove Climate Action Plan

The Elk Grove Climate Action Plan (CAP) was adopted on March 27, 2013 by the Elk Grove City Council and was incorporated into the Elk Grove General Plan Sustainability Element by reference. The CAP includes goals, implementation measures, and action items related to air quality and developed to help the city reach its goals. The CAP includes GHG emission reduction targets, strategies, and implementation measures developed to help the city reach these targets. Reduction strategies address GHG emissions associated with the build environment, resource conservation, transportation, and municipal programs.

However, the CAP does not demonstrate the City's ability to meet 2030 reduction goals (set by SB 32) and subsequently future target years (e.g., 2050). Thus, because of the anticipated buildout date of the SOIA area being beyond 2020 this method of analysis would not demonstrate consistency with State GHG targets set by legislation (i.e., SB 32) or recommendations in the 2017 proposed Scoping Plan.

Updates to the CAP have been initiated as part of the general plan update process. The updated CAP (and associated key policies to be included in the policy document) will be consistent with new State legislation and guidance issued since the existing CAP was adopted in 2013, such as SB 32, EO B-30-15, and updates to the State's Climate Change Scoping Plan.

3.3.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

The Bilby Ridge SOIA consists of approximately 480 acres and is located in the unincorporated area of Sacramento County, just south of the City of Elk Grove. For purposes of evaluating the impacts of the development of the SOIA area, a conceptual land use plan has been development and is described in Chapter 3, "Project Description." This conceptual land use plan was used in the air quality impact analysis

provided below. Regional and local criteria air pollutant emissions and associated impacts, as well as impacts from TACs, CO concentrations, and odors were assessed in accordance with SMAQMD-recommended methodologies.

Construction-related emissions of criteria air pollutants and precursors were calculated using the California Emissions Estimator Model (CalEEMod) Version 2016.3.1 computer program, as recommended by (CAPCOA 2016). Modeling was based on conceptual land use scenario that could take place on the SOIA site (e.g., size, number of units being built, area to be graded, area to be paved, energy information), where available; reasonable assumptions based on typical construction activities; and default values in CalEEMod that are based on the SOIA location and land use type.

For program-level analysis of annexation of lands where it is not possible to know how much construction activity would occur in a given year, SMAQMD recommends that lead agencies conservatively assume 25 percent of the total land uses could be constructed in a single year (SMAQMD 2016b: 9-4). For the purposes of this analysis, and to ensure conservative results, 25 percent of the land uses that could be developed were assumed to be constructed in the earliest possible construction year (2018). This is a conservative assumption because it is unlikely that 25 percent of potential future development in the proposed SOIA Area could be constructed in a single year, and construction equipment fleet emissions are expected to continue to decrease after 2018 with increased emission controls and standards. For a detailed description of model input and output parameters and assumptions, refer to Appendix B.

The potential for traffic generated by potential future development within the SOIA area to result in localized concentrations of CO that exceed NAAQS and CAAQS for this pollutant was evaluated using SMAQMD-recommended screening criteria, as described in Impact 3.3-3 below.

Health risk from potential future SOIA area development construction- and operational-related emissions of TACs were assessed qualitatively. This assessment is based on the location from which construction- or operational-related TAC emissions would be generated by land uses developed under the conceptual land use scenario relative to on-site sensitive receptors as construction occurs, as well as the duration during which TAC exposure would occur.

Similarly, the assessment of odor-related impacts is based on the types of odor sources associated with the types of land uses that could be developed on the SOIA area and their location relative to sensitive receptors, both on and off site.

THRESHOLDS OF SIGNIFICANCE

Per Appendix G of the CEQA Guidelines and SMAQMD recommendations, air quality impacts would be significant if development of the SOIA area would:

- cause construction-generated emissions of criteria air pollutant or precursors that exceed the SMAQMD-recommended thresholds of 85 lb/day for NO_x, 80 lb/day and 14.6 tons/year for PM₁₀, and 82 lb/day and 15 tons/year for PM_{2.5} and/or uncontrolled fugitive dust emissions. SMAQMD does not specific a mass emission threshold for evaluating construction-generated emissions of PM_{2.5}. Because PM_{2.5} is a subset of PM₁₀, the mass emission thresholds of 80 lb/day and 14.6 tons/year for PM₁₀ serves as a proxy to determine whether operational emissions of PM_{2.5} would be a significant contribution to the SVAB;
- ✓ result in a net increase in long-term operational emissions of criteria air pollutant or precursors that exceed the SMAQMD-recommended thresholds of 65 lb/day for ROG and NOx, 80 lb/day and 14.6 tons/year for PM₁₀, and 82 lb/day and 15 tons/year for PM_{2.5};
- result in long-term operational local mobile-source CO emissions that would violate or contribute substantially to localized concentrations that exceed the 1-hour CAAQS of 20 ppm or the 8-hour CAAQS of 9 ppm;

■ generate TAC emissions that would expose sensitive receptors to an incremental increase in cancer risk
that that exceed 10 in 1 million and/or a hazard index of 1.0 or greater; or

create objectionable odors affecting a substantial number of people.

ISSUES NOT EVALUATED FURTHER

All issues applicable to air quality listed under the significance criteria above are addressed in this section.

IMPACT ANALYSIS

Impact 3.3-1: Construction emissions of criteria air pollutants and ozone precursors.

Construction-related activities associated with future development within the SOIA area upon annexation could result in emissions of ROG, NOx, PM_{10} and $PM_{2.5}$ from site preparation (e.g., excavation, clearing), offroad equipment, material and equipment delivery trips, and worker commute trips, and other miscellaneous activities (e.g., building construction, asphalt paving, application of architectural coatings). Construction activities could result in mass emissions of NO_X and PM_{10} that exceed SMAQMD's thresholds of 85 lb/day and 80 lb/day, respectively. Therefore, construction-generated emissions of NO_X and PM_{10} could contribute to the existing nonattainment status of the SVAB with respect to the CAAQS and NAAQS for ozone, the CAAQS for PM_{10} and the NAAQS for $PM_{2.5}$. This would be a **significant** impact.

Construction-related activities for the conceptual land use plan would result in emissions of ROG, NO_x, PM₁₀, and PM_{2.5} from site preparation (e.g., excavation, clearing), off-road equipment, material delivery, worker commute trips, and other miscellaneous activities (e.g., building construction, asphalt paving, application of architectural coatings). Fugitive dust emissions of PM₁₀ and PM_{2.5} are associated primarily with site preparation and vary as a function of soil silt content, soil moisture, wind speed, acreage of disturbance, and vehicle miles traveled on and off the site. Emissions of ozone precursors, ROG and NO_x, are emitted in the exhaust of construction equipment and on-road vehicles. Paving and the application of architectural coatings also results in off-gas emissions of ROG. PM₁₀ and PM_{2.5} are also contained in equipment and vehicle exhaust.

Typical construction activities would require all-terrain forks, fork lifts, cranes, pick-up and fuel trucks, compressors, loaders, backhoes, excavators, dozers, scrapers, pavement compactors, welders, concrete pumps, concrete trucks, and off-road haul trucks, as well as other diesel-fueled equipment as necessary.

Based on SMAQMD guidance for program-level analysis of annexation of lands where it is not known how much construction activity would occur in a given year, 25 percent of the land uses that could be developed as part of the conceptual land use scenario were assumed to be constructed in one single year, and modeled as such, in the earliest possible construction year (2018). Conservative assumptions were used and individual phases were overlapped (i.e., building construction, paving, and architectural coating) to account for construction activities on different parts of the site occurring simultaneously. As such, reported emissions represent a conservative estimate of maximum daily emissions. It is also important to note that the equipment exhaust emission rates of construction in the future would decrease as newer, more emission-efficient construction equipment replaces older, less efficient equipment. For specific assumptions and modeling inputs, refer to Appendix B.

Table 3.3-4 summarizes the modeled maximum daily emissions from construction activity over the estimated 1-year period. Annual emissions for PM_{10} and $PM_{2.5}$ for the modeled year of construction were also estimated to allow for evaluation of compliance with SMAQMD's recommended tons/year thresholds.

As shown in Table 3.3-4, maximum daily emissions of NO_X and PM_{10} could potentially exceed applicable mass emission thresholds. Daily emissions of ROG and $PM_{2.5}$, and annual emissions of PM_{10} and $PM_{2.5}$ would not exceed the respective thresholds. However, it is likely that emissions of NO_X and PM_{10} would exceed

applicable thresholds. Additionally, because of the nonattainment status of the SVAB with respect to the CAAQS for PM_{10} and the NAAQS for $PM_{2.5}$, construction-generated fugitive dust emissions may result in adverse air quality impacts to existing surrounding land uses and may contribute to the existing adverse air quality condition in the SVAB. Therefore, construction emissions could contribute to the existing nonattainment condition in the SVAB with respect to the CAAQS and NAAQS for ozone, the CAAQS for PM₁₀ and the NAAQS for PM_{2.5}. This would be a **significant** impact.

Table 3.3-4 Summary of Maximum Daily Emissions of Criteria Air Pollutants and Precursors Associated with Project Construction

| | ROG | NOx | PN | PM ₁₀ | | N _{2.5} |
|----------------------------------|--------|--------|--------|------------------|--------|------------------|
| | lb/day | lb/day | lb/day | tons/year | lb/day | tons/year |
| 2018 | 672 | 240 | 84 | 2 | 48 | 1 |
| SMAQMD Threshold of Significance | NONE | 85 | 80 | 14.6 | 82 | 15 |
| Exceed Significance Threshold? | N/A | Yes | Yes | No | No | No |

Notes: Notes: N/A= not applicable; Ib/day = pounds per day; tons/year = tons per year; ROG = reactive organic gases; NO_X = oxides of nitrogen; PM₁₀ = respirable particulate matter; PM_{2.5} = fine particulate matter.

Total values may not add correctly because of rounding. See Appendix B for detailed input parameters and modeling results.

Source: Modeling performed by Ascent Environmental 2017

Mitigation Measure 3.3-1: Construction exhaust and fugitive dust emissions controls

At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants implement SMAQMD's Basic Construction Emission Control Practices and SMAQMD's Enhanced Exhaust Control Practices during any construction or ground disturbance activities to reduce construction-related fugitive dust emissions, diesel PM, and NO_X emissions. These measures are included below and are consistent with General Plan Policy CAQ-30 and Policy CAQ-33. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

Basic Construction Fugitive Dust Emissions Control Practices

- Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.
- Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- ▲ Limit vehicle speeds on unpaved roads to 15 miles per hour (mph).
- ▲ All roadways, driveways, sidewalks, parking lots to be paved should completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [required by California Code of Regulations, Title 13, sections 2449(d)(3) and 2485]. Provide clear signage that posts this requirement for workers at the entrances to the site.

Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated.

Enhanced Exhaust Control Practices

- ✓ Prior to any activities on the site, the applicant shall submit to the City and SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project before any grading activities. The inventory shall include the horsepower rating, engine model year, and projected hours of use for each piece of equipment. The project applicant shall provide the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman. The information shall be submitted at least 4 business days before the use of subject heavy-duty off-road equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs.
- Prior to any grading activities, the applicant shall provide a plan for approval by the City and SMAQMD demonstrating that the heavy-duty off-road vehicles (50 horsepower or more) to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project wide fleet-average 20-90 percent NOx reduction (depending on available technology and engine Tier) and 45 percent particulate reduction compared to the most recent CARB fleet average. This plan shall be submitted in conjunction with the equipment inventory. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, aftertreatment products, and/or other options as they become available.
- ✓ The applicant shall ensure that emissions from all off-road, diesel-powered equipment used on the project area do not exceed 40 percent opacity for more than three minutes in any one hour. Use of any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be discontinued immediately until equipment is repaired or replaced. Non-compliant equipment will be documented and a summary provided to the lead agency and SMAQMD monthly. A visual survey of all in-operation equipment shall be made at least weekly. A monthly summary of the visual survey shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey.

Enhanced Fugitive PM Dust Control Practices

Soil Disturbance Areas

- Water exposed soil with adequate frequency for continued moist soil. However, do not overwater to the extent that sediment flows off the site.
- Suspend excavation, grading, and/or demolition activity when wind speeds exceed 20 mph.
- Install wind breaks (e.g., plant trees, solid fencing) on windward side(s) of construction areas.
- ✓ Plant vegetative ground cover (fast-germinating native grass seed) in disturbed areas as soon as possible. Water appropriately until vegetation is established.

Unpaved Roads

- ▲ Install wheel washers for all exiting trucks, or wash off all trucks and equipment leaving the site.
- ✓ Treat site accesses to a distance of 100 feet from the paved road with a 6 to 12-inch layer of wood chips, mulch, or gravel to reduce generation of road dust and road dust carryout onto public roads.
- Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The phone number of the District shall also be visible to ensure compliance.

Significance after Mitigation

Implementation of Mitigation Measure 3.3-1 would result in a reduction of fugitive PM_{10} and $PM_{2.5}$ dust and NO_X emissions from off-road equipment. Additionally, development within the SOIA Area, upon annexation, would be subject to City of Elk Grove General Plan policy CAQ-33, which requires assessment and mitigation of criteria air pollutant emissions, including the use of low-emission vehicles and equipment during construction, where feasible. If emissions reduction measures to support policy CAQ-30 of the City of Elk Grove General Plan were to be developed and implemented before construction were to begin, emissions would be further reduced.

However, because of the uncertainty of construction timing, phasing, and overlap of development of the SOIA area, construction-related emissions of criteria air pollutants and precursors could still exceed significance thresholds. No additional feasible mitigation is available at this time. Therefore, this impact would be significant and unavoidable.

Impact 3.3-2: Long-term operational emissions of air pollutants.

While approval of the SOIA would not result in any physical changes to the environment, development in the SOIA area upon future annexation could result in long-term operational emissions of ROG, NOx, PM $_{10}$ and PM $_{2.5}$ that exceed SMAQMD-recommended mass emission thresholds and, therefore, could conflict with the air quality planning efforts and contribute substantially to the nonattainment status of the SVAB with respect to the CAAQS and NAAQS for ozone, the CAAQS forPM $_{10}$ and the NAAQS forPM $_{2.5}$. This would be **significant** impact.

Approval of the SOIA would not result in any physical changes to the environment or increases in long-term operational emission of air pollutants. However, approval of the SOIA would remove an obstacle to potential future annexation and development of the site. Operations associated with development of the SOIA area upon future annexation would result in the generation of long-term operational emissions of ROG, NOx, PM_{10} , and $PM_{2.5}$ as a result of mobile, stationary, and area sources. Mobile-source emissions of criteria air pollutants and precursors would result from vehicle trips generated by residents, users of the parks, students at the elementary school, as well as by employee commute trips, and other associated vehicle trips (e.g., delivery of supplies, shoppers, maintenance vehicles for commercial land uses). Stationary and areawide sources would include the combustion of natural gas for space and water heating (i.e., energy use), the use of landscaping equipment and other small equipment, the periodic application of architectural coatings, and the use of consumer products.

Table 3.3-5 summarizes the maximum daily operational-related emissions of criteria air pollutants during the summer season (higher emissions scenario), as well as annual emissions of PM_{10} and $PM_{2.5}$. Emissions were calculated based on the proposed conceptual land use scenario and using default trip rates and trip lengths in CalEEMod.

Table 3.3-5 Summary of Maximum (Unmitigated) Operational Emissions of Criteria Air Pollutants and Precursors at Full Buildout (2019)

| Causea Time | Maximum Daily Emissions (lb/day) | | | | | | | |
|-------------------|----------------------------------|-----|------------------|-------------------|--|--|--|--|
| Source Type | ROG | NOx | PM ₁₀ | PM _{2.5} | | | | |
| Area ¹ | 151 | 2 | 1 | 1 | | | | |
| Energy | 2 | 18 | 1 | 1 | | | | |
| Mobile | 142 | 422 | 333 | 91 | | | | |
| Total | 295 | 442 | 335 | 93 | | | | |
| Annual Emissions | _3 | _3 | 53 tons/year | 14.5 tons/year | | | | |

Table 3.3-5 Summary of Maximum (Unmitigated) Operational Emissions of Criteria Air Pollutants and Precursors at Full Buildout (2019)

| Source Type | | missions (lb/day) | | |
|---|-----|---------------------|------------------------------|----------------------------|
| Source Type | ROG | ROG NO _X | | PM _{2.5} |
| SMAQMD Threshold of Significance ² | 65 | 65 | 80 lb/day and 14.6 tons/year | 82 lb/day and 15 tons/year |
| Exceed Significance Threshold? | Yes | Yes | Yes | Yes |

Notes: Notes: Ib/day = pounds per day; tons/year = tons per year; ROG = reactive organic gases; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter.

Total values may not add correctly because of rounding. See Appendix B for detailed input parameters and modeling results.

Source: Modeling performed by Ascent Environmental 2017

As shown in Table 3.3-5, operation-related activities would result in mass emissions of ROG, NO_x , PM_{10} , and $PM_{2.5}$ that exceed the SMAQMD-recommended thresholds of significance. Thus, ROG, NO_x , PM_{10} , and $PM_{2.5}$ emissions generated under full buildout of the SOIA may result in adverse air quality impacts to existing surrounding land uses and may contribute to the existing adverse air quality condition in the SVAB. This would be a **significant** impact.

Mitigation Measure 3.3-2: Prepare an Air Quality Mitigation Plan to reduce potential operational emissions

At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants prepare and implement an operational air quality mitigation plan (AQMP) that achieves a 35 percent reduction in operational emissions of ROG and NO_x compared to unmitigated project emissions. The AQMP shall be prepared in accordance with guidance from SMAQMD's Recommended Guidance for Land Use Emission Reductions, Version 3.3 (SMAQMD 2016c). A 35 percent reduction is recommended by SMAQMD, rather than SMAQMD's standard 15 percent reduction, because SOIA area was not included in the 2016 Sacramento Area Council of Governments (SACOG) Metropolitan Transportation Plan/Sustainable Communities Strategy, which is used to develop mobile-source emissions inventories for the region, and used to show consistency with adopted air quality plans and not conflict with the ability to bring the SVAB into attainment of the CAAQS and NAAQS for ozone (SMAQMD 2016b:4). The AQMP shall also include all feasible measures to reduce operational emissions of PM₁₀, and PM_{2.5}, though SMAOMD has not determined any specific percent reductions for PM₁₀, and PM_{2.5} to be feasible (SMAQMD 2016c:4). The AQMP can include policies and emissions reduction measures demonstrating compliance with the City of Elk Grove's General Plan Conservation and Air Quality Element. The City's development of an AQMD may be conducted in parallel with implementation of Mitigation Measure 3.7-1a of this EIR, which requires implementation of on-site greenhouse gas reduction measures. The AQMP shall be approved by SMAQMD before the construction of any new land use development on the SOIA site. The City can require future developers of the SOIA site to be responsible for funding preparation of the AQMP. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

The AQMP can be prepared after a more detailed development plan is determined. However, in addition to the conditions of approval required by this mitigation measure, the following text shall also be included as a condition of approval for the annexation of territory in the SOIA area into the City of Elk Grove:

"All amendments to the detailed land use plan on which the AQMP is based and that have the potential to result in a change in ozone precursor emissions shall include an analysis which quantifies, to the extent

¹ Area-source emissions include emissions from landscaping, application of architectural coatings, and consumer products, and are estimated based on default model settings.

² Mass emission significance criteria apply to the sum of area, energy, and mobile sources.

³ SMAQMD does not recommend a tons-per-year threshold for evaluating emissions of ROG and NOx associated with the operation of land use developments.

practicable, the effect of the established AQMP on ozone precursor emissions. The amendment shall not increase total ozone precursor emissions above what was considered in the AQMP for the entire project area and shall achieve the original 35 percent reduction in total operational emissions. If the amendment would require a change in the AQMP to meet that requirement, then the proponent of the amendment shall consult with SMAQMD on the revised analysis and shall prepare a revised AQMP for approval by the City, in consultation with SMAQMD."

Significance after Mitigation

Implementation of Mitigation Measure 3.3-2 would require preparation of an AQMP for land use development on the SOIA area. This mitigation would exceed the 15 percent reduction provision of General Plan Policy CAQ-30. It would also be consistent with the City's General Plan Policy CAQ-32, which requires the implementation of an AQMP for land use development projects that may conflict with applicable air quality plans—in addition to those required by Policy CAQ-30. Preparation and implementation of an AQMP could potentially achieve a 35 percent reduction in emissions of ROG and NOx when compared to the unmitigated emissions scenario of 35 percent. Many of the measures implemented to reduce ROG and NOx would likely result in reductions of PM₁₀, and PM_{2.5}. However, even with a 35 percent reduction in operational emissions of ROG and NOx, emissions of these ozone precursors would continue to exceed SMAQMD's mass emission thresholds. Similarly, measures required by the AQMP may not be sufficient to reduce operational emission of PM₁₀, and PM_{2.5} to less than SMAQMD's applicable mass emission thresholds. Thus, future development within the SOIA area and the associated operations may contribute to the nonattainment status of the SVAB with respect to the CAAQS and NAAQS for ozone, the CAAQS for PM₁₀ and the NAAQS for PM_{2.5}. This impact would be **significant and unavoidable**.

Impact 3.3-3: Mobile-source CO concentrations.

While approval of the SOIA would not result in any physical changes to the environment, long-term operational mobile-source emissions of CO potentially generated by vehicle trips associated with future annexation and development of the SOIA area would not be large enough to violate or contribute substantially to localized concentrations of CO that exceed the CAAQS or NAAQS for CO. As a result, this impact would be **less than significant**.

Local mobile-source CO emissions near roadway intersections are a direct function of traffic volume, speed, and delay. Transport of CO is extremely limited because it disperses rapidly with distance from the source under normal meteorological conditions. However, under stable meteorological conditions, CO concentrations near roadways and/or intersections may reach unhealthy levels adversely affecting nearby sensitive land uses, such as residential units, hospitals, schools, and childcare facilities. CO is a pollutant of localized concern and, therefore, analyzed at the local level.

Approval of the SOIA would not result in any physical changes to the environment or increases in mobile source CO concentration. However, approval of the SOIA would remove an obstacle to potential future annexation and development of the site. Project-generated traffic would be associated primarily with the operational phase. As described in Section 3.13, "Traffic, Transportation, and Circulation," at complete buildout of the conceptual land use plan, up to 34,529 daily trips would be generated, including up to 2,730 trips during the a.m. peak hour and up to 3,097 during the p.m. peak hour.

SMAQMD recommends a screening methodology to determine whether CO emissions generated by traffic at congested intersections have the potential to exceed, or contribute to an exceedance of, the 8-hour CAAQS of 9.0 $\mu g/m^3$ or the 1-hour CAAQS of 20.0 $\mu g/m^3$ (SMAQMD 2016b). The screening methodology consists of two tiers of screening criteria, listed below. If the first tier is not met, then the second tier may be applied.

First-Tier

A project will result in a less-than-significant impact to air quality for local CO if:

▲ traffic generated by the project will not result in deterioration of intersection level of service (LOS) to LOS E or F, and

▲ the project will not contribute additional traffic to an intersection that already operates at LOS E or F.

Second-Tier

If all the following criteria are met, a project will result in a less-than-significant impact to air quality for local CO:

- ★ the project will not result in an affected intersection experiencing more than 31,600 vehicles per hour;
- ▲ the project will not contribute traffic to a tunnel, parking garage, bridge underpass, urban street canyon, or below-grade roadway; or other locations where horizontal or vertical mixing of air will be substantially limited; and
- ▲ the mix of vehicle types at the intersection is not anticipated to be substantially different from the County average (as identified by CalEEMod model).

If the conceptual land use plan were to be constructed, deterioration of LOS to unacceptable levels at area intersections could occur. However, because intersection-level analyses were not performed for this EIR, SMAQMD's first tier of screening criteria cannot be applied as part of this environmental review. The first tier would be used once a development plan is developed.

As described in Section 3.13, "Traffic, Transportation, and Circulation," and mentioned above, development of the SOIA area would generate a maximum of 2,730 trips during the a.m. peak hour and up to 3,097 during the p.m. peak hour. The highest daily volume for the cumulative-plus-project condition along the roadway segments analyzed is estimated to be 158,000 for SR 99 from the Bond Road on/off ramps to the Elk Grove Boulevard on/off. The percentage of daily traffic that occurs in the peak period (a.k.a., the K factor) for SR 99 in Sacramento County ranges from 6.35 percent to 10.31 percent (California Department of Transportation 2015). Conservatively assuming the highest end of this range and applying it to the highest-volume roadway segment in the study area of 158,000 vehicles per day, the segment of SR 99 from the Bond Road on/off ramps to the Elk Grove Boulevard on/off ramps would experience a peak-hour volume of approximately 16,290 vehicles per hour. This peak-hour volume does not approach the SMAQMD screening level of 31,600 vehicles per hour. Additionally, because of stricter vehicle emissions standards in newer cars, new technology, and increased fuel economy, CO emissions are expected to be substantially lower in future years compared to the vehicle fleet operating in the region under existing conditions.

The mix of vehicle types generated by the conceptual land use scenario within the SOIA area is not anticipated to have a greater percentage of heavy-duty vehicles and would not be substantially different from the County average. Furthermore, development within the SOIA would not contribute traffic to a tunnel, parking garage, bridge underpass, urban street canyon, below-grade roadway, or other location in which horizontal or vertical mixing of mobile-source CO emissions would be substantially limited. Thus, project-generated local mobile-source CO emissions would not result in or substantially contribute to concentrations of CO that exceed the 1-hour or 8-hour CAAQS and NAAQS. As a result, this impact would be **less than significant.**

Mitigation Measures

None required.

Impact 3.3-4: Exposure of sensitive receptors to TACs.

Approval of the SOIA would not result in any physical changes to the environment. Further, development associated with future annexation of the site would not result in the generation of TACs during construction that would result in an incremental increase in cancer risk greater than 10 in one million or a hazard index greater than 1.0 at existing or future sensitive receptors based on the short duration of construction activities and

distance to existing sensitive receptors. However, new operational TAC sources associated with commercial development may expose existing or new receptors to TAC emissions. This impact would be **significant**.

Approval of the SOIA would not result in any physical changes to the environment or exposure of sensitive receptors to TACs. However, approval of the SOIA would remove an obstacle to potential future annexation and development of the site which could result in the construction of TAC sources and potential exposure of sensitive receptors to TAC sources. The exposure of sensitive receptors to TAC emissions from project-generated construction and operational sources is discussed separately below. The TAC that is the focus of this analysis is diesel PM because it would be emitted during project construction and operation. Although other TACs exist (e.g., benzene, 1,3-butadiene, hexavalent chromium, formaldehyde, methylene chloride), they are primarily associated with industrial operations and the conceptual land use scenario does not include any industrial land uses.

Construction

Construction-related activities associated with the conceptual land use scenario would result in temporary, intermittent emissions of diesel PM from the exhaust of off-road, heavy-duty diesel equipment use for site preparation, grading, paving, application of architectural coatings, on-road truck travel, and other miscellaneous activities. For construction activity, diesel PM is the primary TAC of concern. On-road diesel-powered haul trucks traveling to and from the construction area to deliver materials and equipment are less of a concern because they would not stay on the site for long durations.

Diesel PM was identified as a TAC by CARB in 1998. The potential cancer risk from the inhalation of diesel PM outweighs the potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs (CARB 2003). With regards to exposure of diesel PM, the dose to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher level of health risk for any exposed receptor. According to the Office of Environmental Health Hazard Assessment (OEHHA), *Guidance Manual for Preparation of Health Risk Assessments*, which determine the exposure of sensitive receptors to TAC emissions should be based on a 30-year exposure period for estimating cancer risk at the maximum exposed individual resident (MEIR), with 9- and 70-year exposure periods at the MEIR as supplemental information. Furthermore, 70-year exposure period is required for estimating cancer burden or providing an estimate of population-wide risk (OEHHA 2015:8-1).

It is important to consider that the use of off-road heavy-duty diesel equipment would be limited to the construction phase. As construction progresses, activity intensity and duration would vary throughout the site. Emissions of diesel PM would not be generated at any single location during the entire construction phase because land uses would be developed at different locations throughout the SOIA area, as shown in the conceptual land use scenario. As construction progresses, activity intensity and duration would vary throughout the site. As such, diesel PM-emitting construction activity would not take place near any single existing or future receptor for extended periods of time, or event during the entire construction period.

Existing off-site residential receptors are located approximately 60 feet to the north and to the east of the SOIA area. Studies show that diesel PM is highly dispersive, and receptors must be near emission sources to result in the possibility of exposure to concentrations of concern and must be in close proximity for a long duration of time. Given the temporary and intermittent nature of construction activities likely to occur within close proximity to receptors the exposure of diesel PM to any one receptor would be limited (WRCC 2017).

Therefore, considering the relatively short duration of diesel PM-emitting construction activity at any one location of the SOIA area, the distance to the nearest off-site sensitive receptors, and the highly dispersive properties of diesel PM, construction-related TAC emissions would not expose sensitive receptors to an incremental increase in cancer risk greater than 10 in 1 million or a hazard index greater than 1.0.

Long-Term Operation

Operation of the conceptual land use plan could result in new sources of TACs associated with new vehicular trips on existing and new roadways as well as new sources of diesel PM associated with commercial delivery trucks occurring within the commercial and office land uses. New TAC sources could expose existing surrounding land uses and new receptors to TAC emissions. Development of the conceptual land use scenario would also locate new sensitive land uses near existing TAC sources associated with surrounding roadways.

Guidance from SMAQMD's Recommended Protocol for Evaluating the Location of Sensitive Land Uses Adjacent to Major Roadways and CARB's Air Quality and Land Use Handbook recommends that new sensitive receptors should not be placed within 500 feet of freeways or urban streets with traffic volumes that exceed 100,000 vehicles per day or rural roads with 50,000 vehicles per day (CARB 2005). As described in Section 3.13, "Traffic, Transportation, and Circulation," development within the SOIA would generate approximately 34,529 daily trips (i.e., new TAC sources) that travel on the surrounding roadway network. Further, under cumulative –plus-project conditions, traffic volumes along roadways adjacent to the SOIA area would range from 4,800 to 35,800 vehicles per day. These traffic volumes would not exceed the 100,000-vehicles-per-day criterion identified by SMQMD and CARB and would be spread through the City's roadway network, thus new and existing sensitive receptors would not be exposed to increased health risk.

The SOIA area is not near existing industrial or commercial land uses, thus would not be impacted by existing stationary TAC emission sources. The nearest roadways which would experience traffic volumes that exceed 100,000 vehicles per day in the cumulative plus project scenario are I-5 and SR-99 which would daily traffic volumes of 102,400 and 158,000 vehicles per day along their most heavily traveled segments within the study area. The SOIA area is approximately 1.75 miles east of I-5, and 2.5 miles west of SR-99. Thus, new sensitive receptors would not be located within 500 feet of either freeway, and thus, would not be exposed to excessive health risk. No other urban roadways or freeways near the SOIA area would experience volumes that exceed the applicable thresholds in the cumulative-plus-project scenario.

Development on the SOIA areas would also likely include commercial and business park land uses. Commercial and business park land uses may include loading docks or loading areas where diesel PM-emitting delivery trucks frequently operate, which could result in the exposure of nearby existing or new sensitive receptors to TACs. According to the CARB guidance document *Air Quality and Land Use Handbook*, ARB recommends avoiding the siting of new commercial trucking facilities that accommodate more than 100 trucks per day, or 40 trucks equipped with transportation refrigeration units (TRUs), within 1,000 feet of sensitive receptors (CARB 2005). No industrial land uses are planned for the SOIA area that could be a future source of TACs.

Summary

TACs emitted during construction of new land uses developed on the SOIA area upon annexation would not expose nearby sensitive receptors to incremental increases in cancer, chronic, and acute risk that exceed applicable thresholds (incremental increase in cancer risk greater than 10 in 1 million or a hazard index greater than 1.0). Additionally, new and existing sensitive receptors would not experience traffic volumes exceeding the 100,000-vehicles-per-day criterion identified by SMQMD and CARB, and thus would not be exposed to increased health risk. However, diesel PM-generating delivery trucks at commercial loading docks could expose new or existing sensitive receptors to increased TAC emissions, thus resulting in an incremental increase in cancer risk that that exceeds 10 in 1 million and/or a hazard index of 1.0 or greater. This impact would be **significant**.

Mitigation Measure 3.3-4: Incorporate design features to minimize exposure of sensitive receptors to TACs generated at commercial land uses.

At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants implement the measures to address TAC exposure identified below. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

To reduce exposure of existing or future receptors to diesel PM generated at commercial loading docks, the following design measures shall be incorporated into land uses developed within the SOIA area:

- Proposed commercial land uses that have the potential to emit TACs or host TAC-generating activity (e.g., loading docks) shall be located as far away from existing and proposed on-site sensitive receptors as possible such that they do not expose sensitive receptors to TAC emissions that exceed an incremental increase of 10 in 1 million for the cancer risk and/or a noncarcinogenic Hazard Index of 1.0.
- ▲ Commercial facilities with truck loading areas shall be designed such that buildings or walls shield locations of truck activity from nearby residences or other sensitive land uses.
- ▲ Commercial facilities with truck loading areas that accommodate more than 100 trucks per day, or 40 trucks equipped with transportation refrigeration units (TRUs), shall be located further than 1,000 feet of sensitive receptors.
- Require electrification hook-ups for at all commercial land uses that will receive deliveries from trucks with TRUs so that TRU engines need not be operated at loading docks.
- Signs shall be posted at all loading docks and truck loading areas which indicate that diesel powered delivery trucks must be shut off when not in use for longer than 5 minutes on the premises to reduce idling emissions of diesel PM.

Significance after Mitigation

Implementation of Mitigation Measure 3.3-4 would incorporate design features to minimize exposure of sensitive receptors and ensure that any new sources of TACs associated with the proposed commercial land uses would not expose existing or new sensitive land uses to excessive TAC levels. Thus, the TAC sources generated by land uses proposed within the conceptual development scenario would not result in an increased health risk to existing levels in the SOIA area and this impact would be reduced to **less than significant**.

Impact 3.3-5: Exposure of sensitive receptors to odors.

While approval of the SOIA would not result in any physical changes to the environment, future development of the SOIA area upon annexation could introduce new odor sources into the area (e.g., temporary diesel exhaust emissions during construction and delivery trucks associated with commercial land uses). Thus, receptors located near the commercial land uses may be exposed to odorous emissions depending upon the specific land uses developed. As a result, potential exposure of sensitive receptors to odors would be considered a **significant** impact.

The occurrence and severity of odor impacts depends on numerous factors, including: the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the affected receptors. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress among the public and often generate citizen complaints to local governments and regulatory agencies. Projects with the potential to frequently expose a substantial number of people to objectionable odors would be deemed to have a significant impact.

Construction

Minor odors from the use of heavy-duty diesel equipment, and the laying of asphalt during construction activities would be intermittent and temporary, and would dissipate rapidly from the source with an increase in distance. While construction would most likely occur intermittently over an extended buildout period, these types of odor-generating activities would not occur at any single location, or within proximity to off-site receptors, for an extended period of time. Existing off-site receptors include residences located approximately 60 feet to the north and to the east, and 200 feet to the west of the SOIA area. Additionally, ten existing residential receptors are located on-site, and depending on the phasing of development, these receptors could experience odors associated with construction activities. Given the temporary and

intermittent nature of construction activities within specific locations in the project area, construction is not anticipated to result in an odor-related impact during the construction phase.

Long-Term Operation

Operation of development within the SOIA would include new commercial land uses which would likely result in diesel-fueled delivery trucks visiting loading docks at these areas; however, these types of sources are not different from those that currently deliver materials to existing land uses in developed urban areas to the north, and would be relatively short and infrequent. Facilities developed would be subject to SMAQMD Rule 402 (Nuisance) regarding the control of nuisances, including odors. Receptors located in the general vicinity of such sources may be exposed to odorous emissions. These receptors could include the new residences built around the commercial development, as well as existing residences located adjacent to the SOIA area.

No major odor emission sources that would result in a potentially significant impact to the occupants of the proposed on-site land uses would be anticipated based on the proposed land use plan. However, specific commercial uses have not yet been identified, thus, uses considered to be minor sources of odors may be developed. Such sources typically include dry cleaning establishments, restaurants, and gasoline stations. No industrial land uses are planned for the SOIA area that could be a source of odors.

As a result, potential exposure of sensitive receptors to odors associated with potential commercial land uses in the SOIA area and the siting of new sensitive receptors in proximity to these potential future odor sources would be considered **significant**.

Mitigation Measure 3.3-5: Incorporation of design features for suburban center to address potential odor sources.

At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants implement the following measures:

- ▲ Land uses that have the potential to emit objectionable odorous emissions (e.g., dry cleaning establishments, restaurants, and gasoline stations) shall be located as far away as possible from existing and proposed sensitive receptors or downwind of nearby receptors.
- If an odor-emitting facility is to occupy space in the retail area, odor control devices shall be installed to reduce the exposure of receptors to objectionable odorous emissions. SMAQMD shall be consulted to determine applicable/feasible control devices to be installed. Use of setbacks, site design considerations, and emission controls are typically sufficient to ensure that receptors located near retail uses would not be exposed to odorous emissions on a frequent basis.

Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

Significance after Mitigation

Through implementation of the mitigation measure above, and given that emissions from such sources would typically be intermittent and would disperse rapidly with increased distance from the source, implementation of the project would not be anticipated to result in a frequent exposure of a substantial number of people to odorous emissions. This impact would be reduced to a **less-than-significant** level.

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Ascent Environmental Biological Resources

3.4 BIOLOGICAL RESOURCES

This section addresses biological resources known or with potential to occur in the project vicinity, and describes potential effects of project implementation on those resources. Biological resources include common vegetation and habitat types, sensitive plant communities, and special-status plant and animal species. The analysis includes a description of the existing environmental conditions, the methods used for assessment, the potential direct and indirect impacts of project implementation, and mitigation measures recommended to address impacts determined to be significant or potentially significant.

Comments were received from the Environmental Council of Sacramento, Friends of Stone Lakes National Wildlife Refuge, Habitat 2020, and the County of Sacramento in response to the notice of preparation regarding biological resources of concern that could be adversely affected by the project (e.g., Swainson's hawk).

3.4.1 Environmental Setting

This section describes the presence or absence and quality of common and sensitive terrestrial biological resources on the project site, provides a summary of applicable regulations, and identifies potential effects because of project implementation. The following analysis considers effects on terrestrial communities, special-status species, and sensitive habitats. The data reviewed in preparation of this analysis included: a records search of the California Natural Diversity Database (CNDDB) (2017); a records search of the California and California Native Plant Society (CNPS) (2017) online database of plants in California; and the eBird online database of bird observations. Additionally, a limited reconnaissance-level site visit by an Ascent biologist was conducted on April 10, 2017.

PROJECT AREA

The land area surrounding the project site consist of developed urban land uses of the City of Elk Grove to the north and west and agricultural land areas to the east and south.

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

The Cosumnes River Preserve (Preserve), located approximately seven miles south of the SOIA, consists of approximately 45,859 acres of wildlife habitat and agricultural lands owned by seven land-owning partners. The Cosumnes River is one of the last large rivers in the Central Valley with relatively natural and unregulated stream flows that vary from winter-spring flood flows to reduced summer flows. The Preserve supports migratory waterfowl and waterbirds, wintering population of greater sandhill cranes, and Swainson's hawks.

PROJECT SITE

Vegetation and Wildlife

The project site (or "SOIA area") contains approximately 480 acres of primarily agricultural land. Most non-agricultural vegetation within the project site appears to be associated with irrigation ditches, roadsides, developed residential areas, and the edges of agricultural fields. Isolated trees, including non-native species such as blue gum (*Eucalyptus globulus*), and small groves of trees are present along field edges and near developed areas. Ruderal vegetation such as blackberry (*Rubus* sp.), non-native thistle (*Carduus* sp.), and mustard (*Brassica* sp.) are present along roadsides, and within irrigation ditches near surrounding roads. These irrigation ditches may provide foraging habitat for birds such as great egret (*Ardea alba*) and great

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blue heron (*Ardea herodias*), which are often associated with agricultural land. Common urban wildlife species, such as house sparrow (*Passer domesticus*) and European starling (*Sturnus vulgaris*) likely frequent the project site because of its proximity to a developed residential area. The project site is also part of the larger agricultural landscape of the region, which provides foraging habitat for raptors, such as Swainson's hawk (*Buteo swainsoni*) and red-tailed hawk (*Buteo jamaicensis*).

SENSITIVE BIOLOGICAL RESOURCES

Special-Status Species

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

- listed or proposed for listing as threatened or endangered under federal Endangered Species Act (ESA) or candidates for possible future listing;
- ✓ listed or candidates for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA);
- ▲ listed as Fully Protected under the California Fish and Game Code;
- animals identified by California Department of Fish and Wildlife (CDFW) as species of special concern;
- plants considered by CDFW to be "rare, threatened or endangered in California" (California Rare Plant Ranks of 1A, presumed extinct in California; 1B, considered rare or endangered in California and elsewhere; and 2, considered rare or endangered in California but more common elsewhere);
- considered a locally significant species, that is, a species that is not rare from a statewide perspective but is rare or uncommon in a local context such as within a county or region (CEQA Section 15125 (c)) or is so designated in local or regional plans, policies, or ordinances (CEQA Guidelines, Appendix G); or
- otherwise meets the definition of rare or endangered under CEQA Section 15380(b) and (d).

Special-Status Plants

Table 3.4-1 provides a list of the special-status plant species documented in the CNDDB within five miles of the project site and describes their regulatory status, habitat, and potential for occurrence on the project site.

No special-status plant species have been documented on the project site. However, protocol-level surveys for special-status plants to confirm their presence or absence have not been conducted. Based on the results of the CNDDB search, it was determined that eight special-status plant species could occur. The potential for occurrence of special-status plants was based on the types, extent, and quality of habitats on the project site; the proximity or connectivity of the project site to known occurrences of the species; and the regional distribution and abundance of the species. Special-status plant species that could occur on the project site include: watershield (*Brasenia schreberi*), bristly sedge (*Carex comosa*), dwarf downingia (*Downingia pusilla*), wooly rose-mallow (*Hibiscus lasiocarpos* var. occidentalis), legenere (*Legenere limosa*), Heckard's pepper-grass (*Lepidium latipes* var. heckardii), Sanford's arrowhead (*Sagittaria sanfordii*), and saline clover (*Trifolium hydrophilum*).

Ascent Environmental Biological Resources

Table 3.4-1 Special-Status Plant Species Known to Occur in the Project Region and their Potential for Occurrence on the Project Site

| on the Proje | Regula | atory St | atus ¹ | | Potential for Occurrence ² | |
|--|---------|----------|-------------------|--|--|--|
| Species | Federal | 1 | | - Habitat | | |
| watershield Brasenia schreberi | - | - | 2B.3 | Wetland. Freshwater marshes and swamps. Aquatic from water bodies both natural and artificial in California. 98 to 7,218 ft in elevation. Blooms June-September. | Could occur. The nearest known occurrence is approximately 3 miles southwest of the project site, within Stone Lakes National Wildlife Refuge (CNDDB 2017, CNPS 2017). Potentially suitable habitat on the project site includes irrigation ditches. | |
| bristly sedge Carex comosa | - | - | 2B.1 | Wetland. Marshes and swamps, coastal prairie, valley and foothill grassland. Lake margins, wet places; site below sea level is on a Delta island16 to 5,315 ft in elevation. Blooms May-September. | Could occur. Potentially suitable wetland habitat may be present on the project site. The nearest known occurrence is approximately 2.5 miles southwest of the project site within Stone Lakes National Wildlife Refuge (CNDDB 2017, CNPS 2017). | |
| Peruvian dodder Cuscuta obtusiflora var. glandulosa | - | - | 2B.2 | Wetland. Marshes and swamps (freshwater). Freshwater marsh. 49 to 919 ft in elevation. Blooms July- October. | Not expected to occur. Marsh or swamp habitat is not present on the project site. Additionally, the project site is outside of the optimal elevation range of this species. | |
| dwarf downingia Downingia pusilla | - | - | 2B.2 | Wetland. Valley and foothill grassland (mesic sites), vernal pools. Vernal lake and pool margins with a variety of associates. In several types of vernal pools. 3 to 1,608 ft in elevation. Blooms March-May. | Could occur. Potentially suitable wetland habitat is present on the project site. The nearest known occurrence is approximately 3 miles northwest of the project site, within similar agricultural habitat (CNDDB 2017, CNPS 2017). | |
| woolly rose-mallow Hibiscus lasiocarpos var. occidentalis | - | - | 1B.2 | Wetland. Marshes and swamps (freshwater). Moist, freshwater-soaked river banks and low peat islands in sloughs; can also occur on riprap and levees. In California, known from the delta watershed. 0 to 509 ft in elevation. Blooms June-September. | Could occur. The project site contains potentially suitable habitat within irrigation ditches. The nearest known occurrence is approximately 4 miles northwest of the project site within Stone Lakes National Wildlife Refuge (CNDDB 2017, CNPS 2017). | |
| Northern California black walnut Juglans hindsii | - | - | 1B.1 | Riparian forest, riparian woodland. Few extant native stands remain; widely naturalized. Deep alluvial soil, associated with a creek or stream. 0 to 2,100 ft in elevation. Blooms April-May. | Not expected to occur. The project site is mostly developed agricultural land, and native riparian forest habitat is not present. The nearest known occurrence is approximately 8 miles southwest of the project site near the Sacramento River (CNDDB 2017, CNPS 2017). | |
| legenere Legenere limosa | - | - | 1B.1 | Vernal pools, wetland. In beds of vernal pools. 3 to 2,887 ft in elevation. Blooms April-June. | Could occur. Potentially suitable vernal pool habitat may be present on the project site. The nearest known occurrence is approximately 1.7 miles northwest of the project site within nearby vernal pool habitat (CNDDB 2017, CNPS 2017). | |
| Heckard's pepper-grass Lepidium latipes var. heckardii | - | - | 1B.2 | Valley and foothill grassland, vernal pools. Grassland, and sometimes vernal pool edges. Alkaline soils. 3 to 98 ft in elevation. Blooms March-May. | Could occur. The project site may contain potentially suitable vernal pool habitat. The nearest known occurrence is approximately 3 miles west of the project site along vernal pool habitat (CNDDB 2017, CNPS 2017). | |
| Sanford's arrowhead Sagittaria sanfordii | - | - | 1B.2 | Wetland. Marshes and swamps. In standing or slow-moving freshwater ponds, marshes, and ditches. O to | Could occur. The project site contains potentially suitable habitat within irrigation ditches. The nearest known occurrence is approximately 3.3 | |

Biological Resources Ascent Environmental

Table 3.4-1 Special-Status Plant Species Known to Occur in the Project Region and their Potential for Occurrence on the Project Site

| Species | Regulatory Status ¹ | | atus1 | Halifat | Detertial for Occurrence? |
|--|--------------------------------|-------|-------|---|--|
| | Federal | State | CRPR | Habitat | Potential for Occurrence ² |
| | | | | 2,133 ft in elevation. Blooms May- November. | miles east of the project site within similar habitat (CNDDB 2017, CNPS 2017). |
| saline clover Trifolium hydrophilum | - | - | 1B.2 | I Watiana Warenge and ewamne Walley | Could occur. The project site may contain potentially suitable wetland or vernal pool habitat. The nearest known occurrence is approximately 2.5 miles west of the project site (CNDDB 2017, CNPS 2017). |

Notes: CRPR = California Rare Plant Rank; CNDDB = California Natural Diversity Database

Federal

E Endangered (legally protected by ESA)

T Threatened (legally protected by ESA)

State:

E Endangered (legally protected by CESA)

R Rare (legally protected by CNPPA)

California Rare Plant Ranks:

- 1B Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA)
- 2B Plant species considered rare or endangered in California but more common elsewhere (protected under CEQA, but not legally protected under ESA or CESA)

Threat Ranks

- 0.1 Seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat)
- 0.2 Moderately threatened in California (20-80% occurrences threatened; moderate degree and immediacy of threat)

Not expected to occur: Species is unlikely to be present on the project site due to poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.

Could occur. Suitable habitat is available at the project site; however, there are little to no other indicators that the species might be present.

Likely to occur. The species, or evidence of its presence, was observed at the project site during reconnaissance surveys, or was reported by others.

Sources: CNDDB 2017; CNPS 2017; Calflora 2017

Special-Status Animals

Table 3.4-2 provides a list of the special-status wildlife species documented in the CNDDB within five miles of the project site and describes their regulatory status, habitat, and potential for occurrence on the project site.

Northern harrier (*Circus cyaneus*) was observed foraging on the project site during the reconnaissance site visit conducted in April 10, 2017. Based on the results of the CNDDB search, it was determined that 11 other special-status wildlife species could occur on the project site. The potential for occurrence of these species was based on the types, extent, and quality of habitats on the project site; the proximity or connectivity of the project area to known occurrences of the species; and the regional distribution and abundance of the species. Special-status wildlife species that could occur within the project site include: giant gartersnake (*Thamnophis gigas*), western pond turtle (*Actinemys marmorata*), burrowing owl (*Athene cunicularia*), greater sandhill crane (*Antigone canadensis tabida*), song sparrow ("Modesto" population; *Melospiza melodia*), Swainson's hawk, tricolored blackbird (*Agelaius tricolor*), white-tailed kite (*Elanus leucurus*), vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardi*), and American badger (*Taxidea taxus*). However, protocol-level surveys for special-status animals to confirm their presence or absence have not been conducted for the project.

¹ Legal Status Definitions

² Potential for Occurrence Definitions

Ascent Environmental Biological Resources

Table 3.4-2 Special-Status Wildlife Species Known to Occur in the Project Region and their Potential for Occurrence on the Project Site

| Species | Regulatory Status ¹ | | Habitat | Potential for Occurrence ² | | | | |
|--|-----------------------------------|----------|--|--|--|--|--|--|
| · | Federal | State | | | | | | |
| Amphibians and Reptiles | | | | | | | | |
| giant gartersnake Thamnophis gigas | FT | ST | Marsh and swamp, riparian scrub, wetland. Prefers freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches. This is the most aquatic of the garter snakes in California. | Could occur. The project site contains potentially suitable aquatic habitat within irrigation ditches. The nearest known occurrence is less than 1 mile southwest of the project site (CNDDB 2017). | | | | |
| western pond turtle Emys marmorata | - | SSC | Aquatic, artificial flowing waters, Klamath/north coast flowing waters, Klamath/north coast standing waters, marsh and swamp, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, South coast flowing and standing waters. A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6,000 ft elevation. Need basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.3 mile from water for egg-laying. | Could occur. The project site contains potentially suitable aquatic habitat within irrigation ditches. The nearest known occurrence is approximately 1 mile northwest of the project site within an irrigation ditch (CNDDB 2017). | | | | |
| Birds | | | | | | | | |
| burrowing owl Athene cunicularia | - | SSC | Coastal prairie, coastal scrub, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, and valley and foothill grassland. Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel. | Could occur. The project site contains potentially suitable breeding habitat within earthen berms along irrigation ditches between agricultural fields. The nearest known occurrence is approximately 1 mile northwest of the project site, associated with grazed grassland habitat (CNDDB 2017). | | | | |
| greater sandhill crane Antigone canadensis tabida | - | ST FP | Marsh and swamp, meadow and seep, wetland. Nests in wetland habitats in northeastern California; winters in the Central Valley. Prefers grain fields within 4 miles of a shallow body of water used as a communal roost site; irrigated pasture used as loafing sites. | Could occur. The project site contains potentially suitable overwintering habitat within grain fields. There have been several recent occurrences within approximately 1 mile of the project site (eBird 2017), and the nearby Cosumnes River Preserve is an important overwintering location for the species. | | | | |
| northern harrier Circus cyaneus | - | SSC | Coastal scrub, Great Basin grassland, marsh and swamp, riparian scrub, valley and foothill grassland, and wetlands. Coastal salt and freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas. | Known to occur. The project site contains suitable foraging habitat, and northern harrier was observed foraging on the project site during the reconnaissance site visit on April 10, 2017. Additionally, there have been several recent occurrences within approximately 1 mile of the project site (eBird 2017). | | | | |
| song sparrow ("Modesto" population) Melospiza melodia | - | SSC | Marsh and swamp, wetlands. Emergent freshwater marshes, riparian willow thickets, riparian forests of valley oak (<i>Quercus lobata</i>), and vegetated irrigation canals and levees. | Likely to occur. The project site contains potentially suitable habitat within vegetated irrigation ditches. The nearest known occurrence is approximately 2.3 | | | | |

Biological Resources Ascent Environmental

Table 3.4-2 Special-Status Wildlife Species Known to Occur in the Project Region and their Potential for Occurrence on the Project Site

| Species | Regulatory Status ¹ | | Habitat | Potential for Occurrence ² |
|---|--------------------------------|-----------|--|---|
| | Federal | State | Hastat | 1 otendarior occurrence |
| | | | | miles west of the project site within Stone Lakes National Wildlife Refuge (CNDDB 2017). Song sparrows within the vicinity of the project site are assumed to be part of the "Modesto" population based on location. |
| Swainson's hawk Buteo swainsoni | - | ST | Great Basin grassland, riparian forest, riparian woodland, valley and foothill grassland. Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations. | Likely to occur. The project site contains suitable foraging habitat (agricultural fields), and potentially suitable nesting habitat within isolated trees. The nearest known nesting occurrence is within a walnut (Juglans sp.) tree near the intersection of Bruceville and Bilby Roads (CNDDB 2017). |
| tricolored blackbird Agelaius tricolor | - | CE SSC | Freshwater marsh, marsh and swamp, swamp, wetland. Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few miles of the colony. | Likely to occur. The project site contains potentially suitable nesting habitat, including grain fields, blackberry (<i>Rubus</i> sp.), and other vegetation along irrigation ditches. A historic occurrence (1981, CNDDB 2017) was located on the project site within blackberry plants at the intersection of Kammerer and Bruceville Roads. A more recent breeding colony is located approximately 2 miles southeast of the project site (CNDDB 2017, UC Davis 2017). |
| white-tailed kite Elanus leucurus | - | FP | Cismontane woodland, marsh and swamp, riparian woodland, valley and foothill grassland, and wetlands. Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching. | Could occur. The project site contains potentially suitable foraging habitat (agricultural fields) and nesting habitat (isolated trees) for this species. Additionally, there have been several recent occurrences within approximately 1 mile of the project site (eBird 2017). |
| Fish | | | | |
| longfin smelt Spirinchus thaleichthys | FC | SSC | Aquatic, estuary. Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 parts per thousand, but can be found in completely freshwater to almost pure seawater. | Not expected to occur. The project site does not contain suitable aquatic habitat for this species. The nearest suitable habitat is within the Cosumnes and Sacramento Rivers (CNDDB 2017). |
| Sacramento splittail Pogonichthys macrolepidotus | - | SSC | Aquatic, estuary, freshwater marsh, Sacramento/San Joaquin flowing waters. Endemic to the lakes and rivers of the Central Valley, but now confined to the Delta, Suisun Bay and associated marshes. Slow moving river sections, dead end sloughs. Requires flooded vegetation for spawning and foraging for young. | Not expected to occur. The project site does not contain suitable aquatic habitat for this species. The nearest suitable habitat is within the Cosumnes and Sacramento Rivers (CNDDB 2017). |

Table 3.4-2 Special-Status Wildlife Species Known to Occur in the Project Region and their Potential for **Occurrence on the Project Site**

| Species | Regulato Status ¹ | | Habitat | Potential for Occurrence ² | | | |
|---|------------------------------|-------|--|--|--|--|--|
| | Federal | State | | | | | |
| steelhead - Central Valley DPS Oncorhynchus mykiss irideus | FT | 1 | Aquatic, Sacramento/San Joaquin flowing waters. Populations in the Sacramento and San Joaquin rivers and their tributaries. | Not expected to occur. The project site does not contain suitable aquatic habitat for this species. The nearest suitable habitat is within the Cosumnes and Sacramento Rivers (CNDDB 2017). | | | |
| Invertebrates | | | | | | | |
| vernal pool fairy shrimp Branchinecta lynchi | FT | 1 | Valley and foothill grassland, vernal pool, wetland. Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools. | Could occur. Potentially suitable vernal pool or wetland habitat may be present on the project site. The nearest known recent occurrence is approximately 4 miles north of the project site within a grassy-bottomed depression that was once an undisturbed natural vernal pool (CNDDB 2017). | | | |
| vernal pool tadpole shrimp Lepidurus packardi | FE | - | Valley and foothill grassland, vernal pool, wetland. Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid. | Could occur. Potentially suitable vernal pool or wetland habitat may be present on the project site. The nearest known recent occurrence is approximately 4.7 miles north of the project site within a deep depression along a railroad track (CNDDB 2017). | | | |
| Mammals | | | | | | | |
| American badger Taxidea taxus | - | SSC | Alkali marsh, alkali playa, alpine, alpine dwarf scrub, bog a fen, brackish marsh, broadleaved upland forest, chaparral, chenopod scrub, cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal dunes, coastal prairie. Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows. | Could occur. Optimal habitat is not present on the project site; however, agricultural fields could provide suboptimal habitat for badger. The closest known occurrence is approximately 3.8 miles west of the project site near Hood, CA (CNDDB 2017). | | | |
| Note: CNDDB = California Natural Diversit 1 Legal Status Definitions | y Database | | | | | | |

PT

Federal: State:

Ε **Endangered (legally protected)** D Delisted

T Threatened (legally protected) FP Fully protected (legally protected)

D Delisted SC Species of special concern (no formal protection other than CEQA consideration)

> Ε **Endangered (legally protected)** Т Threatened (legally protected) **Candidate Threatened** CT

Proposed Threatened

Not expected to occur. Species is unlikely to be present on the project site due to poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.

Could occur. Suitable habitat is available on the project site; however, there are little to no other indicators that the species might be present.

Likely to occur. The species, or evidence of its presence, was observed on the project site during reconnaissance surveys, or was reported by others.

Known to occur: The species, or evidence of its presence, was observed in the project area during reconnaissance surveys, or was reported by others.

Source: CNDDB 2017; eBird 2017

² Potential for Occurrence Definitions

Sensitive Natural Communities

Sensitive habitat types include those that are of special concern to CDFW, or that are afforded specific consideration through CEQA, Section 1602 of the California Fish and Game Code, the Porter-Cologne Act, and Section 404 of the CWA, as discussed in Section 3.4.2, "Regulatory Framework," below. Sensitive habitats may be of special concern to regulatory agencies and conservation organizations for a variety of reasons, including their locally or regionally declining status, or because they provide important habitat to common and special-status species.

CDFW maintains a list of plant communities that are native to California. Within that list, CDFW identifies special-status plant communities (i.e., sensitive natural communities), which it defines as communities that are of limited distribution statewide or within a county or region, and are often vulnerable to environmental effects of projects. These communities may or may not contain special-status species or their habitat. Special-status plant communities are tracked in the CNDDB.

Many wetland and riparian plant communities are included on CDFW's list of special-status plant communities, and the importance of protecting and preserving riparian and oak woodland habitats is recognized in the County's general plan policies. The project site contains mostly agricultural land and developed residential areas, and does not contain any riparian woodland or oak woodland. Additionally, no occurrences of sensitive communities within 5 miles of the project site have been documented in the CNDDB. However, the project site may support wetlands, including vernal pools, and other waters of the United States and waters of the state. These resources are considered sensitive habitats and are discussed below.

Waters of the United States and Waters of the State

The main hydrological feature on the project site is approximately 2.7 miles of irrigation ditches, which are not likely to qualify as jurisdictional waters of the United States under Section 404 of the Clean Water Act. While the project site contains mostly agricultural and developed land, a review of aerial imagery and a site visit on April 10, 2017 suggest the northwest portion the project site may contain wetland habitat (Exhibit 3.4-1). A jurisdictional wetland delineation has not been conducted because the project site is currently privately owned, so it is possible that additional potential wetland habitat could be present in other portions of the project site. Vernal pool habitat is present within the vicinity of the project site, including within Stone Lakes National Wildlife Refuge west of the project site. The soil types on the project site are the same as those within areas supporting vernal pool habitat, and it is likely that the project site contained vernal pool habitat prior to conversion to agricultural uses (NRCS 2017).

3.4.2 Regulatory Framework

FEDERAL

Federal Endangered Species Act

The U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) regulate the taking of terrestrial and inland species, as well as anadromous and marine species listed as threatened or endangered under the ESA. In general, persons subject to ESA (including private parties) are prohibited from "taking" endangered or threatened fish and wildlife species on private property, and from "taking" endangered or threatened plants in areas under federal jurisdiction or in violation of state law. Under ESA, the definition of "take" is to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." USFWS has also interpreted the definition of "harm" to include significant habitat modification that could result in take. If a project would result in take of a federally-listed species, either the project applicant must acquire an incidental-take permit, under Section 10(a) of ESA, or if a federal discretionary action is involved, the project applicant will consult with USFWS or NMFS under Section 7 of the ESA.



ASCENT

Wetlands

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act declares it is illegal to take bald eagles, including their parts, nests, or eggs unless authorized. "Take" is defined as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb." Disturb means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause injury to an eagle, or a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or nest abandonment. In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death or nest abandonment.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA), first enacted in 1918, provides for protection of international migratory birds and authorizes the Secretary of the Interior to regulate the taking of migratory birds. The MBTA provides that it shall be unlawful, except as permitted by regulations, to pursue, take, or kill any migratory bird, or any part, nest, or egg of any such bird. The current list of species protected by the MBTA can be found in Title 50 of the Code of Federal Regulations (CFR), Section 10.13 (50 CFR 10.13). The list includes nearly all migratory birds native to the United States.

Section 404 of the Clean Water Act

Section 404 of the Federal Clean Water Act (CWA) requires a project applicant to obtain a permit before engaging in any activity that involves any discharge of dredged or fill material into waters of the United States, including wetlands. Fill material is material placed in waters of the United States where the material has the effect of replacing any portion of a water of the United States with dry land, or changing the bottom elevation of any portion of a water of the United States. Waters of the United States include navigable waters of the United States; interstate waters; all other waters where the use, degradation, or destruction of the waters could affect interstate or foreign commerce; relatively permanent tributaries to any of these waters, and wetlands adjacent to these waters. Wetlands are defined as those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Potentially jurisdictional wetlands must meet three wetland delineation criteria: hydrophytic vegetation, hydric soil types, and wetland hydrology. Wetlands that meet the delineation criteria may be jurisdictional under Section 404 of CWA pending US Army Corps of Engineers (USACE) verification.

Section 401 Water Quality Certification

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

STATE

California Endangered Species Act

The CESA prohibits the taking of state-listed endangered or threatened species, as well as candidate species being considered for listing. Project proponents may obtain a Section 2081 incidental take permit if the impacts of the take are minimized and fully mitigated, and the take would not jeopardize the continued existence of the species. A "take" of a species, under CESA, is defined as an activity that would directly or indirectly kill an individual of a species. The CESA definition of take does not include "harm" or "harass" as is included in the federal ESA. As a result, the threshold for a take under CESA may be higher than under ESA.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act requires that each of the nine RWQCBs prepare and periodically update basin plans for water quality control. Each basin plan sets forth water quality standards for surface water and groundwater, and actions to control nonpoint and point sources of pollution to achieve and maintain these standards. Basin plans offer an opportunity to protect wetlands through the establishment of water quality objectives. The RWQCB's jurisdiction includes waters of the United States, as well as areas that meet the definition of "waters of the state." Waters of the state is defined as any surface water or groundwater, including saline waters, within the boundaries of the state. The RWQCB has the discretion to take jurisdiction over areas not federally protected under Section 404 of the CWA provided they meet the definition of waters of the state. Mitigation requiring no net loss of wetlands functions and values of waters of the state is typically required by the RWQCB.

Fully Protected Species

Protection of fully protected species is described in Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species and do not provide for authorization of incidental take. CDFW has informed nonfederal agencies and private parties that their actions must avoid take of any fully protected species unless the take is covered under a Natural Community Conservation Plan that is approved by CDFW.

Protection for Bird Nests and Raptors

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 specifically states that it is unlawful to take, possess, or destroy any raptors (e.g., hawks, owls, eagles, and falcons), including their nests or eggs. Section 3513 of the California Fish and Game Code codifies the federal MBTA.

LOCAL

The project site lies within the jurisdictional boundaries of Sacramento County; therefore, the County's policies, as well as the Sacramento LAFCo's polices, would apply. Furthermore, if the SOIA is approved, it would likely lead to annexation to the City of Elk Grove. Thus, applicable policies of the City of Elk Grove's General Plan are described below.

Sacramento County General Plan

The following goals and policies of the Conservation Element of the Sacramento County 2030 General Plan (Sacramento County 2011) are applicable to the terrestrial biological resources that may be affected by the project:

- Policy CO-58: Ensure no net loss of wetlands, riparian woodlands, and oak woodlands.
- Policy CO-59: Ensure mitigation occurs for any loss of or modification to the following types of acreage and habitat function:
 - vernal pools,
 - wetlands.
 - riparian,
 - native vegetative habitat, and
 - special-status species habitat.
- ▶ Policy CO-60: Mitigation should be directed to lands identified on the Open Space Vision Diagram and associated component maps (please refer to the Open Space Element of the 2030 General Plan).
- Policy CO-62: Permanently protect land required as mitigation.

■ Policy CO-66: Mitigation sites shall have a monitoring and management program, including an adaptive management component, and an established funding mechanism. The programs shall be consistent with Habitat Conservation Plans that have been adopted or are in draft format.

- ✓ Policy CO-138. Protect and preserve non-oak native trees along riparian areas if used by Swainson's hawk, as well as landmark and native oak trees measuring a minimum of 6 inches in diameter or 10 inches aggregate for multi-trunk trees at 4.5 feet above ground.
- Policy C0-139. Native trees other than oaks, which cannot be protected through development, shall be replaced with in-kind species in accordance with established tree planting specifications, the combined diameter of which shall equal the combined diameter of the trees removed.
- ✓ Policy CO-140. For projects involving native oak woodlands, oak savannah or mixed riparian areas, ensure mitigation through either of the following methods:
 - An adopted habitat conservation plan.
 - ▼ Ensure no net loss of canopy area through a combination of the following: (1) preserving the main, central portions of consolidated and isolated groves constituting the existing canopy and (2) provide an area onsite to mitigate any canopy lost. Native oak mitigation area must be a contiguous area onsite which is equal to the size of canopy area lost and shall be adjacent to existing oak canopy to ensure opportunities for regeneration.
 - Removal of native oaks shall be compensated with native oak species with a minimum of a one to one diameter at breast height (DBH) replacement.
 - A provision for a comparable onsite area for the propagation of oak trees may substitute for replacement tree planting requirements at the discretion of the County Tree Coordinator when removal of a mature oak tree is necessary.
- ✓ Policy CO-141. In 15 years, the native oak canopy within onsite mitigation areas shall be 50 percent canopy coverage for valley oak and 30 percent canopy coverage for blue oak and other native oaks.
- Policy C0-145. Removal of non-native tree canopy for development shall be mitigated by creation of new tree canopy equivalent to the acreage of non-native tree canopy removed. New tree canopy acreage shall be calculated using the 15-year shade cover values for tree species.

Sacramento County Swainson's Hawk Ordinance

Chapter 16.130 of Title 16 of the Sacramento County Code addresses the reduction in Swainson's hawk foraging habitat within unincorporated Sacramento County. Participating in the County's Swainson's Hawk Mitigation Program, which is voluntary, is one option for mitigating the loss of foraging habitat within unincorporated areas of the County. Under this program, mitigation for impacts less than 40 acres can be achieved by paying a mitigation fee or providing replacement habitat (title or easement to suitable Swainson's hawk mitigation lands on a per-acre basis); mitigation for impacts of 40 acres or greater can be achieved only by providing replacement habitat under this program. Other mitigation options usually involve working on an individual basis with CDFW. For example, participation in a CDFW-approved conservation bank with available credits for Swainson's hawk foraging habitat could meet mitigation requirements.

Sacramento County Tree Preservation Ordinance

The Sacramento County Tree Preservation Ordinance provides protection for trees within the designated urban area of the unincorporated area of Sacramento County. The Tree Preservation Ordinance applies only to the designated urban area, except for projects that require a discretionary land use entitlement, such as a parcel map. The project site is not within this designated urban area.

Draft South Sacramento Habitat Conservation Plan

The draft South Sacramento Habitat Conservation Plan (SSHCP) is a regional, comprehensive plan that establishes a framework for Permit Applicants to comply with state and federal endangered species regulations and with aquatic resource regulations, while accommodating future land use and development included in the general plans of Sacramento County, Galt, and Rancho Cordova. The City of Elk Grove is not a SSHCP plan partner.

The SSHCP identifies "Covered Activities," which are specific types of projects and activities within the Planning Area that may result in the take of SSHCP Covered Species or loss of aquatic resources. SSHCP Covered Activities implemented within the "Urban Development Area" (UDA) would include, but are not limited to:

- activities and projects related to urban development and associated infrastructure including buildout of the Sacramento County Urban Services Boundary (USB);
- ▲ the Capital Southeast Connector Project and other planned transportation projects;
- ▲ planned water and wastewater development projects; and
- maintenance of stream channels in the UDA such as vegetation and sediment removal.

The SSHCP Conservation Strategy is designed to allow streamlining of Covered Activity compliance with of ESA, CESA, CWA, and Fish and Game Code, and other applicable environmental regulations. The SSHCP conservation strategy identifies Biological Goals for Planning Area land covers, natural communities, aquatic resources, and Covered Species, including specific measurable Biological Objectives to achieve each Biological Goals. The SSHCP's conservation strategy would include habitat restoration, enhancement and management actions, and adaptive management and monitoring activities. The SSHCP conservation strategy would establish and implement a consolidated and interconnected Preserve System in the Planning Area that would preserve ecologically important resources using a landscape or watershed perspective. Habitat losses within the USB would be offset primarily through the establishment of Preserve System, but core and satellite preserves may be established within the USB. As currently conceived, land developers that convert habitat within the USB would pay a defined per-acre fee to mitigate impacts. These fees would be used to protect, restore, maintain, and monitor habitat. The SSHCP also includes a preserve monitoring and management program and an adaptive management plan.

The Permit Applicants are requesting ESA and CESA Incidental Take Permits (ITPs) with 50-year permit terms. Under the Proposed Action/Proposed Project Alternative, federal and state ITPs would be issued to the Permit Applicants by the USFWS and CDFW, and the USACE would develop and approve a multilevel CWA 404 permit strategy for the Permit applicants.

A public draft of the SSHCP and its Draft EIS/EIR was released on June 2, 2017, and the comment period ended on September 5, 2017. Approval of the final SSHCP, final EIS/EIR, final Aquatic Resources Program, and final Implementation Agreement is anticipated to occur in the fall and winter of 2017/2018. Issuance of the ITP is anticipated in the spring of 2018.

City of Elk Grove General Plan

The City of Elk Grove General Plan Conservation Element (City of Elk Grove 2016) includes policies and actions aimed at reducing development impacts on native and nonnative habitats, plants, and animals. The Parks, Trails, and Open Space Element ensures that the City's desires and needs for parks, recreation, and open space are addressed. The following General Plan policies are relevant to biological resources.

✓ Policy CAQ-8: Large trees (both native and nonnative) are an important aesthetic (and, in some cases, biological) resource. Trees that function as an important part of the City's or neighborhood's aesthetic character or natural habitat should be retained to the extent possible during the development of new

structures, roadways (public and private, including roadway widening), parks, drainage channels, and other uses and structures.

- If trees cannot be preserved onsite, offsite mitigation or payment of in-lieu fee may be required by the City. Where possible, trees planted for mitigation should be located in the same watershed as the trees that were removed.
- Trees that cannot be protected shall be replaced either onsite or offsite as required by the City.
- Policy CAQ-9: Wetlands, vernal pools, marshland and riparian (streamside) areas are considered important resources. Impacts to these resources shall be avoided unless shown to be technically infeasible. The City shall seek to ensure that no net loss of wetland areas occurs, which may be accomplished by avoidance, revegetation, and restoration onsite or creation of riparian habitat corridors.
 - ▼ CAQ-9-Action 1 As part of the development review process, ensure that all potentially affected wetland areas are identified, and provide mitigation to ensure that no net loss occurs. Mitigation should occur within the same watershed as the impact, where feasible.
 - CAQ-9-Action 2 Coordinate with the California Department of Fish and Game and the U.S. Fish and Wildlife Service in the review of development projects.
- Policy CAQ-11: The City shall seek to preserve areas, where feasible, where special-status plant and animal species and critical habitat areas are known to be present or potentially occur, based on City biological resource mapping and data provided in the General Plan EIR or other technical material, and may be adversely affected by public or private development projects. Where preservation is not possible, appropriate mitigation shall be included in the public or private project. "Special-status" species are generally defined as species considered to be rare, threatened, or endangered, or otherwise protected under local, state, and/or federal policies, regulations, or laws.
 - development projects in areas identified to contain or possibly contain special-status plant and animal species based on City biological resource mapping and data provided in the General Plan EIR or other technical material. The biological resources evaluation shall determine the presence/absence of these special-status plant and animal species on the site. The surveys associated with the evaluation shall be conducted during the appropriate seasons for proper identification of the species. Such evaluation will consider the potential for significant impact on special-status plant and animal species, and will identify feasible mitigation measures to mitigate such impacts to the satisfaction of the City and appropriate governmental agencies (e.g., U.S. Fish and Wildlife Service, California Department of Fish and Game and U.S. Army Corps of Engineers) where necessary (e.g., species listed under the State and/or Federal Endangered Species Act). Mitigation measures may include, but are not limited to, the following:
 - For special-status plant species: On- or off-site preservation of existing populations from direct and indirect impacts, seed and soil collection or plant transplant that ensures that the plant population is maintained.
 - For special-status animal species: avoidance of the species and its habitat as well as the potential provision of habitat buffers, avoidance of the species during nesting or breeding seasons, replacement or restoration of habitat on- or off-site, relocation of the species to another suitable habitat area, payment of mitigation credit fees.
 - Participation in a habitat conservation plan.

■ Policy PTO-15: The City views open space lands of all types as important resource which should be preserved in the region, and supports the establishment of multipurpose open space areas to address a variety of needs, including, but not limited to:

- Maintenance of agricultural uses
- Wildlife habitat
- Recreational open space
- Aesthetic benefits
- Flood control

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

■ 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.

City of Elk Grove Municipal Code Chapter 19.12: Tree Preservation and Protection

Chapter 19.12 of the City's Municipal Code provides regulations for tree preservation and protection.

Regulations apply to four types of trees as follows:

- ▲ Landmark trees, which are trees specifically identifies for protection by the City Council;
- ▲ Trees of local importance, which are trees of specific varieties greater than six inches in diameter;
- ▲ Secured trees, which are trees that were protected as part of the development process for residential subdivisions and commercial developments; and
- ▲ Trees on City property or in the public right-of-way.

Work on or removal of any of these four types of trees requires prior approval in the form of a Tree Permit from the City of Elk Grove. Project applicants shall contact the City of Elk Grove Planning Department to determine if their tree requires a Tree Permit prior to completing work.

Arborist Review

Prior to the consideration of a request for tree removal by the designated approving authority, the City Arborist shall prepare an arborist report paid for by the project applicant. The report shall identify the basis, if any, for supporting the removal of the tree(s). The arborist report shall include an analysis of the following factors:

- The condition of the tree with respect to disease, general health, damage, structural integrity, and
 whether or not the tree acts as a host for an organism which is parasitic to another species of tree which
 is in danger of being exterminated by the parasite;
- ✓ The number of existing trees on the subject property, on adjacent property, and immediately proximate to the subject tree(s) as deemed relevant by the City Arborist, and the effect of the tree removal upon public health, safety, prosperity of surrounding trees, visual impact, and general welfare of the area;
- ▲ Age of tree, specifically with regard to whether or not removal of the tree would encourage healthier, more vigorous growth of other trees in the area;
- The number of healthy trees that a given parcel of land will support, with and without the proposed development;

▲ The effect of tree removal on soil stability/erosion, particularly near water courses, drainage ditches, or on steep slopes, or the effect on runoff interception;

- ▲ The potential for the tree to be a public nuisance, or interfere with utility service, as well as its proximity to existing buildings and structures;
- Present and future shade potential with regard to solar heating and cooling;
- Identification of alternatives that would allow for the preservation of the tree(s) proposed for removal; and
- ▲ Any other information the City Arborist finds pertinent (e.g., site conditions, other vegetation).

Design Criteria and Findings

- A Review by Designated Approving Authority. The approving authority shall determine, after preparation of the arborist report and a recommendation by the City Arborist, whether or not the tree(s) cannot or should not be retained. The determination of the approving authority in granting or denying a tree permit for tree removal shall, at a minimum, be based upon the factors analyzed in the arborist report.
- ✓ Findings for Permit Issuance. The designated approving authority shall make at least two (2) of the following findings as part of the approval of a tree permit for tree removal:
 - For development projects, every effort has been made to integrate the existing tree(s) into project design, including the use of minor deviations.
 - ▼ The effect of the removal of the tree will not negatively impact the health, safety, and prosperity of surrounding trees, or the aesthetics and general welfare of the area.
 - The tree presents a threat to public health and safety and must be removed.
- ✓ Findings for Permit Denial. The designated approving authority shall make all of the following findings as part of the denial of a tree permit for tree removal:
 - Removal of the tree is inconsistent with the standards for tree removal as provided in this section; and
 - ▼ The denial of the permit for tree removal will not unreasonably compromise the owner's rights to enjoy and develop the property.

Mitigation for Tree Loss

As part of the approval of a tree permit for removal of a tree, the designated approving authority shall require mitigation for the loss of the tree consistent with Article IV (Mitigation for Tree Loss). The requirement for mitigation may be waived under those circumstances provided in Section 19.12.180 (Alternative mitigation requirements). Mitigation for tree loss shall be provided at a ratio of one new inch DBH of tree for each inch DBH lost (1:1 ratio), unless an alternative mitigation is approved by the City.

City of Elk Grove Municipal Code Chapter 16.130: Swainson's Hawk Impact Mitigation Fees

The City of Elk Grove City Council determined that the continued expansion of urban uses into the agricultural lands within the City that are identified through the CEQA process to provide suitable foraging habitat for Swainson's hawk, a listed threatened species under CESA, will, absent mitigation, result in a significant reduction of such foraging habitat. The reduction in foraging habitat can occur through requests for zoning changes of agriculturally zoned lands to land use designations that enable land to be reduced to parcel sizes too small to support Swainson's hawk foraging habitat or through requests for land use entitlements for nonagricultural uses that are incompatible with the maintenance of Swainson's hawk foraging habitat. The City of Elk Grove Swainson's Hawk Impact Mitigation Fees (City of Elk Grove Municipal

Code Chapter 16.130) provides the means for projects to mitigate loss of Swainson's hawk foraging habitat through the purchase of conservation easements (if the project will affect greater than 40 acres of habitat) or by paying a mitigation fee (if the project will affect less than 40 acres of habitat).

3.4.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

The analysis of potential impacts to biological resources resulting from implementation of the project is based on the data review and reconnaissance site visit described previously in Section 3.4.1, "Environmental Setting." In this program-level analysis, the project scope is limited to the SOIA and does not include land use or zoning designations/changes, specific development projects, or other physical disturbances. However, potential future development/urbanization of the project site is considered an indirect effect of the proposed SOIA and addressed in this analysis at a conceptual or general level, based on the land use and development capacities identified for the site as described in Chapter 2, "Project Description." Future urbanization and development of the project site would be subject to more detailed project-level CEQA review of specific projects.

THRESHOLDS OF SIGNIFICANCE

The following standards of significance are based on Appendix G of the CEQA Guidelines. For purposes of this EIR, the proposed project would have a significant impact with regard to biological resources if it would:

- result in a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species (as defined above) in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- result in a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS;
- result in a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA or state protected wetlands as defined by the Porter-Cologne Act (including, but not limited to, marsh, vernal pool, coastal) through direct removal, filling, hydrological interruption, or other means;
- interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- conflict with any local applicable policies protecting biological resources; or
- conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

ISSUES NOT EVALUATED FURTHER

Riparian Habitat or Oak Woodlands

The project site does not contain riparian habitat or oak woodlands; therefore, project implementation would have no impact on these sensitive natural communities. This issue is not discussed further. (The project site could contain wetlands, including vernal pools, which are considered sensitive habitats and analyzed in this EIR.)

Wildlife Movement Corridors or Nursery Sites

The main wildlife movement corridors within the vicinity of the project site are the Cosumnes River to the southeast and the Sacramento River to the west. Stone Lakes National Wildlife Refuge, located west of the

SOIA area, also provides habitat connectivity between the Sacramento River and smaller tributaries. The SOIA area has been previously developed for agricultural uses, and is not expected to provide significant connectivity for wildlife movement between important habitats or core areas within the region, or contain any portion of a major or local wildlife corridor. This determination is supported by the fact that wildlife movement through the SOIA is limited from current and planned suburban development to the north, east, and west of the SOIA area. Additionally, the project site does not contain any known wildlife nursery sites. Therefore, the project is not expected to affect important wildlife corridors or nursery sites, and this issue is not discussed further.

Consistency with Local Policies or Ordinances

The Sacramento County General Plan (Sacramento County 2011) and City of Elk Grove General Plan (City of Elk Grove 2016) contain several policies that focus on preservation of special-status plants and wildlife, and sensitive natural communities (e.g., wetlands and vernal pools). Mitigation measures for potential impacts to special-status plants (Mitigation Measure 3.4-1), special-status wildlife (Mitigation Measures 3.4-2a through 3.4-2g), and jurisdictional wetlands and other waters (Mitigation Measure 3.4-3) are included in the impact analysis, below. With implementation of these mitigation measures, potential impacts would be reduced to a less-than-significant level, and the project would not conflict with Sacramento County General Plan or City of Elk Gove General Plan policies protecting special-status species and sensitive habitats. Therefore, this issue is not discussed further in this EIR.

The Sacramento County Tree Preservation Ordinance (see Section 3.4.2, "Regulatory Framework") requires the preservation of native oak trees within the designated urban area of the unincorporated area of Sacramento County. The establishment of the SOIA would not change Sacramento County General Plan agricultural land use designations or zoning and would not allow any urban development to occur. Thus, the project would not conflict with Sacramento County tree protection requirements.

Chapter 19.12 of the City's Municipal Code provides regulations for tree preservation and protection. Future development of the SOIA would occur after annexation to the City of Elk Grove and would be required to demonstrate compliance with its tree protection and mitigation requirements. Thus, the SOIA area would not conflict with City tree protection provisions.

IMPACT ANALYSIS

Impact 3.4-1: Disturbance to or loss of special-status plant species and habitat.

Potential land uses and development projects that may be approved and implemented in the future in the proposed SOIA area could result in disturbance or loss of several special-status plant species. Because the loss of special-status plants can substantially affect the abundance, distribution, and viability of local and regional populations of these species, this would be a **potentially significant** impact.

Eight special-status plant species were determined to have potential to occur on the project site, including: watershield, bristly sedge, dwarf downingia, wooly rose-mallow, legenere, Heckard's pepper-grass, Sanford's arrowhead, and saline clover. Suitable habitat for all eight of these plant species primarily includes wetlands and vernal pools. While the project site contains mostly agricultural and developed land, potential wetland habitat is present within the northwest portion of the project site, and possibly elsewhere on the project site.

While no physical changes to the site would occur as a result of approval of the SOIA, the project would remove an obstacle to the future annexation and development of the site. Land use changes associated with the conceptual land use plan would result in low density residential, commercial, public schools, and public parks uses. Construction activities such as ground disturbance and vegetation removal, and the conversion of potential wetland habitat to urban uses, associated with potential future development and land uses on the project site could result in disturbance or removal of special-status plants and their habitat, if they are present. The loss of special-status plants and their habitat can substantially affect the abundance,

distribution, and viability of local and regional populations of these species. Therefore, project-related loss of special-status plant species would be a **potentially significant** impact.

Mitigation Measure 3.4-1: Protection and mitigation of special-status plants.

At the time of submittal of any application to annex territory with the Bilby Ridge SOIA area, the City of Elk Grove shall impose the following conditions on all discretionary projects. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

- ✓ Prior to construction and during the blooming period for the special-status plant species with potential to occur in the project site and in areas of any required off-site improvements, a qualified botanist shall conduct protocol-level surveys for special-status plants following the most recent CDFW rare plant survey protocols in areas where potentially suitable habitat would be removed or disturbed by project activities. Table 3.4-3 summarizes the normal blooming periods for special-status plant species with potential to occur on the project site, which generally indicates the optimal survey periods when the species are most identifiable.
- ✓ If no special-status plants are found, the botanist shall document the findings in a letter report to USFWS, CDFW, and the project applicant and no further mitigation shall be required.

Table 3.4-3 Normal Blooming Period for Special-Status Plants with Potential to Occur on the Project Site

| Species | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| watershield Brasenia schreberi | | | | | | | | | | |
| bristly sedge Carex comosa | | | | | | | | | | |
| dwarf downingia Downingia pusilla | | | | | | | | | | |
| Woolly rose-mallow Hibiscus lasiocarpos var. occidentalis | | | | | | | | | | |
| legenere Legenere limosa | | | | | | | | | | |
| Heckard's pepper-grass Lepidium latipes var. heckardii | | | | | | | | | | |
| Sanford's arrowhead Sagittaria sanfordii | | | | | | | | | | |
| Saline clover Trifolium hydrophilum | | | | | | | | | | |

Source: Data compiled by Ascent Environmental in 2017

✓ If special-status plant species are found that cannot be avoided during construction, the applicant shall consult with CDFW and/or USFWS, as appropriate depending on species status, to determine the appropriate mitigation measures for direct and indirect impacts that could occur as a result of project construction and shall implement the agreed-upon mitigation measures to achieve no net loss of occupied habitat or individuals. Mitigation measures may include preserving and enhancing existing populations, creation of off-site populations on mitigation sites through seed collection or transplantation, and/or restoring or creating suitable habitat in sufficient quantities to achieve no net loss of occupied habitat and/or individuals. A mitigation and monitoring plan shall be developed describing how unavoidable losses of special-status plants will be compensated.

■ If relocation efforts are part of the mitigation plan, the plan shall include details on the methods to be used, including collection, storage, propagation, receptor site preparation, installation, long-term protection and management, monitoring and reporting requirements, success criteria, and remedial action responsibilities should the initial effort fail to meet long-term monitoring requirements.

- Success criteria for preserved and compensatory populations shall include:
 - ▼ The extent of occupied area and plant density (number of plants per unit area) in compensatory populations shall be equal to or greater than the affected occupied habitat.
 - Compensatory and preserved populations shall be self-producing. Populations shall be considered self-producing when:
 - plants reestablish annually for a minimum of five years with no human intervention such as supplemental seeding; and
 - reestablished and preserved habitats contain an occupied area and flower density comparable to existing occupied habitat areas in similar habitat types in the project vicinity.
 - ▼ If off-site mitigation includes dedication of conservation easements, purchase of mitigation credits, or other off-site conservation measures, the details of these measures shall be included in the mitigation plan, including information on responsible parties for long-term management, conservation easement holders, long-term management requirements, success criteria such as those listed above and other details, as appropriate to target the preservation of long term viable populations.

Significance after Mitigation

Implementation of Mitigation Measure 3.4-1 would reduce significant impacts on special-status plants to a **less-than-significant** level because it would require future project applicants to identify and avoid special-status plants or provide compensation for loss of special-status plants through enhancement of existing populations, creation and management of off-site populations, conservation easements, or other appropriate measures.

Impact 3.4-2: Disturbance to or loss of special-status wildlife species and habitat.

Potential land uses and development projects that may be approved and implemented in the future under the proposed SOIA area could adversely affect several special-status wildlife species, including reptiles, nesting birds, invertebrates, and mammals. Future development construction activities such as ground disturbance and vegetation removal, as well as overall conversion of habitat to urban uses, could result in the disturbance or loss of individuals and reduced breeding productivity of these species. Special-status wildlife species are protected under ESA, CESA, California Fish and Game Code, CEQA, or other regulations. The loss of special-status wildlife species and their habitat would be a **potentially significant** impact.

One special-status species (northern harrier) has been observed foraging on the project site. Eleven other special-status wildlife species were determined to have potential to occur on the project site: giant gartersnake, western pond turtle, burrowing owl, greater sandhill crane, song sparrow ("Modesto" population), Swainson's hawk, tricolored blackbird, white-tailed kite, vernal pool fairy shrimp, vernal pool tadpole shrimp, and American badger. Land use changes and development projects on the project site may be approved and implemented in the future as a result of approval of the SOIA and future annexation to the City. The conceptual land use plan and capacities for the project site identify low density residential, commercial, public schools, and public parks as future uses. Construction activities (such as ground disturbance and vegetation removal), and the conversion of suitable habitat to urban uses associated with potential future development and land uses on the project site could result in disturbance or loss of special-status animals, if they are present. Potential effects of future annexation and development of the SOIA area on the special-status animal species known or with potential to occur on the project site are discussed below.

Aquatic reptiles

Giant gartersnake

Giant gartersnake is listed as threatened under ESA and CESA, and the wide historic range of the species is currently limited to several fragmented population clusters. As much of the species' native wetland habitat has been converted to urban and agricultural uses, the species has adapted to drainage canals and irrigation ditches. The project site contains potentially suitable aquatic habitat within irrigation ditches and the nearest known occurrence is less than 1 mile southwest of the project site (CNDDB 2017). Future land use changes and development related to the SOIA could result in the loss of giant gartersnake individuals and occupied habitat, if the species occurs on the project site, through construction-related disturbances, conversion of agricultural land to urban uses, and destruction of irrigation ditches and other suitable habitat elements. This would be a **potentially significant** impact.

Western pond turtle

Western pond turtle is a CDFW species of special concern. This species can be found in many different aquatic habitats, including ponds, marshes, rivers, and irrigation ditches. Western pond turtle uses upland habitat for basking and egg-laying. The nearest known occurrence is approximately 1 mile northwest of the project site within an irrigation ditch (CNDDB 2017). Future land use changes and development subsequent to the SOIA could result in the loss of western pond turtles, if the species occurs on the project site, through construction-related disturbances, conversion of agricultural land to urban uses, and destruction of irrigation ditches and other suitable habitat elements. This would be a **potentially significant** impact.

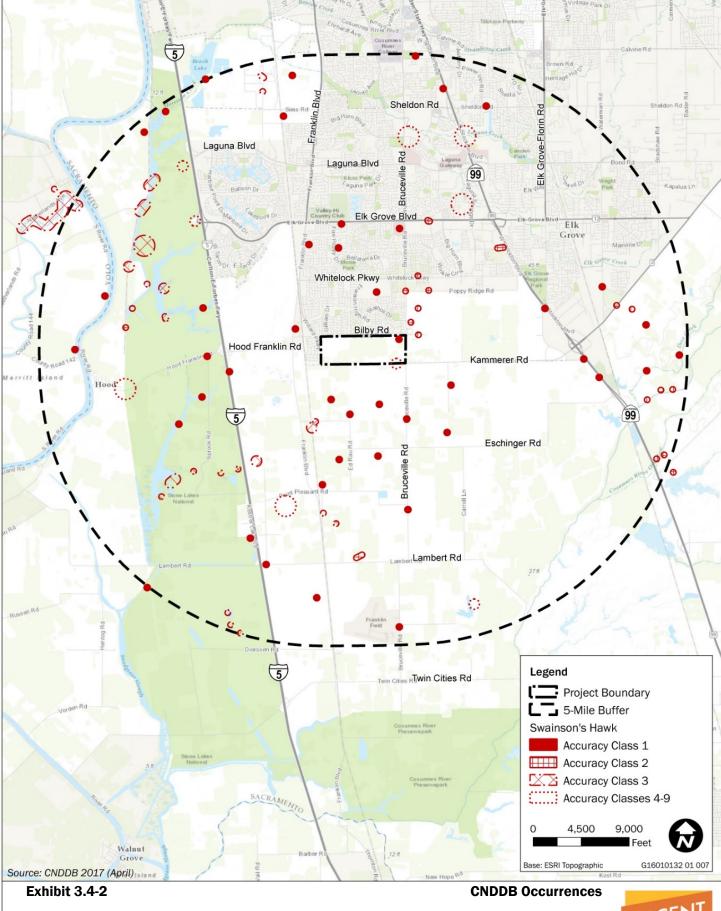
Burrowing owl

Burrowing owl is a CDFW species of special concern. The project site contains potentially suitable breeding habitat within earthen berms along irrigation ditches and between agricultural fields. The nearest known occurrence is approximately 1 mile northwest of the project site, associated with grazed grassland habitat (CNDDB 2017). Future land use changes and development related to the SOIA could result in destruction of active burrows or direct mortality of burrowing owls, if they are present on the project site, through conversion of agricultural land to urban uses and construction-related ground disturbance. This would be a **potentially significant** impact.

Swainson's hawk and other nesting raptors

The project site contains isolated trees and tree groves that could be used for nesting by Swainson's hawk and white-tailed kite. The agricultural fields on the project site also provide potential foraging habitat for these species, and for northern harrier. Swainson's hawks have historically nested on the project site (CNDDB 2017, Exhibit 3.4-2), and Swainson's hawks, white-tailed kites, and northern harriers are frequently observed in the area (eBird 2017). The nearest known nesting occurrence of Swainson's hawk is within a walnut (*Juglans* sp.) tree near the intersection of Bruceville and Bilby Roads (CNDDB 2017). Several Swainson's hawks and northern harriers were observed during the April 10, 2017 site visit.

Project construction activities associated with potential future land uses and development on the project site, such as ground disturbance, construction vehicles, and presence of construction crews, could disturb nesting Swainson's hawks, northern harriers, and white-tailed kites if they are present, potentially resulting in nest abandonment, nest failure, or mortality of chicks or eggs. At full buildout, the conceptual land use plan also includes the potential conversion of approximately 480 acres of agricultural land to urban uses, including low-density residential, commercial, public schools, and public parks. Conversion of agricultural land would result in the permanent loss of suitable foraging habitat for Swainson's hawk. The potential loss of Swainson's hawk and other raptor nests, or the permanent loss of Swainson's hawk foraging habitat, would be a **significant** impact.





Other special-status bird species

Several additional special-status bird species could potentially occur on the project site, including greater sandhill crane, song sparrow ("Modesto" population), and tricolored blackbird. Greater sandhill crane is listed as threatened under CESA, and is also fully protected under California Fish and Game Code. The "Modesto" population of song sparrow is a CDFW species of special concern, and tricolored blackbird is a candidate species under CESA and a CDFW species of special concern. Tricolored blackbird is also currently protected under an emergency listing by the California Fish and Game Commission while the petition for state listing is considered.

Potentially suitable overwintering habitat for greater sandhill crane is present in the agricultural land on the project site. Several recent occurrences have been documented within approximately 1 mile of the project site (eBird 2017), and the nearby Cosumnes River Preserve is an important overwintering location for the species. The Cosumnes River Preserve contains approximately 50,000 acres of wildlife habitat, and provides connectivity between adjacent agricultural land and undeveloped land in the region. The potential future conversion of approximately 480 acres of agricultural habitat to urban uses on the project site as a result of the proposed SOIA would reduce available overwintering habitat for greater sandhill crane. However, this loss is not expected to substantially diminish the overall quality and availability of the habitat for sandhill crane within the region and its proximity to existing and planned urban uses. The SSHCP greater sandhill crane modeled habitat identifies the site as not providing high value foraging habitat (SSHCP Figure 3-22). Project impacts to greater sandhill crane would be **less than significant**.

Potentially suitable nesting habitat for song sparrow ("Modesto" population) and tricolored blackbird is present on the project site, primarily within ruderal vegetation (e.g., blackberry) along irrigation ditches. The nearest known occurrence of song sparrow is 2.3 miles west of the project site within Stone Lakes National Wildlife Refuge, and the nearest known occurrence of tricolored blackbird is approximately 2 miles southeast of the project site (CNDDB 2017). Tricolored blackbirds have historically nested on the project site within blackberry plants at the intersection of Kammerer and Bruceville Roads (1981, CNDDB 2017). Habitat on the project site for both of these species is not optimal; however, it is possible that nests or nesting colonies could be present. Project construction activities associated with potential future land uses and development on the project site, such as ground disturbance and vegetation removal, could disturb nesting song sparrows and tricolored blackbirds if they are present, potentially resulting in nest abandonment, nest failure, or mortality of chicks or eggs. This would be a **potentially significant** impact.

Aquatic invertebrates

Two aquatic invertebrate species, vernal pool fairy shrimp and vernal pool tadpole shrimp, could potentially occur on the project site. Vernal pool fairy shrimp is listed as threatened under ESA, and vernal pool tadpole shrimp is listed as endangered under ESA. The nearest known occurrences of both species are approximately 4 to 5 miles north of the project site, within disturbed aquatic habitat (a grassy-bottomed depression and a depression next to a railroad track, respectively; CNDDB 2017). These species are typically associated with vernal pools, which are abundant within the region of the project site – including within Stone Lakes National Wildlife Refuge. Much of the region has undergone urban and agricultural development, and vernal pool and wetland habitat has been lost or fragmented over time. While the project site contains mostly agricultural and developed land, potential wetland habitat is present within the northwest portion of the project site, and potentially elsewhere on the project site. Project construction activities associated with potential future land uses and development on the project site, such as conversion of potential wetland habitat to urban uses, ground disturbance, and vegetation removal, could result in disturbance or removal of vernal pool fairy shrimp, vernal pool tadpole shrimp, and their habitat if they are present. This would be a **potentially significant** impact.

American badger

Optimal habitat for American badger is not present on the project site; however, agricultural fields could provide suboptimal habitat for badger. The nearest known occurrence of American badger is 3.8 miles west of the SOIA area near Hood, CA (CNDDB 2017). Potential future land uses and development activities in the SOIA, including conversion of agricultural land to urban uses and associated ground disturbance, could

result in the direct loss or injury of American badger if the species is present on the project site. This would be a **potentially significant** impact.

Mitigation Measure 3.4-2a: Protection of giant gartersnake.

At the time of submittal of any application to annex territory with the Bilby Ridge SOIA area, the City of Elk Grove shall impose the following conditions on all discretionary projects. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

- ✓ For projects or ground-disturbing activities with potential to disturb suitable aquatic or adjacent upland habitat for giant gartersnake, the following measures will be implemented.
 - ▼ The applicant shall retain a qualified biologist to conduct a field investigation to delineate giant gartersnake aquatic habitat within the project and any required off-site improvements and adjacent areas within 300 feet of the construction footprint. Giant gartersnake aquatic habitat includes agricultural ditches.
 - During construction, an approved biologist experienced with giant gartersnake identification and behavior shall be on-site daily when construction activities within aquatic habitat or within 300 feet of aquatic habitat are taking place. The biologist shall inspect the project site daily for giant gartersnake prior to construction activities. The biologist will also conduct environmental awareness training for all construction personnel on required avoidance procedures and protocols if a giant gartersnake enters an active construction zone.
 - All construction activity within giant garter snake aquatic and upland habitat in and around the site shall be conducted between May 1 and September 15, the active period for giant gartersnakes. This would reduce direct impacts on the species because the snakes would be active and respond to construction activities by moving out of the way.
 - If construction activities occur in giant gartersnake aquatic habitat, aquatic habitat shall be dewatered and then remain dry and absent of aquatic prey (e.g., fish and tadpoles) for 15 days prior to initiation of construction activities. If complete dewatering is not possible, the project applicant shall consult with CDFW and USFWS to determine what additional measures may be necessary to minimize effects to giant gartersnake. After aquatic habitat has been dewatered 15 days prior to construction activities, exclusion fencing shall be installed extending a minimum of 300 feet into adjacent uplands to isolate both the aquatic and adjacent upland habitat. Exclusionary fencing shall be erected 36 inches above ground and buried at least 6 inches below the ground to prevent snakes from attempting to move under the fence into the construction area. In addition, high-visibility fencing shall be erected to identify the construction limits and to protect adjacent habitat from encroachment of personnel and equipment. Giant gartersnake habitat outside construction fencing shall be avoided by all construction personnel. The fencing and the work area shall be inspected by the approved biologist to ensure that the fencing is intact and that no snakes have entered the work area before the start of each work day. The fencing shall be maintained by the contractor until completion of the project.
 - ▼ If a giant gartersnake is observed, the biologist shall notify CDFW and USFWS immediately. Construction activities will be suspended in a 100-foot radius of the gartersnake until the snake leaves the site on its own volition. If necessary, the biologist shall consult with CDFW and USFWS regarding appropriate procedures for relocation. If the animal is handled, a report shall be submitted, including date(s), location(s), habitat description, and any corrective measures taken to protect giant gartersnake within 1 business day to CDFW and USFWS. The biologist shall report any take of listed species to USFWS immediately. Any worker who inadvertently injures or kills a giant gartersnake or who finds one dead, injured, or entrapped must immediately report the incident to the approved biologist.

All excavated steep-walled holes and trenches more than 6 inches deep shall be covered with plywood (or similar material) or provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each work day or 30 minutes prior to sunset, whichever occurs first. All steep-walled holes and trenches shall be inspected by the approved biologist each morning to ensure that no wildlife has become entrapped. All construction pipes, culverts, similar structures, construction equipment, and construction debris left overnight within giant gartersnake modeled habitat shall be inspected for giant gartersnake by the approved biologist prior to being moved.

- If erosion control is implemented on the project site, non-entangling erosion control material shall be used to reduce the potential for entrapment. Tightly woven fiber netting (mesh size less than 0.25 inch) or similar material will be used to ensure snakes are not trapped (no monofilament). Coconut coir matting and fiber rolls containing burlap are examples of acceptable erosion control materials.
- ▼ The applicant shall ensure that there is no-net-loss of giant gartersnake habitat by compensating for loss of habitat at a ratio of 1:1, by purchasing credits from a USFWS-approved conservation bank.
- Prior to construction, USFWS shall be consulted pursuant to Section 7 of the ESA. The activities may qualify to use the "Programmatic Formal Consultation for U.S. Army Corps of Engineers 404 Permitted Projects with Relatively Small Effects on the Giant Garter Snake within Butte, Colusa, Glenn, Fresno, Merced, Sacramento, San Joaquin, Solano, Stanislaus, Sutter and Yolo Counties, California" (USFWS 1999). The Habitat Replacement & Restoration Guidelines (Appendix A), Items Necessary for Formal Consultation (Appendix B), Avoidance & Minimization Measures During Construction (Appendix C), and Monitoring Requirements (Appendix D) shall be followed.

Significance after Mitigation

Implementation of Mitigation Measure 3.4-2a would reduce impacts on giant gartersnake to a **less-than-significant** level because giant gartersnakes and habitat would be avoided and protected from construction activities, and the project applicant would compensate for loss of suitable occupied habitat because of construction activities.

Mitigation Measure 3.4-2b: Avoidance of western pond turtle.

At the time of submittal of any application to annex territory with the Bilby Ridge SOIA area, the City of Elk Grove shall impose the following conditions on all discretionary projects. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

For projects or ground-disturbing activities (including any required off-site improvements) with potential to disturb suitable aquatic or adjacent upland habitat for western pond turtle, the following measures shall be implemented.

■ Within 24 hours before beginning construction activities within 200 feet of suitable aquatic habitat for western pond turtle, a qualified biologist shall survey areas of anticipated disturbance for the presence of western pond turtle. The construction area shall be re-inspected whenever a lapse in construction activity of two weeks or more has occurred. If pond turtles are found during the survey or observed within the construction area at any other time, they shall be relocated by a qualified biologist to upstream or adjacent aquatic habitat that would not be disturbed by construction activity.

Significance after Mitigation

Implementation of Mitigation Measure 3.4-2b would reduce potential impacts on western pond turtle to a **less-than-significant** level by requiring preconstruction surveys and the protection of western pond turtles from construction-related injury, mortality, or other disturbance.

Mitigation Measure 3.4-2c: Protection of burrowing owl.

At the time of submittal of any application to annex territory with the Bilby Ridge SOIA area, the City of Elk Grove shall impose the following conditions on all discretionary projects. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

For projects or ground-disturbing activities with potential to disturb suitable habitat for burrowing owl, the following measures shall be implemented.

- The applicant shall retain a qualified biologist to conduct focused breeding and nonbreeding season surveys for burrowing owls in areas of suitable habitat on and within 1,500 feet of the project site and any required off-site improvements. Surveys shall be conducted prior to the start of construction activities and in accordance with Appendix D of CDFW's Staff Report on Burrowing Owl Mitigation (CDFW 2012) or the most recent CDFW protocols.
- If no occupied burrows are found, a letter report documenting the survey methods and results shall be submitted to CDFW and no further mitigation will be required.
- ✓ If an active burrow is found during the nonbreeding season (September 1 through January 31), the applicant shall consult with CDFW regarding protection buffers to be established around the occupied burrow and maintained throughout construction. If occupied burrows are present that cannot be avoided or adequately protected with a no-disturbance buffer, a burrowing owl exclusion plan shall be developed, as described in Appendix E of CDFW's 2012 Staff Report. Burrowing owls shall not be excluded from occupied burrows until the project's burrowing owl exclusion plan is approved by CDFW. The exclusion plan shall include a plan for creation, maintenance, and monitoring of artificial burrows in suitable habitat proximate to the burrows to be destroyed, that provide substitute burrows for displaced owls.
- If an active burrow is found during the breeding season (February 1 through August 31), occupied burrows shall not be disturbed and will be provided with a 150- to 1,500-foot protective buffer unless a qualified biologist verifies through noninvasive means that either: (1) the birds have not begun egg laying, or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. The size of the buffer shall depend on the time of year and level disturbance as outlined in the CDFW Staff Report (CDFW 2012) or the most recent CDFW protocols. The size of the buffer may be reduced if a broad-scale, long-term, monitoring program acceptable to CDFW is implemented to ensure burrowing owls are not detrimentally affected. Once the fledglings are capable of independent survival, the owls can be evicted and the burrow can be destroyed per the terms of a CDFW-approved burrowing owl exclusion plan developed in accordance with Appendix E of CDFW's 2012 Staff Report or the most recent CDFW protocols.
- If active burrowing owl nests are found on the site and are destroyed by project implementation, the project applicant shall mitigate the loss of occupied habitat in accordance with guidance provided in the CDFW 2012 Staff Report or the most recent CDFW protocols, which states that permanent impacts to nesting, occupied and satellite burrows, and burrowing owl habitat shall be mitigated such that habitat acreage, number of burrows, and burrowing owls impacted are replaced through permanent conservation of comparable or better habitat with similar vegetation communities and burrowing mammals (e.g., ground squirrels) present to provide for nesting, foraging, wintering, and dispersal. The applicant shall retain a qualified biologist to develop a burrowing owl mitigation and management plan that incorporates the following goals and standards:
 - Mitigation lands shall be selected based on comparison of the habitat lost to the compensatory habitat, including type and structure of habitat, disturbance levels, potential for conflicts with humans, pets, and other wildlife, density of burrowing owls, and relative importance of the habitat to the species range wide.
 - ✓ If feasible, mitigation lands shall be provided adjacent or proximate to the site so that displaced owls can relocate with reduced risk of take. Feasibility of providing mitigation adjacent or proximate to the

project site depends on availability of sufficient suitable habitat to support displaced owls that may be preserved in perpetuity.

- ✓ If suitable habitat is not available for conservation adjacent or proximate to the project site, mitigation lands shall be focused on consolidating and enlarging conservation areas outside of urban and planned growth areas and within foraging distance of other conservation lands. Mitigation may be accomplished through purchase of mitigation credits at a CDFW-approved mitigation bank, if available. If mitigation credits are not available from an approved bank and mitigation lands are not available adjacent to other conservation lands, alternative mitigation sites and acreage shall be determined in consultation with CDFW.
- ✓ If mitigation is not available through an approved mitigation bank and will be completed through permittee-responsible conservation lands, the mitigation plan shall include mitigation objectives, site selection factors, site management roles and responsibilities, vegetation management goals, financial assurances and funding mechanisms, performance standards and success criteria, monitoring and reporting protocols, and adaptive management measures. Success shall be based on the number of adult burrowing owls and pairs using the site and if the numbers are maintained over time. Measures of success, as suggested in the 2012 Staff Report, shall include site tenacity, number of adult owls present and reproducing, colonization by burrowing owls from elsewhere, changes in distribution, and trends in stressors.

Significance after Mitigation

Implementing Mitigation Measure 3.4-2c would reduce potential impacts on burrowing owl to a **less-than-significant** level because burrowing owls would be avoided and protected from construction activities, or the project applicant would compensate for project-related loss of suitable occupied habitat.

Mitigation Measure 3.4-2d: Protection measures for Swainson's hawk and other nesting raptors.

At the time of submittal of any application to annex territory with the Bilby Ridge SOIA area, the City of Elk Grove shall impose the following conditions on all discretionary projects. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

For projects or ground-disturbing activities (including any required off-site improvements) with potential to affect Swainson's hawk and other raptor nests, or remove Swainson's hawk foraging habitat, the project applicant shall consult with CDFW with respect to the following measures proposed to mitigate for habitat removal and potential nest disturbance. As part of the consultation, the project applicant may seek take authorization under Section 2081 of the Fish and Game Code. The following measures will be implemented and are intended to avoid, minimize, and fully mitigate impacts to Swainson's hawk, as well as other raptors:

- ✓ For construction activities that would occur within 0.25 mile of a known or likely Swainson's hawk nest site (identified based on previous years' use by Swainson's hawk), the project applicant shall attempt to initiate construction activities prior to nest initiation phase (i.e., before March 1). Depending on the timing, regularity, and intensity of construction activity, construction in the area prior to nest initiation may discourage a Swainson's hawk pair from using that site and eliminate the need to implement further nest-protection measures, such as buffers and limited construction operating periods around active nests. Other measures to deter establishment of nests (e.g., reflective striping or decoys) may be used prior to the breeding season in areas planned for active construction. However, if breeding raptors establish an active nest site, as evidenced by nest building, egg laying, incubation, or other nesting behavior, near the construction area, they shall not be harassed or deterred from continuing with their normal breeding activities.
- ▲ For project activities, including tree removal, that begin between March 1 and September 15, qualified biologists shall conduct preconstruction surveys for Swainson's hawk and other nesting raptors and to identify active nests on and within 0.5 mile of the project site. The surveys shall be conducted before the beginning of any construction activities between March 1 and September 15, following the Recommended

Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (Swainson's Hawk Technical Advisory Committee 2000).

- Impacts to nesting Swainson's hawks and other raptors shall be avoided by establishing appropriate buffers around active nest sites identified during preconstruction raptor surveys. Project activity shall not commence within the buffer areas until a qualified biologist has determined, in coordination with CDFW, that the young have fledged, the nest is no longer active, or reducing the buffer would not likely result in nest abandonment. CDFW guidelines recommend implementation of 0.25-mile-wide buffer for Swainson's hawk and 500-feet for other raptors, but the size of the buffer may be adjusted if a qualified biologist and the project applicant, in consultation with CDFW, 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 shall be required if the activity has potential to adversely affect the nest.
- ▲ Trees shall not be removed during the breeding season for nesting raptors unless a survey by a qualified biologist verifies that there is not an active nest in the tree.
- Mitigation for loss of Swainson's hawk foraging habitat will follow the provisions of City of Elk Grove's Municipal Code, Chapter 16.130, which requires projects to mitigate loss the of Swainson's hawk foraging habitat through the purchase of conservation easements (if the project will impact greater than 40 acres of habitat) or by paying a mitigation fee (if the project will impact less than 40 acres of habitat). The amount of land preserved shall be governed by a one-to-one (1:1) mitigation ratio for each acre developed as set forth in Chapter 16.130.

Significance after Mitigation

Implementing Mitigation Measure 3.4-2d would reduce impacts on Swanson's hawk and other raptors, but not to a less-than-significant level. Although active Swainson's hawk and other raptor nests would be avoided and protected from construction activities, approximately 480 acres of potentially suitable foraging habitat would be converted to urban uses. Development within the region surrounding the project site has resulted in widespread loss of foraging habitat for Swainson's hawk because of conversion of grassland and agricultural habitats. While loss of foraging habitat within the project site would be mitigated at a 1:1 ratio, any loss of foraging habitat would result in **significant and unavoidable** impacts to local nesting Swainson's hawks.

Mitigation Measure 3.4-2e: Protection measures for tricolored blackbird and song sparrow ("Modesto" population).

At the time of submittal of any application to annex territory with the Bilby Ridge SOIA area, the City of Elk Grove shall impose the following conditions on all discretionary projects. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

For projects or ground-disturbing activities that could affect tricolored blackbird and song sparrow nesting habitat (primarily within ruderal vegetation (e.g., blackberry) along irrigation ditches), the following measures shall be implemented to avoid or minimize loss of active tricolored blackbird or song sparrow nests:

- ▲ To minimize the potential for loss of tricolored blackbird nesting colonies, song sparrow nests, or other bird nests, structure and vegetation removal activities shall commence during the nonbreeding season (September 1-January 31). If all suitable nesting habitat is removed during the nonbreeding season, no further mitigation would be required.
- August 31, a qualified biologist shall conduct preconstruction surveys for nests on any structure or vegetation slated for removal, as well as for potential tricolored blackbird nesting habitat. The surveys shall be conducted no more than 14 days before construction commences. If no active nests or tricolored blackbird colonies are found during focused surveys, no further action under this measure will be required. If active nests are located during the preconstruction surveys, the biologist shall notify CDFW. If necessary, modifications to the project design to avoid removal of occupied habitat while still achieving project

objectives shall be evaluated, and implemented to the extent feasible. If avoidance is not feasible or conflicts with project objectives, construction shall be prohibited within a minimum of 100 feet of the nest to avoid disturbance until the nest colony is no longer active. These recommended buffer areas may be reduced or expanded through consultation with CDFW. Monitoring of all occupied nests shall be conducted by a qualified biologist during construction activities to adjust the 100-foot buffer if agitated behavior by the nesting bird is observed.

Significance Conclusion

Implementation of Mitigation Measure 3.4-2e would reduce impacts to a **less-than-significant** level because tricolored blackbird, song sparrow, and other bird nests would be avoided and protected from construction activities.

Mitigation Measure 3.4-2f: Mitigation for aquatic invertebrates; vernal pool fairy shrimp and vernal pool tadpole shrimp.

At the time of submittal of any application to annex territory with the Bilby Ridge SOIA area, the City of Elk Grove shall impose the following conditions on all discretionary projects. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

This mitigation measure applies to projects or ground-disturbing activities with potential to disturb habitat for vernal pool crustaceans; it incorporates the conservation measures from the USFWS Programmatic Biological Opinion (USFWS 1996) that provide for both habitat preservation and habitat creation for vernal pool fairy shrimp and vernal pool tadpole shrimp.

If suitable wetland or vernal pool habitat is determined to be present on the project site (see Mitigation Measure 3.4-3), the project applicant shall implement the following measures to minimize and compensate for loss of vernal pool fairy shrimp and vernal pool tadpole shrimp.

- Habitat Preservation: The applicant, in consultation with USFWS, shall compensate for direct effects of the project on potential habitat for vernal pool fairy shrimp and vernal pool tadpole shrimp at a ratio of 2:1, by purchasing vernal pool preservation credits from a USFWS-approved conservation bank. Compensation credits shall be purchased prior to any ground-disturbing activities.
- Habitat Creation: The applicant shall compensate for the direct effects of the project on potential habitat for vernal pool fairy shrimp and vernal pool tadpole shrimp at a ratio of 1:1, by purchasing vernal pool creation credits from a USFWS-approved conservation bank.
- Mitigation shall occur before the approval of any grading or improvement plans for any project phase that would allow work within 250 feet of such habitat, and before any ground-disturbing activity within 250 feet of the habitat.
- ✓ For seasonal wetlands and drainages that shall be retained on the site (i.e., those not proposed to be filled), a minimum setback of at least 50 feet from these features will be avoided on the project site. The buffer area shall be fenced with high visibility construction fencing prior to commencement of ground-disturbing activities, and shall be maintained for the duration of construction activities.
- ▲ A worker environmental awareness training shall be conducted to inform on-site construction personnel regarding the potential presence of listed species and the importance of avoiding impacts to these species and their habitat.
- The applicant shall secure any necessary take authorization prior to project construction through formal consultation between USACE and USFWS pursuant to Section 7 of the ESA, and shall implement all measures included in the Biological Opinion issued by USFWS.

Significance after Mitigation

Implementation of Mitigation Measure 3.4-2f would reduce significant impacts on vernal pool fairy shrimp and vernal pool tadpole shrimp and suitable habitat to a **less-than-significant** level because it would offset the impact through preserving vernal pool habitat at a ratio of 2:1 and the creation of vernal pool habitat at a ratio of 1:1 within a USFWS-approved mitigation bank or on-site habitat enhancement and protection subject to USFWS approval.

Mitigation 3.4-2g: Protection measures for American badger.

At the time of submittal of any application to annex territory with the Bilby Ridge SOIA area, the City of Elk Grove shall impose the following conditions on all discretionary projects. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

This mitigation measure applies to projects or ground-disturbing activities with potential to disturb suitable habitat for American badger.

▶ Prior to construction activities within suitable habitat for American badger (e.g., ruderal grassland, gain fields), a qualified wildlife biologist shall conduct surveys to identify any American badger burrows/dens. These surveys shall be conducted not more than 15 days prior to the start of construction. If occupied burrows are not found, further mitigation will be not required. If occupied burrows are found, impacts to active badger dens shall be avoided by establishing exclusion zones around all active badger dens, within which construction-related activities shall be prohibited until denning activities are complete or the den is abandoned. A qualified biologist shall monitor each den once per week to track the status of the den and to determine when a den area has been cleared for construction.

Significance after Mitigation

Implementation of Mitigation Measure 3.4-2g would reduce impacts on American badger to a **less-than-significant** level because preconstruction surveys would be conducted and active badger dens would be protected from construction activities.

Impact 3.4-3: Disturbance and loss of wetlands, other waters of the United States, and waters of the state.

Wetlands, including vernal pools, and other waters of the United States and waters of the state may be present in the SOIA. Future land use changes and development related to the proposed establishment of the SOIA and future annexation could result in conversion of wetland habitat to urban uses. Loss or degradation of wetland habitat would be a **potentially significant** impact.

The main hydrological feature on the project site is approximately 2.7 miles of irrigation ditches, which are not likely to qualify as jurisdictional waters of the United States under Section 404 of the Clean Water Act. While the project site contains mostly agricultural and developed land, a review of aerial imagery and a site visit on April 10, 2017 suggest the northwest portion the project site may contain wetland habitat. A jurisdictional wetland delineation has not been conducted because the project site is currently privately owned, so it is possible that additional potential wetland habitat could be present in other portions of the project site. Vernal pool habitat is present within the vicinity of the project site, including within Stone Lakes National Wildlife Refuge west of the project site. The soil types on the project site are the same as those within areas supporting vernal pool habitat, and it is likely that the project site contained vernal pool habitat prior to conversion to agricultural uses.

Future land use changes and development related to the proposed SOIA could result in the conversion of wetland habitat to urban uses on the project site. Project construction activities associated with these potential uses on the project site, including vegetation removal and other ground disturbance, could result in the loss or degradation wetlands, other waters of the United States, or waters of the state through fill, hydrologic changes, or other disturbances. This would be a **potentially significant** impact.

Mitigation Measure 3.4-3: Wetlands, other waters of the U.S., and waters of the state.

At the time of submittal of any application to annex territory with the Bilby Ridge SOIA area, the City of Elk Grove shall impose the following conditions on all discretionary projects. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

For projects that could disturb wetlands, other waters of the United States, or waters of the state, the project applicant shall retain a qualified biologist to survey the project site for sensitive natural communities, including wetland and vernal pool habitats. Wetlands and vernal pools are of special concern to resource agencies and are afforded specific consideration, based on Section 404 of the CWA and other applicable regulations. If wetlands or vernal pool habitats are determined to be present, a delineation of waters of the United States, including wetlands that would be affected by the project, shall be prepared by a qualified biologist through the formal Section 404 wetland delineation process. The delineation shall be submitted to and verified by USACE. If, based on the verified delineation, it is determined that fill of waters of the United States would result from implementation of the project, authorization for such fill shall be secured from USACE through the Section 404 permitting process. Any waters of the United States that would be affected by project development shall be replaced or restored on a "no-net-loss" basis in accordance with USACE mitigation guidelines (or the applicable USACE guidelines in place at the time of construction). In association with the Section 404 permit (if applicable) and prior to the issuance of any grading permit, Section 401 Water Quality Certification from the RWOCB shall be obtained.

Significance after Mitigation

Implementation of Mitigation Measure 3.4-3 would reduce impacts to wetlands, other waters of the United States, and waters of the state to a **less-than-significant** level because it would ensure no net loss of functions and acreage of wetlands and other waters through implementation of USACE mitigation guidelines.

Impact 3.4-4: Consistency with the South Sacramento Habitat Conservation Plan (SSHCP).

The SOIA area is within the proposed SSHCP area, and is designated as an Urban Development Area; however, the City of Elk Grove is not a participant in the SSHCP. Should future developers participate in the HCP, development within the SOIA area would be permitted because it is within an Urban Development Area and is not within a preserve area. Impacts to implementation of the SSHCP would be **less than significant.**

The SOIA area is within the proposed SSHCP area, and is designated as an Urban Development Area. A public draft of the SSHCP and its Draft EIS/EIR have been released, however, the HCP has not yet been adopted. The SSHCP includes a multi-jurisdictional group of partners, including Sacramento County, the cities of Rancho Cordova and Galt, the Sacramento County Water Agency, the Sacramento The City of Elk Grove is not participating in the SSHCP, and upon future annexation into the City of Elk Grove, the project site would not be included in the SSHCP area and future development related to the proposed SOIA would not be subject to the SSHCP provisions. However, the SOIA area is currently within unincorporated Sacramento County, and future developers of the project site could choose to participate in the SSHCP prior to future annexation should the SSHCP be adopted. The project site is within an Urban Development Area, where urbanization is permissible and incidental take of covered species can occur. Because urban development would be permitted within the SOIA area should developers participate in the SSHCP, and because the City of Elk Grove is not a participant in the SSHCP should developers choose not to participate in the SSHCP prior to annexation, impacts to implementation of the SSHCP would be less than significant.

Mitigation Measure

No mitigation is required.

3.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

This section analyzes and evaluates the potential impacts of the potential for future development in the Bilby Ridge SOIA on known and unknown archaeological, historical, paleontological, and tribal cultural resources. The analysis includes a description of the existing environmental conditions, the methods used for assessment, the potential direct and indirect impacts of project implementation, and mitigation measures recommended to address impacts determined to be significant or potentially significant.

Cultural resources include districts, sites, buildings, structures, or objects generally older than 50 years and considered to be important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. They include pre-historic resources, historic-era resources, tribal cultural resources, and fossil deposits of paleontological importance.

Archaeological resources are locations where human activity has measurably altered the earth or left deposits of prehistoric or historic-era physical remains (e.g., stone tools, bottles, former roads, house foundations). Historical (or architectural) resources include standing buildings (e.g., houses, barns, outbuildings, cabins) and intact structures (e.g., dams, bridges, roads). Tribal cultural resources were added as a resource subject to review under CEQA, effective January 1, 2015 (as defined by Assembly Bill [AB] 52, Statutes of 2014, in Public Resources Code [PRC] Section 21074). This is a new category of resources under CEQA and includes site features, places, cultural landscapes, sacred places or objects, which are of cultural value to a Tribe. Paleontological resources include mineralized, partially mineralized, or unmineralized bones and teeth, soft tissues, shells, wood, leaf impressions, footprints, burrows, and microscopic remains that are more than 5,000 years old and occur mainly in Pleistocene or older sedimentary rock units.

One comment letter regarding cultural resources was received in response to the Notice of Preparation. The Native American Heritage Commission requested AB 52 and Senate Bill (SB) 18 compliance information; while SB 18 does not apply to the project because there is not a General Plan amendment associated with the project (which is the trigger for SB 18 compliance), SB 18 is not a CEQA requirement and, therefore, is not discussed in this section. AB 52 compliance is described below.

3.5.1 Environmental Setting

PALEONTOLOGICAL SETTING

Significant nonrenewable vertebrate and invertebrate fossils and unique geologic units have been documented throughout California. The fossil-yielding potential of a particular area is highly dependent on the geologic age and origin of the underlying rocks (refer to geologic timescale in Table 3.5-1). Paleontological potential refers to the likelihood that a rock unit will yield a unique or significant paleontological resource. All sedimentary rocks, some volcanic rocks, and some low-grade metamorphic rocks have potential to yield significant paleontological resources. Depending on location, the paleontological potential of subsurface materials generally increases with depth beneath the surface, as well as with proximity to known fossiliferous deposits.

Pleistocene or older (older than 11,000 years) continental sedimentary deposits are considered to have a high paleontological potential, while Holocene-age deposits (less than 10,000 years old) are generally considered to have a low paleontological potential because they are geologically immature and are unlikely to have fossilized the remains of organisms. Metamorphic and igneous rocks have a low paleontological potential, either because they formed beneath the surface of the earth (such as granite), or because they have been altered under high heat and pressures, chaotically mixed or severely fractured. Generally, the processes that form igneous and metamorphic rocks are too destructive to preserve identifiable fossil remains.

Table 3.5-1 Divisions of Geologic Time

| Era | Period | Time in Millions of Years Ago (approximately) | Epoch | |
|-----------|---------------|--|-------------|--|
| Cenozoic | Overtowners | < 0.01 | Holocene | |
| | Quaternary | 2.6 | Pleistocene | |
| | | 5.3 | Pliocene | |
| | | 23 | Miocene | |
| | Tertiary | 34 | Oligocene | |
| | | 56 | Eocene | |
| | | 65 | Paleocene | |
| Mesozoic | Cretaceous | 145 | - | |
| | Jurassic | 200 | - | |
| | Triassic | 251 | - | |
| | Permian | 299 | - | |
| | Carboniferous | 359 | - | |
| Dalaanaia | Devonian | 416 | - | |
| Paleozoic | Silurian | 444 | - | |
| | Ordovician | 488 | - | |
| | Cambrian | 542 | - | |
| Pre | cambrian | 2,500 | - | |

Source: U.S. Geological Survey 2010

The Bilby Ridge SOIA site is located within the Great Valley geomorphic province, which is primarily described as a relatively flat alluvial plain, about 50 miles wide and 400 miles long, with thick sequences of sedimentary deposits of Jurassic through Holocene age. The Great Valley geomorphic province is bounded on the north by the Klamath and Cascade mountain ranges, on the east by the Sierra Nevada Mountains, and on the west by the California Coast Mountain Range. The project site contains alluvium geologic units. These geologic units are mostly located around the Sacramento and Cosumnes rivers and are considered to have paleontological resource sensitivity.

According to the *City of Elk Grove General Plan Draft EIR* (City of Elk Grove 2003), fossils recovered to date from the Riverbank Formation are typically large, late Pleistocene vertebrates; although fish, frogs, snakes, turtles and a few plants such as *Prunus* (prune), *Platanus* (sycamore), and *Salix* (willow) are also typical. The typically large, Rancholabran vertebrates include *Bison* (bison), *Equus* (horse), *Camelops* (camel), *Mammuthus* (mammoth), *Paramylodon* (ground sloth), and *Canis* (wolf).

PREHISTORIC SETTING

Although human occupation of the Central Valley may extend back 10,000 before present (B.P.), reliable evidence of such an early human presence is lacking and may be deeply buried. The prehistoric setting can be categorized into the following periods.

The Paleo-Indian Period: The Paleo-Indian Period (12,000 to 10,500 B.P.) saw the first demonstrated entry and spread of humans into California. Characteristic artifacts recovered from archaeological sites of this time period include fluted projectile points (constructed from chipped stones that have a long groove down the center called a "flute") and large, roughly fashioned cobble and bifacially-flaked stone tools that were used in hunting the mastodon, bison, and mammoth that roamed the land during this time.

The Lower Archaic Period: The beginning of the Lower Archaic Period (10,500 to 7500 B.P.) coincides with that of the Middle Holocene climatic change which resulted in widespread floodplain deposition. This episode resulted in most of the early archaeological deposits being buried. Most tools were manufactured of local materials, and distinctive artifact types include large dart points and the milling slab and handstone.

The Middle Archaic Period: The Middle Archaic Period (7500 to 2500 B.P.) is characterized by warm, dry conditions which brought about the drying up of pluvial lakes. Economies were more diversified and may have included the introduction of acorn processing technology, although hunting remained an important source of food. Artifacts characteristic of this period include milling stones and pestles and a continued use of a variety of implements interpreted as large dart points.

The Upper Archaic Period: The Upper Archaic Period (2500 to 850 B.P.) corresponds with a sudden turn to a cooler, wetter and more stable climate. The development of status distinctions based upon wealth is well documented in the archaeological record. The development of specialized tools, such as bone implements and stone plummets, as well as manufactured shell goods, were prolific during this time. The regional variance of economies was largely because of the seasonality of resources which were harvested and processed in large quantities.

The Emergent Period: Several technological and social changes distinguish the Emergent Period (850 B.P. to Historic) from earlier cultural manifestations. The bow and arrow were introduced, ultimately replacing the dart and throwing spear, and territorial boundaries between groups became well established. In the latter portion of this Period (450 to 1800 B.P.), exchange relations became highly regularized and sophisticated. The clam disk bead developed as a monetary unit of exchange, and increasing quantities of goods moved greater distances. It was at the end of this Period that contact with Euroamericans became commonplace, eventually leading to intense pressures on Native American populations.

ETHNOGRAPHIC SETTING

The Bilby Ridge SOIA area (or "project site") lies within the ethnographic territory of the Plains Miwok, which are a distinct linguistic group of the Utian language family of the Penutian Stock. 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.

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. 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.

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). 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. Ethnographic reports indicate that the Plains Miwok also caught black-tailed 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. Fishing was also important for the Plains Miwok, and salmon provided the dominant food resource. In the rivers, mussels and freshwater clams were collected. In addition to gathering resources, the Plains Miwok obtained wild tobacco, in addition to planting tobacco seeds and cultivating the plants.

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. Alverez 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.

HISTORIC SETTING

Regional History

Spanish exploration of the Central Valley dates to the late 1700s, but exploration of the northern section of the Central Valley and contact with its Native American population did not begin until the early 1800s, as described above. The second quarter of the nineteenth century encompasses the Mexican Period (ca. 1821-1848) in California. This period is an outgrowth of the Mexican Revolution, and its accompanying social and political views affected the mission system across California. In 1833 the missions were secularized and their lands divided among the *Californios* as land grants called *ranchos*. These ranchos facilitated the growth of a semi-aristocratic group that controlled the larger ranchos. The work on these large tracts of land was accomplished by the forced labor of local Native Americans. The closest ranchos to the project area are in Sacramento County near the southern boundary of Placer County. These ranchos include the Rancho de Paso, the San Juan, and the Río de los Americanos.

Simultaneously with the exploration of the Central Valley, the flanks of the Sierra Nevada trails were being blazed across the plains and mountains facilitating the westward migration of Euroamericans. These early immigrants to California are typified by groups such as the 1841 Bartleson-Bidwell party and the 1844 Stevens-Murphy party. The commencement of the Mexican-American War in 1846 also affected the exploration and development of California, including the identification of new trails across the Sierra Nevada. The exploits of the Mormon Battalion and the establishment of the Mormon Emigrant Trail across the Sierra Nevada highlight these activities.

The discovery of gold at Sutter's Mill in Coloma in 1848 was the catalyst that caused a dramatic alteration of both Native American and Euroamerican cultural patterns in California. Once news of the discovery of gold spread, a flood of Euroamericans entered the region, and gravitated to the area of the "Mother Lode." Initially, the Euroamerican population grew slowly but soon exploded as the presence of large deposits of gold was confirmed in the Sacramento area. The population of California quickly swelled from an estimated 4,000 Euroamericans in 1848 to 500,000 in 1850. Sacramento, established in 1848 by John A. Sutter, also grew in population and was incorporated as a city in 1850.

Local History

In 1850, Elk Grove developed around a stage stop on the Monterey Trail, though after the railroad was constructed 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 unincorporated townsite of "Old Town" Elk Grove was located about a mile east of State Route 99 (SR 99). 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 the City of 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 West Coast, in two areas locally called Laguna Creek and Laguna West. On July 1, 2000, Elk Grove incorporated as a city.

RECORDS SEARCHES, SURVEYS, AND CONSULTATION

Paleontological Resources

A search of the University of California Museum of Paleontology (UCMP) database was conducted on April 17, 2017. Records of paleontological finds maintained by the UCMP (2017) state that there are 13 localities at which fossil remains have been found in Sacramento County. These occur in the Mariposa and Riverbank geologic formations. The database did not list any paleontological resources in the project site; however, three resources have been recorded along the Cosumnes River.

Archaeological and Historical Resources

A confidential records search for the project site and a surrounding 0.25-mile radius was conducted by Ascent Environmental at the North Central Information Center (NCIC) on May 4, 2017 (NCIC File No. SAC-17-59). The search included a review of the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), *California Inventory of Historic Resources* (1976), *California Points of Historical Interest* (May 1992 and updates), Directory of Properties in the Historic Property Data File, Archaeological Determinations of Eligibility (State Office of Historic Preservation computer lists dated March 20, 2014), records of previously recorded cultural resources, records of previous field studies, and other historic maps and documents. The records search revealed no resources on the project site. Seven cultural resources within a 0.25-mile radius of the project site were identified; one prehistoric archaeological site and six historical sites (buildings and structures). No NRHP- or CRHR-eligible resources were identified.

Tribal Cultural Resources

As described further below, AB 52 applies to those projects for which a lead agency had issued a notice of preparation of an EIR or notice of intent to adopt a negative declaration or mitigated negative declaration on or after July 1, 2015. Sacramento LAFCo mailed letters to the following tribal contacts on April 19, 2017.

- ▲ The Honorable Rhonda Morningstar Pope, Chairperson for Buena Vista Rancheria of Me-Wuk Indians;
- ▲ The Honorable Don Ryberg, Chairperson, and Grayson Coney, Cultural Director for T' Si-Akim Maidu:
- ▲ Cosme Valdez, Interim Chief Executive Officer for Nashville-El Dorado Miwok;
- ▲ Dr. Crystal Martinez, Chairperson for the lone Band of Miwok Indians;
- Raymond Hitchcock, Chairperson for Wilton Rancheria;
- Nicholas Fonseca, Chairperson for Shingle Springs Band of Miwok Indians; and
- Gene Whitehouse, Chairperson for United Auburn Indian Community (UAIC) of the Auburn Rancheria.

Robert Columbro, Tribal Historic Preservation Officer for Buena Vista Rancheria, responded on April 26, 2017 and declined consultation. UAIC responded on May 2, 2017, requesting copies of existing cultural reports and current records search results, in addition to initiating formal consultation. These documents were sent to UAIC on May 26, 2017. UAIC did not respond to meeting requests identified in the May 26, 2017, correspondence or subsequent phone and e-mail messages sent by the Sacramento LAFCo Executive Director. Thus, consultation was completed and no tribal cultural resources were identified at the site by UAIC. No responses were received from T' Si-Akim Maidu, Nashville-El Dorado Miwok, Ione Band of Miwok Indians, Wilton Rancheria, or Shingle Springs Band of Miwok Indians.

3.5.2 Regulatory Framework

FEDERAL

National Historic Preservation Act

Among those statutes enacted by Congress that affect historic properties, the National Historic Preservation Act of 1966 (NHPA) is the most significant law that addresses historic preservation. One of the most important provisions of the NHPA is the establishment of the NRHP, the official designation of historical resources. Districts, sites, buildings, structures, and objects are eligible for listing in the NRHP. Nominations

are listed if they are significant in American history, architecture, archeology, engineering, and culture. The NRHP is administered by the National Park Service. To be eligible, a property must be significant under criterion A (history), B (persons), or C (design/construction); possess integrity; and ordinarily be 50 years of age or more.

Listing in the NRHP does not entail specific protection or assistance for a property but it does guarantee recognition in planning for federal or federally-assisted projects, eligibility for federal tax benefits, and qualification for federal historic preservation assistance. Additionally, project effects on properties listed in the NRHP must be evaluated under CEQA.

Once a heritage resource has been recorded and if it is determined to be significant, the potential impacts (or effects) of a project on a heritage property are assessed. Federal regulatory impact thresholds are contained in Section 106 of the NHPA and accompanying regulations (36 Code of Federal Regulations [CFR] Part 800). Section 106 requires that federal agencies consider the effects of their actions on significant archaeological properties before implementing a project or "undertaking." The criteria of effect are found in 36 CFR 800.0(a) and state that:

An undertaking has an effect on a historic property when the undertaking may alter characteristics of the property that may qualify the property for inclusion in the National Register.

The Advisory Council's regulations require that the federal agency apply the criteria of adverse effect to historic properties that would be affected by a proposed undertaking (36 CFR 800.9b). An undertaking is considered to have an adverse effect when the effect on a historic property may diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association, or the quality of data suitable for scientific analysis.

STATE

California Register of Historical Resources

All properties listed in or formally determined eligible for listing in the NRHP are eligible for the CRHR. The CRHR is a listing of State of California resources that are significant within the context of California's history. The CRHR is a statewide program of similar scope and with similar criteria for inclusion as those used for the NRHP. In addition, properties designated under municipal or county ordinances are also eligible for listing in the CRHR.

A historic resource must be significant at the local, state, or national level under one or more of the criteria defined in the California Code of Regulations Title 15, Chapter 11.5, Section 4850. The CRHR criteria are similar to the NRHP criteria and are tied to CEQA because any resource that meets the criteria below is considered a historical resource under CEQA. As noted above, all resources listed in or formally determined eligible for the NRHP are automatically listed in the CRHR.

The CRHR uses four evaluation criteria:

- 1. Is associated with events or patterns of events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.
- 2. Is associated with the lives of persons important to local, California, or national history.
- 3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values.
- 4. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area. California or the nation.

Similar to the NRHP, a resource must meet one of the above criteria and retain integrity. The CRHR uses the same seven aspects of integrity as the NRHP.

California Environmental Quality Act

CEQA requires public agencies to consider the effects of their actions on both "historical resources" and "unique archaeological resources." Pursuant to PRC Section 21084.1, a "project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." Section 21083.2 requires agencies to determine whether projects would have effects on unique archaeological resources.

Historical Resources

"Historical resource" is a term with a defined statutory meaning (PRC, Section 21084.1; determining significant impacts to historical and archaeological resources is described in the State CEQA Guidelines, Sections 15064.5[a] and [b]). Under State CEQA Guidelines Section 15064.5(a), historical resources include the following:

- 1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (PRC Section 5024.1).
- 2) A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the PRC or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the PRC, will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- 3) 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 to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource will be considered by the lead agency to be historically significant if the resource meets the criteria for listing in the California Register of Historical Resources (PRC Section 5024.1), including the following:
 - a) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
 - b) Is associated with the lives of persons important in our past;
 - c) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
 - d) Has yielded, or may be likely to yield, information important in prehistory or history.
- 4) The fact that a resource is not listed in or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the PRC), or identified in a historical resources survey (meeting the criteria in PRC Section 5024.1(g)) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC Section 5020.1(j) or 5024.1.

Unique Archaeological Resources

CEQA also requires lead agencies to consider whether projects would impact unique archaeological resources. PRC Section 21083.2, subdivision (g), states that unique archaeological resource means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- 1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- 2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- 3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Tribal Cultural Resources

CEQA also requires lead agencies to consider whether projects will impact tribal cultural resources. PRC Section 21074 states the following:

- a) "Tribal cultural resources" are either of the following:
 - 1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
 - A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.
 - B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
 - 2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.
- b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.
- c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

California Native American Historical, Cultural, and Sacred Sites Act

The California Native American Historical, Cultural and Sacred Sites Act applies to both State and private lands. The Act requires that upon discovery of human remains, construction or excavation activity cease and the county coroner be notified. If the remains are of a Native American, the coroner must notify the Native American Heritage Commission (NAHC). The NAHC then notifies those persons most likely to be descended from the Native American's remains. The Act stipulates the procedures the descendants may follow for treating or disposing of the remains and associated grave goods.

California Health and Safety Code

Section 7052 of the Health and Safety Code states that the disturbance of Native American cemeteries is a felony. Section 7050.5 (b) of the California Health and Safety Code specifies protocol when human remains are discovered. The code states:

In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the

recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in PRC Section 5097.98.

Public Resources Code, Section 5097

PRC Section 5097 specifies the procedures to be followed in the event of the unexpected discovery of human remains on nonfederal land. The disposition of Native American burial falls within the jurisdiction of the NAHC. Section 5097.5 of the Code states the following:

No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

Assembly Bill 52

AB 52, signed by the California Governor in September of 2014, establishes a new class of resources under CEQA: "tribal cultural resources." It requires that lead agencies undertaking CEQA review must, upon written request of a California Native American tribe, begin consultation once the lead agency determines that the application for the project is complete, before the issuance of a notice of preparation of an EIR or notice of intent to adopt a negative declaration or mitigated negative declaration. AB 52 also requires revision to CEQA Appendix G, the environmental checklist. This revision created a new category for "tribal cultural resources."

LOCAL

The project site lies within the jurisdictional boundaries of Sacramento County; therefore, the County's policies, as well as the Sacramento LAFCo's polices, would apply. Furthermore, if the SOIA is approved, it would likely lead to annexation to the City of Elk Grove. Thus, applicable policies of the City of Elk Grove's General Plan are described below.

Sacramento County General Plan

The Sacramento County General Plan contains policies and actions relevant to the inventory, protection, and enhancement of significant archaeological and historical resources within the SOIA Area. Relevant policies and actions include:

- ▲ 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.
- ▲ 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.
- ▲ CO-159: The cost of all excavation conducted prior to completion of the project shall be the responsibility of the project developer.
- ▲ CO-160: Monitor projects during construction to ensure crews follow proper reporting, safeguards, and procedures.

- ▲ 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.
- ▲ 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.
- ▲ 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.
- ▲ CO-164: Develop local architectural preservation standards drawing from state and Federal guidelines.
- ▲ 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.

City of Elk Grove General Plan

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 Bilby Ridge SOIA site. 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 site are provided below:

- ▲ HR-1: Encourage the preservation and enhancement of existing historical and archaeological resources in the City.
- ▲ HR-3: Encourage restoration, renovation, and/or rehabilitation of all historic structures.
- ▲ 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 on-site study as part of the environmental review process. Implement all recommended mitigation measures.
 - ► **FR-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, archaeologic, 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 [Guidelines] Section 15064.5 (d) and (e) shall be followed."

3.5.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

The analysis is informed by the provisions and requirements of federal, state, and local laws and regulations that apply to cultural resources. In determining the level of significance, the analysis assumes that the project would comply with relevant, federal, state, and local laws, regulations, and ordinances. While no development is proposed on the Bilby Ridge SOIA site, the impact analysis evaluates impacts from development of the site. The primary sources of information for this section are the *Kammerer Road/Highway* 99 SOIA EIR prepared for Sacramento LAFCo (AECOM 2017) and the *City of Elk Grove General Plan Draft EIR* (City of Elk Grove 2003).

This impact analysis is consistent with the City of Elk Grove General Plan policies HR-1, HR-3, and HR-6 regarding the evaluation of potential impacts and mitigation measures for archaeological, historic, and cultural resources.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, the project would result in a potentially significant impact on cultural resources if it would:

- cause a substantial adverse change in the significance of an historical resource as defined in Section 15064.5;
- cause a substantial adverse change in the significance of an archaeological resource as defined in Section 15064.5;
- disturb any human remains, including those interred outside of dedicated cemeteries;
- directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC Section 21074.

ISSUES NOT EVALUATED FURTHER

All issues applicable to cultural resources listed under the significance criteria above are addressed in this section.

IMPACT ANALYSIS

Impact 3.5-1: Change in the significance of an historical resource.

The NCIC records search revealed no historical resources on the project site. There are a number of historicage buildings on the projects site that have not been evaluated for NRHP- or CRHR-eligibility. If the SOIA is approved and subsequent annexation of all or a portion of the site to the City of Elk Grove occurs, development of the SOIA area could result in damage to or destruction to these buildings. If they are found to be historically significant, the impact to historical resources would be **potentially significant**.

Historical (or architectural) resources include standing buildings (e.g., houses, barns, cabins) and intact structures (e.g., dams, bridges, water conveyance systems). The NCIC records search revealed no historical resources on the project site; however, seven historical sites were located within the 0.25-mile buffer area. There are a number of historic-age (over 45 years old) ranch and farm buildings and structures on the project site; however, access to the site was not available at the time of the preparation of this EIR to evaluate whether the buildings would be eligible as historic resources for inclusion in the NRHP or CRHR.

The Bilby Ridge SOIA does not include land use designations or zoning as specific approval actions and, therefore, there are no associated construction activities that would adversely affect historical resources. However, approval of the SOIA could remove and obstacle to future annexation and development of the site in a manner consistent with the conceptual land use plan. Development of the site SOIA area could result in damage to or destruction of a building or structure that has not yet been evaluated for historical significance. Therefore, the impact to historical resources would be **potentially significant**.

Mitigation Measure 3.5-1: Conduct project-specific level surveys and identify measures to protect identified historic resources.

At the time of submittal of any application to annex territory with the Bilby Ridge SOIA area, the City of Elk Grove shall impose the following conditions on all discretionary projects:

- ✓ Prior to construction activities, project sponsors shall identify and evaluate all historic-age (over 45-years in age) buildings and structures that could potentially be impacted by the project. This would include preparation of an historic structure report and evaluation of resources to determine their eligibility for recognition under State, federal, or local historic preservation criteria. The evaluation shall be prepared by an architectural historian, or historical architect meeting the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, Professional Qualification Standards. The evaluation should comply with CEQA Guidelines section 15064.5(b), and, if federal funding or permits are required, with Section 106 of the National Historic Preservation Act (NHPA) of 1966 (16 U.S.C. § 470 et seq.). Study recommendations shall be implemented.
- ✓ If resources eligible for inclusion in the NRHP or CRHR are identified, an assessment of project impacts on these resources shall be included in the report, as well as detailed measures to avoid impacts. If avoidance of a significant architectural/built environment resource is not feasible, additional mitigation options include, but are not limited to, specific design plans for historic districts, or plans for alteration or adaptive re-use of a historical resource that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitation, Restoring, and Reconstructing Historic Buildings and City of Elk Grove General Plan Policy HR-1 and HR-3.

Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

Significance after Mitigation

Implementation of Mitigation Measures 3.5-1 would reduce potentially significant impacts to historic resources on the Bilby Ridge SOIA site because actions would be taken to record, evaluate, avoid, or otherwise treat the resource appropriately, in accordance with pertinent laws and regulations. LAFCo would

condition future annexation on compliance with Mitigation Measure 3.5-1, and implementation of this mitigation measure would reduce impact to a **less-than-significant** level.

Impact 3.5-2: Disturb unique archaeological resources.

Based on the results of the records search, there are no known archaeological sites within the Bilby Ridge SOIA area. However, ground-disturbing activities from development upon annexation to the City of Elk Grove could result in discovery or damage of as yet undiscovered archaeological resources as defined in CEQA Guidelines Section 15064.5. This would be a **potentially significant** impact.

The NCIC records search revealed no archaeological resources on the project site; one prehistoric site was located within the 0.25-mile buffer area. As shown on Figure 4.11-1 of the City of Elk Grove General Plan EIR, the Bilby Ridge SOIA site is located within an area of cultural resource sensitivity. Although no NRHP- or CRHR-listed or eligible resources, or unique archaeological resources have been documented in the project site, the project is located in a region where prehistoric and historic-era cultural resources have been recorded and there remains a potential that undocumented cultural resources could be unearthed or otherwise discovered during ground-disturbing and construction activities. Prehistoric or ethnohistoric materials might include flaked stone tools, tool-making debris, stone milling tools, shell or bone items, and fire-affected rock or soil darkened by cultural activities (midden); examples of significant discoveries would include villages and cemeteries. Historic materials might include metal, glass, or ceramic artifacts; examples of significant discoveries might include former privies or refuse pits.

The Bilby Ridge SOIA does not include land use designations or zoning as specific approval actions and, therefore, would have no construction-related ground disturbing activities which could adversely affect archaeological resources. However, approval of the SOIA could remove and obstacle to future annexation and development of the site in a manner consistent with the conceptual land use plan. Development of the SOIA area would result in soil disturbance and because of the possible presence of undocumented cultural resources within the project site, construction-related impacts on cultural resources would be **potentially significant**.

Mitigation Measure 3.5-2: Avoid potential effects on unique archaeological resources.

At the time of submittal of any application to annex territory with the Bilby Ridge SOIA area, the City of Elk Grove shall impose the following conditions on all discretionary projects:

- Before construction activities, the applicant shall retain a qualified archaeologist to conduct archaeological surveys for the site and any required off-site improvements, in accordance with the current City of Elk Grove General Plan Policy HR-6-Action 1. Project sponsors shall follow recommendations identified in the survey, which may include activities such as subsurface testing, designing and implementing a Worker Environmental Awareness Program, construction monitoring by a qualified archaeologist, avoidance of sites, or preservation in place.
- ✓ In the event that evidence of any prehistoric or historic-era subsurface archaeological features or deposits are discovered during construction-related earth-moving activities (e.g., ceramic shard, trash scatters, lithic scatters), in accordance with current Elk Grove General Plan Policy HR-6-Action 2, all ground-disturbing activity in the area of the discovery shall be halted and the City of Elk Grove Planning Division shall be notified immediately. A qualified archaeologist shall be retained to assess the significance of the find. If the find is a prehistoric archeological site, the appropriate Native American group shall be notified. If the archaeologist determines that the find does not meet NRHP or CRHR standards of significance for cultural resources, construction may proceed. If the archaeologist determines that further information is needed to evaluate significance, a data recovery plan shall be prepared. If the find is determined to be significant by the qualified archaeologist (i.e., because the find is determined to constitute either an historical resource or a unique archaeological resource), the archaeologist shall work with the project applicant to avoid disturbance to the resources, and if complete avoidance is not feasible in light of project design, economics, logistics, and other factors, follow

accepted professional standards in recording any find including submittal of the standard DPR Primary Record forms (Form DPR 523) and location information to NCIC.

Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

Significance after Mitigation

LAFCo would condition future annexation on compliance with Mitigation Measure 3.5-2; the City of Elk Grove would also require compliance with current General Plan Policy HR-6-Action 1 and Action 2. Implementation of Mitigation Measure 3.5-2 would reduce potentially significant impacts to archaeological resources because mitigation would be developed in coordination with the appropriate federal, state, and/or local agency(ies) and tribes to avoid, move, record, or otherwise treat the resource appropriately, in accordance with pertinent laws and regulations. By providing an opportunity to avoid disturbance, disruption, or destruction of archaeological resources, this impact would be reduced to a **less-than-significant** level.

Impact 3.5-3: Accidental discovery of human remains.

Although unlikely, construction and excavation activities associated with future development of the SOIA area could unearth previously undiscovered or unrecorded human remains, if they are present. Compliance with California Health and Safety Code Sections 7050.5 and 7052 and PRC Section 5097 in the event that human remains are found would make this impact less than significant.

Based on documentary research, no evidence suggests that any prehistoric or historic-era marked or unmarked human interments are present within the Bilby Ridge SOIA area. The location of grave sites and Native American remains can occur outside of dedicated cemeteries or burial sites. Ground-disturbing construction activities could uncover previously unknown human remains, which could be archaeologically or culturally significant. Even if the SOIA were approved, land use activities within the project site would remain under the jurisdiction of Sacramento County until annexation is approved by LAFCo at some future time. The Bilby Ridge SOIA does not include land use designations or zoning as specific approval actions. However, approval of the SOIA could remove and obstacle to future annexation and development of the site in a manner consistent with the conceptual land use plan. Development of the SOIA area would result in soil disturbance; therefore, the potential exists for previously undiscovered human remains to be discovered.

California law recognizes the need to protect Native American human burials, skeletal remains, and items associated with Native American burials from vandalism and inadvertent destruction. The procedures for the treatment of Native American human remains are contained in California Health and Safety Code Sections 7050.5 and 7052 and PRC Section 5097. If human remains are discovered during any construction activities, potentially damaging ground-disturbing activities in the area of the remains would be halted immediately, and the project applicant would notify the Sacramento County coroner and the NAHC immediately, according to PRC Section 5097.98 and Section 7050.5 of California's Health and Safety Code. If the remains are determined by the NAHC to be Native American, the guidelines of the NAHC would be adhered to in the treatment and disposition of the remains. Following the coroner's findings, the archaeologist and the NAHC-designated most likely descendent would determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The responsibilities for acting upon notification of a discovery of Native American human remains are identified in PRC Section 5097.94.

Compliance with California Health and Safety Code Sections 7050.5 and 7052 and PRC Section 5097 would provide an opportunity to avoid or minimize the disturbance of human remains, and to appropriately treat any remains that are discovered. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.5-4: Disturb a unique paleontological resource.

Any future development within the SOIA area could potentially affect undiscovered paleontological resources. This would be a **potentially significant** impact.

As described previously, the Bilby Ridge SOIA area is located within the Pleistocene nonmarine sedimentary rocks (Riverbank Formation) and Quaternary alluvium geologic units. These geologic units are considered to be sensitive for paleontological resource. A search of the UCMP database identified 13 localities at which fossil remains have been found in Sacramento County. These occur in the Mariposa and Riverbank geologic formations. According to the City of Elk Grove General Plan Draft EIR, 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. Therefore, if paleontological resources are present on the site, project-related earth-disturbing activities could affect the integrity of a paleontological site, thereby causing a substantial change in the significance of the resource.

The Bilby Ridge SOIA does not include land use designations or zoning as specific approval actions and, therefore, would have no construction-related ground disturbing activities that could adversely affect paleontological resources. However, approval of the SOIA could remove and obstacle to future annexation and development of the site in a manner consistent with the conceptual land use plan. Development of the SOIA area would result in construction activities such as digging, excavation, trenching, and other earthwork and could have the potential to disturb or damage paleontological resources. Therefore, the project would have the potential to damage previously unknown and potentially significant paleontological resources. The impact is **potentially significant**.

Mitigation Measure 3.5-4: Avoid impact to unique paleontological resources.

At the time of submittal of any application to annex territory with the Bilby Ridge SOIA area, the City of Elk Grove shall impose the following conditions on all discretionary projects:

- Consistent with General Plan Policy HR-6-Action 1 and Action 2, before the start of on- or off-site earthmoving activities that would disturb 1 acre of land or more within the Riverbank Formations, project applicants shall inform all construction personnel involved with earthmoving activities regarding the possibility of encountering fossils, the appearance and types of fossils likely to be seen during construction, and proper notification procedures should fossils be encountered.
- ✓ If paleontological resources are discovered during earthmoving activities, the construction crew shall immediately cease work near the find and notify the City of Elk Grove.
- ✓ The applicant shall retain a qualified paleontologist to evaluate the resource and prepare a recovery plan. The recovery plan may include, but is not limited to, a field survey, construction monitoring, sampling and data recovery procedures, museum curation for any specimen recovered, and a report of findings. Recommendations in the recovery plan that are determined by the City to be necessary and feasible shall be implemented before construction activities can resume at the site where the paleontological resource or resources were discovered. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

Significance after Mitigation

Mitigation Measure 3.5-4 would create a new implementation program that contains additional resource disturbance prevention activities and a cease-work requirement upon paleontological resource discovery. With implementation of these changes, impacts would be reduced because construction workers and operational personnel would be alerted to the possibility of encountering paleontological resources and professionally accepted and legally compliant procedures for the discovery of paleontological resources would be implemented in the event of a find. The impact is considered **less than significant.**

Impact 3.5-5: Change in the significance of a tribal cultural resource.

Consultation with UIAC has resulted in no resources identified as TCRs as described under AB 52 on or near the SOIA area. However, subsequent discretionary projects upon annexation to the City of EIk Grove may be required to prepare site-specific project-level analysis to fulfill CEQA requirements, which may include additional AB 52 consultation that could lead to the identification of TCRs. Compliance with PRC 21080.3.1 would make this impact less than significant.

As part of the 2013/2014 legislative session, AB 52 established a new class of resources under CEQA, TCRs, and requires that lead agencies undertaking CEQA review must, upon written request of a California Native American Tribe, begin consultation once the lead agency determines that the application for the project is complete. As detailed above, Sacramento LAFCo sent letters to eight tribal representatives in compliance with AB 52. UAIC responded on May 2, 2017, requesting copies of existing cultural reports and current records search results, in addition to initiating formal consultation. These documents were sent to UAIC on May 26, 2017. UAIC did not respond to meeting requests identified in the May 26, 2017, correspondence or subsequent phone and e-mail messages sent by the Sacramento LAFCo Executive Director. Thus, consultation was completed and no specific tribal cultural resources were identified at the site by UAIC.

The consultation resulted in the conclusion that there are no resources known to exist in the SOIA area that the Tribes consider to be a TCR as described under AB 52 and defined in PRC Section 21074. To be considered a TCR, a resource must be either:

- 1. listed or determined to be eligible for listing, on the national, state, or local register of historic resources, or
- a resource that the lead agency determines, in its discretion and supported by substantial evidence, to treat as a tribal cultural resource pursuant to the criteria in PRC Section 50241(c). PRC Section 5024.1(c) provides that a resource is meets criteria for listing as an historic resource in the California Register if in meets any of the following:
 - (1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
 - (2) Is associated with the lives of persons important in our past.
 - (3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
 - (4) Has yielded, or may be likely to yield, information important in prehistory or history.

Although no resources within the project site have been identified as meeting any of the PRC Section 5024.1(c) criteria and the Bilby Ridge SOIA does not include construction activities and, therefore, would have no impact on TCRs, it is possible that subsequent discretionary projects upon annexation to the City of Elk Grove may be required to prepare site-specific project-level analysis to fulfill CEQA requirements, which may include additional AB 52 consultation that could lead to the identification of TCRs.

California law recognizes the need to identify and protect TCRs; the procedures for the treatment of Native American resources are contained in California PRC 21081.3.1.

■ Within 14 days of determining that a project application is complete, or to undertake a project, the lead agency must provide formal notification, in writing, to the tribes that have requested notification of proposed projects in the lead agency's jurisdiction. If it wishes to engage in consultation on the project, the tribe must respond to the lead agency within 30 days of receipt of the formal notification. The lead agency must begin the consultation process with the tribes that have requested consultation within 30 days of receiving the

request for consultation. Consultation concludes when either: 1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource, or 2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached.

- Public agencies shall, when feasible, avoid damaging effects to any TCR (PRC Section 21084.3 (a).). If the lead agency determines that a project may cause a substantial adverse change to a tribal cultural resource, and measures are not otherwise identified in the consultation process, new provisions in the PRC describe mitigation measures that, if determined by the lead agency to be feasible, may avoid or minimize the significant adverse impacts (PRC Section 21084.3 (b)). Examples include:
 - (1) Avoidance and preservation of the resources in place, including, but not limited to, planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
 - (2) Treating the resource with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
 - (A) Protecting the cultural character and integrity of the resource
 - (B) Protecting the traditional use of the resource
 - (C) Protecting the confidentiality of the resource.
 - (3) Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
 - (4) Protecting the resource.

Compliance with California PRC 21080.3.1 would provide an opportunity to avoid or minimize the disturbance of previously unknown TCRs, and to appropriately treat any that are discovered. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

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3.6 ENERGY

This section was prepared pursuant to CEQA Guidelines Section 15126 and Appendix F of the CEQA guidelines, which requires that EIRs include a discussion of the potential energy impacts of projects, with particular emphasis on considering if potential future development within the SOIA area (or "project site") would result in inefficient, wasteful, and unnecessary consumption of energy.

Energy related to the project would include energy directly consumed for space heating and cooling, and electric facilities and lighting at residential units, the elementary school, and retail land uses. Indirect energy consumption would be associated with the generation of electricity at power plants. Transportation-related energy consumption includes the use of fuels and electricity to power cars, trucks, and public transportation. Energy would also be consumed by equipment and vehicles used during project construction and routine maintenance activities.

Comments received in response to the Notice of Preparation related to energy included concerns about evaluating the project's consistency with existing plans and examining the project's effect on vehicle miles traveled (VMT) by directing growth to an area with higher VMT per household than the regional average. Additionally, the Sacramento Municipal Utility District (SMUD) submitted a comment letter detailing the potential electrical demand that would be generated by the project, outlines the overhead and underground electrical lines that would be needed, and notes that a new substation or upgrades could be potentially needed.

3.6.1 Environmental Setting

PHYSICAL SETTING

Energy Facilities and Services in the Project Area

Electric services in the City of Elk Grove and Sacramento County is provided by the SMUD, while natural gas services are provided by the Pacific Gas and Electric Company (PG&E). There are existing electrical and natural gas infrastructure facilities along the surrounding roadway network. Existing facilities within or adjacent to the project site include a 69 kilovolt (kV) overhead line and a 12kV underground line, both north of Bilby Road, and 12kV/69kV overhead lines along Bruceville Road.

Energy Types and Sources

In 2013, the world total energy consumption was about 543 quadrillion British thermal unit (Btu), or the amount of heat required to raise the temperature of one pound of water by one-degree Fahrenheit, 18 percent of which occurred within the U.S. Fossil fuels provide approximately 80 percent of the energy used in the U.S., nuclear power provides about 8.5 percent, and renewable energy provides approximately 9.8 percent (U.S. Energy Information Administration [EIA] 2016, Barr 2001). California is the most populous state in the U.S., and its energy consumption is second only to Texas; however, California has the lowest per capita energy consumption rate in the U.S. California relies on a regional power system comprised of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. Recent trends associated with energy use in California are discussed below.

Local Electrical Service

SMUD provides electrical service to over 1.5 million customers within its 900-square-mile service area. SMUD is one of 46 publicly owned utilities in the state and in 2014 it was the fifth largest utility in California (Sacramento LAFCo 2017). SMUD's average electrical consumption in 2015 was 11,082 gigawatts and is expected to increase to 12,109 gigawatts by 2022 (Sacramento LAFCo 2017). SMUD receives power from varied sources including hydropower, natural-gas-fired generators, renewable energy such as solar and wind

power, and power purchased on the wholesale market. Current peak demand for energy is approximately 3,000 megawatts (MWs). By 2050, that peak demand is expected to near 5,000 MWs.

SMUD has established several energy-efficiency programs. The Home Performance Program allows customers a low-cost appraisal of the overall energy efficiency of their homes and provides incentives for home energy improvements through a grant from the U.S. Department of Energy. SMUD also offers resources to home and business owners to track energy use and methods to conserve energy. SMUD's voluntary "Greenergy" green pricing program supports reducing electricity generated by fossil fuels by allowing customers to obtain their electricity from a renewable source. Residential customers also have the option of selecting renewable energy supply for 50 percent of their electricity with special purchases in carbon offset projects. (Sacramento LAFCo 2017)

SMUD's Renewable Portfolio Standard (RPS) program was implemented to support renewable energy generation and reduce the need to generate energy from fossil fuels. To meet its annual renewables goals, SMUD both contracts for renewable electricity from independent power producers and builds and owns renewable energy power plants. SMUD met its renewable energy supply goals of 24 percent for 2011 (20 percent RPS + 4 percent Greenergy). SMUD has chosen to meet or exceed the state requirements and anticipates meeting the 2020 goal of 37 percent (33 percent RPS plus 4 percent Greenergy). (Sacramento LAFCo 2017)

Petroleum

Gasoline and diesel fuel sold in California for motor vehicles is refined in California to meet specific formulations required by the California Air Resources Board (CARB). Major petroleum refineries in California are concentrated in three counties: Contra Costa County in northern California, Kern County in central California, and Los Angeles County in southern California.

Natural Gas

One third of energy commodities consumed in California is natural gas. The natural gas market continues to evolve and service options expand, but its use falls mainly into four sectors – residential, commercial, industrial, and electric power generation. In addition, natural gas is an alternative to petroleum for use in trucks, buses, and some cars. Alternative transportation-related vehicles are increasing in use by consumers along with the development of a safe, reliable refueling infrastructure (California Energy Commission [CEC] 2016).

In 2014, approximately 35 percent of all natural gas consumed in the State was used to generate electricity. Residential land uses represented approximately 17 percent of California's natural gas consumption with the balance consumed by the industrial, resource extraction, and commercial sectors (EIA 2014).

Electricity and Renewables

Power plants in California meet approximately 68 percent of the in-state electricity demand; hydroelectric power from the Pacific Northwest provides another 12 percent; and power plants in the southwestern U.S. provide another 20 percent (EIA 2014). The contribution of in-state and out-of-state power plants depends upon, among other factors, the precipitation that occurred in the previous year and the corresponding amount of hydroelectric power that is available. SMUD is the primary electricity supplier in Sacramento County (see discussion above).

California regulations require that electricity consist of 33 percent renewables by 2020 and 50 percent renewables by 2030 for all electricity retailers in the state. As of July 2016, the California electricity system was powered by 21.9 percent renewables, including biomass, geothermal, small hydroelectric, solar, and wind. In-state generation of electricity consisted of 24.5 percent renewables (CEC 2016).

Alternative Fuels

A variety of alternative fuels are used to reduce demand for petroleum-based fuel. The use of these fuels is encouraged through various statewide regulations and plans (e.g., Low Carbon Fuel Standard, AB 32

Scoping Plan). Conventional gasoline and diesel may be replaced (depending on the capability of the vehicle) with many transportation fuels, including:

- electricity,

- natural gas (methane in the form of compressed and liquefied natural gas),
- renewable diesel (including biomass-to-liquid),
- synthetic fuels, and
- gas-to-liquid and coal-to-liquid fuels.

California has a growing number of alternative fuel vehicles through the joint efforts of CEC, CARB, local air districts, federal government, transit agencies, utilities, and other public and private entities. As of September 2016, California contained nearly 14,000 alternative fueling stations (AFDC 2017).

COMMERCIAL AND RESIDENTIAL ENERGY USE

Homes built between 2000 and 2015 used 14 percent less energy per square foot than homes built in the 1980s, and 40 percent less energy per square foot than homes built before 1950. However, the increase size of newer homes has offset these efficiency improvements. Primary energy consumption in the residential sector total 21 quadrillion Btu in 2009 (the latest year the EIA's *Residential Energy Consumption Survey* was completed), equal to 54 percent of consumption in the buildings sector and 22 percent of total primary energy consumption in the U.S. Energy consumption increased 24 percent from 1990 to 2009. However, because of projected improvements in building and appliance efficiency, the EIA 2012 Annual Energy Outlook forecast a 13 percent increase in energy consumption from 2009 to 2035 (EIA 2016).

Commercial buildings represent just under one-fifth of U.S. energy consumption with office space, retail, and educational facilities representing about half of commercial sector energy consumption. In aggregate, commercial buildings consumed 46 percent of building energy consumption and approximately 19 percent of U.S. energy consumption. In comparison, the residential sector consumed approximately 22 percent of U.S. energy consumption (U.S. Department of Energy 2012).

ENERGY USE FOR TRANSPORTATION

Transportation is the second largest energy consumer nationwide, accounting for 27 percent of the total national energy use (U.S. Department of Energy 2016). On-road vehicles are estimated to consume approximately 80 percent of California's transportation energy demand, with cars, trucks, and buses accounting for nearly all of the on-road fuel consumption. Petroleum products (gasoline, diesel, jet fuel) account for almost 99 percent of the energy used in California by the transportation sector, with the rest provided by ethanol, natural gas, and electricity (Bureau of Transportation Statistics 2015).

On-road vehicles use about 90 percent of the petroleum consumed in California. The California Department of Transportation (Caltrans) projected 782 million gallons of gasoline and diesel were consumed in Sacramento County in 2015, an increase of approximately 88 million gallons of fuel from 2010 levels (Caltrans 2008).

Vehicle Miles Traveled and Gasoline Consumption

According to Caltrans, total gasoline consumption in California is expected to increase 57 percent from 2007 to 2030, and the number of vehicle miles traveled (VMT) is expected to increase 61 percent over the same time (Caltrans 2009). As noted in the Regulatory Setting of this section, several State mandates and efforts, such as Senate Bill (SB) 375, seek to reduce VMT. Fuel consumption per capita in California decreased by nearly 11 percent from 2008 to 2011 (Bureau of Transportation Statistics 2015). Despite the progress in

reducing per capita VMT and per capita fuel consumption, the continued projected increases in total fuel consumption and VMT can be attributed to the overall increase in population.

Total gasoline use in California varies from year to year because of a variety of factors such as gas prices, periods of economic growth and decline, and fuel economy of vehicles. Between January 2007 and May 2016, an average of approximately 672 billion gallons of gasoline were purchased in California. During this time, the volume of gasoline purchased ranged from a minimum of approximately 1.1 billion gallons in February 2013 to a maximum of approximately 1.37 billion gallons in August 2007 (California State Board of Equalization 2016).

The Sacramento Area Council of Government's (SACOG) 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy identifies that the regional weekday VMT in 2012 was 57,009,900 miles (25.1 miles per capita) and would increase to 74,519,700 miles (24.2 miles per capita) by 2036 (SACOG 2016). The region is anticipated to become more transportation fuel efficient, because per capita VMT is projected to decline by 2036.

Energy Used by Private and Commercial Vehicles

Commercial vehicles, generally composed of light-, medium-, and heavy-duty trucks, are typically fueled by diesel or gasoline and are part of the general fleet mix of vehicles present within the Sacramento region transportation system.

Average fuel economy is expected to increase for automobiles and all types of trucks. The federal Corporate Average Fuel Economy (CAFE) is the required average fuel economy for a vehicle manufacturer's entire fleet of passenger cars and light-duty trucks for each model year. For many years, the standard for passenger automobile was 27.5 miles per gallon (mpg), and the standard for light-duty trucks, a classification that also includes sport utility vehicles (SUVs) under 8,500 pounds, rose to 22.5 mpg for 2008 models. Effective with the 2011 model year, the CAFE standard was revised from a single number to a model-specific formulation based on the size of the vehicle, in square feet (wheelbase times track, or the distance between the axles multiplied by the distance between the wheels of each axle), referred to as the vehicle's "footprint." For 2012, the average CAFE standard for passenger cars is 33.3 mpg, while for light-duty trucks it is 25.4 mpg (Federal Registrar 2010).

ENERGY USE AND CLIMATE CHANGE

Scientists and climatologists have produced evidence that the burning of fossil fuels by vehicles, power plants, industrial facilities, residences, and commercial facilities has led to an increase of the earth's temperature. For an analysis of greenhouse gas production and the project's impacts on climate change, refer to Section 3.7, "Greenhouse Gas Emissions."

3.6.2 Regulatory Framework

Federal and State agencies regulate energy consumption through various policies, standards, and programs. At the local level, individual cities and counties establish policies in their general plans and climate action plans related to the energy efficiency of new development and land use planning and to the use of renewable energy sources.

Energy conservation is embodied in many federal, state, and local statutes and policies. At the federal level, energy standards apply to numerous products (e.g., the U.S. Environmental Protection Agency's (EPA) EnergyStar™ program) and transportation (e.g., fuel efficiency standards). At the state level, Title 24 of the California Code of Regulations sets forth energy standards for buildings. Further, the State provides rebates/tax credits for installation of renewable energy systems, and offers the Flex Your Power program promotes conservation in multiple areas.

FEDERAL

Energy Policy and Conservation Act, and CAFE Standards

The Energy Policy and Conservation Act of 1975 established nationwide fuel economy standards to conserve oil. Pursuant to this Act, the National Highway Traffic and Safety Administration, part of the U.S. Department of Transportation (DOT), is responsible for revising existing fuel economy standards and establishing new vehicle economy standards.

The CAFE program was established to determine vehicle manufacturer compliance with the government's fuel economy standards. Compliance with CAFE standards is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the U.S. EPA calculates a CAFE value for each manufacturer based on the city and highway fuel economy test results and vehicle sales. The CAFE values are a weighted harmonic average of the EPA city and highway fuel economy test results. Based on information generated under the CAFE program, DOT is authorized to assess penalties for noncompliance. Under the Energy Independence and Security Act of 2007 (described below), the CAFE standards were revised for the first time in 30 years.

Energy Policy Act of 1992

The Energy Policy Act of 1992 (EPAct) was passed to reduce the country's dependence on foreign petroleum and improve air quality. EPAct includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally-fueled fleets in metropolitan areas. EPAct requires certain federal, state, and local government and private fleets to purchase a percentage of light-duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are also included in EPAct. Federal tax deductions will be allowed for businesses and individuals to cover the incremental cost of AFVs. State are also required by the act to consider a variety of incentive programs to help promote AFVs.

Energy Policy Act of 2005

The Energy Policy Act of 2005 provides renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 is designed to improve vehicle fuel economy and help reduce U.S. dependence on oil. It represents a major step forward in expanding the production of renewable fuels, reducing dependence on oil, and confronting global climate change. The Energy Independence and Security Act of 2007 increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022, which represents a nearly five-fold increase over current levels; and reduces U.S. demand for oil by setting a national fuel economy standard of 35 miles per gallon by 2020—an increase in fuel economy standards of 40 percent.

By addressing renewable fuels and CAFE standards, the Energy Independence and Security Act of 2007 will build on progress made by the Energy Policy Act of 2005 in setting out a comprehensive national energy strategy for the 21st century.

STATE

Warren-Alquist Act

The 1975 Warren-Alquist Act established the California Energy Resources Conservation and Development Commission, now known as CEC. The Act established state policy to reduce wasteful, uneconomical, and unnecessary uses of energy by employing a range of measures. The California Public Utilities Commission (CPUC) regulates privately-owned utilities in the energy, rail, telecommunications, and water fields.

State of California Energy Plan

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 current plan is the 1997 California Energy Plan. 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 assistance to public agencies and fleet operators in implementing incentive programs for zero-emission vehicles and addressing their infrastructure needs; and encouragement of urban design that reduces VMT and accommodates pedestrian and bicycle access.

Assembly Bill 2076: Reducing Dependence on Petroleum

Pursuant to Assembly Bill (AB) 2076 (Chapter 936, Statutes of 2000), CEC and CARB prepared and adopted a joint agency report in 2003, *Reducing California's Petroleum Dependence*. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita VMT (CEC; CARB 2003). Further, in response to the CEC's 2003 and 2005 *Integrated Energy Policy Reports*, Governor Davis directed CEC to take the lead in developing a long-term plan to increase alternative fuel use.

A performance-based goal of AB 2076 was to reduce petroleum demand to 15 percent below 2003 demand.

Integrated Energy Policy Report

Senate Bill (SB) 1389 (Chapter 568, Statutes of 2002) required CEC to: "[C]onduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The Energy Commission shall use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety" (Public Resources Code Section 25301[a]). This work culminated in the Integrated Energy Policy Report (IEPR).

CEC adopts an IEPR every two years and an update every other year. The 2015 IEPR is the most recent IEPR, which was adopted February 24, 2016. The 2015 IEPR provides a summary of priority energy issues currently facing the State, outlining strategies and recommendations to further the State's goal of ensuring reliable, affordable, and environmentally-responsible energy sources. Energy topics covered in the report include progress toward statewide renewable energy targets and issues facing future renewable development; efforts to increase energy efficiency in existing and new buildings; progress by utilities in achieving energy efficiency targets and potential; improving coordination among the State's energy agencies; streamlining power plant licensing processes; results of preliminary forecasts of electricity, natural gas, and transportation fuel supply and demand; future energy infrastructure needs; the need for research and development efforts to statewide energy policies; and issues facing California's nuclear power plants.

Senate Bill 1078: California Renewables Portfolio Standard Program

SB 1078 (Chapter 516, Statutes of 2002) establishes a renewable portfolio standard (RPS) for electricity supply. The RPS requires that retail sellers of electricity, including investor-owned utilities and community choice aggregators, provide 20 percent of their supply from renewable sources by 2017. This target date was moved forward by SB 1078 to require compliance by 2010. In addition, electricity providers subject to the RPS must increase their renewable share by at least 1 percent each year. The outcome of this legislation will impact regional transportation powered by electricity. As of 2016, the State has reported that 21 percent of electricity is sourced from certified renewable sources (see Section 5.14.1.2, "Environmental Setting").

Senate Bill X1-2: California Renewable Energy Resources Act

SB X1-2 of 2011 requires all California utilities to generate 33 percent of their electricity from renewables by 2020. SB X1-2 sets a three-stage compliance period requiring all California utilities, including independently-owned utilities, energy service providers, and community choice aggregators, to generate 20 percent of their electricity from renewables by December 31, 2013; 25 percent by December 31, 2016; and 33 percent by

December 31, 2020. SB X1-2 also requires the renewable electricity standard to be met increasingly with renewable energy that is supplied to the California grid from sources within, or directly proximate to, California. SB X1-2 mandates that renewables from these sources make up at least 50 percent of the total renewable energy for the 2011-2013 compliance period, at least 65 percent for the 2014-2016 compliance period, and at least 75 percent for 2016 and beyond.

Senate Bill 350: Clean Energy and Pollution Reduction Act of 2015

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) requires the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources to be increased to 50 percent by December 31, 2030. This act also requires doubling of the energy efficiency savings in electricity and natural gas for retail customers through energy efficiency and conservation by December 31, 2030.

Energy Action Plan

The first Energy Action Plan (EAP) emerged in 2003 from a crisis atmosphere in California's energy markets. The State's three major energy policy agencies (CEC, CPUC, and the Consumer Power and Conservation Financing Authority [established under deregulation and now defunct]) came together to develop one high-level, coherent approach to meeting California's electricity and natural gas needs. It was the first time that energy policy agencies formally collaborated to define a common vision and set of strategies to address California's future energy needs and emphasize the importance of the impacts of energy policy on the California environment.

In the October 2005 Energy Action Plan II, CEC and CPUC updated their energy policy vision by adding some important dimensions to the policy areas included in the original EAP, such as the emerging importance of climate change, transportation-related energy issues and research and development activities. The CEC recently adopted an update to the EAP II in February 2008 that supplements the earlier EAPs and examines the State's ongoing actions in the context of global climate change.

Assembly Bill 1007: State Alternative Fuels Plan

AB 1007 (Chapter 371, Statues of 2005) required CEC to prepare a state plan to increase the use of alternative fuels in California. CEC prepared the State Alternative Fuels Plan (SAF Plan) in partnership with CARB and in consultation with other state, federal, and local agencies. The SAF Plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes the costs to California and maximizes the economic benefits of in-state production. The SAF Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuel use, reduce greenhouse gas (GHG) emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Executive Order S-06-06

Executive Order (EO) S-06-06, signed on April 25, 2006, establishes targets for the use and production of biofuels and biopower, and directs state agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The EO establishes the following target to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20 percent of its biofuels within California by 2010, 40 percent by 2020, and 75 percent by 2050. The EO also calls for the State to meet a target for use of biomass electricity. The 2011 Bioenergy Action Plan identifies those barriers and recommends actions to address them so that the State can meet its clean energy, waste reduction, and climate protection goals. The 2012 Bioenergy Action Plan updates the 2011 plan and provides a more detailed action plan to achieve the following goals:

- encourage development of diverse bioenergy technologies that increase local electricity generation, combined heat and power facilities, renewable natural gas, and renewable liquid fuels for transportation and fuel cell applications;

- create jobs and stimulate economic development, especially in rural regions of the state; and

As of 2015, 3.2 percent of the total electricity system power in California was derived from biomass.

California Green Building Standards

California Code of Regulations, Title 24, Part 6, is California's Energy Efficiency Standards for Residential and Non-Residential Buildings. Title 24 was established by CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption, and provide energy efficiency standards for residential and non-residential buildings. In 2013, CEC updated Title 24 standards with more stringent requirements, effective July 1, 2014. All buildings for which an application for a building permit is submitted on or after July 1, 2014 must follow the 2013 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions. The CEC Impact Analysis for California's 2013 Building Energy Efficiency Standards estimates that the 2013 standards are 23.3 percent more efficient than the previous 2008 standards for residential construction and 21.8 percent more efficient for non-residential construction. In 2016, CEC updated Title 24 standards again, effective January 1, 2017. While the impact analysis of these standards has not yet been released. CEC estimates that the 2016 standards are 28 percent more efficient than 2013 standards for residential construction and are 5 percent more efficient for non-residential construction. The building efficiency standards are enforced through the local plan check and building permit process. Local government agencies may adopt and enforce additional energy standards for new buildings as reasonably necessary because of local climatologic, geologic, or topographic conditions, provided that these standards exceed those provided in Title 24.

Assembly Bill 32, Climate Change Scoping Plan and Update

In December 2008, CARB adopted its Climate Change Scoping Plan, which contains the main strategies California will implement to achieve reduction of approximately 118 million metric tons (MMT) of CO₂-equivalent (CO₂e) emissions, or approximately 21.7 percent from the State's projected 2020 emission level of 545 MMT of CO₂e under a business-as-usual scenario (this is a reduction of 47 MMT CO₂e, or almost 10 percent, from 2008 emissions). In May 2014, CARB released and has since adopted the *First Update to the Climate Change Scoping Plan* to identify the next steps in reaching AB 32 goals and evaluate progress that has been made between 2000 and 2012 (CARB 2014:4 and 5). According to the update, California is on track to meet the near-term 2020 GHG limit and is well positioned to maintain and continue reductions beyond 2020 (CARB 2014:ES-2). The update also reports the trends in GHG emissions from various emissions sectors (e.g., transportation, building energy, agriculture).

On January 20, 2017, CARB released its proposed 2017 Climate Change Scoping Plan Update, which lays out the framework for achieving the 2030 reductions as established in more recent legislation (discussed below). The proposed 2017 Scoping Plan Update identifies the GHG reductions needed by each emissions sector to achieve a statewide emissions level that is 40 percent below 1990 levels before 2030.

The measures identified in the proposed 2017 Climate Change Scoping Plan Update will have the co-benefit of reducing California's dependency of fossil fuels and making land use development and transportation systems more energy efficient. At the time of writing this environmental document, CARB has not yet approved its proposed 2017 Scoping Plan Update. More details about the statewide GHG reduction goals and Scoping Plan measures are provided in the regulatory setting of Section 5.6, "Greenhouse Gas Emissions and Climate Change."

Senate Bill 375

Senate Bill 375 (SB 375), signed by the Governor in September 2008, aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires metropolitan planning organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy, showing prescribed land use allocation in each MPO's Regional Transportation

Plan. CARB, in consultation with the MPOs, is to provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in their respective regions for 2020 and 2035. Implementation of SB 375 will have the co-benefit of reducing California's dependency of fossil fuels and making land use development and transportation systems more energy efficient.

The SACOG serves as the MPO for Sacramento, Placer, El Dorado, Yuba, Sutter, and Yolo Counties, excluding those lands located in the Lake Tahoe Basin. The project site is in Sacramento County. SACOG adopted its Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) 2035 in 2012, and completed an update adopted on February 18, 2016. SACOG was tasked by CARB to achieve a 9 percent per capita reduction compared to 2012 emissions by 2020 and a 16 percent per capita reduction by 2035, which CARB confirmed the region would achieve by implementing its SCS (CARB 2013). The MTP/SCS forecasted land use development by community types: Center and Corridor Communities, Established Communities, Developing Communities, Rural Residential Communities, and Lands Not Identified for Development in the MTP/SCS Planning Period.

Executive Order B-30-15

On April 20, 2015 Governor Edmund G. Brown Jr. signed Executive Order B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's executive order aligns California's GHG reduction targets with those of leading international governments such as the 28-nation European Union which adopted the same target in October 2014. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (AB 32, discussed above). California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050. This is in line with the scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius, the warming threshold at which major climate disruptions are projected, such as super droughts and rising sea levels.

Senate Bill 32 and Assembly Bill 197 of 2016

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050. Achievement of these goals will have the co-benefit of reducing California's dependency of fossil fuels and making land use development and transportation systems more energy efficient.

Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars program which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of zero-emission vehicles, into a single package of standards for vehicle model years 2017 through 2025. The new rules strengthen the GHG standard for 2017 models and beyond. This will be achieved through existing technologies, the use of stronger and lighter materials, and more efficient drivetrains and engines. The program's zero-emission vehicle regulation requires battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15 percent of California's new vehicle sales by 2025. The program also includes a clean fuels outlet regulation designed to support the commercialization of zero-emission hydrogen fuel cell vehicles planned by vehicle manufacturers by 2015 by requiring increased numbers of hydrogen fueling stations throughout the state. The number of stations will grow as vehicle manufacturers sell more fuel cell vehicles. By 2025, when the rules will be fully implemented, the statewide fleet of new cars and light trucks will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions than the statewide fleet in 2016 (CARB 2016).

LOCAL

Sacramento County General Plan

The goal of the Energy Element of the General Plan is to ensure that energy conservation is considered in the policy-making which guides the physical growth of Sacramento County (Sacramento County 2011). The following policies from the Sacramento County General Plan would apply to the SOIA.

- Policy PF-101: Route new overhead sub-transmission lines within existing transmission line corridors, along railroad tracks, or major roadways. In an effort to reduce the visual impact of new lines combine circuits on existing 69 kV power poles, wherever feasible.
- Policy EN-14. Develop or revise design standards relating to building solar orientation, landscaping, impervious surfaces, and parking space requirements to conserve energy.
- Policy EN-16. Promote the use of passive and active solar systems in new and existing residential, commercial, and institutional buildings as well as the installation of solar swimming pool heaters and solar water and space heating systems.
- Policy EN-30. Develop and implement standardized procedures for evaluating the initial and long-range energy impacts of proposed developments.

City of Elk Grove

City of Elk Grove General Plan

The City of Elk Grove General Plan includes the following policies applicable to the energy efficiency of new development and reducing community-wide energy consumption in Elk Grove (City of Elk Grove 2016):

- Policy CAQ-27. The City shall promote energy conservation measures in new development to reduce onsite 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 non-peak hours.
- Policy H-6. Support energy-conserving programs in the production and rehabilitation of affordable housing to reduce household energy costs, improve air quality, and mitigate potential impacts of climate change in the region.
 - ► H-6 Action 1. Continue to promote and support energy efficiency in new construction by encouraging developers to utilize SMUD energy programs and other energy efficiency programs and to be consistent with the Sustainability Element of the General Plan and the City's Climate Action Plan.

► H-6 Action 2. Continue to encourage participation in SMUD's PV (photovoltaic) Pioneer program by issuing PV system permits at no charge upon SMUD's approval.

- ✓ Policy S-8. Incorporate green building techniques and best management practices in the site design, construction, and renovation of all public projects. (Please see CAP reduction measures.)
 - ► S-8-Action 1. Require all new municipal developments to exceed state Title 24 Energy Efficiency Standards by 15 percent to the extent such efficiencies are possible.
 - ▼ S-8-Action 2. Design new municipal facilities to be at a minimum the baseline Leadership in Energy and Environmental Design (LEED) certification.
 - ▼ S-8-Action 3. Implement measures identified during the energy audit process to reduce energy use in existing municipal buildings.
- ✓ Policy S-9. Support innovation and green building best management practices for all new private development.
 - ▼ S-9-Action 1. Require all new private developments to meet and (as determined feasible by the City) exceed state Title 24 Energy Efficiency Building Standards. (Please see Climate Action Plan [CAP] reduction measures.)
 - ▼ S-9-Action 2. Include a Green Building & Development Resource List and supporting materials with City planning and building permit applications that outline ways to integrate green building principles into project design.
 - ▼ S-9-Action 3. Establish a green building incentive program to encourage developers to integrate green design techniques above and beyond the requirements of Action 1. Incentives may include, but are not limited to, expedited review, plan/permit review fee reduction, density bonuses, tax credits, and/or technical assistance.
 - **S-9-Action 4.** Establish partnerships with HUD and utility and water districts and providers to initiate pilot projects that demonstrate green building best practices.
 - ▼ S-9-Action 5. Create a program to recognize exemplary projects in the city that exhibit innovation and best practices in green building design.
 - ► S-9-Action 6. Provide regular training to ensure that Planning Department and Building Safety & Inspection Department staff are able to implement the State's Green Building Code and review or rate green building projects.
- Policy S-14. Maintain and enhance a community forest by preserving and planting trees in appropriate densities and locations to maximize energy conservation and air quality benefits. (Please see CAP reduction measures.)
- Policy S-16. Promote innovation in energy efficiency. (Please see CAP reduction measures.)
 - ▼ S-16-Action 1. Support a cost-effective approach to staying on top of best practices toward energy efficiency.
 - ► S-16-Action 8. Require the use of high-albedo material for public outdoor surfaces such as rooftops, parking lots, median barriers, roadway improvements (where feasible), and sidewalks.

The City of Elk Grove is in the process of updating its General Plan that is anticipated to include VMT standards for development.

Elk Grove Climate Action Plan

The Elk Grove CAP was adopted on March 27, 2013 by the Elk Grove City Council and was incorporated into the Elk Grove General Plan Sustainability Element by reference. The CAP includes goals, implementation measures, and action items related to air quality and developed to help the city reach its goals. The CAP includes GHG emission reduction targets, strategies, and implementation measures developed to help the city reach these targets. Reduction strategies address GHG emissions associated with the build environment, resource conservation, transportation, and municipal programs.

However, the CAP does not demonstrate the City's ability to meet 2030 reduction goals (set by SB 32) and subsequently future target years (e.g., 2050) and; thus, is not used for the purposes of this project. Updates to the CAP have been initiated as part of the general plan update process. The updated CAP (and associated key policies to be included in the policy document) is anticipated to be consistent with new State legislation and guidance issued since the existing CAP was adopted in 2013, such as SB 32, E0 B-30-15, and updates to the State's Climate Change Scoping Plan.

3.6.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

The conceptual land use plan (see Exhibit 2-4) was assumed for the purposes of modeling energy consumption. Levels of construction- and operation-related energy consumption by the conceptual land use scenario, measured in megawatt-hours of electricity, Therms of natural gas, gallons of gasoline, and gallons of diesel fuel. Energy consumption estimates were calculated using the California Emissions Estimator Model (CalEEMod) version 2016.3.1 computer program (CAPCOA 2016). CalEEMod default values based on the project's land uses and location were used.

For program-level analysis of annexation of lands where it is not possible to know how much construction activity would occur in a given year, SMAQMD recommends a conservative assumption that 25 percent of the total land uses could be constructed in a single year (SMAQMD 2016). For the purposes of this analysis, and to ensure conservative results, 25 percent of the land uses that could be developed were assumed to be constructed in the earliest possible construction year (2018). Total energy consumption during construction was estimated by multiplying the annual worst-case constructions (construction emissions associated with development of 25 percent of the total proposed land uses) by four.

Table 3.6-1 summarizes the levels of energy consumption for the peak year of construction and total levels of energy consumption. Table 3.6-2 summarizes the levels of energy consumption for the first year of operation during an assumed build-out year of 2025. Table 3.6-3 summarizes the gasoline and diesel consumption estimated for the project in 2025.

Table 3.6-1 Construction Energy Consumption

| Year | Diesel (Gallons) | Gasoline (Gallons) |
|--------------------|------------------|--------------------|
| 2018 | 601,736 | 8,090,180 |
| Total ¹ | 2,406,944 | 32,360,720 |

Notes: Gasoline gallons include on-road gallons from worker trips. Diesel gallons include off-road equipment and on-road gallons from worker and vendor trips.

¹Total construction energy consumption estimated by multiplying the annual worst-case constructions (construction emissions associated with development of 25 percent of the total proposed land uses) by four.

Source: Calculations by Ascent Environmental in 2017

Table 3.6-2 Operational Energy Consumption

| Land Use/Energy Type | Energy Consumption | Units | | |
|---------------------------|--------------------|------------|--|--|
| Single-Family Residential | | | | |
| Electricity | 16,324 | MWh/year | | |
| Natural Gas | 43,905 | MMBtu/year | | |
| Commercial | | | | |
| Electricity | 16,073 | MWh/year | | |
| Natural Gas | 7,164 | MMBtu/year | | |
| Commercial/Office | | • | | |
| Electricity | 12,217 | MWh/year | | |
| Natural Gas | 10,567 | MMBtu/year | | |
| Elementary School | | | | |
| Electricity | 3,226 | MWh/year | | |
| Natural Gas | 6,369 | MMBtu/year | | |
| All Land Uses | | | | |
| Electricity | 47,840 | MWh/year | | |
| Natural Gas | 68,005 | MMBtu/year | | |

Table 3.6-3 Gasoline and Diesel Consumption

| Vehicle Category | Gasoline (gal/year) | Diesel (gal/year) |
|---------------------------|---------------------|-------------------|
| Passenger Vehicles | 708,516 | 6,481 |
| Trucks | 837,632 | 314,539 |
| Buses | 18,292 | 22,721 |
| Other Vehicles | 5,745 | 1,103 |
| Total (All Vehicle Types) | 1,570,185 | 344,844 |

Notes: gal/year = gallons per year.

Source: Calculations by Ascent Environmental in 2017

Source: Calculations by Ascent Environmental in 2017

THRESHOLDS OF SIGNIFICANCE

The following significance criteria area based on CEQA Guidelines Appendix F (energy), under which implementation of the project would have a potentially significant adverse impact if the project would:

- Result in wasteful, inefficient, or unnecessary consumption of energy, during project construction or operation, as evidenced by a failure to decrease overall per capita energy consumption or decrease reliance on fossil fuels such as coal, natural gas, and oil;
- ▲ Fail to incorporate feasible renewable energy or energy efficiency measures into building design, equipment use, transportation, or other project features, or otherwise fail to increase reliance on renewable energy sources; or
- Exceed the available capacities of energy supplies that require the construction of facilities.

IMPACT ANALYSIS

Impact 3.6-1: Wasteful, inefficient, or unnecessary consumption of energy, during project construction or operation.

Future development of the SOIA area could increase electricity and natural gas consumption at the site relative to existing conditions. Thus, this impact would be **potentially significant**.

Appendix F of the State CEQA Guidelines requires the consideration of the energy implications of a project. CEQA requires mitigation measures to reduce "wasteful, inefficient and unnecessary" energy usage (Public Resources Code Section 21100, subdivision (b)(3)). Neither the law nor the State CEQA Guidelines establish criteria that define wasteful, inefficient, or unnecessary use. Compliance with California Code of Regulations Title 24 Energy Efficiency Standards would result in energy-efficient buildings. However, compliance with building codes does not adequately address all potential energy impacts during project construction and operation. For example, energy would be required to transport people and goods to and from any potential future development within the SOIA area.

Construction-Related Energy

If the SOIA were approved and subsequent annexation and development of the site were to occur in line with the conceptual land use plan (see Exhibit 2-4), energy would be required to construct the project, operate and maintain construction equipment, and produce and transport construction materials. The one-time energy expenditure required to construct the physical buildings and infrastructure associated with the project would be non-recoverable. Most energy consumption would result from operation of construction equipment and vehicle trips associated with commutes by construction workers and haul trucks supplying materials. An estimated 32,360,720 gallons of gasoline and 2,406,944 gallons of diesel would be consumed to enable project construction. The energy needs for project construction would be temporary and is not anticipated to require additional capacity or increase peak or base period demands for electricity or other forms of energy. Construction equipment use and associated energy consumption would be typical of that associated with construction of new residential and commercial projects in a suburban setting.

Building Energy

If the conceptual land use plan were developed, operation of the project would be typical of residential, educational, and commercial uses requiring electricity and natural gas for lighting, space and water heating, appliances, and landscape maintenance activities. Indirect energy use would include wastewater treatment and solid waste removal. The project would increase electricity and natural gas consumption in the region relative to existing conditions and would construct new utility connections to existing electrical and natural gas facilities.

The project would be required to meet the California Code of Regulations Title 24 standards for energy efficiency that are in effect at the time of construction that will continue to require improved building energy efficiency. Additionally, as required by the City of Elk Grove General Plan, all new private developments are required to meet and (as determined feasible by the City) exceed state Title 24 Energy Efficiency Building Standards prior to issuance of grading or building permits.

Implementation of Mitigation Measure 3.7-1a provided in Section 3.7, "Greenhouse Gas Emissions," would further improve the energy efficiency of the project through increase use of on-site renewable energy, efficient lighting, energy efficient plumbing fixtures, and/or consideration of zero net energy development (if feasible). The combination of these measures would reduce wasteful energy consumption for buildings and improve energy efficiency of the project.

Transportation Energy

If the conceptual land use plan were developed, fuel consumption associated with vehicle trips generated by the project would not be considered inefficient, wasteful, or unnecessary in comparison to other similar

developments in the region. The project is anticipated to generate an annual VMT of 138,159,419 miles. The project would consume 344,844 gallons of diesel per year and 1,570,185 gallons of gasoline per year.

Fuel use estimates were calculated from the combination of fuel consumption rates and fuel mix by vehicle class from CARB's EMFAC2014 model with overall VMT and mode share by vehicle class modeled for the project in CalEEMod (see Section 3.3 "Air Quality," and Appendix B of this EIR). Federal and state regulations regarding standards for vehicles in California are designed to reduce wasteful, unnecessary, and inefficient use of energy for transportation. It should be noted that the CalEEMod estimates of VMT do not factor existing local land use conditions.

Implementation of Mitigation Measure 3.7-1a provided in Section 3.7, "Greenhouse Gas Emissions," would also further reduce project VMT and transportation energy use through measures such as on- and off-site safety improvements for bike, pedestrian, and transit connections, and/or implement relevant improvements identified in the City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan (see also Mitigation Measure 3.13-1). These mitigation measures are identified below.

Through incorporation of bicycle, pedestrian, and transit facilities and amenities, and reduction of fuel usage by providing for infrastructure for electric vehicle charging at residences and the commercial land uses, future projects within the SOIA area would not result in a wasteful or inefficient use of transportation-related energy (see Mitigation Measure 3.7-1a and Mitigation Measure 3.13-1).

Mitigation Measure 3.6-1: Implement Mitigation Measures 3.7-1a and 3.13-1.

Mitigation Measure 3.7-1a: On-site GHG emission reduction measures.

At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants to implement all reduction measures necessary to comply with the City of Elk Grove CAP in place at the time and implement the following additional measures if they are not included in the City of Elk Grove CAP:

Construction

- Enforce idling time restrictions for construction vehicles
- ▲ Require construction vehicles to operate with the highest tier engines commercially available
- Divert and recycle construction and demolition waste, and use locally-sourced building materials with a high recycled material content to the greatest extent feasible
- ▲ Minimize tree removal, and mitigate indirect GHG emissions increases that occur because of vegetation removal, loss of sequestration, and soil disturbance
- Utilize existing grid power for electric energy rather than operating temporary gasoline/diesel powered generators
- ✓ Increase use of electric and renewable fuel powered construction equipment and require renewable diesel fuel where commercially available
- Require diesel equipment fleets to be lower emitting than any current emission standard

Operation

- Comply with lead agency's standards for mitigating transportation impacts under SB 743
- Require on-site EV charging capabilities for parking spaces serving the project to meet jurisdiction-wide EV proliferation goals

▲ Allow for new construction to install fewer on-site parking spaces than required by local municipal building code, if appropriate

- Dedicate on-site parking for shared vehicles
- ▲ Provide adequate, safe, convenient, and secure on-site bicycle parking and storage in multi-family residential projects and in non-residential projects
- Provide on- and off-site safety improvements for bike, pedestrian, and transit connections, and/or implement relevant improvements identified in the City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan
- ▲ Require on-site renewable energy generation
- ✓ Prohibit wood-burning fireplaces in new development, and require replacement of wood-burning fireplaces for renovations over certain size developments
- Require cool roofs and "cool parking" that promotes cool surface treatment for new parking facilities as well as existing surface lots undergoing resurfacing
- ▲ Require solar-ready roofs
- Require organic collection in new developments
- ▲ Require low-water landscaping in new developments. Require water efficient landscape maintenance to conserve water and reduce landscape waste
- ▲ Achieve Zero Net Energy performance targets before dates required by CALGreen
- Where Zero Net Energy is deemed infeasible, building energy may also be reduced in the following ways:
 - ▼ Reduce building energy-related GHG emissions through the use of on-site renewable energy (e.g., solar photovoltaic panels) where technologically feasible and at a minimum of 15 percent of the project's total energy demand. Building design, landscape plans, and solar installation shall take into account solar orientation, and building roof size to maximize solar exposure.
 - Provide incentives to future residents to purchase Energy Star[™] appliances (including clothes washers, dish washers, fans, and refrigerators).
 - ► Install high efficiency lighting (i.e., light emitting diodes) in all streetlights, security lighting, and all other exterior lighting applications.
 - ▶ Provide electrical outlets on the exterior of project buildings to allow sufficient powering of electric landscaping equipment.
 - ✓ Install low-flow kitchen faucets that comply with CALGreen residential voluntary measures (maximum flow rate not to exceed 1.5 gallons per minute at 60 psi).
 - ► Install low-flow bathroom faucets that exceed the CALGreen residential mandatory requirements (maximum flow rate not to exceed 1.5 gallons per minute at 60 psi).
 - Install low-flow toilets that exceed the CALGreen residential mandatory requirements (maximum flush volume less not to exceed 1.28 gallons per flush).

✓ Install low-flow showerheads that exceed the CALGreen residential mandatory requirements (maximum flow rate not to exceed 2 gallons per minute at 80 psi).

- ▼ Reduce turf area and use water-efficient irrigation systems (i.e., smart sprinkler meters) and landscaping techniques/design.
- Require new construction, including municipal building construction, to achieve third-party green building certifications, such as the GreenPoint Rated program or the LEED rating system
- ▲ Require the design of bike lanes to connect to the regional bicycle network
- ▲ Expand urban forestry and green infrastructure in new land development
- Require preferential parking spaces for park and ride to incentivize carpooling, vanpooling, commuter bus, electric vehicles, and rail service use
- ▲ Require a transportation management plan for specific plans which establishes a numeric target for non-SOV travel and overall VMT
- Develop a rideshare program targeting commuters to major employment centers
- Require the design of bus stops/shelters/express lanes in new developments to promote the usage of mass-transit
- Require gas outlets in residential backyards for use with outdoor cooking appliances such as gas barbeques if natural gas service is available
- Require the installation of electrical outlets on the exterior walls of both the front and back of residences to promote the use of electric landscape maintenance equipment
- Require the design of the electric boxes in new residential unit garages to promote electric vehicle usage
- Require electric vehicle charging station (conductive/inductive) and signage for non-residential developments
- Provide electric outlets to promote the use of electric landscape maintenance equipment to the extent feasible on parks and public/quasi-public lands
- Require each residential unit to be "solar ready," including installing the appropriate hardware and proper structural engineering
- ▲ Require the installation of energy conserving appliances such as on-demand tank-less water heaters and whole-house fans
- Require each residential and commercial building equip buildings with energy efficient AC units and heating systems with programmable thermostats/timers
- Require large-scale residential developments and commercial buildings to report energy use, and set specific targets for per-capita energy use
- ▲ Require each residential and commercial building to utilize low flow water fixtures such as low flow toilets and faucets
- Require the use of energy-efficient lighting for all street, parking, and area lighting
- ▲ Require the landscaping design for parking lots to utilize tree cover

- Incorporate water retention in the design of parking lots and landscaping
- Require the development project to propose an off-site mitigation project which should generate carbon credits equivalent to the anticipated GHG emission reductions. This would be implemented via an approved protocol for carbon credits from CAPCOA, CARB, or other similar entities determined acceptable by the local air district
- Require the project to purchase carbon credits from the CAPCOA GHG Reduction Exchange Program, American Carbon Registry, Climate Action Reserve or other similar carbon credit registry determined to be acceptable by the local air district
- Encourage the applicant to consider generating or purchasing local and California-only carbon credits as the preferred mechanism to implement its off-site mitigation measure for GHG emissions and that will facilitate the State's efforts in achieving the GHG emission reduction goal

Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

Mitigation Measure 3.13-1: Participation in transportation system improvements.

At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall consult with Sacramento County and Caltrans to establish local and state highway transportation improvement plans and funding mechanisms to provide service levels consistent with the City's and County's general plans consistent with City of Elk Grove General Plan Policy CI-2. This will include on-site transportation improvements for pedestrian, bicycle, and transit facilities that will interconnect with existing and planned City pedestrian, bicycle, and transit improvements consistent with the City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan.

Future development within the SOIA area will be responsible for constructing or contributing on a fair-share basis to roadway improvements necessary to serve development within the SOIA area. This may include participation in the I-5 Freeway Subregional Corridor Mitigation Program.

In addition, a detailed traffic study will be completed after a more defined land use plan has been developed. Improvements needed from development in the SOIA area will be established by subsequent traffic studies and LOS standards of affected agencies in effect at the time. Annexation and development activity within the SOIA area will require the preparation of traffic impact report/s to establish the fair share and costing of required improvements. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

Significance after Mitigation

As noted above, implementation of the above mitigation measures would improve operational and transportation energy efficiency of the project that would ensure that project's energy consumption would not be considered wasteful, inefficient, or unnecessary. Thus, this impact would be reduced to **less than significant**.

Impact 3.6-2: Demand for energy services and facilities.

Electrical and natural gas infrastructure would need to be extended by PG&E and SMUD to meet the energy needs of future development within the SOIA area upon annexation. If determined to be necessary, off-site improvements to electrical and natural gas facilities would be the responsibility of the utility and would be analyzed by the utility provider under separate environmental review. Physical environmental impacts from construction or operation of off-site improvements could remain significant after implementation of mitigation (i.e., significant and unavoidable) or no feasible mitigation may be available to fully reduce impacts to a less-than-significant level. Neither LAFCo nor the City of Elk Grove would have control over the approval, timing, or implementation of any electrical or natural gas facility improvements. This impact would be **significant**.

Future development of the SOIA area would increase electricity and natural gas consumption and require new utility connections. While the conceptual land use plan provides no details on the extension of electrical and natural gas infrastructure into the project area, there are existing electrical and natural gas infrastructure facilities along the roadway network surrounding the SOIA area that are available for connection. Electrical infrastructure around the SOIA area includes a 69 kilovolt (kV) overhead line and a 12kV underground line north of Bilby Road, as well as 12kV and 69kV overhead lines along Bruceville Road. Natural gas facilities could be extended from nearby facilities to serve the proposed SOIA Area (LAFCo 2016: 4.0-41).

Based on their review of the NOP, SMUD estimates that the electrical demand potentially generated by the project is approximately 12 MWs, and states that this potential increase in load could require a new substation or upgrades to the existing substation in the vicinity of the SOIA area (McIntire 2017). Additionally, SMUD anticipates that the following off-site extensions or improvements of facilities could be required:

- Double overhead 69kV lines along Kammerer Road,
- 12kV underground line on the south side of the project site along Kammerer Road,
- Overhead 69kV line on the existing 69kV route along Bruceville Road,
- 12kV underground line on the east of the project site along Bruceville Road,
- 12kV underground line on the west of the project site,
- 20-foot public utility easements for future overhead 69kV lines, and
- 12.5-foot public utility easements for overhead/underground facilities along all new streets.

However, the Public Utilities Commission obligates SMUD and PG&E to maintain the capacity to provide energy to planned developments. Therefore, SMUD and PG&E would review final development plans once the applicant submits them to the appropriate design and construction services departments, and determine infrastructure connection specifics at that time. Specific energy demand would be calculated in coordination with SMUD and PG&E to ensure that the project site is adequately served. The potential environmental effects of any new or expanded off-site utilities would be considered by the utility provider through separate CEQA review. Potential significant environmental impacts from construction of off-site infrastructure could include, but not limited to, the following:

- ▲ Aesthetics: temporary and/or permanent alteration of public views from construction of infrastructure improvements
- ▲ Air Quality: air pollutant and toxic air contaminant emissions from construction activities that exceed thresholds recommended by the Sacramento Metropolitan Air Quality Management District
- ▲ Archaeological, Historical, and Tribal Cultural Resources: damage or loss of significant cultural resources from construction activities
- Biological Resources: loss of habitat and direct impacts to special status plant and animal species
- Greenhouse Gases: temporary emission of greenhouse gases during construction.
- ▲ Hazards and Hazardous Materials: potential exposure or release of hazardous materials or contamination during construction
- Hydrology and Water Quality: construction-related stormwater quality impacts
- ▲ Noise: temporary excessive noise levels during construction on sensitive noise receptors
- ▲ Transportation: temporary disruption of roadways and congestion from construction activities and equipment.

The physical environmental impacts from construction or operation of off-site improvements could remain significant after implementation of mitigation (i.e., significant and unavoidable), or no feasible mitigation may be available to fully reduce impacts to a less-than-significant level as it is unknown at this time what the extent of these impacts may be. Neither LAFCo nor the City of Elk Grove would have control over the approval, timing, or implementation any facility improvements. This would be a **significant** impact.

Mitigation Measure 3.6-2: Prepare utility service plans that demonstrate adequate electrical and natural gas service and infrastructure are available.

At the time of submittal of any application to annex territory within the SOIA area, the City of Elk Grove shall require that the applicants prepare utility service plans that identify the projected electrical and natural gas demands and that appropriate infrastructure sizing and locations to serve future development will be provided. The utility service plans shall verify that SMUD and PG&E have adequate electrical and natural gas supplies and infrastructure to serve the annexation territory. For any new off-site facility improvements, the City shall provide LAFCo information on the environmental review for the improvement and mitigation measures have been identified to address identified significant environmental impacts. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

Significance after Mitigation

The impacts of construction or operation of off-site improvements, if required, could result in significant environmental effects that cannot be determined at this time. Neither LAFCo nor the City of Elk Grove would have control over the approval, timing, or implementation these improvements. Therefore, the potential impact of constructing new or expanded electrical or natural gas facilities to serve development of the SOIA area in in the future, if required and assuming eventual annexation and development, would be **significant and unavoidable**.

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3.7 GREENHOUSE GAS EMISSIONS

This chapter presents a summary of the current state of climate change science and greenhouse gas (GHG) emissions sources in California; a summary of applicable regulations; quantification of project-generated GHG emissions and discussion about their potential contribution to global climate change; and analysis of the project's resiliency to climate change-related risks.

Comments received in response to the Notice of Preparation related to GHG's included concerns about evaluating the project's consistency with existing plans and examining the project's effect on vehicle miles traveled (VMT) by directing growth to an area with higher VMT per household than the regional average.

3.7.1 Environmental Setting

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

The Physical Scientific Basis

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. The earth has a much lower temperature than the sun; therefore, the earth emits lower frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane, nitrous oxide (N_2O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Human-caused emissions of these GHGs in excess of natural ambient concentrations are found to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is "extremely likely" that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic forcing (Intergovernmental Panel on Climate Change [IPCC] 2014:3, 4).

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas most pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the lifetime of any particular GHG molecule is dependent on multiple variables and cannot be determined with any certainty, it is understood that more CO₂ is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration. Of the total annual human-caused CO₂ emissions, approximately 55 percent is estimated to be sequestered through ocean and land uptake every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO₂ emissions remains stored in the atmosphere (IPCC 2013:467).

The quantity of GHGs in the atmosphere that ultimately result in climate change is not precisely known, but is enormous; no single project alone would measurably contribute to an incremental change in the global average temperature, or to global, local, or micro climates. Thus, from the standpoint of CEQA, GHG impacts relative to global climate change are inherently cumulative.

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GREENHOUSE GAS EMISSION SOURCES

GHG emissions are attributable in large part to human activities associated with the transportation, industrial/manufacturing, utility, residential, commercial, and agricultural emissions sectors (California Air Resources Board [CARB] 2014a). In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation (CARB 2014a). Emissions of CO₂ are byproducts of fossil fuel combustion. CH₄, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. nitrous oxide is also largely attributable to agricultural practices and soil management. CO₂ sinks, or reservoirs, include vegetation and the ocean, which absorb CO₂ through sequestration and dissolution (CO₂ dissolving into the water), respectively, two of the most common processes for removing CO₂ from the atmosphere.

EFFECTS OF CLIMATE CHANGE ON THE ENVIRONMENT

According to the IPCC, which was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme, global average temperature is expected to increase by 3 to 7 degrees Fahrenheit (°F) by the end of the century, depending on future GHG emission scenarios (IPCC 2007). According to the California Natural Resources Agency (CNRA), temperatures in California are projected to increase 2 to 5 °F by 2050 and by 4 to 9 °F by 2100 (CNRA 2009).

Other environmental resources could be indirectly affected by the accumulation of GHG emissions and resulting rise in global average temperature. For example, an increase in the global average temperature is expected to result in a decreased volume of precipitation falling as snow in California and an overall reduction in snowpack in the Sierra Nevada. According to *Our Changing Climate* (CNRA 2012), the snowpack portion of the state's water supply could potentially decline 30 to 90 percent by the end of the 21st century. An increase in precipitation falling as rain rather than snow also could lead to increased potential for floods because water that would normally be held in the snowpack of the Sierra Nevada until spring would flow into the Central Valley concurrently with winter rainstorm events. This scenario would place more pressure on California's levee/flood control system.

As the existing climate throughout California changes over time, the ranges of various plant and wildlife species could shift or be reduced, depending on the favored temperature and moisture regimes of each species. In the worst cases, some species would become extinct or be extirpated from the state if suitable conditions are no longer available (CNRA 2012).

Changes in precipitation patterns and increased temperatures are expected to alter the distribution and character of natural vegetation and associated moisture content of plants and soils. An increase in frequency of extreme heat events and drought are also expected. These changes are expected to lead to increased frequency and intensity of wildfires (CNRA 2012).

Another outcome of global climate change is sea level rise. Sea level rose approximately seven inches during the last century and it is predicted to rise an additional seven to 22 inches by 2100, depending on the future levels of GHG emissions (IPCC 2007). CNRA projects that sea levels along California will rise 5 to 24 inches by 2050 and 17 to 66 inches by 2100 (CNRA 2012).

Cal-Adapt is a climate change scenario planning tool developed by the California Energy Commission (CEC) that downscales global climate model data to local and regional resolution under two emissions scenarios: the A-2 scenario represents a business-as-usual future emissions scenario, and the B-1 scenario represents a lower GHG emissions future. According to Cal-Adapt, annual average temperatures in the project area are projected to rise by 3.6 to 6.3°F by 2090, with the range based on low and high emissions scenarios (Cal-Adapt 2017a).

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3.7.2 Regulatory Framework

GHG emissions and responses to global climate change are regulated by a variety of federal, State, and local laws and policies. Key regulatory and conservation planning issues applicable to the proposed project are discussed below.

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

National Program to Cut Greenhouse Gas Emissions and Improve Fuel Economy for Cars and Trucks

On August 28, 2014, the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Transportation's National Highway Traffic Safety Administration (NHTSA) finalized a new national program that would reduce GHG emissions and improve fuel economy for all new cars and trucks sold in the U.S. (NHTSA 2012). EPA proposed the first-ever national GHG emissions standards under the federal Clean Air Act, and NHTSA proposed Corporate Average Fuel Economy standards under the Energy Policy and Conservation Act. This national program requires automobile manufacturers to build a single light-duty national fleet that meets all requirements under both federal programs and the standards of California and other states. This program will increase fuel economy to the equivalent of 54.5 miles per gallon for the fleet of cars and light-duty trucks by model year 2025, and, as of 2016, NHTSA and EPA are developing additional phases to address GHG emission standards for new medium- and heavy-duty trucks (NHTSA 2016). This program is currently under review by EPA, but at the time of publication of this DEIR had not been changed.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

Executive Order S-3-05

Executive Order (EO) S-3-05, signed by Governor Arnold Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the executive order established total GHG emission targets for the state. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

While dated, this executive order remains relevant because a more recent California Appellate Court decision, *Cleveland National Forest Foundation v. San Diego Association of Governments* (November 24, 2014) 231 Cal.App.4th 1056, examined whether it should be viewed as having the equivalent force of a legislative mandate for specific emissions reductions. The case is being reviewed by the California Supreme Court and oral arguments have been presented; however, a decision had not been released at the time of writing this DEIR. Therefore, the Appellate Court decision is not currently considered a citable precedent.

Assembly Bill 32, the California Global Warming Solutions Act of 2006

In September 2006, Governor Schwarzenegger signed the California Global Warming Solutions Act of 2006, Assembly Bill (AB) 32. AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. AB 32 also requires that these reductions "...shall remain in effect unless otherwise amended or repealed. (b) It is the intent of the Legislature that the statewide greenhouse gas emissions limit continues in existence and be used to maintain and continue reductions in emissions of greenhouse gases beyond 2020. (c) The [Air Resources Board] shall make recommendations to the Governor and the Legislature on how to continue reductions of greenhouse gas emissions beyond 2020." [California Health and Safety Code, Division 25.5, Part 3, Section 38551]

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Assembly Bill 32 Climate Change Scoping Plan and Updates

In December 2008, CARB adopted its Climate Change Scoping Plan, which contains the main strategies California will implement to achieve reduction of approximately 118 million metric tons (MMT) of CO₂-equivalent (CO₂e) emissions, or approximately 21.7 percent from the State's projected 2020 emission level of 545 MMT of CO₂e under a business-as-usual scenario (this is a reduction of 47 MMT CO₂e, or almost 10 percent, from 2008 emissions). In May 2014, CARB released and subsequently adopted the *First Update to the Climate Change Scoping Plan* to identify the next steps in reaching AB 32 goals and evaluate progress that has been made between 2000 and 2012 (CARB 2014b:4 and 5). According to the update, California is on track to meet the near-term 2020 GHG limit and is well positioned to maintain and continue reductions beyond 2020 (CARB 2014b: ES-2). The update also reports the trends in GHG emissions from various emissions sectors (e.g., transportation, building energy, agriculture).

On January 20, 2017, CARB released its proposed 2017 Climate Change Scoping Plan Update (2017 Scoping Plan Update), which lays out the framework for achieving the 2030 reductions as established in more recent legislation (discussed below). The proposed 2017 Scoping Plan Update identifies the GHG reductions needed by each emissions sector to achieve a statewide emissions level that is 40 percent below 1990 levels before 2030.

The proposed update also identifies how GHGs associated with proposed projects could be evaluated under CEQA. Specifically, it states that achieving "no net increase" in GHG emissions is the correct overall objective of projects evaluated under CEQA if conformity with an applicable local GHG reduction plan cannot be demonstrated. CARB recognizes that it may not be appropriate or feasible for every development project to mitigate its GHG emissions to no net increase and that this may not necessarily imply a substantial contribution to the cumulatively significant environmental impact of climate change. In terms of current project-level thresholds, neither the Sacramento Metropolitan Air Quality Management District (SMAQMD) nor the City of Elk Grove have developed an evidenced-based, bright-line numeric threshold consistent with the State's long-term 2030 GHG goal. At the time of writing this environmental document, CARB has not yet approved its proposed 2017 Scoping Plan Update.

Senate Bill 375

Senate Bill (SB) 375, signed by Governor Schwarzenegger in September 2008, aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires metropolitan planning organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy, showing prescribed land use allocation in each MPO's Regional Transportation Plan. CARB, in consultation with the MPOs, is to provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in their respective regions for 2020 and 2035.

The Sacramento Area Council of Governments (SACOG) serves as the MPO for Sacramento, Placer, El Dorado, Yuba, Sutter, and Yolo Counties, excluding those lands located in the Lake Tahoe Basin. The project site is in Sacramento County. SACOG adopted its Metropolitan Transportation Plan/Sustainable Communities Strategy 2035 in 2012, and completed an update adopted on February 18, 2016. SACOG was tasked by CARB to achieve a 9 percent per capita reduction compared to 2012 emissions by 2020 and a 16 percent per capita reduction by 2035, which CARB confirmed the region would achieve by implementing its SCS (CARB 2013).

Executive Order B-30-15

On April 20, 2015 Governor Brown signed EO B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's EO aligns California's GHG reduction targets with those of leading international governments such as the 28-nation European Union, which adopted the same target in October 2014. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (Assembly Bill 32, discussed above). California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050. This is in line with the scientifically established levels needed in the U.S. to limit global warming below 2

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degrees Celsius, the warming threshold at which major climate disruptions are projected, such as super droughts and rising sea levels.

Senate Bill 32 and Assembly Bill 197 of 2016

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize ARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050.

Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars program which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of zero-emission vehicles, into a single package of standards for vehicle model years 2017 through 2025. The new rules strengthen the GHG standard for 2017 models and beyond. This will be achieved through existing technologies, the use of stronger and lighter materials, and more efficient drivetrains and engines. The program's zero-emission vehicle regulation requires battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15 percent of California's new vehicle sales by 2025. The program also includes a clean fuels outlet regulation designed to support the commercialization of zero-emission hydrogen fuel cell vehicles planned by vehicle manufacturers by 2015 by requiring increased numbers of hydrogen fueling stations throughout the state. The number of stations will grow as vehicle manufacturers sell more fuel cell vehicles. By 2025, when the rules will be fully implemented, the statewide fleet of new cars and light trucks will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions than the statewide fleet in 2016 (CARB 2012).

Senate Bill X1-2, the California Renewable Energy Resources Act of 2011

SB X1-2 of 2011 requires all California utilities to generate 33 percent of their electricity from renewables by 2020. SB X1-2 sets a three-stage compliance period requiring all California utilities, including independently-owned utilities, energy service providers, and community choice aggregators, to generate 20 percent of their electricity from renewables by December 31, 2013; 25 percent by December 31, 2016; and 33 percent by December 31, 2020. SB X1-2 also requires the renewable electricity standard to be met increasingly with renewable energy that is supplied to the California grid from sources within, or directly proximate to, California. SB X1-2 mandates that renewables from these sources make up at least 50 percent of the total renewable energy for the 2011-2013 compliance period, at least 65 percent for the 2014-2016 compliance period, and at least 75 percent for 2016 and beyond. In October 2015, SB 350 was signed by Governor Brown, which requires retail sellers and publicly-owned utilities to procure 50 percent of their electricity from renewable resources by 2030.

California Building Efficiency Standards of 2016 (Title 24, Part 6)

Buildings in California are required to comply with California's Energy Efficiency Standards for Residential and Nonresidential Buildings established by CEC regarding energy conservation standards and found in Title 24, Part 6 of the California Code of Regulations. These standards were first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption and are updated on an approximately 3-year cycle 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, 2017 must follow the 2016 standards (CEC 2015a). Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions.

California Integrated Waste Management Act

To minimize the amount of solid waste that must be disposed of in landfills, the State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties were required to divert 25 percent of all solid waste from landfill facilities by January 1, 1995, and 50 percent by January 1, 2000. Through other statutes and regulations, this 50

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percent diversion rate also applies to State agencies. In order of priority, waste reduction efforts must promote source reduction, recycling and composting, and environmentally-safe transformation and land disposal. Per capita disposal rates for the City of Sacramento are below the target disposal rates established by AB 939 (1989; California Department of Resources Recycling and Recovery [CalRecycle] 2017).

In 2011, AB 341 modified the California Integrated Waste Management Act and directed CalRecycle to develop and adopt regulations for mandatory commercial recycling. The resulting Mandatory Commercial Recycling Regulation (2012) requires that on and after July 1, 2012, certain businesses that generate four cubic yards or more of commercial solid waste per week shall arrange recycling services. To comply with this requirement, businesses may either separate recyclables and self-haul them or subscribe to a recycling service that includes mixed waste processing. AB 341 also established a statewide recycling goal of 75 percent; the 50 percent disposal reduction mandate still applies for cities and counties under AB 939.

LOCAL PLANS, POLICIES, REGULATIONS, AND LAWS

Sacramento Metropolitan Air Quality Management District

SMAQMD is the primary agency responsible for addressing air quality concerns in all of Sacramento County—its role is discussed further in Section 4.6, "Air Quality." SMAQMD also recommends methods for analyzing project-generated GHGs in CEQA analyses and offers multiple potential GHG reduction measures for land use development projects. SMAQMD developed thresholds of significance to provide a uniform scale to measure the significance of GHG emissions from land use and stationary source projects in compliance with CEQA and AB 32. SMAQMD's goals in developing GHG thresholds include ease of implementation; use of standard analysis tools; and emissions mitigation consistent with AB 32. However, since the passage of SB 32 and AB 197 and the associated adoption of a revised statewide emissions target of 40 percent below 1990 levels by 2030, SMAQMD has not developed new thresholds in compliance with this target.

Sacramento County

The Sacramento County 2030 General Plan includes the following policies applicable to this project and related to reducing GHG emissions (Sacramento County 2011).

- Policy AQ-22. Reduce greenhouse gas emissions from County operations as well as private development.
- Policy LU-115. It is the goal of the County to reduce GHG emissions to 1990 levels by the year 2020. This shall be achieved through a mix of State and local action.

Sacramento County Climate Action Plan

The Sacramento County CAP Strategy and Framework Document was adopted on November 9, 2011 and presents a framework for reducing GHG emissions and managing water and other resources to best prepare for a changing climate.

However, the CAP does not demonstrate the County's ability to meet 2030 reduction goals (set by SB 32) and; subsequently, future target years (e.g., 2050) and does not meet all of the criteria in Section 15183.5(b)(1) as a plan for the reduction of GHG emissions. However, updates to the CAP have been initiated and the updated CAP (and associated key policies to be included in the policy document) will meet all of the criteria in Section 15183.5(b)(1) as a plan for the reduction of GHG emissions, and be consistent with new State legislation and guidance issued since the existing CAP was adopted in 2011, such as SB 32, EO B-30-15, and updates to the State's Climate Change Scoping Plan.

The existing Sacramento County CAP does not meet all of the criteria in Section 15183.5(b)(1) as a plan for the reduction of GHG emissions. The County is currently preparing an updated CAP to meet all specified criteria.

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City of Elk Grove

The City of Elk Grove General Plan includes the following policies applicable to this project and related to reducing GHG emissions (City of Elk Grove 2016).

- Policy S-5. Reduce greenhouse gas emissions from community-wide sources, including City facilities and operations, by a minimum of 15 percent below 2005 levels by 2020, consistent with the standards and requirements of AB 32.
- ▶ Policy S-8. Incorporate green building techniques and best management practices in the site design, construction, and renovation of all public projects. (Please see Climate Action Planning [CAP]) reduction measures.)
 - ► S-8-Action 1. Require all new municipal developments to exceed state Title 24 Energy Efficiency Standards by 15 percent to the extent such efficiencies are possible.
 - ▼ S-8-Action 2. Design new municipal facilities to be at a minimum the baseline LEED certification.
 - ▼ S-8-Action 3. Implement measures identified during the energy audit process to reduce energy use in existing municipal buildings.
- Policy S-9. Support innovation and green building best management practices for all new private development.
 - ► S-9-Action 1. Require all new private developments to meet and (as determined feasible by the City) exceed state Title 24 Energy Efficiency Building Standards. (Please see CAP reduction measures.)
 - ► S-9-Action 2. Include a Green Building & Development Resource List and supporting materials with City planning and building permit applications that outline ways to integrate green building principles into project design.
- ▶ Policy S-10. Support higher-density, compact, residential development along transit by placing high-density residential or mixed-use sites near transit opportunities. (Please see CAP reduction measures.)
 - ▼ S-10-Action 1. Review the existing TOD designation in the Land Use Plan to determine if additional opportunities exist. Review should give consideration to the recommendations presented in the SACOG Blueprint Growth Principles. (Please see CAP.)
 - **S-10-Action 2.** Review the existing TOD designation in the Land Use Plan and revise the definition to emphasize mixed-use, compact, higher-density development around transit stations.
 - ▼ S-10-Action 3. Review and update the City's design guidelines to ensure appropriate design of TODs, and establish standards to prioritize pedestrians, cyclists, and public transit over private vehicles.
- Policy S-11. Support strategies that reduce reliance on single-occupancy private vehicles and promote the viability of alternative modes of transport. (Please see CAP reduction measures.)
 - ▼ S-11-Action 2. Require new commercial development for projects equal to and greater than 100,000 square feet to provide electric vehicle charging station and new residential development to pre-wire for plug-in electric vehicles.
 - ▼ S-11-Action 4. Ensure new multi-family and commercial developments provide bicycle parking and other bicycle support facilities appropriate for the users of the development.
- Policy S-12. Improve the health and sustainability of the community through improved regional air quality and reduced greenhouse gas emissions that contribute to climate change.

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- **▼ S-12 Action 1.** Ensure that new development is consistent with the City's CAP.
- Policy S-18. Facilitate recycling, reduction in the amount of waste, and reuse of materials to reduce the amount of solid waste sent to landfill from Elk Grove. (Please see CAP reduction measures.)
 - ▼ S-18-Action 4. Enforce the Construction and Demolition (C&D) Debris Recycling Program for applicable construction projects and all demolition projects and increase the requirements to a 65 percent waste diversion.
- Policy S-20. Reduce the amount of water used by residential and nonresidential uses. (Please see CAP reduction measures.)
 - ▼ S-20-Action 3. Continue to require new commercial and multi-family residential developments to install low-flow fixtures.

Elk Grove Climate Action Plan

The Elk Grove CAP was adopted on March 27, 2013 by City Council and was incorporated into the Elk Grove General Plan Sustainability Element by reference The CAP includes GHG emission reduction targets, strategies, and implementation measures developed to help reach identified targets. Reduction strategies address GHG emissions associated with the build environment, resource conservation, transportation, and municipal programs.

However, the CAP does not demonstrate the City's ability to meet 2030 reduction goals (set by SB 32) and; subsequently, future target years (e.g., 2050). Thus, because of the anticipated buildout date of the SOIA area (or "project site") being beyond 2020 this method of analysis would not demonstrate consistency with State GHG targets set by legislation (i.e., SB 32) or recommendations in the 2017 proposed Scoping Plan.

Updates to the CAP have been initiated as part of the general plan update process. The updated CAP (and associated key policies to be included in the policy document) is anticipated to be consistent with new State legislation and guidance issued since the existing CAP was adopted in 2013, such as SB 32, EO B-30-15, and updates to the State's Climate Change Scoping Plan.

3.7.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

The conceptual land use plan (see Exhibit 2-4) was assumed for the purposes of modeling GHG emissions. GHG emissions associated with the conceptual land use scenario would be generated during project construction and by operation of the various land uses after construction is complete. Conceptual land use scenario-related operational emissions of GHG were estimated for the following sources: area sources (e.g., the use of landscape maintenance equipment), energy use associated with residential and nonresidential buildings, water and wastewater treatment and distribution, solid waste, and mobile sources.

Construction Emissions

Construction-related emissions of GHGs were calculated using the California Emissions Estimator Model (CalEEMod) Version 2016.3.1 computer program (California Air Pollution Control Officers Association [CAPCOA] 2016), as recommended by SMAQMD. Modeling was based on available information (e.g., land uses, acreage, number of units) for the conceptual land use scenario; reasonable assumptions based on typical construction activities; and default values in CalEEMod that are based on the project's location and land use type.

For program-level analysis of annexation of lands where it is not possible to know how much construction activity would occur in a given year, SMAQMD recommends a conservative assumption that 25 percent of

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the total land uses could be constructed in a single year (SMAQMD 2016). For the purposes of a conservative analysis, 25 percent of the land uses that could be developed were assumed to be constructed in the earliest possible construction year (2018). This assumption would be considered conservative because it is likely not possible that 25 percent of future land use in the proposed SOIA area could be under construction in 2018, and construction equipment fleet emissions are expected to decrease in the future with increased emission controls and standards. For a detailed description of model input and output parameters and assumptions, refer to Appendix C.

Operation Emissions

Operation-related emissions of GHG were also estimated using CalEEMod Version 2016.3.1. Operational emissions of GHGs were estimated for the following sources: area sources (e.g., landscaping-related fuel combustion sources), energy use (i.e., electricity and natural gas consumption), water use, solid waste, and mobile sources. Mobile-source emissions were calculated using CalEEMod Version 2016.3.1 with default trip generation and VMT rates (CAPCOA 2016). Indirect emissions associated with electricity and natural gas consumption were estimated using GHG emissions factors for Sacramento Municipal Utility District (SMUD) based on SMUD's Strategic Directive on Resource Planning (SMUD 2016). The project's level of electricity and natural gas usage were based on 2016 Title 24-adjusted consumption rates provided by CalEEMod for each land use type. Adjustments were based on the CEC estimate that single-family houses are 28 percent more energy efficient than 2013 Title 24 standards and non-residential buildings are 5 percent more efficient than 2013 Title 24 standards (CEC 2015b).

THRESHOLDS OF SIGNIFICANCE

The issue of global climate change is inherently a cumulative issue, as the GHG emissions of individual projects cannot be shown to have any material effect on global climate. Thus, the project's impact to climate change is addressed only as a cumulative impact.

CEQA Guidelines Section 15064 and relevant portions of Appendix G recommend that a lead agency consider a project's consistency relevant, adopted plans, and discuss any inconsistencies with applicable regional plans, including plans to reduce GHG emissions. In Appendix G of the State CEQA Guidelines, two questions are provided to help assess if the project would result in a potentially significant impact on climate change. These questions ask whether the project would:

- generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or
- conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs?

In California, some counties, cities, and air districts have developed guidance and thresholds of significance for determining significance of GHG emissions that occur within their jurisdiction. LAFCo is the CEQA Lead Agency for the SOIA project and is; therefore, responsible for determining whether an impact would be considered significant.

As discussed above, the City of Elk Grove CAP does not demonstrate the City's ability to meet 2030 reduction goals (set by SB 32) and; subsequently, future target years (e.g., 2050). Thus, for projects such as the SOIA that would be built out beyond 2020 this method of analysis would not demonstrate consistency with State GHG targets set by legislation (i.e., SB 32) or recommendations in the 2017 Scoping Plan Update.

If the lead agency does not have a qualified CAP that can be used to show consistency with State GHG targets, then the local air district's thresholds may be used, if available and applicable. SMAQMD has developed thresholds of significance for development projects that occur within the jurisdiction of SMAQMD that are tied to target year 2020 and no further. Thus, with respect to SB 32 and 2030 GHG reduction goals of 40 percent below 1990 levels, SMAQMD has not developed numeric, bright-line thresholds of significance

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for GHG emissions generated during project construction or operation. Nonetheless, SMAQMD recommends that lead agencies quantify and disclose project-related GHG emissions and make a significance determination of these emissions. Because of the cumulative effect of GHGs, SMAQMD recommends amortizing a project's construction emissions over the operational lifetime of the project (SMAQMD 2016). The sum of estimated amortized construction emissions and annual operational emissions per year is assumed to reflect the total annual GHG emissions attributable to the project.

As discussed above, recent passage of SB 32 in September 2016 set a new State GHG emissions target for the year 2030 at 40 percent below 2020 levels. Thus, for projects that would generate emissions beyond 2020, significance would be determined based on a project's compliance with this target. An impact would be determined significant if a project were to conflict with or prevent the State from meeting 2030 GHG reduction targets.

To set the stage for how California would meet targets set forth by SB 32, ARB's 2017 Scoping Plan Update suggests several approaches for showing a project's consistency with State targets. The following is related to project-level CEQA analyses (CARB 2017:136):

Absent conformity with an adequate geographically specific GHG reduction plan, [ARB] recommends that all new land use development implement all feasible measures to reduce GHG emissions....

[ARB] believes that achieving no net increase in GHG emissions is the correct overall objective, but it may not be appropriate or feasible for every development project. An inability to mitigate a project's GHG emissions to zero does not necessarily imply a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA. Lead agencies may develop evidenced-based bright-line numeric thresholds—consistent with the [2017 Scoping Plan Update] and the State's long-term GHG goals—and projects with emissions over that amount may be required to incorporate on-site design features and mitigation measures that avoid or minimize project emissions to the degree feasible. Otherwise, a performance-based metric using a climate action plan or other plan to reduce GHG emissions is appropriate.

In relation to the proposed 2017 Scoping Plan Update language above, the City has prepared a geographically-specific GHG reduction plan; however, as explained above, the plan does not meet the targets set forth by SB 32 and; therefore, cannot be used to demonstrate consistency with future target years (i.e., 2030 or 2050). Further, neither SMAQMD nor the City have developed an evidenced-based bright-line numeric threshold or performance-based metric based on an applicable CAP, consistent with the State's long-term GHG goals. Therefore, relying on consistency with a qualified GHG reduction plan or comparing project-generated emissions to a bright-line threshold are not options for this analysis. Consequently, based on the overall objective of the 2017 Scoping Plan Update, a "no net increase" threshold is applied for the purposes of this analysis. The intent of this analysis is not to present the use of a no net increase threshold as a generally applied threshold of significance for GHG impacts. Its use herein is related directly to the facts surrounding the project and availability of reliance on other threshold options. A project that results in no net increase in GHG emissions would not result in a substantial increase in GHGs or conflict with local or State plans adopted for the purpose of reducing GHG emissions.

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IMPACT ANALYSIS

Impact 3.7-1: Project-generated greenhouse gas emissions.

Future development of the SOIA area upon annexation is estimated to generate $5,116 \, \text{MTCO}_2\text{e}$ from construction activities and $71,113 \, \text{MTCO}_2\text{e}$ operation-related emissions at assumed buildout of the conceptual land use plan. Total emissions attributed to the conceptual land use plan would be $71,318 \, \text{MTCO}_2\text{e}/\text{year}$ with combined amortized construction emissions. This level of GHG emissions has the potential to result in a considerable contribution to cumulative emissions related to global climate change and conflict with State GHG reduction targets established for 2030 and 2050. This cumulative impact would be significant and the project's contribution would be **cumulatively considerable.**

While approval of the SOIA would not result in physical changes to the environment, approval of the SOIA would remove an obstacle to subsequent annexation and development of the site. GHG emissions associated with the conceptual land use scenario would be generated during construction and operation. Construction activities would result in the generation of GHG emissions from the use of heavy-duty off-road construction equipment, delivery trucks associated with materials transport, and vehicle use during worker commute.

Operation of the conceptual land use scenario would result in mobile-source GHG emissions associated with vehicle trips to and from the conceptual land uses, and within the SOIA area; area-source emissions from the operation of landscape maintenance equipment; energy-source emissions from the consumption of electricity and natural gas; water-related energy consumption associated with water use and the conveyance and treatment of wastewater; waste-generated emissions from the transport and disposal of solid waste.

Emissions were quantified for each year of construction and project operations. Modeling results are shown below in Table 3.7-1.

Table 3.7-1 Conceptual Land Use Scenario Greenhouse Gas Emissions

| Project Phase | GHG Emissions |
|---|-------------------------------|
| Construction GHG Emissions | MTCO₂e |
| Maximum Annual Construction Emissions ¹ | 1,279 |
| Total Conceptual Land Use Scenario Construction Emissions | 5,116 |
| Amortized over 25 Years | 205 |
| Operational GHG Emissions | MTCO ₂ e (MT/year) |
| Area | 32 |
| Energy | 16,515 |
| Mobile | 51,149 |
| Waste | 2,408 |
| Water | 1.008 |
| Total Project Annual GHG Emissions (Amortized Construction + Operational) | 71,318 |
| Emissions per Service Population ² | 7.2 |

Notes: Totals may not add because of rounding; $CO_2e = carbon dioxide equivalent$; MT = metric tons; GHG = greenhouse gas.

Source: Modeled by Ascent Environmental 2017

¹Total construction emissions estimated by multiplying the annual worst-case constructions (construction emissions associated with development of 25% of the total proposed land uses) by four.

 $^{^2\}mbox{Total}$ service population consists of 5,540 residents and 4,359 employees.

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As shown in Table 3.7-1 above, the project would generate a total of 5,116 MTCO₂e over the duration of construction activities and annual operational emissions of 71,113 MTCO₂e. Total construction emissions were amortized over the project's 25-year life, consistent with guidance from SMAQMD (SMAQMD 2016). Thus, the level of annual GHG emissions associated with the conceptual land use scenario, including amortized construction-related emissions, is estimated to be approximately 71,318 MTCO₂e/year.

As discussed in the "Significance Criteria" section above, currently no bright line threshold or geographically-specific GHG reduction plan is available that could be used to evaluate project-generated GHG emissions beyond 2020- (assumed buildout date is post 2020), the year for which SMAQMD thresholds are based and the City of Elk Grove CAP shows City GHG emission targets in line with State targets.

Therefore, because the project would generate 71,318 MTCO₂e/year, it could conflict with the State's ability to meet the goals of SB 32 and project-generated GHG emissions would be considered **cumulatively considerable and significant**.

Mitigation Measure 3.7-1a: On-site GHG emission reduction measures.

At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants to implement all reduction measures necessary to comply with the City of Elk Grove CAP in place at the time and implement the following additional measures if they are not included in the City of Elk Grove CAP:

Construction

- Enforce idling time restrictions for construction vehicles
- Require construction vehicles to operate with the highest tier engines commercially available
- Divert and recycle construction and demolition waste, and use locally-sourced building materials with a high recycled material content to the greatest extent feasible
- ▲ Minimize tree removal, and mitigate indirect GHG emissions increases that occur because of vegetation removal, loss of sequestration, and soil disturbance
- Utilize existing grid power for electric energy rather than operating temporary gasoline/diesel powered generators
- Increase use of electric and renewable fuel powered construction equipment and require renewable diesel fuel where commercially available
- Require diesel equipment fleets to be lower emitting than any current emission standard

Operation

- Comply with lead agency's standards for mitigating transportation impacts under SB 743
- Require on-site EV charging capabilities for parking spaces serving the project to meet jurisdiction-wide EV proliferation goals
- ▲ Allow for new construction to install fewer on-site parking spaces than required by local municipal building code, if appropriate
- Dedicate on-site parking for shared vehicles
- Provide adequate, safe, convenient, and secure on-site bicycle parking and storage in multi-family residential projects and in non-residential projects

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■ Provide on- and off-site safety improvements for bike, pedestrian, and transit connections, and/or implement relevant improvements identified in the City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan

- ▲ Require on-site renewable energy generation
- Prohibit wood-burning fireplaces in new development, and require replacement of wood-burning fireplaces for renovations over certain size developments
- Require cool roofs and "cool parking" that promotes cool surface treatment for new parking facilities as well as existing surface lots undergoing resurfacing
- ▲ Require solar-ready roofs
- ▲ Require organic collection in new developments
- ▲ Require low-water landscaping in new developments. Require water efficient landscape maintenance to conserve water and reduce landscape waste.
- ▲ Achieve Zero Net Energy performance targets before dates required by CALGreen
- Where ZNE is deemed infeasible, building energy may also be reduced in the following ways:
- Reduce building energy-related GHG emissions through the use of on-site renewable energy (e.g., solar photovoltaic panels) where technologically feasible and at a minimum of 15 percent of the project's total energy demand. Building design, landscape plans, and solar installation shall take into account solar orientation, and building roof size to maximize solar exposure.
- Provide incentives to future residents to purchase Energy Star[™] appliances (including clothes washers, dish washers, fans, and refrigerators).
- ✓ Install high efficiency lighting (i.e., light emitting diodes) in all streetlights, security lighting, and all other exterior lighting applications.
- Provide electrical outlets on the exterior of project buildings to allow sufficient powering of electric landscaping equipment.
- ✓ Install low-flow kitchen faucets that comply with CALGreen residential voluntary measures (maximum flow rate not to exceed 1.5 gallons per minute at 60 psi).
- ✓ Install low-flow bathroom faucets that exceed the CALGreen residential mandatory requirements (maximum flow rate not to exceed 1.5 gallons per minute at 60 psi)
- Install low-flow toilets that exceed the CALGreen residential mandatory requirements (maximum flush volume less not to exceed 1.28 gallons per flush)
- ✓ Install low-flow showerheads that exceed the CALGreen residential mandatory requirements (maximum flow rate not to exceed 2 gallons per minute at 80 psi)
- Reduce turf area and use water-efficient irrigation systems (i.e., smart sprinkler meters) and landscaping techniques/design.
- Require new construction, including municipal building construction, to achieve third-party green building certifications, such as the GreenPoint Rated program or the LEED rating system

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- ▲ Require the design of bike lanes to connect to the regional bicycle network
- ▲ Expand urban forestry and green infrastructure in new land development
- Require preferential parking spaces for park and ride to incentivize carpooling, vanpooling, commuter bus, electric vehicles, and rail service use
- ▲ Require a transportation management plan for specific plans which establishes a numeric target for non-SOV travel and overall VMT
- Develop a rideshare program targeting commuters to major employment centers
- Require the design of bus stops/shelters/express lanes in new developments to promote the usage of mass-transit
- Require gas outlets in residential backyards for use with outdoor cooking appliances such as gas barbeques if natural gas service is available
- Require the installation of electrical outlets on the exterior walls of both the front and back of residences to promote the use of electric landscape maintenance equipment
- ▲ Require the design of the electric boxes in new residential unit garages to promote electric vehicle usage
- ▲ Require electric vehicle charging station (conductive/inductive) and signage for non-residential developments
- Provide electric outlets to promote the use of electric landscape maintenance equipment to the extent feasible on parks and public/quasi-public lands
- Require each residential unit to be "solar ready," including installing the appropriate hardware and proper structural engineering
- ▲ Require the installation of energy conserving appliances such as on-demand tank-less water heaters and whole-house fans
- Require each residential and commercial building equip buildings with energy efficient AC units and heating systems with programmable thermostats/timers
- Require large-scale residential developments and commercial buildings to report energy use, and set specific targets for per-capita energy use
- Require each residential and commercial building to utilize low flow water fixtures such as low flow toilets and faucets
- Require the use of energy-efficient lighting for all street, parking, and area lighting
- ▲ Require the landscaping design for parking lots to utilize tree cover
- Incorporate water retention in the design of parking lots and landscaping
- Require the development project to propose an off-site mitigation project which should generate carbon credits equivalent to the anticipated GHG emission reductions. This would be implemented via an approved protocol for carbon credits from CAPCOA, CARB, or other similar entities determined acceptable by the local air district

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■ Require the project to purchase carbon credits from the CAPCOA GHG Reduction Exchange Program, American Carbon Registry, Climate Action Reserve or other similar carbon credit registry determined to be acceptable by the local air district

▲ Encourage the applicant to consider generating or purchasing local and California-only carbon credits as the preferred mechanism to implement its off-site mitigation measure for GHG emissions and that will facilitate the State's efforts in achieving the GHG emission reduction goal

Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

Mitigation Measure 3.7-1b: Purchase carbon offsets.

In addition to Mitigation Measure 3.7-1a, at the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants offset GHG emissions to zero by funding activities that directly reduce or sequester GHG emissions or, if necessary, obtaining carbon credits. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

To the degree a project relies on GHG mitigation measures, SMAQMD and CARB recommend that lead agencies prioritize on-site design features (Mitigation Measures 3.7-1a and 3.3-2) and direct investments in GHG reductions near the project, to help provide potential air quality and economic co-benefits locally. For example, direct investment in a local building retrofit program can pay for cool roofs, solar panels, solar water heaters, smart meters, energy efficient lighting, energy efficient appliances, energy efficient windows, insulation, and water conservation measures for homes within the geographic area of the project. Other examples of local direct investments include financing installation of regional electric vehicle charging stations, paying for electrification of public school buses, and investing in local urban forests. However, it is critical that any such investments in actions to reduce GHG emissions are real and quantifiable. Where further project design or regional investments are infeasible or not proven to be effective, it may be appropriate and feasible to mitigate project emissions through purchasing and retiring carbon credits issued by a recognized and reputable accredited carbon registry.

The CEQA Guidelines recommend several options for mitigating GHG emissions. State CEQA Guidelines Section 15126.4(C)(3) states that measures to mitigate the significant effects of GHG emissions may include "off-site measures, including offsets that are not otherwise required..." Through the purchase of GHG credits through voluntary participation in an approved registry, GHG emissions may be reduced at the project level. GHG reductions must meet the following criteria:

- Real—represent reductions actually achieved (not based on maximum permit levels),
- Additional/Surplus—not already planned or required by regulation or policy (i.e., not double counted),
- Quantifiable—readily accounted for through process information and other reliable data,
- ▲ Enforceable—acquired through legally-binding commitments/agreements,
- Validated—verified through accurate means by a reliable third party, and
- Permanent—will remain as GHG reductions in perpetuity.

In partnership with offset providers, any future project applicant shall purchase carbon offsets (from available programs that meet the above criteria) that fully offset the project's remaining (i.e., post implementation of Mitigation Measures 3.7-1a and 3.3-2) operational GHG emissions over the 25-year project life.

It should be noted that purchases of offsets would occur once and remain effective throughout the lifetime of the project (i.e., 25 years per SMAQMD guidance). In order for an offset to be considered viable, it must exhibit "permanence." To adequately reduce emissions of GHGs, carbon offsets must be able to demonstrate the ability to counterbalance GHG emissions over the lifespan of a project or "in perpetuity." For example, the purchase of a carbon offset generated by a reforestation project would entail the replanting or maintenance of carbon-sequestering trees, which would continue to sequester carbon over several years, decades, or centuries

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(Forest Trends 2015). It is important to note that the offsets purchased must offer an equivalent GHG reduction benefit annually, as opposed to a one-time reduction.

Before issuing building permits for development within the SOIA area, the City of Elk Grove shall confirm that the project applicant or its designee has fully offset the project's remaining (i.e., post implementation of Mitigation Measures 3.7-1a and 3.3-2) operational GHG emissions over the 25-year project life associated with such building permits by relying upon one of the following compliance options, or a combination thereof:

- demonstrate that the project applicant has directly undertaken or funded activities that reduce or sequester GHG emissions that are estimated to result in GHG reduction credits (if such programs are available), and retire such GHG reduction credits in a quantity equal to the remaining operational GHG emissions:
- provide a guarantee that it shall retire carbon credits issued in connection with direct investments (if such programs exist at the time of building permit issuance) in a quantity equal to the remaining operational GHG emissions;
- undertake or fund direct investments (if such programs exist at the time of building permit issuance) and retire the associated carbon credits in a quantity equal to the remaining operational GHG emissions; or
- if it is impracticable to fully offset operational emissions through direct investments or quantifiable and verifiable programs do not exist, the project applicant or its designee may purchase and retire carbon credits that have been issued by a recognized and reputable, accredited carbon registry in a quantity equal to the remaining operational GHG Emissions.

Significance after Mitigation

Implementation of identified actions in Mitigation Measures 3.7-1a and 3.3.2 could reduce GHG emissions. However, these mitigation measures could not mitigate GHG emissions to a level of no net increase. Thus, the project would still result in GHG emissions that would be considered cumulatively considerable.

Implementation of Mitigation Measure 3.7-1b would require the purchase of off-site carbon credits to reduce the remaining operational GHG emissions. Thus, implementation of all of the above mitigation measures would offset project GHG emissions and, therefore; would not conflict with City of Elk Grove's climate planning efforts, ARB's proposed 2017 Scoping Plan Update, or established state GHG reduction targets. Thus, the project's contribution to cumulative GHG emission after mitigation could be mitigated through implementation of both mitigation measures. However, Sacramento LAFCo cannot guarantee the success of these mitigation measures for offsetting project emissions. Confirmation of compliance with the mitigation measures would require monitoring of the GHG reduction actions as development occurs. LAFCo would not be able to verify or enforce these measures after annexation. The City of Elk Grove is also in the process of updating its CAP and may alter the mitigation approach for the development of this project (after annexation) to match the updated CAP GHG reduction measures. Because of this uncertainty in achieving no net increase in GHG emissions, the project's contribution to this significant cumulative impact would be cumulatively considerable and significant and unavoidable.

Impact 3.7-2: Impacts of climate change on the project.

The project is not located within an area projected to experience a substantial increase in wildland fire risk or flooding as a result of climate changes in the future. Anticipated changes in future climate patterns are not anticipated to have any substantial adverse effects on the project. Therefore, the impacts of climate change on the project would be **less than significant.**

As discussed previously in this section, there is substantial evidence that human-induced increases in GHG concentrations in the atmosphere have led to increased global average temperatures (climate change)

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through the intensification of the greenhouse effect, and associated changes in local, regional, and global average climatic conditions.

Although there is a strong scientific consensus that global climate change is occurring and influenced by human activity, there is less certainty as to the timing, severity, and potential consequences of the climate phenomena, particularly at specific locations. Scientists have identified several ways in which global climate change could alter the physical environment in California (CNRA 2012). These include:

- changes in the timing and amount of runoff;
- reduced water supply;
- deterioration of water quality; and
- elevated sea level.

Several of these changes may translate into a variety of issues and concerns that may affect the project, including:

- increased frequency and intensity of wildfire as a result of changing precipitation patterns and temperatures;

Annual average temperatures in Sacramento County are projected to increase steadily. According to Cal-Adapt, Sacramento County is projected to experience a temperature increase of 1.5°F by 2050 and 3.5°F by 2090 under the low-emissions scenario, and an increase of 4.1°F by 2050 and 6.2°F by 2090 under the high-emissions scenario, as compared to the 1961 to 1990 baseline period (Cal-Adapt 2017a).

Increased temperature is expected to lead to secondary climate change impacts, including increases in the frequency, intensity, and duration of extreme heat days and multi-day heat waves/events in California. Cal-Adapt defines the extreme heat day threshold for Sacramento County as 100°F or higher. An extreme heat day is defined as a day between April through October where the maximum temperature exceeds the 98th historical percentile of maximum temperature based on daily temperature data from 1961 to 1990 (i.e., 100°F). From the data collected from 1961 to 1990, Sacramento County has a historical average of four extreme heat days a year. Sacramento County is already experiencing an increase in the frequency of extreme heat days per year with a current average of eight to nine extreme heat days per year from 2010 to 2016, with 18 extreme heat days in 2015 (Cal-Adapt 2017a).

Cal-Adapt data shows a range of projected increases in the number of extreme heat days by 2099, all of which are at least four times the historical (1961-1990) average in both emissions scenarios. The projected annual average number of extreme heat days under the low-emissions scenario is approximately 15 days per year in 2050 and between 19 to 45 days per year at the end of the century. Under the high-emissions scenario, Cal-Adapt predicts that Sacramento County will experience 25 to 31 extreme heat days per year in 2050 and 50 to 67 days per year by 2099 (Cal-Adapt 2017a).

Any future project within the SOIA area would be required to meet the 2016 Title 24 building energy standards (or current Title 24 building energy standards), which require well-insulated buildings and high-efficiency heating, ventilation, and air conditioning units.

Fire risk data for the State have been projected for the years 2020, 2050, and 2085. The data models the areas that are projected to experience increases in area burned compared to the expected burn rate without climate change. Based on these maps, the SOIA area is not located within an area projected to experience greater than expected wildland fire risks (Cal-Adapt 2017b). However, wildfires within the Sierra Nevada and

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areas outside the County affect air quality in Sacramento County. Wildland fires produce substantial emissions of particulate matter (e.g., smoke, soot), which may cause health effects including restricted breathing and aggravation of existing respiratory and cardiovascular diseases in the short-term, and alterations to immune systems and cancer from chronic exposure. Particulate matter from wildfire dissipates throughout the Central Valley degrading air quality conditions for short or extended periods of time. The duration of wildfire-related particulate matter in the County's air is linked to wind patterns originating from the Sacramento-San Joaquin Delta. Colloquially known as the "Delta Breeze," oceanic winds are channeled through the Delta into Sacramento County, and help disperse air pollutants north of the Sacramento Valley; however, during about half of the days from July to September, a phenomenon called the "Schultz Eddy" prevents this from occurring. These natural phenomena affect the severity of wildfire-related air pollution in Sacramento County (SMAQMD 2016). For example, during the summers of 2013 through 2015, several wildfire incidents occurred in Northern California that increased levels of particulate matter within Sacramento County.

Fire planning and preparation activities in Elk Grove are primarily undertaken by the Cosumnes Community Services District Fire Department (CCSDFD). CCSDFD's Fire Prevention Bureau provides community prevention services related to fire, life, occupational hazards, property damage, and environmental safety.

The City of Elk Grove General Plan includes the following policies in the Safety Element related to addressing wildfires and mitigating their risks (City of Elk Grove 2016):

- SA-37. Cooperate with the Cosumnes Community Services District (CCSD) Fire Department to reduce fire hazards, assist in fire suppression, and promote fire safety in Elk Grove.
 - ▼ SA-37-Action 1. Review new development for adequate water supply and pressure, fire hydrants, and access to structures by firefighting equipment and personnel.
 - ▼ SA-37-Action 2. Review projects for compliance with the California Fire Code and the life safety provisions of the California Building Code as part of the building permit process.
 - SA-37-Action 4. Require, where appropriate, on-site fire suppression systems for all new commercial and industrial development to reduce the dependence on fire department equipment and personnel.
 - ► SA-37-Action 6. The City shall require the installation of earthquake-triggered automatic gas shut-off sensors in high-occupancy facilities and in industrial and commercial structures.
 - SA-37-Action 7. Work with the CCSD Fire Department to enforce all existing codes regarding fire protection, including building inspection and vegetation management.

Through CCSDFD's Fire Prevention Bureau fire protection services and the policies listed in the City's General Plan, the project is not considered to be located in an area with a substantial risk to wildland fires or hazards as programs and policies are in place to address such risks.

With regards to increases in flood risk, the project is not located in a coastal zone where an increased threat of flooding may occur because of sea level rise (Cal-Adapt 2017c). However, Sacramento County is vulnerable to riverine flooding. Riverine flooding generally occurs as result of prolonged rainfall, or rainfall combined with snowmelt and/or already saturated soils from previous rain events. Riverine flooding can occur anytime from November through April, and is largely caused by heavy and continued rains. Intense storms may overwhelm local waterways, as well as threaten the integrity of flood control structures.

Sacramento County is considered highly likely to experience catastrophic flooding as a result of riverine flooding. Because of the project area's relatively flat, generally low-lying terrain and numerous waterways, historically, flooding has constituted the most frequent natural hazard experienced by Sacramento County. While it is uncertain precisely how and to what extent climate change will affect flooding events in Sacramento County, it is reasonable to expect that an increase in flooding could have serious ramifications,

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because the area is already considerably vulnerable. More rapid and earlier snowmelt, or increased potential for high-intensity storm events, compared to historical trends, could potentially place additional strain on the components of flood control systems (e.g., levees, dams), and increase the likelihood of flooding in Sacramento County. Refer to Section 3.8, "Hydrology, Drainage, and Water Quality" for more details about flood protection around the project.

Based on currently-available data, the project is not located within an area projected to experience a substantial increase in wildland fire risk or flooding as a result of climate changes in the future. Anticipated changes in future climate patterns are not anticipated to have any substantial effects on the project. This impact would be **less than significant.**

Mitigation Measures

No mitigation is required.

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3.8 HYDROLOGY, DRAINAGE, AND WATER QUALITY

This section describes the existing hydrologic and water quality setting for the project site, including climate, hydrology, groundwater, flooding, and water quality. Applicable regulations and policies regarding hydrology and water quality are discussed, and impacts that may result from project implementation are identified. Mitigation measures are recommended to reduce potential impacts, where appropriate. Water supply and its relationship with groundwater is addressed in Section 3.14, "Utilities."

A comment was received from the Central Valley Regional Water Quality Control Board in response to the notice of preparation. The information provided has been incorporated into the following analysis, as appropriate.

3.8.1 Environmental Setting

CLIMATE

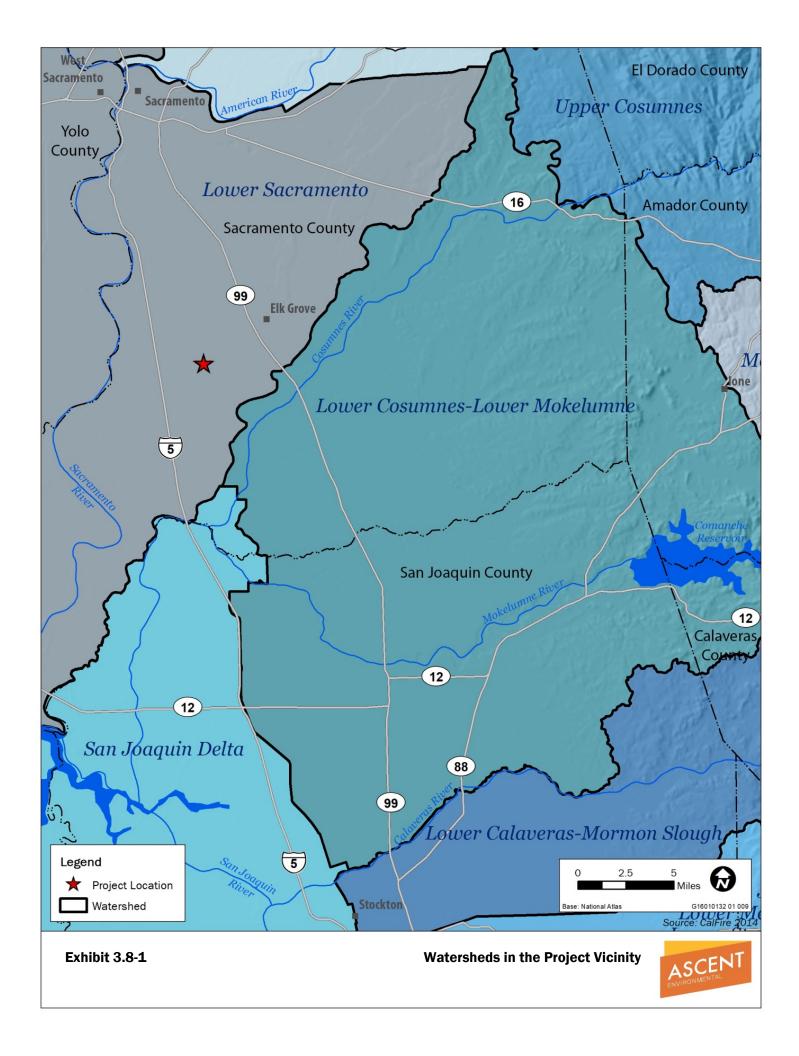
The climate in Sacramento County is Mediterranean, with cool wet winters and warm dry summers. The mean annual precipitation in the project vicinity for the period between 1941 and 2010, was approximately 19 inches. Most precipitation occurred from November through April. During the period of record, annual precipitation has varied from 6 inches (1976) to 33 inches (1983), with a one-day high of 3.8 inches on October 13, 1962 (Western Climate Center 2012).

HYDROLOGY

Sacramento County contains six major watersheds: the Lower Sacramento River, the North Fork American River, the South Fork American River, the San Joaquin Delta, the Lower Cosumnes-Lower Mokelumne Rivers, and the Upper Cosumnes River. The project site is located within the Lower Sacramento River Watershed, and drains into the San Joaquin Delta Watershed (Exhibit 3.8-1). The 384-mile Sacramento River is the largest river in California and carries approximately 31 percent of the total runoff water in the state (Sacramento County 2011). The Lower Sacramento River Watershed is located in the northwest portion of Sacramento County, and is the largest watershed in the county. Major tributaries within the Lower Sacramento River Watershed include Cache Creek, Putah Creek, and the Feather River.

The SOIA area (or "project site") lies within the City's Drainage Shed C, which covers nearly 7,900 acres in southern Sacramento County (Figure 2.0-4 in the City of Elk Grove Southeast Area Strategic Plan Draft EIR). The watershed generally slopes from east to west with an average slope of about 0.10 percent. The existing land use in the watershed is agricultural except for the Elk Grove Promenade site, which covers 525 acres in the upstream (eastern) portion of the watershed. Although the Promenade project stalled before completion, many of the site improvements were constructed, including roads, parking lots, buildings, and underground utilities including a storm drainage pipe system. The pipe system that collects runoff from the Promenade site delivers it to a detention basin that was constructed on the west side of the approved but unbuilt Sterling Meadows project. Downstream of this existing detention basin, runoff is conveyed through an agricultural drainage channel until it reaches Bruceville Road. At that point, the channel exits the City boundary and continues west for approximately 22,000 feet where it crosses under Interstate 5 and enters the Stone Lakes National Wildlife Refuge (City of Elk Grove 2014: 5.9-1).

Hydrology in the SOIA area is dominated by irrigation runoff and seasonal stormwater runoff from surrounding residential developments and direct precipitation. All natural drainage courses within the project site have been altered because of agricultural development. Runoff within the site occurs primarily within a network of agricultural ditches. While the project site contains mostly agricultural and developed land, a review of aerial imagery and a site visit on April 10, 2017 suggest that the northwest portion of the project site may contain wetland habitat.



GROUNDWATER

The Sacramento Valley Groundwater Basin is the major groundwater basin in the Sacramento River hydrologic region. There are 18 groundwater subbasins. The project site is within Groundwater Basin 5-21.65, the South American subbasin. The South American subbasin is bounded by the American River on the north, the Cosumnes and Mokelumne Rivers on the south, and the Sacramento River on the west. The aquifer system is recharged by streams and rivers within the subbasin; primarily the American, Cosumnes, and Sacramento Rivers. The South American Subbasin is not considered to be in overdraft according to State of California Department of Water Resources (DWR) Bulletin 118 (DWR 2016). Groundwater from the South American subbasin is used conjunctively to supply water to the Sacramento County Water Agency's (SCWA's) Zone 40, which includes the SOIA area.

SCWA is a party to the Water Forum Agreement, which established co-equal objectives of 1) providing a reliable and safe water supply for the region's economic health and planned development through the year 2030; and 2) preserving the fishery, wildlife, recreational, and aesthetic values of the lower American River. Additional diversions of surface water, increased conjunctive use of surface water and groundwater, expanded water demand management programs, and recycled water were identified to meet the first objective. Modifications to American River flow patterns were proposed to improve in-stream fish habitat. Based on the hydraulic boundaries of river sources, the Water Forum defined three groundwater subbasins. Zone 40 lies entirely within the Central Basin which is a component of the South American subbasin (SCWA 2005).

Groundwater in the Central Basin is generally classified as occurring in a shallow or upper unconfined aquifer zone (Laguna or Modesto Formation) and in an underlying deeper semi-confined aquifer zone (Mehrten Formation). These formations are typically composed of lenses of inter-bedded sand, silt, and clay, interlaced with coarse-grained stream channel deposits. The shallow aquifer extends approximately 200 to 300 feet below the ground surface. The deep aquifer is separated from the shallow aquifer by a discontinuous clay layer that serves as a semi-confining layer for the deep aquifer. The base of the potable water portion of the deep aquifer averages approximately 1,400 feet below the ground surface. Groundwater used in the Central Basin is supplied from both the shallow and deeper aquifer systems (SCWA 2016).

Groundwater elevations generally declined consistently from the 1950s and 1960s until 1995. From 1995 to 2003, groundwater levels have increased partially because of the increased use of surface water in the Central Basin by SCWA and other water agencies, and the fallowing of previously irrigated agricultural lands transitioning into new urban development areas in accordance with the Sacramento County and City of Elk Grove General Plans.

Historic groundwater extraction from the Central Basin in the past has resulted in a general lowering of groundwater elevations near the center of the basin away from the sources of recharge. These depressions historically coalesced into a single cone of depression centered near Elk Grove. Historic groundwater pumping in the region has also resulted in groundwater depressions on either side of the Cosumnes River, which has hydraulically separated the river from the groundwater basin near the City of Elk Grove.

In general, the rest of the Central Basin does not show any distinctive patterns with respect to regional groundwater elevations, and the water table tends to mimic the local topography. Groundwater levels in the Central Basin are anticipated to stabilize as SCWA's conjunctive use program is fully implemented (SCWA 2016).

The Sacramento Central Groundwater Authority's South American Subbasin Alternative Submittal (Sacramento Central Groundwater Authority 2016) evaluated the change in groundwater storage in the Central Basin from 2005 to 2015. The total annual average change in storage over the 2005 to 2015 was estimated to be approximately 4,000 acre-feet per year. This is representative of a basin in equilibrium where natural recharge from deep percolation, hydraulically connected rivers, and boundary subsurface inflows are keeping up with active pumping and changes in hydrology. Over the 10-year period, the basin continues to recover at its deepest points and management is now focused on working with affected agencies to keep water from leaving the basin, and improving basin conditions where and when possible, in

accordance with the Central Sacramento County Groundwater Management Plan (Central Sacramento County GMP) (Sacramento Central Groundwater Authority 2016).

Groundwater storage in the recharge area underlying Elk Grove and surrounding areas is continuing to increase from recharge from conjunctive use and surface water use expansion, increased use of recycled water, and water conservation. The increase in storage in this portion of the subbasin has filled the long-term cone of depression and has eroded the ridge of higher groundwater separating it from the Cosumnes Subbasin (Sacramento Central Groundwater Authority 2016). The Water Forum Agreement set the long-term average annual extraction of groundwater (i.e., sustainable yield) from the Central Basin at 273,000 acrefeet per year. Groundwater extraction has been within the Water Forum Agreement's sustainable yield from 2005 (252,984 afy) to 2015 (217,111 afy). The least amount of groundwater extraction over this period occurred in 2011 (202,324 afy) and the most occurred in 2008 (260,200 acre-feet per year). The average groundwater extraction during the drought years (2011–2015) was approximately 219,000 acre-feet per year (Sacramento Central Groundwater Authority 2016).

Groundwater in the upper aquifer system is of higher quality than that found in the lower aquifer system, although there are some occurrences of arsenic and nitrate. The lower aquifer system contains higher concentrations of iron and manganese, and total dissolved solids. Water from the upper aquifer generally does not require treatment other than disinfection for public drinking water systems, unless high arsenic or nitrate values are encountered. Wells that pump from the lower aquifer often require treatment for iron and manganese (SCWA 2016).

FLOODING

The 100-year flood refers to the flood resulting from a storm event that has a probability of occurring once every 100 years, or a 1 percent chance of occurring in any given year. Areas mapped in the 100-year floodplain area are subject to inundation during a 100-year storm event. The project site lies outside of the designated 100-year floodplain. In addition, according to the Federal Emergency Management Agency (FEMA) flood insurance rate map (FIRM), the project site is not located within the 100-year floodplain and the nearest area within the 100-year floodplain is located near Stone Lakes Basin, approximately 0.3 miles northwest of the SOIA area.

However, a portion of the SOIA area is within the 200-year floodplain identified by the City of Elk Grove (as shown in Exhibit 3.8-2). This map identifies areas where higher standards of development and flood protection may be required before issuance of building permits. The City's 200-year floodplain boundary was developed using data provided by DWR, supplemented by floodplain studies commissioned by the City covering local creek systems that have watershed areas of at least 10 square miles. This includes the Laguna Creek and Deer Creek/Cosumnes River watersheds, as well as the Sacramento River watershed, which affects local creek systems.

Dam Failure

Dam failure is caused by various impacts to the structure, including earthquake, erosion, structural failure, or foundation leakage. Failure of Folsom Dam (including the earth-filled dikes) could affect the City of Elk Grove and the surrounding unincorporated area. However, the SOIA area is not within the inundation area for Folsom Dam (Sacramento County 2016). Further, no flood control dams are located along the Cosumnes River.

WATER QUALITY

Water quality refers to the chemical and physical properties of water, which affects the uses and users of that water. Surface water quality within the Lower Sacramento River Watershed is generally good, and no waterbodies within the watershed are included on the state's list of "impaired water bodies" under Section 303(d) of the federal Clean Water Act (CWA). The land surrounding the project site includes agricultural land which may contain residual agricultural chemicals (e.g., pesticides, herbicides) that could be present within runoff near the project site (City of Elk Grove 2016).

STORMWATER

The Sacramento County Department of Water Resources provides stormwater drainage to various service areas in unincorporated Sacramento County and the cities of Citrus Heights, Elk Grove, and Rancho Cordova. The Drainage Division reviews new development improvement plans for adherence to drainage requirements, and provides hydraulic and hydrologic study of watersheds for new development and planning purposes. The project site is not currently in Sacramento County Department of Water Resources' stormwater utility service area.

The City of Elk Grove provides local stormwater drainage services to development within the City's boundaries. The areas to the north, east, and west of the project site are provided drainage services by the City of Elk Grove. The Water Resources Division reviews drainage studies and plans for new development to ensure that new storm drainage facilities meet the goals of the City of Elk Grove's Storm Drain Master Plan to accommodate the stormwater runoff generated from new structures and roads and safely convey stormwater to the Sacramento and Cosumnes Rivers (LAFCo 2016: 4.0-15 to 4.0-16). Monthly stormwater utility fees are collected to maintain publicly-owned water drainage facilities, manage flood control, and execute the Stormwater Quality Program. Storm drainage within the City is conveyed through a storm drainage and flood control collection system consisting of approximately 400 miles of underground pipes and 60 miles of natural and constructed channels.

3.8.2 Regulatory Framework

FEDERAL

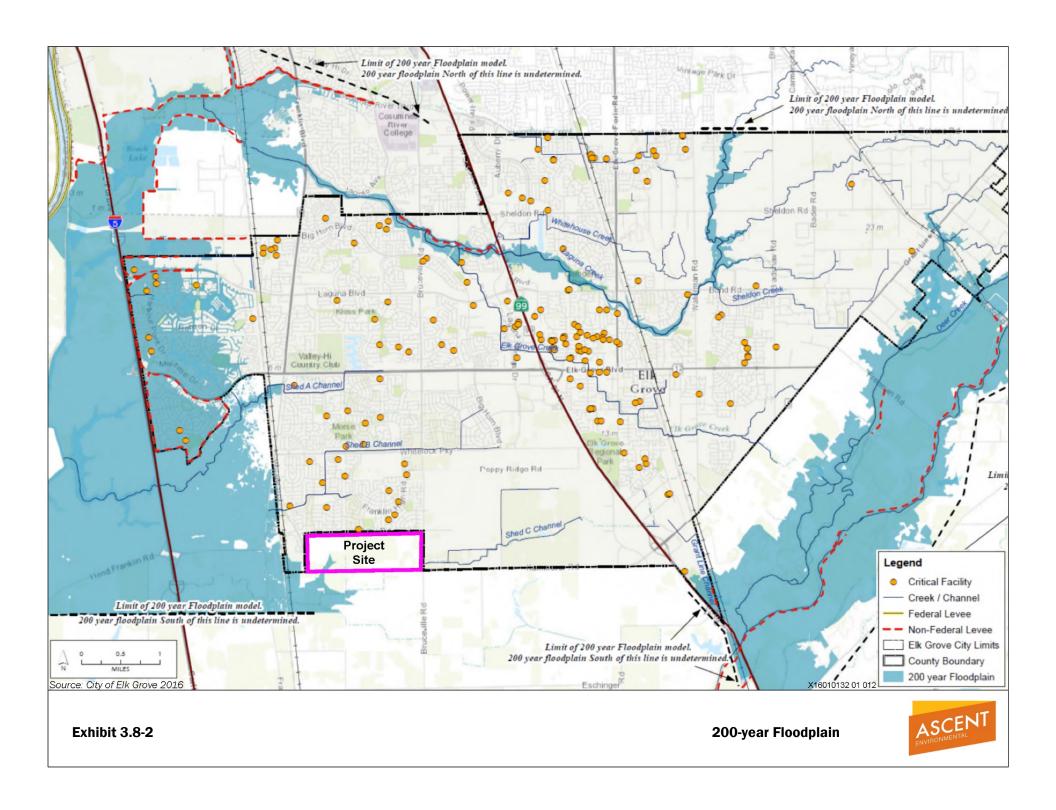
Federal Emergency Management Agency

In 1968, Congress created the National Flood Insurance Program in response to the rising cost of taxpayer funded disaster relief for flood victims and the increasing amount of damage caused by floods. FEMA administers the National Flood Insurance Program to provide subsidized flood insurance to communities that comply with FEMA regulations to limit development in floodplains. FEMA also issues flood insurance rate maps that identify which land areas are subject to flooding. These maps provide flood information and identify flood hazard zones in the community. FEMA has established a minimum level of flood protection for new development as the 1-in-100 Annual Exceedance Probability (i.e., 100-year flood event).

Clean Water Act

The U.S. Environmental Protection Agency (EPA) is the lead federal agency responsible for water quality management. The Clean Water Act (CWA) is the primary federal law that governs and authorizes water quality control activities by EPA, as well as the states.

Section 402 of the CWA establishes the NPDES permit program to regulate the discharge of pollutants from point sources. The CWA defines point sources of water pollutants as "any discernible, confined, and discrete conveyance" that discharges or may discharge pollutants. These are sources from which wastewater is transmitted in some type of conveyance (e.g., pipe or channel) to a waterbody, and are classified as municipal or industrial. Municipal point sources consist primarily of domestic treated sewage and processed water, including municipal sewage treatment plant outfalls and stormwater conveyance system outfalls. These outfalls contain harmful substances that are emitted directly into waters of the U.S. Without a permit, the discharge of pollutants from point sources into navigable waters of the U.S. is prohibited. NPDES permits require regular water quality monitoring. In California, the NPDES permit program is administered by the State Water Resources Control Board (SWRCB).



Provision C.3

On May 17, 1996, U.S. Environmental Protection Agency (EPA) published an Interpretive Policy Memorandum on Reapplication Requirements for Municipal Separate Storm Sewer Systems (MS4s), which provided guidance on permit application requirements for regulated MS4s. MS4 permits include requirements for post-construction control of stormwater runoff in what is known as Provision C.3. The goal of Provision C.3 is for the Permittees to use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address both soluble and insoluble stormwater runoff pollutant discharges and prevent increases in runoff flows from new development and redevelopment projects. This goal is to be accomplished primarily through the implementation of low impact development (LID) techniques.

Federal Antidegradation Policy

The federal antidegradation policy, established in 1968, is designed to protect existing uses and water quality and national water resources. The federal policy directs states to adopt a statewide policy that includes the following primary provisions:

- existing in-stream uses and the water quality necessary to protect those uses shall be maintained and protected;
- where existing water quality is better than necessary to support fishing and swimming conditions, that quality shall be maintained and protected unless the state finds that allowing lower water quality is necessary for important local economic or social development; and
- where high-quality waters constitute an outstanding national resource, such as waters of national and state parks, wildlife refuges, and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

Water Quality Criteria/Standards

Pursuant to federal law, EPA has published water quality regulations under Title 40 of the Code of Federal Regulations (CFR). Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the act, water quality standards consist of designated beneficial uses of the water body in question and criteria that protect the designated uses. Section 304(a) requires EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. As described in the discussion of state regulations below, SWRCB and its nine regional water quality control boards (RWQCBs) have designated authority in California to identify beneficial uses and adopt applicable water quality objectives.

National Toxics Rule and California Toxics Rule

In 1992, EPA issued the National Toxics Rule (NTR) (40 CFR 131.36) under the CWA to establish numeric criteria for priority toxic pollutants in 14 states and jurisdictions, including California, to protect human health and aquatic life. The NTR established water quality standards for 42 pollutants for which water quality criteria exist under CWA Section 304(a) but for which the respective states had not adopted adequate numeric criteria. EPA issued the California Toxics Rule (CTR) in May 2000. The CTR establishes numeric water quality criteria for 130 priority pollutants for which EPA has issued Section 304(a) numeric criteria that were not included in the NTR.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program was established in the CWA to regulate municipal and industrial discharges to surface waters of the United States. NPDES permit regulations have been established for broad categories of discharges including point source municipal waste discharges and nonpoint source stormwater runoff. Each NPDES permit identifies limits on allowable

concentrations and mass emissions of pollutants contained in the discharge. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits. "Nonpoint source" pollution originates over a wide area rather than from a definable point. Nonpoint source pollution often enters receiving water in the form of surface runoff and is not conveyed by way of pipelines or discrete conveyances. Two types of nonpoint source discharges are controlled by the NPDES program: discharges caused by general construction activities and the general quality of stormwater in municipal stormwater systems. The goal of the NPDES nonpoint source regulations is to improve the quality of stormwater discharged to receiving waters to the maximum extent practicable. The RWQCBs in California are responsible for implementing the NPDES permit system (see the discussion of state regulations below).

Section 303(d) Impaired Waters List

Under Section 303(d) of the CWA, states are required to develop lists of water bodies that do not attain water quality objectives after implementation of required levels of treatment by point source dischargers (municipalities and industries). Section 303(d) requires that the state develop a total maximum daily load (TMDL) for each of the listed pollutants. The TMDL is the amount of the pollutant that the water body can receive and still be in compliance with water quality objectives. The TMDL is also a plan to reduce loading of a specific pollutant from various sources to achieve compliance with water quality objectives. EPA must either approve a TMDL prepared by the state or disapprove the state's TMDL and issue its own. NPDES permit limits for listed pollutants must be consistent with the waste load allocation prescribed in the TMDL. After implementation of the TMDL, it is anticipated that the problems that led to placement of a given pollutant on the Section 303(d) list would be remediated.

There are no 303(d) listed water features on or adjacent to the SOIA area.

STATE

State Water Resources Control Board

Created by the State Legislature in 1967, SWRCB protects water quality by setting statewide policy, coordinating and supporting RWQCBs efforts, and reviewing petitions that contest RWQCBs actions. There are nine RWQCBs that exercise rulemaking and regulatory activities by basins. The project site is located within the Central Valley RWQCB Region 5S.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act) is California's statutory authority for the protection of water quality. Under the Porter-Cologne Act (California Water Code Section 13000) the SWRCB, and the RWQCBs, are responsible for administering federal and state water quality regulation and permitting duties. The act sets forth the obligations of the SWRCB and RWQCBs under the CWA to adopt and periodically update water quality control plans, or basin plans. Basin plans are plans in which beneficial uses, water quality objectives, and implementation programs are established for each of the nine regions in California. The Porter-Cologne Act also requires waste dischargers to notify the RWQCBs of such activities by filing Reports of Waste Discharge and authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements, NPDES permits, Section 401 water quality certifications, or other approvals.

National Pollutant Discharge Elimination System Permits

SWRCB has required specific NPDES permits for a variety of activities that have potential to discharge pollutants to waters of the state and adversely affect water quality. To receive an NPDES permit a Notice of Intent to discharge must be submitted to SWRCB and design and operational best management practices (BMPs) must be implemented to reduce the level of contaminated runoff. BMPs can include the development and implementation of regulatory measures (local authority of drainage facility design) various practices, including educational measures (workshops informing public of what impacts result when household chemicals are dumped into storm drains), regulatory measures (local authority of drainage facility design), public policy measures (label storm drain inlets as to impacts of dumping on receiving waters), and

structural measures (filter strips, grass swales, and retention basins). NPDES permits also have inspection, monitoring, and reporting requirements.

Municipal Stormwater NPDES Permit

The City of Elk Grove has jurisdiction over aspects of stormwater management in the City. The City is a joint participant with Sacramento County's NPDES permit. The permit allows the City to discharge urban runoff from Municipal Separate Storm Sewer Systems (MS4s) in its municipal jurisdiction. 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;
- develop and implement a stormwater pollution prevention plan (SWPPP); and
- perform inspections of stormwater control structures and pollution prevention measures.

Construction General Permit

Projects that would disturb 1 or more acres of soil, or would disturb less than 1 acre of soil but are part of a larger common plan of development the in total disturbs 1 or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit), Construction General Permit Order No. 2009-009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, and ground disturbance. The Construction General Permit authorizes the discharge of stormwater to surface waters from construction activities. It prohibits the discharge of materials other than stormwater and authorized non-stormwater discharges and all discharges that contain a hazardous substance in excess of reportable quantities established in Title 40, Sections 117.3 or 302.4 of the CFR, unless a separate NPDES permit has been issued to regulate those discharges.

The Construction General Permit requires that all developers of land where construction activities will occur over more than 1 acre do the following:

- complete a Risk Assessment to determine pollution prevention requirements pursuant to the three Risk Levels established in the General Permit,
- eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the Nation,
- develop and implement a stormwater pollution prevention plan (SWPPP), which specifies BMPs that will reduce pollution in stormwater discharges to the Best Available Technology Economically Achievable/ Best Conventional Pollutant Control Technology standards, and
- perform inspections and maintenance of all BMPs.

Typical BMPs contained in SWPPPs are designed to minimize erosion during construction, stabilize construction areas, control sediment, control pollutants from construction materials, and address post construction runoff quantity (volume) and quality (treatment). The SWPPP must also include a discussion of the program to inspect and maintain all BMPs.

State Nondegradation Policy

In 1968, as required under the federal antidegradation policy described previously, the SWRCB adopted a nondegradation policy aimed at maintaining high quality for waters in California. The nondegradation policy states that the disposal of wastes into state waters shall be regulated to achieve the highest water quality consistent with maximum benefit to the people of the state and to promote the peace, health, safety, and welfare of the people of the state. The policy provides as follows:

a) Where the existing quality of water is better than required under existing water quality control plans, such quality would be maintained until it has been demonstrated that any change would be consistent

- with maximum benefit to the people of the state and would not unreasonably affect present and anticipated beneficial uses of such water.
- b) Any activity which produces waste or increases the volume or concentration of waste and which discharges to existing high-quality waters would be required to meet waste discharge requirements.

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements permitting processes.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA) was enacted in September of 2014. Pursuant to SGMA, sustainable groundwater management is the management and use of groundwater in a manner that can be maintained during a 50-year planning and implementation horizon without causing undesirable results. Local implementation of the SGMA is not subject to LAFCo purview. The SGMA establishes a new structure for locally managing California's groundwater and includes the following key elements:

- □ provides for the establishment of a Groundwater Sustainability Agency (GSA) by one or more local agencies overlying a designated groundwater basin or subbasin, as established by DWR Bulletin 118-03;
- requires all groundwater basins found to be of "high" or "medium" priority to prepare Groundwater Sustainability Plans (GSP).;
- provides for the proposed revisions, by local agencies, to the boundaries of a DWR Bulletin 118 basin, including the establishment of new subbasins:
- provides authority for DWR to adopt regulations to evaluate GSPs, and review the GSPs for compliance every 5 years;
- requires DWR to establish BMPs and technical measures for GSAs to develop and implement GSPs; and
- provides regulatory authorities for the SWRCB for developing and implementing interim groundwater monitoring programs under certain circumstances (such as lack of compliance with development of GSPs by GSAs).

Central Valley Flood Protection Board Floodplain Regulations

In 2007, the governor signed Senate Bill No. 5 (Stats. 2008, ch. 302; SB 5), Assembly Bill No. 5 (Stats. 2007, ch. 366; AB 5), AB 70 (Stats. 2007, ch. 367), AB 162 (Stats. 2007, ch. 369), and AB 156 - all of which deal with flood management in the Central Valley.

AB 5 and SB 5 renamed the Department of Water Resources Reclamation Board as the Central Valley Flood Protection Board (CVFPB), and expanded its size, duties, and powers, including a requirement that the CVFPB prepare and adopt a Central Valley Flood Protection Plan by 2012. In addition, the program required that cities and counties in the Sacramento-San Joaquin Valley amend their general plans and zoning ordinances to be consistent with a newly adopted flood plan within 36 months of flood plan adoption, and established other flood protection regulations for local land-use decisions consistent with the Central Valley Flood Protection Plan. Further, SB 5 established higher standards of flood protection (generally 200-year protection) for urban and urbanizing areas (defined as areas of at least 10,000 residents, or which will grow to 10,000 by the year 2022). Other non-urban areas remain subject to the pre-existing 100-year standard for protection.

AB 70 states that local governments could be held financially liable if they unreasonably approve new developments that are susceptible to flood damage. AB 162 requires local governments to consider flood risks in their general plans (after January 1, 2009), including:

- annually review areas covered by the general plan that are subject to flooding as identified by FEMA or the State Department of Water Resources;
- include flood hazards in the safety element of their general plan, with goals, policies, and objectives for the protection of the community;
- consider flood risk in evaluating the available land suitable for urban development if the flood protection infrastructure required for development would be impractical because of cost or other considerations.

As required by the flood management requirements in the Government Code, the City of Elk Grove has incorporated CVFPP measures into the Safety Element of its general plan through the inclusion of Urban Level Flood Protection mapping, as well as through more extensive flood risk analysis. Related measures have been incorporated into Title 23 of the Municipal Code. The City applies more stringent development standards in identified areas when considering approval of future projects and developments.

Safe Drinking Water Act

As mandated by the Safe Drinking Water Act (Public Law 93-523), passed in 1974, EPA regulates contaminants of concern to domestic water supply. Such contaminants are defined as those that pose a public health threat or that alter the aesthetic acceptability of the water. These types of contaminants are regulated by EPA primary and secondary maximum contaminant levels (MCLs). MCLs and the process for setting these standards are reviewed triennially. Amendments to the Safe Drinking Water Act enacted in 1986 established an accelerated schedule for setting drinking water MCLs. EPA has delegated to the DHS the responsibility for California's drinking water program. DHS is accountable to EPA for program implementation and for adoption of standards and regulations that are at least as stringent as those developed by EPA. Title 22 of the California Administrative Code (Article 16, Section 64449) defines secondary drinking water standards, which are established primarily for reasons of consumer acceptance (i.e., taste) rather than for health issues.

LOCAL

The project site lies within the jurisdictional boundaries of Sacramento County; therefore, the County's policies, as well as the Sacramento LAFCo's polices, would apply. Furthermore, if the SOIA is approved, it may lead to annexation to the City of Elk Grove. Thus, applicable policies of the City of Elk Grove's General Plan are described below.

Central Sacramento County Groundwater Management Plan

The Central Sacramento County Groundwater Management Plan (CSCGMP) represents an established framework for maintaining sustainable groundwater resources for the various users overlying the basin in Sacramento County between the American and Cosumnes Rivers (SCGA 2006). It includes specific goals, objectives, and an action plan to provide a "road map" for the governance body as the steps necessary to manage the basin are taken in coordination with various stakeholders. The CSCGMP is intended to be adaptive to changing conditions within the groundwater basin and is updated and refined as needed to reflect progress made in achieving the CSCGMP's objectives. A goal of the CSCGMP is to ensure a viable groundwater resource for beneficial uses, including water for purveyors, agricultural, agricultural residential, industrial, and municipal supplies while maintaining and enhancing flows in the Cosumnes River. It is used as a tool to help ensure a long-term reliable water supply for rural domestic, agricultural, urban, business/industrial, environmental, and development uses in the region. The California Water Code requires that a groundwater management plan contain numerous technical provisions, which are briefly summarized as follows:

- ▲ An inventory of water supplies and a description of water uses within a given region. This information is summarized in a water balance showing overall water demands and available water supplies.
- Basin Management Objectives that are designed to protect and enhance the groundwater basin.
- ▲ Monitoring and management programs that ensure the Basin Management Objectives are being met.
- Description of stakeholder involvement and public information plan and programs for the groundwater basin.

The Water Forum estimated that the long-term average annual sustainable yield of the Central Basin was 273,000 afy, while extractions were estimated at 250,000 afy. The CSCGMP identifies provisions to maintain groundwater pumping levels within the sustainable yield, including reducing demand, conjunctive use, and aquifer storage and recovery projects.

Sacramento Central Groundwater Authority Alternative Submittal

SGMA established a process for local agencies (LAFCo is not subject to this process) to develop an Alternative submittal in lieu of a groundwater sustainability plan, if the Alternative satisfies the objectives of SGMA via a similar level of groundwater management through the agencies' existing groundwater management plan, and/or by providing sufficient factual evidence demonstrating the subbasin has operated within its locally established sustainable yield for at least 10 years. According to the groundwater sustainability plan regulations, Alternatives will be evaluated by the same criteria that will be used to assess groundwater sustainability plans.

The Sacramento Central Groundwater Authority prepared and submitted a final draft of the Alternative Submittal to DWR on December 14, 2016. The Alternative Submittal provides a similar level of detail as required in a groundwater sustainability plan and shows groundwater management would continue to occur consistent with the existing Central Sacramento County GMP. The Alternative Submittal demonstrates subbasin operations from 2005 to 2015 did not exceed the sustainable yield conditions set forth by the Water Forum Agreement of 273,000 afy. If approved, the 273,000 afy sustainable yield set forth by the Water Forum Agreement will be incorporated into the Alternative Submittal, and will be the base year for measuring the long-term sustainability of groundwater in the subbasin. DWR's timetable for approval and adoption of the Alternative submittal is not known at this time.

Sacramento LAFCO Policies, Standards, and Procedures

The following Sacramento LAFCo policies, standards, and procedures relate to hydrology and water quality.

Chapter IV, General Standard

Section F. Application of the California Environmental Quality Act to Changes of Organization or Reorganization and Spheres of Influence.

- Standard 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 one or more of the following situations exists:
 - ✓ If buildout of the project may result in the capacity of any public service or facility being exceeded or substantially affected. For the purposes of this provision, public facilities or services include, but are not limited to: sewage disposal, water service, flood control facilities, drainage facilities, law enforcement, fire protection, school, parks, libraries, gas and electric service, and solid waste disposal. A public service or facility shall be considered "substantially affected" if the additional demand generated by the project would result in the facility or service exceeding 110 percent of its design capacity, or 120 percent of the available capacity.
 - If the project has substantial growth-inducing potential because it would result in:

- 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;
- providing any other public service or facility to a substantial area which could not grow without such service; and
- encouraging or fostering growth in a substantial area.

Sacramento County General Plan

The following policies from the Conservation Element and Safety Element of the Sacramento County General Plan (Sacramento County 2011) are directly related to hydrology and water quality resource management issues and are applicable to the project:

Conservation Element

- Policy CO-24. Comply with the Sacramento Areawide NPDES Municipal Permit.
- ▲ Policy C0-26. Protect areas susceptible to erosion, natural water bodies, and natural drainage systems.
- Policy CO-27. Support surface water quality monitoring programs that identify and address causes of water quality degradation.
- Policy CO-28. Comply with other water quality regulations and NPDES permits as they apply to County projects or activities, such as the State's Construction General Permit and Aquatic Pesticides Permit.
- Policy CO-30. Require development projects to comply with the County's stormwater development/design standards, including hydromodification management and low impact development standards, established pursuant to the NPDES Municipal Permit.

Safety Element

- Policy SA-7. In accordance with the County Floodplain Management Ordinance, the County shall locate, when feasible, new essential public facilities outside of flood hazard zones including hospitals and health care facilities, emergency shelters, fire stations, emergency command centers, and emergency communications facilities; or identify construction methods or other methods to minimize damage if these facilities are located in flood hazard zones.
- Policy SA-8. Maintain the structural and operational integrity of essential public facilities during flooding.
- Policy SA-13. Where new upstream development in Sacramento County will increase or potentially impact runoff onto parcels downstream in a neighboring jurisdiction, such as the City of Sacramento, Sacramento County will coordinate with the appropriate neighboring jurisdiction to mitigate such impacts.

City of Elk Grove General Plan

The following policies from the City of Elk Grove General Plan (City of Elk Grove 2016) are directly or indirectly related to hydrology, water quality, or flooding, and are applicable to the project:

Conservation and Air Quality Element

- Policy CAQ-1: Reduce the amount of water used by residential and non-residential uses by encouraging water conservation.
- 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.
- 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 on-site 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-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-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.

Safety Element

- 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 locate, and encourage other agencies to locate, new essential government service facilities and essential health care facilities outside of 100- year and 200-year flood hazard zones, except in cases where such locations would compromise facility functioning.
- Policy SA-19: The City will not enter into a development agreement, approve a building permit or entitlement, or approve a tentative or parcel map for a project located within an urban level of flood protection area unless it meets one or more established flood protection findings.
- ▶ Policy SA-25: 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 hazard management, drainage, or wetland maintenance.
- Policy SA-28: 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.

Public Facility Element

■ 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.

City of Elk Grove Storm Drainage Master Plan

The City of Elk Grove adopted a comprehensive Storm Drainage Master Plan to provide a variety of drainage concepts for upgrading the existing storm drainage and flood control collection system. The plan identifies and analyzes the existing drainage deficiencies throughout the City, provides a range of drainage concepts for the construction of future facilities required to serve the City at buildout of the General Plan, and establishes criteria for selecting and prioritizing projects.

City of Elk Grove Municipal Code Chapter 15.12

Elk Grove Municipal Code Chapter 15.12 establishes the authority of the City to conduct inspections and enforcement related to control of illegal and industrial discharges to the City storm drainage system and local receiving waters.

City of Elk Grove Municipal Code Chapter 16.44

Elk Grove Municipal Code Chapter 16.44 establishes administrative procedures, standards for review and implementation, and enforcement procedures for controlling erosion, sedimentation, other pollutant runoff, and the disruption of existing drainage and related environmental damage. This chapter requires that prior to grading activities, a detailed set of plans be provided that include measures to minimize erosion, sediment, and dust created by improvement activities.

3.8.3 Environmental Impacts and Mitigation Measures

Aspects of the project with the potential to affect hydrology and water quality include ground disturbance activities, such as grading, that could potentially result in temporary impacts to hydrological features within the project site, and residential development, that could potentially result in depletion of groundwater supplies. This section describes construction-related and permanent discharge-related effects on hydrology and water quality within the project area that would result from development of the SOIA area upon annexation to the City, and relates these effects to significance criteria to make determinations regarding environmental effects.

ANALYSIS METHODOLOGY

Evaluation of potential hydrologic and water quality impacts was based on a review of existing information from previously completed documents that address water resources in the project vicinity. The information obtained from these sources was reviewed and summarized to establish existing conditions and to identify potential environmental effects, based on the standards of significance presented in this chapter. In determining the level of significance, the analysis assumes that the proposed project would comply with relevant federal, state, and local ordinances and regulations.

Water quality impacts associated with temporary construction activities were assessed in a qualitative manner. The potential short-term, construction-related effects of grading and land disturbance were assessed based on the probability of seasonal exposure to rainfall and runoff, routes of exposure for contaminants to enter surface water, and the magnitude and duration of construction relative to the potential water quality parameters expected to be affected by the activity.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, a hydrology and water quality impact would be significant if implementation of the proposed project would do any of the following:

- 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;
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial on- or off-site erosion or siltation;

- 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 on- or off-site flooding:
- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- otherwise substantially degrade water quality;
- place housing within a 100-year or 200-year flood hazard area as mapped on a federal Flood Hazard Boundary or FIRM or other flood hazard delineation map;
- place within a 100-year or 200-year flood hazard area structures that would impede or redirect flood flows;
- 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; or

ISSUES NOT EVALUATED FURTHER

Because of the distance from the nearest open waterbody, the Pacific Ocean (more than 88 miles west of the project site), the proposed project would not be affected by inundation as a result of seiche or tsunami. In addition, the project site is relatively flat, with no steep areas that would have the potential to generate mudflows during operation. Therefore, these issues are not addressed further.

While no on-site drainage system has been identified for the SOIA area to support future development, it is assumed that drainage improvements would be limited to on-site improvements. The development of the SOIA area (including drainage improvements) is addressed in the technical sections of this EIR.

IMPACT ANALYSIS

Impact 3.8-1: Short-term construction-related and operational water quality degradation.

Development of the SOIA area as a result of future annexation could result in water quality degradation from construction activities, as well as from operational sources of water pollutants. This impact would be **potentially significant**.

Storm drainage within this SOIA area has historically been achieved via ditches as part of the various agricultural operations. Though the project itself would not include any development or construction that would affect water quality or waste discharge requirements, approval of the SOIA would potentially allow for the SOIA area to be developed. Construction and operation of such development could result in activities with the potential to degrade water quality.

Project construction activities may involve ground-disturbance, trenching, facility construction, and vegetation removal. These activities would create the potential for soil erosion and sedimentation of stormwater drainage systems, both within and downstream of the project site. The construction process may also result in accidental release of other pollutants to surface waters, including oil and gas, chemical substances used during construction, waste concrete, and wash water. Many construction-related waste

products have the potential to degrade existing water quality by altering the dissolved-oxygen content, temperature, pH, suspended-sediment and turbidity levels, or nutrient content, or by causing toxic effects in the aquatic environment.

The Section 402 NPDES Construction General permits require project proponents to incorporate general site design control measures into project design. These control measures may include conserving natural areas, protecting slopes and channels, and minimizing impervious areas. Treatment control measures may include use of vegetated swales and buffers, grass median strips, detention basins, wet ponds, or constructed wetlands, infiltration basins, and other measures. Filtration systems may be either mechanical (e.g., oil/water separators) or natural (e.g., bioswales and settlement ponds). Selection and implementation of these measures would occur on a project-by-project basis depending on project size and stormwater treatment needs. NPDES MS4 permittees (e.g., City of Elk Grove) are also required to develop and enforce ordinances and regulations to reduce the discharge of sediments and other pollutants in runoff, and must verify compliance. NPDES Construction General permittees are required to develop a SWPPP for each site, which include BMPs to reduce potential construction impacts. New development that would introduce 10,000 or more square feet of new impervious surfaces would be required under Provision C.3 of the NPDES program to incorporate LID strategies such as stormwater reuse, on-site infiltration, and evapotranspiration.

In addition, any future development within SOIA area would have to adhere to City of Elk Grove NDPES permit requirements and City of Elk Grove Municipal Code requirements related to Stormwater Management and Discharge Control (Chapter 15.12). As established in the City of Elk Grove's Improvement Standards Section 11 Stormwater Quality Protection, developers meeting the project area disturbance threshold of 1 acre or more must obtain coverage under the SWRCB General Permit for Storm Water Discharges Associated with Construction Activity (Construction General Permit) prior to commencing construction activities, and projects smaller than 1 acre of disturbed soil area must prepare a Water Pollution Control Plan. Permit requirements include development and implementation of a SWPPP prior to disturbing a site. The SWPPP has to include a site-specific listing of the potential sources of stormwater pollution, anticipated stormwater discharge locations, BMPs for construction waste handling and disposal, and non-stormwater management, among other items.

Development within the SOIA area would increase impervious surfaces, which could result in additional stormwater runoff. Common urban pollutants (e.g., petroleum hydrocarbons, lubricants, herbicides and pesticides, sediments, and metals [generated by the wear of automobile parts]) could be transported in runoff, washed by rainwater from rooftops and landscaped areas into on-site and local drainage networks, and potentially adversely affect the quality of receiving surface waters or groundwater. Infiltration of stormwater runoff into the soil would also likely decrease because of an increase in impermeable surfaces. As part of a future development, a stormwater drainage system would be required to collect and convey stormwater runoff from developed areas. Future stormwater drainage systems could include open channels and multi-use stormwater quality/detention facilities.

According to the City of Elk Grove's Storm Drainage Master Plan (2011), LID must be incorporated into future development projects in the City, based on the requirements of the City's NPDES stormwater permit. LID emphasizes the use of on-site natural features integrated with engineered hydrologic controls distributed throughout a watershed that promote infiltration, filtration, storage, and evaporation of runoff close to the source to manage stormwater. Any future development would be required to submit stormwater drainage designs, including a comprehensive drainage study consistent with the Storm Drainage Master Plan to the City of Elk Grove for approval.

Typical BMPs used to meet regulatory standards include:

Construction

▲ Limit excavation and grading activities to the dry season (April 15 to October 15) to the extent possible to reduce the chance of severe erosion from intense rainfall and surface runoff, as well as the potential for soil saturation in swale areas.

- ▲ Cover stockpiles of loose material; diverting runoff away from exposed soil material; locating and operating sediment basin/traps to minimize the amount of off-site sediment transport and dissipate energy; and removing any trapped sediment from the basin/trap for placement at a suitable location on-site, away from concentrated flows, or removal to an approved disposal site.
- Provide erosion protection on all exposed soils either by revegetation or placement of impervious surfaces after completion of grading.
- Store hazardous materials such as fuels and solvents used on the construction sites in covered containers that are protected from rainfall, runoff, and vandalism.

Operation

- Design roadway and parking lot drainage to run through grass median strips that are contoured to provide adequate storage capacity and to provide overland flow, detention, and infiltration before runoff reaches culverts or detention basins. Oil and sediment separators or absorbent filter systems may also be installed within the storm drainage system to provide filtration of stormwater before discharge to reduce the potential for water quality impacts.
- Use integrated pest management techniques (i.e., methods that minimize the use of potentially hazardous chemicals) in landscaped areas.
- Handle, store, and apply potentially hazardous chemicals in accordance with all applicable laws and regulations.
- Implement an erosion control and revegetation program designed to allow re-establishment of native vegetation on slopes in undeveloped areas as part of the long-term sediment control plan.
- Use alternative discharge options to protect sensitive fish and wildlife populations in areas where habitat for fish and other wildlife would be threatened by facility discharge.

While the above provisions would apply to future development in the SOIA area upon annexation, there are no proposed stormwater management plans for the project to demonstrate compliance. Thus, this impact would be **potentially significant**.

Mitigation Measure 3.8-1: Development of a drainage master plan for the SOIA area.

At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants prepare and implement an update to the City of Elk Grove Storm Drainage Master Plan that incorporates the SOIA area or a drainage master plan for the entire SOIA area that includes the following items and shall be consistent with the City of Elk Grove Storm Drainage Master Plan:

- an accurate calculation of pre-project and post-development runoff scenarios, obtained using appropriate engineering methods that accurately evaluate potential changes to runoff, including increased surface runoff:
- details on on-site detention basin and drainage channel design that are consistent with the requirements of the City of Elk Grove and provide enough storage to accommodate peak storm events and no increase post-development flows or flood conditions off-site;
- identification of any drainage facility connections or coordination with the planned Southeast Area Plan drainage channel east of the SOIA area;
- identification of design features that avoid site development from occurring in the 200-year floodplain;

- implementation of appropriate BMPs to address construction and operational stormwater quality consistent with City requirements;
- a description of any treatments necessary to protect earthen channels from erosion, and modifications that may be needed to existing underground pipe and culvert capacities;
- a description of the proposed maintenance program for the on-site drainage system; and
- ▲ a description of the project-specific standards for installing drainage systems.

Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

Significance after Mitigation

Implementation of Mitigation Measure 3.8-1 would require that stormwater drainage master planning be prepared for the entire SOIA area as part of future site development. This process would require compliance with City stormwater quality requirements that are tied to its NDPES permit requirements to protect surface water quality. Thus, implementation of Mitigation Measure 3.8-1 would mitigate this impact to a less-than-significant level.

Impact 3.8-2: Deplete groundwater supplies or interfere substantially with groundwater recharge.

Future development of the SOIA area upon annexation could result in groundwater usage and creation of impervious surfaces that could block groundwater recharge. Sacramento County Water Agency manages its water supply in a conjunctive manner to protect groundwater resources and has adequate water supplies available for the project. Further, the SOIA area soil conditions do not provide for effective groundwater recharge in the region. Project groundwater impacts would be **less than significant**.

Future development of the SOIA area could affect groundwater in two ways: additional demand for water could increase the use of groundwater, and addition of impervious surfaces could limit groundwater recharge.

Future development within the project site would likely lead to increased demand for groundwater. The project site is located within SCWA Zone 40, and is part of the South Service Area (SCWA 2011). The South Service Area is supplied by a mix of surface water, groundwater, and recycled water (SCWA 2011). Currently, the SCWA only serves residential areas within the South Service Area, but it is likely that new development would be included in this service area as well.

The project site was included in the SCWA Zone 40 Water Supply Master Plan's (SCWA 2005) 2030 Study Area. As evaluated further in Section 3.14, "Utilities," the SCWA manages water conjunctively; adjusting the mix of surface and groundwater supplied based on rainfall and availability of surface water. The WSIP (SCWA 2016) projects that total water demand in the service area, including water system losses will be 102,400 afy in the year 2052. The service area has adequate planned supply facilities to be able to address both the wet/average years and dry years. The excess supply during normal years is projected to range from 140,000 afy in 2020 to 84,600 afy in 2052, and in dry years the excess supply is projected to range between 60,700 afy in 2020 and 11,800 afy in 2052 (SCWA 2016). Although development of the SOIA area was not considered in the cumulative buildout land use assumptions for the Zone 40 Water Supply Master Plan, the addition of 1,009.5 afy of potential project water demand (see Table 3.14-4) based on the conceptual land use plan (see Exhibit 2-4) (a 1 percent increase) would not drastically change the assumptions used by SCWA, which have a margin of error and are updated on a regular basis to reflect changes in land use and consumption rates. It is estimated that the SOIA area utilizes 765 to 1,615 afy of groundwater under current agricultural operations. Thus, the project may result in net increase of 145.5 acre-feet per year in water demand or a net decrease of 814.6 afy in water demand from future development depending upon the final land use scenario.

The Water Forum estimated that the long-term average annual sustainable yield of the Central Basin was 273,000 afy, while extractions were estimated at 217,111 afy in 2015. The CSCGMP identifies provisions to maintain groundwater pumping levels within the sustainable yield, including reducing demand, conjunctive use, and aquifer storage and recovery projects that apply to SCWA's water supply provision of the project. The Sacramento Central Groundwater Authority Alternative Submittal demonstrates subbasin operations from 2005 to 2015 did not exceed the sustainable yield conditions set forth by the Water Forum Agreement of 273,000 afy. If approved, the 273,000 afy sustainable yield set forth by the Water Forum Agreement will be incorporated into the Alternative Submittal, and will be the base year for measuring the long-term sustainability of groundwater in the subbasin.

The project's increased water demands would not cause groundwater pumping within the Central Basin to exceed its sustainable yield. Thus, the future development of the SOIA is not expected to substantially deplete groundwater supplies or lower groundwater levels beyond projected levels.

Infiltration rates can vary and largely depend on the characteristics of the exposed overlying soils and vegetation. The project site is considered to be a "very poor" groundwater recharge area because of soil conditions (UC Davis 2017). As discussed above, on-site drainage plans would be designed to retain, capture, and convey increased runoff in accordance with the city design standards and State requirements such as Provision C.3 site control features. These standards and regulations generally require or encourage the use of LID features such as vegetated swales, permeable paving, use of landscaping for infiltration, and other measures that would retain runoff as much as possible and allow for on-site infiltration.

Thus, the potential for subsequent development projects in the SOIA area to deplete groundwater resources or interfere with groundwater recharge is considered **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.8-3: Alteration of drainage pattern or increase in rate or amount of surface runoff in a manner that would result in substantial erosion or siltation.

Future development of the SOIA area upon annexation could lead to alteration of the drainage pattern of the site. This could result in increased stormwater runoff and an increase in susceptibility to downstream flooding and sediment issues. This would be a **potentially significant** impact.

The project site is currently primarily agricultural land. No change in land use, drainage, or rate of stormwater runoff would result from the SOIA. However, this analysis considers the potential effects on drainage if the project site is annexed and developed in a manner consistent with the conceptual land use plan in the future.

As discussed above, development of the SOI area would increase the quantity of impervious surfaces, which could alter the drainage pattern, or increase the rate or amount of surface runoff. The increased runoff could also discharge at a greater rate, leading to higher peak flows during storm events that could increase the potential for stormwater to cause flood conditions and to transport urban pollutants.

The project site contains a network of irrigation ditches, which would likely be replaced by other stormwater infrastructure when the land is developed. The project site is not covered under the Storm Drainage Master Plan area but is adjacent to both Drainage Shed B and Drainage Shed C and would likely require coordination with the planned drainage improvements for the Southeast Area Plan.

The planned storm drainage improvements associated with Southeast Area Plan (east of the SOIA area) would involve off-site excavation to deepen the existing channel downstream of Bruceville Road. The excavation would be limited to construction of a small pilot channel to eliminate existing high points in the existing channel, which would allow the planned Southeast Area Plan channel to be constructed deeper. This

off-site excavation is only intended to provide extra depth in the on-site channel and is not intended to provide a significant increase in capacity downstream of Bruceville Road. It is estimated that the pilot channel would extend approximately 3,200 feet downstream of Bruceville Road and the average depth of excavation would be approximately 1.8 feet. (City of Elk Grove 2014: 5.9-16)

Additionally, projects would be required to comply with the City of Elk Grove's General Plan policy CAQ-18 regarding stormwater runoff discharge rates (City of Elk Grove 2016). Further, NPDES Provision C.3 requirements include post-construction drainage control requirements that address the volume of off-site flows, which can be effective in reducing sedimentation effects on downstream receiving waters. Project proponents are required to plan, design, and develop sites to: (1) protect areas that provide important water quality benefits necessary to main riparian and aquatic biota, and/or are particularly susceptible to erosion and sediment loss; (2) limit increases of impervious areas; (3) limit land disturbance activities such as clearing and grading, and cut-and-fill to reduce erosion and sediment loss; (4) limit disturbance of natural drainage features and vegetation; and (5) reduce erosion and, to the extent practicable, retain sediment onsite during and after construction.

Although the local, State, and federal policies and regulations specified above would provide for analysis of potential impacts and preventative measures to limit or avoid substantial alteration of the existing drainage pattern of the SOIA area, individual projects would have the potential to adversely affect surface runoff at a project-specific level because of the addition of impervious surfaces. This would be a **potentially significant** impact.

Mitigation Measures

Implement Mitigation Measure 3.8-1.

Significance after Mitigation

Implementation of Mitigation Measure 3.8-1 would require that stormwater drainage master planning be prepared for the entire SOIA area as part of future site development that would require compliance with City drainage and stormwater quality requirements as well as ensure coordination with planned drainage improvements associated with the Southeast Area Plan. Thus, implementation of Mitigation Measure 3.8-1 would mitigate this impact to a less-than-significant level.

Impact 3.8-4: Place structures or housing within a flood hazard area or result in loss, injury, or death due to flooding.

A portion of the SOIA area is mapped as 200-year floodplain that could expose future SOIA area residents to flooding. This would be a **potentially significant impact**.

While the SOIA would not result in physical changes to the site, the project would remove an obstacle to future annexation and development which could result in structures and housing being exposed to flooding from a 200-year event (see Exhibit 3.8-2). Siting structures in flood zones can result in direct effects on new development related to flooding where substantial damage can occur. In addition, structures that impede flood flows can cause a backwater effect by potentially raising flood levels, causing more severe flooding impacts to existing vulnerable areas, or by exposing new areas that would not have previously flooded to flooding impacts. Pursuant to SB 5, the City prohibits development in the 200-year floodplain unless certain findings are made. Thus, this impact would **potentially significant**.

As discussed above, the SOIA area is located outside of the Folsom Dam inundation zone. In addition, there are no levees within or adjacent to the SOIA area. Therefore, any future development within the SOIA area would not expose people or structures to a risk of loss, injury or death from flooding as a result of the failure of a levee or dam.

Mitigation Measures

Implement Mitigation Measure 3.8-1.

Significance after Mitigation

Mitigation Measure 3.8-1 would result in a drainage master plan for the entire SOIA area would include design features that avoid site development from occurring in the 200-year floodplain. Thus, this impact would be **less than significant** with mitigation.

Ascent Environmental Land Use

3.9 LAND USE

This section describes the existing land uses and potential effects associated with project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on review of the Cortese-Knox-Hertzberg Local Government Reorganization Act, Sacramento LAFCo *Policies, Standards, and Procedures Guidelines Manual; Sacramento County General Plan*; the *Sacramento County Zoning Ordinance Code*; the *City of Elk Grove General Plan*; and the Sacramento Area Council of Governments Blueprint; and the *2036 Metropolitan Transportation Plan/Sustainable Communities Strategy* (MTP/SCS). The analysis includes a description of the existing environmental conditions, the methods used for assessment, the potential direct and indirect impacts of project implementation. No mitigation measures are recommended because no impacts were determined to be significant or potentially significant.

Comments were received identifying consistency with the SACOG Blueprint and MTP/SCS as well as treatment of the proposed SOIA land use conceptual plan. The information provided has been incorporated into the following analysis, as appropriate.

3.9.1 Environmental Setting

LAND USE

Project Site

The project site (or "SOIA area") is surrounded on three sides by the southern boundary of the Elk Grove city limits within an unincorporated area of Sacramento County. The Bilby Ridge site is comprised of approximately 480 acres, most of which is currently in agricultural production (e.g., row crops, irrigated and non-irrigated pasture land) (see Exhibit 3-2).

Surrounding Land Uses

Adjacent land uses include agricultural operations to the south and east and single-family residential and related uses to the west and north. The residential uses to the north and west were developed under the East Franklin Specific Plan, which is largely built-out. To the northeast of the site is land approved for development under the Laguna Ridge Specific Plan. The Laguna Ridge Specific Plan provides for the development of approximately 5,887 single-family homes and 1,800 multi-family or medium density units for a total of 7,767 dwelling units, and approximately 265 acres of commercial, office, and civic uses (on approximately 1,900 acres. The specific plan designates single-family and multi-family residential uses adjacent to the SOIA area.

The Southeast Policy Area Community Plan (SEPA) addresses the land currently under agricultural use just east of the site. While this plan was adopted in 2014, no development has occurred. The SEPA land use plan consists of mixed-use, commercial, office, and industrial/flex space that would generate approximately 23,410 new jobs, approximately 4,790 residential units of varying types and densities, three elementary schools, and parks. Designated land uses adjacent to the SOIA area include multifamily and single-family residential and drainage facilities.

The alignment of the approved Capital SouthEast Connector (planned 35-mile multi-lane limited access roadway connecting Interstate 5, State Route 99, and US Highway 50 in El Dorado County) is located south of the Bilby Ridge site (see Exhibit 2-3). The Capital SouthEast Connector Joint Powers Authority (Connector JPA), City of Elk Grove, and Sacramento County are coordinating on the proposed Kammerer Road Extension Project that is located south of the project site and would consist of a four-lane expressway with a Class 1 bicycle and pedestrian trail along the expressway.

Land Use Ascent Environmental

3.9.2 Regulatory Framework

FEDERAL

There are no federal plans, policies, regulation, or laws applicable to the land use component for this project.

STATE

Cortese-Knox-Hertzberg Local Government Reorganization Act

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (CKH Act) establishes procedures for local government changes, including city incorporations and annexations. In regard to changes to spheres of influence, the CKH Act provides guidance that is pertinent to this project, as shown below.

- The Local Agency Formation Commission (LAFCo) shall develop and determine the sphere of influence of each city within the county and enact policies designed to promote the logical and orderly development of areas within the sphere (California Government Code Title 5 Division 3 Part 2 Chapter 4 Section 56425).
- ▲ LAFCo shall not approve a change to the sphere of influence if land within that area is under a Williamson Act contract (California Government Code Title 5 Division 3 Part 2 Chapter 4 Section 56426.6 [a]) unless the change would "facilitate planned, orderly, and efficient patterns of land use or provision of services, and the public interest in the change substantially outweighs the public interest in the current continuation of the contract beyond its current expiration date" (California Government Code Title 5 Division 3 Part 2 Chapter 4 Section 56426.6 [b][A]).
- As part of updating the sphere of influence, LAFCo shall conduct a service review of the municipal services provided in the county (California Government Code Title 5 Division 3 Part 2 Chapter 4 Section 56430).
- ▲ The service review ensures that the proposed extension of services is consistent with the following policies:
 - orderly growth and development (California Government Code Title 5 Division 3 Part 2 Chapter 4 Section 56001):
 - planned, well-ordered, efficient urban development patterns with appropriate consideration of preserving open-space and agricultural lands within those patterns (California Government Code Title 5 Division 3 Part 2 Chapter 4 Section 56300); and
 - discouraging urban sprawl, preserving open-space and prime agricultural lands, encouraging the efficient provision of government services, and encouraging the orderly formation and development of local agencies based upon local conditions and circumstances (California Government Code Title 5 Division 3 Part 2 Chapter 4 Section 56301).
 - Section 56059 defines "open space" as any parcel or area of land or water which is substantially unimproved and devoted to an open-space use, as defined in Government Code Section 65560.
 - Government Code Section 65560 defines open space in the following manner:
 - (b)"Open-space land" is any parcel or area of land or water that is essentially unimproved and devoted to an open-space use as defined in this section, and that is designated on a local, regional or state open-space plan as any of the following:
 - (1) Open space for the preservation of natural resources including, but not limited to, areas
 required for the preservation of plant and animal life, including habitat for fish and wildlife species;

Ascent Environmental Land Use

areas required for ecologic and other scientific study purposes; rivers, streams, bays and estuaries; and coastal beaches, lakeshores, banks of rivers and streams, and watershed lands.

- (2) Open space used for the managed production of resources, including but not limited to, forest lands, rangeland, agricultural lands and areas of economic importance for the production of food or fiber; areas required for recharge of groundwater basins; bays, estuaries, marshes, rivers and streams which are important for the management of commercial fisheries; and areas containing major mineral deposits, including those in short supply.
- (3) Open space for outdoor recreation, including but not limited to, areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes, including access to lakeshores, beaches, and rivers and streams; and areas which serve as links between major recreation and open-space reservations, including utility easements, banks of rivers and streams, trails, and scenic highway corridors.
- (4) Open space for public health and safety, including, but not limited to, areas which
- require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, flood plains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs and areas required for the protection and enhancement of air quality.
- (5) Open space in support of the mission of military installations that comprises areas adjacent to military installations, military training routes, and underlying restricted airspace that can provide additional buffer zones to military activities and complement the resource values of the military lands.
- (6) Open space for the protection of places, features, and objects described in Sections 5097.9
 and 5097.993 of the Public Resources Code.

The Sacramento LAFCo is the agency responsible for the approval of the proposed SOIA and is responsible for implementing the CKH Act.

LOCAL

The project site lies within the jurisdictional boundaries of Sacramento County; therefore, the County's policies, as well as the Sacramento LAFCo's polices, would apply. Furthermore, if the SOIA is approved, it may lead to annexation to the City of Elk Grove. Thus, applicable policies of the City of Elk Grove's General Plan are described below.

Sacramento LAFCo Policy, Standards, and Procedures Manual

LAFCo is charged with applying the policies and provisions of the CKH Act to its decisions regarding annexations, incorporations, reorganizations, and other changes of government organization. LAFCo has adopted standards pursuant to the authority contained in the CKH Act to assist in carrying out its provisions.

When considering annexations to cities and changes in cities' spheres of influence, the following standards apply:

Chapter IV. General Standards

A. Spheres of Influence

1. LAFCo will approve an application for a change of organization or reorganization only if the proposal is consistent with an approved Sphere of Influence plan for the affected agency or agencies. Spheres of Influence will not generally be amended concurrently with an action of an application. Spheres of Influence

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amendments will ordinarily take longer to process than applications for a change of organization or reorganization. Agencies are encouraged to keep their Spheres of Influence plans up to date so that individual applications for changes of organization or reorganization are not burdened with Spheres of Influence amendment requirements. Amendments to Spheres of Influence occasioned by individual applications for changes organization or reorganization which would render the Spheres of Influence internally inconsistent or inconsistent with the other policies or standards herein will not be approved.

- 2. Spheres of Influence are the primary planning tool for LAFCo. The LAFCo has developed standards related to the Master Service Element of any agency's Spheres of Influence. Agencies must have an updated Master Services Element which meets the following standards:
 - a. Is consistent with the Master Services Element of the Spheres of Influence of any overlapping jurisdiction;
 - b. Demonstrates that adequate services will be provided within the time frame needed by the inhabitants of the area included within the proposed boundary;
 - c. Identifies existing land use and a reasonable projection of land uses which would occur if services were provided consistent with the updated Element;
 - d. Presents a map that clearly indicates the location of existing and proposed facilities, including plan for timing and location of facilities;
 - e. Describes the nature of each service to be provided;
 - f Describes the service level capacity of the service provider's facilities;
 - g. Identifies the anticipated service level to be provided;
 - h. Describes any actions, improvements, or construction necessary to reach required service levels, including costs and financing methods;
 - Provides copies of district enabling legislation pertinent to the provision of service levels, including costs and financing methods;
 - j. Identifies projected revenue and identifies savings occurring as a result of the action; and
 - k. Provides existing and five-year population projections within agency boundaries.
- 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.

E. Agricultural Land Conservation

LAFCo will exercise its powers to conserve agricultural land pursuant to the following standards:

- 1. 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:
 - The land subject to the change of organization or reorganization is contiguous to either lands developed with an urban use or lands which have received all discretionary approvals for urban development.

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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.

- 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.
- 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.
- 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:
 - (1) The agricultural significance of the subject and adjacent areas relative to other agricultural lands in the region.
 - (2) The use of the subject and the adjacent areas.
 - (3) 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 through or adjacent to, any other agricultural lands which lie between the project site and existing facilities.
 - (4) Whether natural or man-made barriers serve to buffer adjacent or nearby agricultural land from the effects of the proposed development.
 - (5) Applicable provisions of the General Plan open space and land use elements, applicable growth-management policies, or other statutory provisions designed to protect agriculture.
- 2. LAFCo will not make the affirmative findings that the proposed development of the subject lands is consistent with the Spheres of Influence in the absence of an approved Sphere of Influence Plan. LAFCo will not make the affirmative findings that insufficient vacant non- prime land exists within the Spheres of Influence Plan unless the applicable jurisdiction has:
 - a. Identified within its Spheres of Influence all "prime agricultural land" as defined herein.
 - b. Enacted measures to preserve prime agricultural land identified within its Sphere of Influence for agricultural use.
 - c. Adopted as part of its General Plan specific measures to facilitate and encourage in-fill development as an alternative to the development of agricultural lands.
- 3. The LAFCo will comment upon, whenever feasible, Notices of Preparation for Environmental Impact Reports or projects which involve the development of large tracts of open space and agricultural land and that are not scheduled for urbanization within a five-year period. Potential adverse impacts related to the loss of open space 4ewaqor agricultural land also will be commented upon by LAFCo.

Chapter V. Specific Standards by Type of Action

A. Annexations to Cities

- 1. LAFCo will utilize Spheres of Influence through application of the following standards:
 - b. The LAFCo generally will not allow Spheres of Influence to be amended concurrently with annexation proposals;

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c. The LAFCo will favorably consider proposals that are a part of an orderly, phased annexation program by an agency for territory within its Sphere of Influence;

- 3. The LAFCo will favorably consider proposals to annex streets where adjacent municipal lands will generate additional traffic and where there are isolated sections of county road that will result from an annexation proposal. Cities shall annex a roadway portion when 50 percent of the property on either or both sides of the street is within the city.
- 4. The LAFCo will favorably consider annexations with boundary lines located so that all streets and rights-of-way will be placed within the same city as the properties which either abut thereon or for the benefit of which such streets and rights-of-way are intended.
- 5. An annexation may not result in islands of incorporated or unincorporated territory or otherwise cause or further the distortion of existing boundaries unless it is determined that the annexation as proposed is necessary for orderly growth, and cannot be annexed to another city or incorporated as a new city. Annexations of territory must be contiguous to the annexing city. Territory is not contiguous if its only connection is a strip of land more than 300 feet long and less than 200 feet wide.

I. Annexations to Spheres of Influence

- 1. The LAFCo will generally treat a proposed amendment to an agency's Sphere of Influence similarly to an application for approval of a Sphere of Influence. The LAFCo's policies will be applied to applications for amendment to a Sphere of Influence as if it were an annexation planned for the mid- to long-range future. For that reason, each of the following sets of policies will apply to applications for amendments to Spheres of Influence:
 - a. General policies;
 - b. Specific policies and standards for annexations to cities and special districts; and
 - c. Specific policies and standards for amendments to Spheres of influence.
- 2. The Sphere of Influence Master Services Element must be current before additions to a Sphere of influence will be approved by LAFCo.
- 3. The Sphere of influence amendments shall precede applications for annexations.
- 4. Amendment proposals must be consistent with the updated Sphere of Influence and Master Services Element.
- 5. An applicant for an amendment to a Sphere of Influence must demonstrate a projected need or lack of need for service.
- 6. Amendment proposals involving Sphere expansion which contain prime agricultural land will not be approved by the LAFCo if there is sufficient alternative land available for annexation within the existing Sphere of Influence.
- 7. A phased plan for annexation of Sphere of Influence territory should be included in the Sphere of influence proposal.
- 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.
- The LAFCo will deny proposals that would result in significant unmitigable adverse effects upon other service recipients or other agencies serving the affected area unless the approval is conditioned to avoid such impacts.

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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.

Sacramento Area Council of Governments' Blueprint

The Sacramento Area Council of Governments (SACOG) is an association of local governments in the six-county Sacramento Region that includes the City of Sacramento. SACOG provides transportation planning and funding for the region, prepares the region's long-range transportation plan, approves the distribution of affordable housing in the region, and assists in planning for transit, bicycle networks, and airport land uses. The Blueprint Project was a regional effort by SACOG to build a consensus around a long-term vision for the growth and development of the Sacramento region. The Blueprint was adopted by the SACOG Board of Directors in December 2004 and is a voluntary framework for guiding future growth in the region. The Blueprint is not a policy document and does not regulate land use or approve or prohibit growth in the region. The Blueprint is intended by SACOG to be advisory and to guide the region's transportation planning and funding decisions (such as the development of the MTP/SCS). The SOIA area is identified as a growth area under the Blueprint.

Sacramento Area Council of Government's Metropolitan Transportation Plan/Sustainable Communities Strategy

In 2016, the Sacramento Area Council of Government's (SACOG) approved the MTP/SCS, which is a regional transportation plan and land use strategy designed to support good growth patterns, including:

- ▲ inwardly-focused growth and improved economic viability of rural areas;
- ▲ a transportation system that delivers cost- effective results and is feasible to construct and maintain;

- real, viable choices for methods of travel.

The MTP/SCS built on the foundation provided by the Blueprint project and includes a land use strategy to improve mobility and reduce travel demand from passenger vehicles by prioritizing compact and transit-oriented development, reducing the growth in vehicle miles traveled (VMT) and associated greenhouse gas emissions. The MTP/SCS also includes projections for the location of growth within the region, between jurisdictions and among housing place types (i.e., infill and greenfield development). The 2016 MTP/SCS maps show the SOIA area as "Blueprint Growth Footprint Not Identified for Development in the MTP/SCS Planning Period." The 2016 MTP/SCS includes no growth projections for the SOIA area for 2036. (SACOG 2016.)

Sacramento County General Plan

The current County of Sacramento General Plan, titled Sacramento County General Plan of 2005–2030 (2030 General Plan), was adopted on November 9, 2011. The Sacramento County General Plan provides an inventory of land supply within the County, and projects the amount and location of land and density, and intensity of development that will be required to accommodate future populations and economic growth through 2030 (Sacramento County 2011).

The following policies and actions from the Agriculture and Land Use Elements of 2030 General Plan apply to the SOIA.

- Policy AG-1: The County shall protect prime, statewide importance, unique and local importance farmlands located outside of the USB from urban encroachment.
- Policy LU-1: The County shall not provide urban services beyond the Urban Policy Area, except when the County determines the need for health and safety purposes.

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■ Policy LU-2: The County shall maintain an Urban Service Boundary that defines the long-range plans (beyond twenty five years) for urbanization and extension of public infrastructure and services, and defines important areas for protecting as open space and agriculture.

■ Policy LU-12: The County will prohibit land use projects which are not contiguous to the existing UPA, city boundaries, or existing planned communities or master plan areas (i.e. leapfrog development).

The 2030 General Plan establishes land use designations within the project site. The 2030 General Plan land use designation for the SOIA area is Agricultural Cropland (Exhibit 2-3). Land south of the project site is also designated Agricultural Cropland. This designation represents agricultural lands most suitable for intensive agriculture. The agricultural activities included are row crops, tree crops, irrigated grains and dairies.

The 2030 General Plan designates two boundaries that guide development: The Urban Service Boundary (USB) and the Urban Policy Area (UPA). The SOIA area is within the USB and outside of the UPA.

Urban Service Boundary

The 2030 General Plan designates area within the USB to indicate the ultimate boundary of the urban area in the unincorporated area of Sacramento County. The 2030 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 jurisdictional 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 2011).

Sacramento County Municipal Code

The Sacramento County Ordinances and Codes provide regulation of land and structures 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.

Most of the project site is zoned AG-80 (Agricultural, 80-acre minimum), with about 20 percent of the site zoned AG-20 (Agricultural, 20-acre minimum) (see Exhibit 3.2-2). Agricultural zoning is used to promote long-term agricultural use, to discourage the premature and unnecessary conversion of agricultural land to urban uses, and to encourage the retention of sufficiently large agricultural lots to assure maintenance of viable agricultural units. Land to the south of the project site is zoned for AG-80.

City of Elk Grove General Plan

The City of Elk Grove is currently updating its General Plan. However, a draft is not yet available, so the existing (2003) General Plan policies and actions are described below. Any future development would be required to comply with the most recent General Plan. The SOIA Area is included within the Elk Grove General Plan planning area and shown on Figure LU-2 of the General Plan. This area is located between the City boundaries and an area designated for a future study to determine development potential.

The following policies and actions from the Land Use and Economic Development Elements of the City of Elk Grove General Plan.

- ▲ Policy LU-4: All land use approvals, including, but not limited to:
 - Zoning,
 - Planning documents (such as Specific Plans and Special Planning Areas),
 - ▼ Tentative Maps,
 - Conditional Use Permits,
 - Etc., and
 - shall be required to conform with the General Plan.

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■ Policy 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 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.

- Policy 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.
- Policy LU-14: 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 Prezoning and a plan for infrastructure financing and phasing;
 - Annexations should:
 - 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
- Policy LU-15: The City shall encourage annexations initiated by landowner/residents, which are consistent with the City's policies.
- ▶ 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.;

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■ 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.

Proposed General Plan Update

The City of Elk Grove is in the process of updating its entire General Plan that includes amendments to its Zoning Code to reflect the updates to the General Plan and an update to the City's Climate Action Plan. The General Plan Update under its Preferred Land Use Map would expand the build out potential of the City and designated "Study Areas" from 77,716 dwelling units (252,560 residents) and 97,373 jobs under the current General Plan to 101,665 dwelling units (328,378 residents) and 122,802 jobs under the update (City of Elk Grove 2017a). A notice of preparation for the General Plan Update Draft EIR was released by the City on June 23, 2017.

The General Plan Update establishes four Study Areas (West, South, East, and North) that are currently located outside of the City boundaries and that may be annexed in the future. The Study Areas consist of 7,797 acres and would provide up to 30,332 dwelling units (97,971 residents) and 40,356 jobs at build out (City of Elk Grove 2017a). The SOIA area is located within the north portion of the West Study Area that consists of 1,982 acres. The City's Draft Annexation Strategy identifies that the planning objective for the West Study Area is to create new diverse residential neighborhoods that include walkable parks, public services, and lower-intensity employment opportunities (City of Elk Grove 2017b).

City of Elk Grove Zoning Code

The Zoning Code (Title 23 of the City's Municipal Code) is the primary implementation tool of the General Plan. It divides the City into zoning districts and applies specific development standards to each district. Other development standards established by the Zoning Code include allowed land uses, height limits, setbacks, and the performance requirements (e.g., landscaping, parking) for each district.

The project site is outside the area governed by the City's zoning ordinance. Areas to the east of the project site are zoned for agricultural uses with residential zoning north of the site.

3.9.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

The Bilby Ridge SOIA does not include land use designations or zoning as specific approval actions. Proposed land use and zoning designations for a site would be provided at the time a request for annexation of the site is submitted to LAFCo. However, for LAFCo to understand and fully evaluate the direct and indirect impacts associated with consideration of the Bilby Ridge SOIA, it must also consider the reasonable development pattern and intensity that could occur at the site from subsequent land use approvals. To provide a framework for project evaluation, the project evaluates a conceptual suburban land use plan for the SOIA area (Table 3-1 and Exhibit 3-4).

Evaluation of potential land use and planning impacts was based on a review of planning and regulatory documents, including the Sacramento County General Plan (Sacramento County 2011), the Sacramento County Zoning Code, the Elk Grove General Plan (City of Elk Grove 2003), the Elk Grove Zoning Code, the MTP/SCS (SACOG 2016), the Sacramento LAFCo Policies, Standards, and Procedures Guidelines (SACOG 2007), and the CKH Act. The project was evaluated against the policies and regulations within the adopted documents to determine whether the project would conflict with adopted pans. In addition, the existing land uses

The information obtained from these sources was reviewed and summarized to establish existing conditions and to identify potential environmental effects, based on the standards of significance presented in this chapter. In determining the level of significance, the analysis assumes that the proposed project would comply with relevant federal, state, and local ordinances and regulations (see Section 3.9.2, "Regulatory Framework").

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THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, a land use and planning impact would be significant if implementation of the proposed project would do any of the following:

- physically divide an established community;
- conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or
- conflict with any applicable habitat conservation plan or natural community conservation plan.

Consistency with the proposed South Sacramento Habitat Conservation Plan is addressed in Section 3.4, "Biological Resources." Potential impacts related to the loss of "prime agricultural lands" as defined by Section 56064 of the Cortese-Knox-Hertzberg Local Government Reorganization Act is addressed in Section 3.2, "Agricultural Resources."

ISSUES NOT EVALUATED FURTHER

The proposed SOIA would expand the City's sphere of influence that could result in annexation to the City and suburban development. SOIA area and land areas south are largely vacant and do not contain an unincorporated community. Thus, the project would expand the existing and planned residential communities into agricultural and open space lands and would not divide an established community of interest.

IMPACT ANALYSIS

Impact 3.9-1: Consistency with Sacramento County and City of Elk Grove general plans and zoning.

Establishment of the SOIA area and future annexation and development would not conflict with adopted County or City general plan policies, land use designations, or zoning that would generate any adverse physical impacts beyond those addressed in detail in the environmental sections of this EIR. Thus, this impact would be **less than significant**.

The project includes an amendment to Elk Grove's sphere of influence. However, the SOIA area would continue to be within unincorporated Sacramento County and subject to Sacramento County general plan designations and zoning. This project does not pre-zone or change the land use designations for the SOIA area.

If the SOIA area is approved and annexation to the City of Elk Grove is subsequently approved, land use planning would occur under the City's jurisdiction. Pre-zoning of the affected territory by the City would be required prior to any application for annexation. Any future development would be required to comply with the City's General Plan policies. In addition, future development would be subject to CEQA review and analysis.

Sacramento General Plan

As noted above, the SOIA area is currently designated by the Sacramento County General Plan as Agricultural Cropland and is within Sacramento County's Urban Services Boundary and outside the Urban Policy Area. The project does not include the construction or development of any structures or infrastructure.

The land use assumptions discussed above indicate that future development of the SOIA area would result in urban land uses that do not conform to the existing agricultural land use designation. However, if LAFCo were to consider and then approve annexation in the future, Sacramento County would relinquish land use planning authority to the City, and the Sacramento County General Plan would no longer apply to the annexed areas. Table 3.9-1 provides a consistency analysis with the County of Sacramento General Plan policies.

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Table 3.9-1 Sacramento County General Plan Consistency Analysis

| Element | Policy | Consistency Determination |
|-------------|---|---|
| Agriculture | Policy AG-1. The County shall protect prime, statewide importance, unique and local importance farmlands located outside of the USB from urban encroachment. | Consistent: The project site is within the USB; therefore, does not fall within the requirements of the policy to protect important farmland outside of the USB. |
| Land Use | Policy LU-1. The County shall not provide urban services beyond the Urban Policy Area, except when the County determines the need for health and safety purposes. | Consistent: The project site is currently within the jurisdiction of the County of Sacramento and is entirely outside of the County's General Plan UPA. However, no land uses changes are proposed that would require urban services. |
| | Policy LU-2. The County shall maintain an Urban Service Boundary that defines the long-range plans (beyond twenty five years) for urbanization and extension of public infrastructure and services, and defines important areas for protecting as open space and agriculture. | Consistent: The project would be consistent with this policy recognizing that the project site, as a part of the existing USB area, would be available for future urban development. |
| | Policy LU-12. The County will prohibit land use projects which are not contiguous to the existing UPA, city boundaries, or existing planned communities or master plan areas (i.e. leapfrog development). | Consistent: The project site is currently within the jurisdiction of the County of Sacramento and is entirely outside of the UPA. However, it is contiguous to the Elk Grove city limits and would not cause leapfrog development, if the project site were to develop in the future. |

Elk Grove General Plan

The project site does not currently have Elk Grove General Plan land use designations. However, if future annexation were to occur, the project site would be under the jurisdiction of Elk Grove and would be required to be consistent with City General Plan policies and regulations. As shown in Table 2-1, the SOIA conceptual land use plan would be consistent with the mixed of land uses identified in the proposed General Plan Update Land Plan Guidelines for the West Study Area.

Table 3.9-2 provides a consistency analysis with the City of Elk Grove General Plan policies.

Table 3.9-2 Elk Grove General Plan Consistency Analysis

| 14510 0. | Table 5.5-2 Lik Grove General Fran Consistency Analysis | | | | | |
|-------------|--|--|--|--|--|--|
| Element | Policy | Consistency Determination | | | | |
| Land Use | Policy LU-4 All land use approvals, including, but not limited to: ✓ 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: The City of Elk Grove may, in collaboration with developers, begin comprehensive planning at an undetermined time pursuant to approval of the SOIA. Any proposed development would be required to demonstrate consistency with the Elk Grove General Plan. | | | | |
| | Policy 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 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. | Consistent: See discussion under Policy LU-4, above. | | | | |
| | Policy 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: If this project is approved, the City's sphere of influence would be updated. | | | | |

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Table 3.9-2 Elk Grove General Plan Consistency Analysis

| Element | Policy | Consistency Determination |
|---------|---|---|
| | Policy LU-14: 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. | Consistent: Future development of the SOIA area would be an orderly expansion of the City's boundaries as it is surrounded on three sides by the City. The future annexation would require comprehensive land use planning and consistency with the Elk Grove General Plan. |
| | 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: | |
| | 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 | |
| | Policy LU-15: The City shall encourage annexations initiated by landowner/residents, which are consistent with the City's policies. | Consistent: This policy describes the City's attitude towards potential annexations which are consistent with City policies. Per the above and below descriptions, this project is shown to be consistent. |
| | 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. | Consistent: While some potential land uses are shown for purposes of the sphere of influence amendment, the land uses are only conceptual. Any future development proposal would need to go through a separate planning and environmental review process to ensure that the proposed land uses comply with all policies of the General Plan. None |
| | Development should take place in compliance with the goals and policies of this General Plan. | of the SOIA area is located within the 100-year floodplain. |
| | ■ 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. | |

As shown in the above tables, the SOIA would be consistent with applicable general plan policies. In addition, the zoning would not be updated until a later date and, therefore, would continue to be consistent with Sacramento County zoning until a later project is proposed which would have its own separate environmental analysis. The potential land uses as shown in Exhibit 2-4 in Chapter 2, "Project Description," show the potential types of land use designations and zoning which might be applied at some future date. If this area were annexed, designated under Elk Grove's general plan, and zoned, then those actions would ensure that the general plan and zoning for the site was compatible with Elk Grove's general plan and zoning

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code. However, the current project is an amendment to the City's existing sphere of influence and future land uses are only speculative and shown for demonstration and analysis purposes.

Impacts and project consistency issues associated with environmental resource and issue areas are addressed in each technical section of this EIR. Implementation of the project would not conflict with adopted County or City general plan land use policies, land use designations, or zoning that would generate any adverse physical impacts beyond those addressed in detail in the environmental sections of this EIR (e.g., air quality, biological resources, cultural resources). Thus, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.9-2: Consistency with SACOG Metropolitan Transportation Plan/Sustainable Communities Strategy.

The SOIA area is included in the MTP/SCS as an area not identified for development by 2036. However, it anticipated for eventual development under the SACOG Blueprint. As such, the impact related to consistency with the MTP/SCS would be **less than significant**.

The SACOG MTP/SCS identifies the project site as part of the "Blueprint Growth Footprint Not Identified for Development in the MTP/SCS Planning Period." Though the MTP/SCS does not assume any development in these areas by 2036, it is an area identified for future development under the Blueprint. The MTP/SCS does not ensure growth or restrict growth from occurring in these areas. The project site is adjacent to existing development and borders the City of Elk Grove. As such, changing the sphere of influence to include this area would not conflict with the MTP/SCS. The impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.9-3: Consistency with Sacramento LAFCo Policy, Standards, and Procedures Guidelines.

Establishment of the SOIA and the future annexation and development of the area would not conflict with Sacramento LAFCo *Policy, Standards, and Procedure Guidelines Manual*. Therefore, this impact would be **less than significant**.

LAFCo is the agency responsible for complying with the CKH Act. The Sacramento LAFCo *Policy, Standards* and *Procedures Manual* lays out the specific ways that LAFCo would ensure compliance with the requirements of the act.

Table 3.9-3 provides a consistency analysis with the LAFCO policies, standards, and procedures.

| Table 3.9-3 | Sacramento LAFCo Policy, Standards, and Procedures Guidelines Consistency Analysis |
|--------------------|--|
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| Chapter | Standard | Consistency Determination |
|-------------------------|---|---|
| IV General Standards | A2: Agencies must have an updated Master Services Element | Consistent: The Master Services Review document included with the application meets the standards as described in the Sacramento LAFCo Policy, Standards, and Procedures Guidelines. |
| | E1: 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 | Consistent: Orderly development is enabled by advance and thoughtful planning on the part of jurisdictions. There are no current applications for annexation or development of this site. While the current land use designation and zoning for the site is agriculture, placing the land within the USB shows the intent on the part of the County to allow for urban development and the provision of urban services at |

Ascent Environmental Land Use

 Table 3.9-3
 Sacramento LAFCo Policy, Standards, and Procedures Guidelines Consistency Analysis

| Chapter | Standard | Consistency Determination | | | |
|--|---|---|--|--|--|
| | will lead to the planned, orderly and efficient development of an area. | some future point in time. Future development of the area would also be consistent with SACOG's Blueprint. The SOIA would not change the current land use designation or zoning; however, it would remove obstacles for future development. | | | |
| | | As identified under Impact 3.2-1, future annexation and development of the SOIA area would result in the loss of prime agricultural land that is in open space. Implementation of Mitigation Measure 3.2-1 would require that future development applicants protect one acre of existing agricultural lands for every acre developed. | | | |
| | | Per the criteria for planned, orderly, and efficient development, the land is contiguous to lands that are already developed or have received all discretionary approvals for urban development, development of a substantial portion of the subject land is likely to occur within the next 20 years; and the City of Elk Grove current sphere of influence boundary is the same as the City limit line. | | | |
| V Specific Standards by Type of Action | A1b: The LAFCo generally will not allow Spheres of Influence to be amended concurrently with annexation proposals | Consistent: The SOIA does not include an annexation proposal. | | | |
| | A1e: The LAFCo encourages the annexation to each city of all islands of unincorporated territory and all substantially surrounded unincorporated areas located within the city's Sphere of influence. | Consistent: The SOIA Area is surrounded on three sides by land that is within the City of Elk Grove. | | | |
| | A2: The LAFCo will not approve proposals in which boundaries are not contiguous with the existing boundaries of the city to which the territory will be annexed | Consistent: The SOIA Area is adjacent and contiguous with the Elk Grove City boundary. | | | |
| | I2: The Sphere of Influence Master Services Element must be current before additions to a Sphere of influence will be approved by LAFCo. | Consistent: See discussion under standard A2, above. | | | |
| | I5:. An applicant for an amendment to a Sphere of Influence must demonstrate a projected need or lack of need for service. | Consistent: The application shows a preliminary land use scenario that would require a projected need for services. | | | |
| | I6:. Amendment proposals involving Sphere expansion which contain prime agricultural land will not be approved by the LAFCo if there is sufficient alternative land available for annexation within the existing Sphere of Influence. | Consistent: See discussion under standard E1, above. | | | |
| | I7:. A phased plan for annexation of Sphere of Influence territory should be included in the Sphere of influence proposal. | Consistent: The MSR states "MSR may also serve to assist the City in the development of a phased Comprehensive Annexation Program (CAP)." | | | |
| | I9:. The LAFCo will deny proposals that would result in significant unmitigable adverse effects upon other service recipients or other agencies serving the affected area unless the approval is conditioned to avoid such impacts. | Consistent: To amend a sphere of influence, LAFCo must conduct a thorough review of the potential environmental impacts, as required by CEQA. This document provides this required review and analysis. As described throughout this document, the mitigation measures within the EIR would reduce the impacts related to the SOIA as much as feasible. | | | |
| | I10:. 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. | Consistent: This is discussed in detail in the MSR which accompanies the application. | | | |

Land Use Ascent Environmental

As described in Table 3.9-3, implementation of the project would be consistent with the Sacramento LAFCo Policy, Standards, and Procedures Guidelines Manual. Thus, this impact is considered less than significant.

Mitigation Measures

No mitigation is required.

Impact 3.9-4: Conversion of open space.

Establishment of the SOIA and the future annexation and development of the area could result in the loss of open space resources, as defined by Sacramento LAFCo, to urban uses. Therefore, this impact would be **significant**.

Section 56059 of the Cortese-Knox-Hertzberg Local Government Reorganization Act utilizes the open space definition under Government Code Section 65560. The project area would meet the definition under Section 65560(b)(2), as it is currently in agricultural use as well as zoned and General Plan designated for agricultural use by Sacramento County. Subsequent annexation of the SOIA area and development identified in the conceptual land use plan (see Exhibit 2-4) would result in the conversion of the site's open space condition to urban uses. This impact would be **significant**.

Mitigation Measures

Implement Mitigation Measure 3.2-1 (protection of 1 acre of existing agricultural land of equal or higher quality for each acre of Farmland of Statewide Importance, Farmland of Local Importance, and prime agricultural land that would be developed by the project).

Significance after Mitigation

While conservation of land areas of the same area and quality of agricultural land placed elsewhere in the region could partially offset the direct conversion of Important Farmland and prime agricultural land that could occur within the SOIA area, this approach would not create new agricultural land to replace lands that could be lost. There is no additional feasible mitigation. The impact would remain **significant and unavoidable**.

3.10 NOISE AND VIBRATION

This section presents definitions of common noise descriptors; descriptions of applicable noise regulations, acoustic fundamentals, and existing ambient noise conditions; and an analysis of potential short- and long-term noise impacts associated with implementation of the project.

No comments related to noise and vibration were received in response to the Notice of Preparation.

3.10.1 Environmental Setting

ACOUSTIC FUNDAMENTALS

Prior to discussing the environmental and regulatory noise setting for the project, background information on sound, noise, vibration, and common noise descriptors is needed to provide context and a better understanding of the technical terms and regulations referenced throughout this section.

Sound, Noise, and Acoustics

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a human ear. Noise is defined as loud, unexpected, or annoying sound.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver determines the sound level and characteristics of the noise perceived by the receiver. The field of acoustics deals primarily with the propagation and control of sound.

Frequency

Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low-frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz, or thousands of hertz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

Sound Pressure Levels and Decibels

The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micro-Pascals (mPa). One mPa is approximately one hundred billionth (0.0000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 mPa. Because of this large range of values, sound is rarely expressed in terms of mPa. Instead, a logarithmic scale is used to describe sound pressure level (SPL) in terms of decibels (dB).

Addition of Decibels

Because decibels are logarithmic units, SPLs cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3-dB increase. In other words, when two identical sources are each producing sound of the same loudness at the same time, the resulting sound level at a given distance would be 3 dB higher than if only one of the sound sources was producing sound under the same conditions. For example, if one automobile produces an SPL of 70 dB when it passes an observer, two cars passing simultaneously would not produce 140 dB; rather, they would combine to produce 73 dB. Under the decibel scale, three sources of equal loudness together produce a sound level 5 dB louder than one source.

A-Weighted Decibels

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the SPL in that range. In general, people are most sensitive to the frequency range of 1,000–8,000 Hz, and perceive sounds within that range better than sounds of the same amplitude in higher or lower frequencies. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies. Then, an "A-weighted" sound level (expressed in units of A-weighted decibels) can be computed based on this information.

The A-weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgment correlates well with the A-scale sound levels of those sounds. Thus, noise levels are typically reported in terms of A-weighted decibels or dBA. All sound levels discussed in this section are A-weighted decibels. Table 3.10-1 describes typical A-weighted noise levels for various noise sources.

Table 3.10-1 Typical Noise Levels

| Common Outdoor Activities | Noise Level (dBA) | Common Indoor Activities |
|---|-------------------|--|
| | -110- | Rock band |
| Jet fly-over at 1,000 feet | -100- | |
| Gas lawn mower at 3 feet | -90- | |
| Diesel truck at 50 feet at 50 miles per hour | -80- | Food blender at 3 feet, Garbage disposal at 3 feet |
| loisy urban area, daytime, Gas lawn mower at 100 feet | -70 <i>-</i> | Vacuum cleaner at 10 feet, Normal speech at 3 feet |
| Commercial area, Heavy traffic at 300 feet | -60- | |
| Quiet urban daytime | -50- | Large business office, Dishwasher next room |
| Quiet urban nighttime | -40 <i>-</i> | Theater, large conference room (background) |
| Quiet suburban nighttime | -30- | Library, Bedroom at night |
| Quiet rural nighttime | -20- | |
| | -10- | Broadcast/recording studio |
| Lowest threshold of human hearing | -0- | Lowest threshold of human hearing |

Source: Caltrans 2013a: Table 2-5

Human Response to Changes in Noise Levels

As discussed above, the doubling of sound energy results in a 3-dBA increase in the sound level. However, given a sound level change measured with precise instrumentation, the subjective human perception of a doubling of loudness will usually be different from what is measured.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear is able to a discern 1-dBA change in sound levels when exposed to steady, single-frequency ("pure-tone") signals in the mid-frequency (1,000–8,000 Hz) range. In typical noisy environments, changes in noise of 1–2 dBA are generally not perceptible. However, it is widely accepted that people can begin to detect sound level increases of 3 dBA in typical noisy environments. Further, a 5-dBA increase is generally perceived as a distinctly noticeable increase, and a 10-dBA increase is generally perceived as a doubling of loudness. Therefore, a doubling of sound energy (e.g., doubling the volume of traffic on a highway) that would result in a 3-dBA increase in sound would generally be perceived as barely detectable.

Vibration

Vibration is the periodic oscillation of a medium or object with respect to a given reference point. Sources of vibration include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) and those introduced by human activity (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, (e.g., operating factory machinery) or transient in nature (e.g., explosions). Vibration levels can be depicted in terms of amplitude and frequency, relative to displacement, velocity, or acceleration.

Vibration amplitudes are commonly expressed in peak particle velocity (PPV) or root-mean-square (RMS) vibration velocity. PPV and RMS vibration velocity are normally described in inches per second (in/sec) or in millimeters per second (mm/s). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is typically used in the monitoring of transient and impact vibration and has been found to correlate well to the stresses experienced by buildings (FTA 2006:7-5, Caltrans 2013b:6).

Although PPV is appropriate for evaluating the potential for building damage, it is not always suitable for evaluating human response. It takes some time for the human body to respond to vibration signals. In a sense, the human body responds to average vibration amplitude. The RMS of a signal is the average of the squared amplitude of the signal, typically calculated over a 1-second period. As with airborne sound, the RMS velocity is often expressed in decibel notation as vibration decibels (VdB), which serves to compress the range of numbers required to describe vibration (FTA 2006:7-5). This is based on a reference value of 1 micro inch per second.

The typical background vibration-velocity level in residential areas is approximately 50 VdB. Ground vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels (FTA 2006:7-7).

Typical outdoor sources of perceptible ground vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. Construction activities can generate sufficient ground vibrations to pose a risk to nearby structures. Constant or transient vibrations can weaken structures, crack facades, and disturb occupants (FTA 2006:7-5).

Vibrations generated by construction activity can be transient, random, or continuous. Transient construction vibrations are generated by blasting, impact pile driving, and wrecking balls. Continuous vibrations result from vibratory pile drivers, large pumps, and compressors. Random vibration can result from jackhammers, pavement breakers, and heavy construction equipment.

Table 3.10-2 describes the general human response to different ground vibration-velocity levels.

| Table 3.10-2 Human Res | ponse to Different Levels of Ground Noise and Vibration | | | |
|--------------------------|--|--|--|--|
| Vibration-Velocity Level | Human Reaction | | | |
| 65 VdB | Approximate threshold of perception. | | | |
| 75 VdB | Approximate dividing line between barely perceptible and distinctly perceptible. Many people find that transportation-related vibration at this level is unacceptable. | | | |
| 85 VdB | Vibration acceptable only if there are an infrequent number of events per day. | | | |

Notes: VdB = vibration decibels referenced to 1 μ inch/second and based on the root mean square (RMS) velocity amplitude.

Source: FTA 2006:7-8

Common Noise Descriptors

Noise in our daily environment fluctuates over time. Various noise descriptors have been developed to describe time-varying noise levels. The following are the noise descriptors used in this section.

Equivalent Continuous Sound Level (Leq): Leq represents an average of the sound energy occurring over a specified period. In effect, Leq is the steady-state sound level containing the same acoustical energy as the time-varying sound that simultaneously occurs during the same period. The 1-hour A-weighted equivalent sound level (Leq[n]) is the energy average of A-weighted sound levels occurring during a 1-hour period and is the basis for noise abatement criteria used by the California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA).

Percentile-Exceeded Sound Level (Lxx): L_{xx} represents the sound level exceeded for a given percentage of a specified period (e.g., L_{10} is the sound level exceeded 10 percent of the time, and L_{90} is the sound level exceeded 90 percent of the time).

Maximum Sound Level (Lmax): Lmax is the highest instantaneous sound level measured during a specified period.

Day-Night Sound Level (Ldn): Ldn is the energy average of A-weighted sound levels occurring over a 24-hour period, with a 10-dBA "penalty" applied to A-weighted sound levels occurring during nighttime hours between 10 p.m. and 7 a.m.

Community Noise Equivalent Level (CNEL): Similar to L_{dn}, CNEL is the energy average of the A-weighted sound levels occurring over a 24-hour period, with a 10-dBA penalty applied to A-weighted sound levels occurring during the nighttime hours between 10 p.m. and 7 a.m. and a 5-dBA penalty applied to the A-weighted sound levels occurring during evening hours between 7 p.m. and 10 p.m.

Sound Propagation

When sound propagates over a distance, it changes in level and frequency content. The manner that noise reduces with distance depends on the following factors.

Geometric Spreading

Sound from a localized source (i.e., a point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dBA for each doubling of distance from a point source. Roads and highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources, thus propagating at a slower rate in comparison to a point source. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels generated by a line source attenuate at a rate of 3 dBA for each doubling of distance from the line source.

Ground Absorption

The propagation path of noise from a source to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective-wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 feet. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver, such as soft dirt, grass, or scattered bushes and trees), an excess ground-attenuation value of 1.5 dBA per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dBA per doubling of distance. This would hold true for point sources, resulting in an overall drop-off rate of up to 7.5 dBA per doubling of distance.

Atmospheric Effects

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels, as wind can carry sound. Sound levels can be increased at large distances (e.g., more than 500 feet) from the source because of atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects.

Shielding by Natural or Human-Made Features

A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receiver specifically to reduce noise. A barrier that breaks the line of sight between a source and a receiver will typically result in at least 5 dBA of noise reduction. Taller barriers provide increased noise reduction. Vegetation between the source and receiver is rarely effective in reducing noise because it does not create a solid barrier.

EXISTING NOISE ENVIRONMENT

Existing Noise- and Vibration-Sensitive Land Uses

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as parks, schools, historic sites, cemeteries, and recreation areas are also generally considered sensitive to increases in exterior noise levels. Places of worship and transit lodging, and other places where low interior noise levels are essential are also considered noise-sensitive. Those noted above are also considered vibration-sensitive land uses in addition to commercial and industrial buildings where vibration would interfere with operations within the building, including levels that may be well below those associated with human annoyance.

Existing noise- and vibration- sensitive land uses near the SOIA area (or "project site") include the continuous single family residential development on the northern and western sides of the project site, Henry Backer Senior Park to the north, and a single-family residence along Bruceville Road east of the project site. The nearest sensitive receptors to the SOIA area are the receptors along the northern and eastern sides of the project site (single-family development along Bilby Road, Henry Backer, Sr. Park, and the single-family residence along Bruceville Road), all of which are approximately 75 feet from the project site. The residential receptors to the west are located approximately 175 feet from the project site. See Exhibit 3.10-1 for locations of all nearby sensitive land uses.

Existing Noise Sources and Ambient Levels

Transportation Noise

The existing noise environment in the project area is primarily influenced by vehicular traffic on the surrounding roadway network (e.g., Bilby Road, Willard Parkway, Bruceville Road). Table 3.10-3 summarizes the modeled existing traffic noise levels at 100 feet from the centerline of each area roadway segments, and lists distances from each roadway centerline to the 70, 65, and 60 L_{dn} traffic noise contours. Exhibit 3.10-2 and Exhibit 3.10-3 show the traffic noise contours for roadways in the vicinity of the SOIA Area. The traffic noise levels presented in Table 3.10-3 were estimated using calculation methods consistent with FHWA Traffic Noise Model (FHWA 2004) and using average daily traffic (ADT) volumes provided in the traffic analysis conducted by Fehr & Peers and summarized in Section 3.13, "Traffic, Transportation, and Circulation," and detailed in Appendix D of this DEIR.

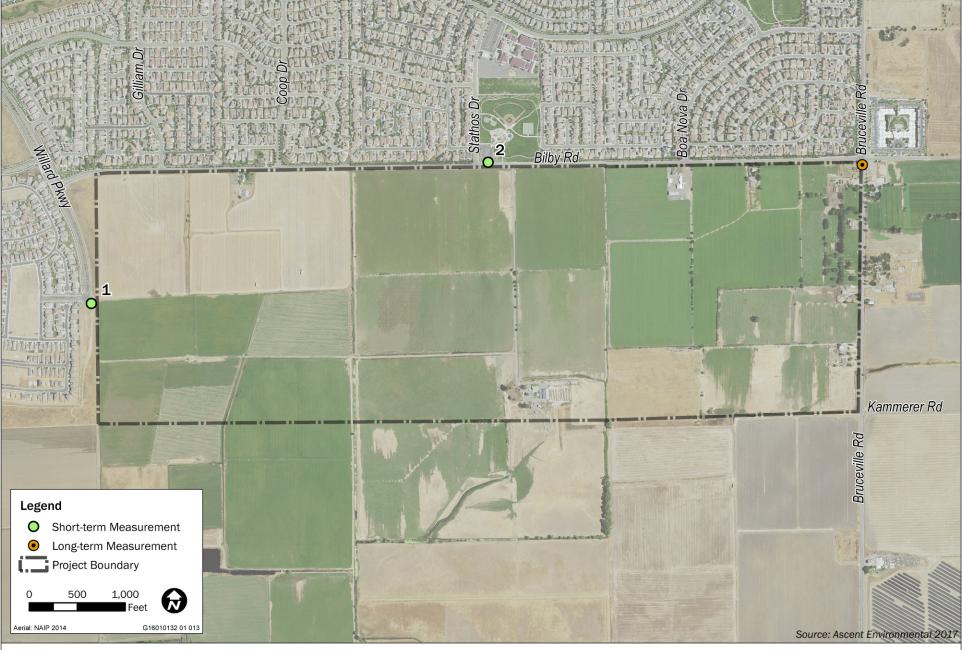


Exhibit 3.10-1

Noise Measurement Locations



Table 3.10-3 Summary of Modeled Existing Traffic Noise Levels

| Doodway Cogmont / Cogmont Doogintion | L _{dn} at 100 feet from | Distance (feet) from Roadway Centerline to Ldn Contour | | | |
|--|----------------------------------|--|-----|------|--|
| Roadway Segment/Segment Description | Roadway Centerline | 70 | 65 | 60 | |
| Hood Franklin Road (I-5 NB Off-Ramp to Kammerer Road) | 64.9 | 31 | 98 | 310 | |
| Kammerer Road (Bruceville Road to McMillan Road) | NA | NA | NA | NA | |
| Kammerer Road (McMillan Road to Driveway) | NA | NA | NA | NA | |
| Kammerer Road (Driveway to Lent Ranch Parkway) | 65.0 | 32 | 100 | 317 | |
| Kammerer Road (Lent Ranch Parkway to Promenade Parkway) | 65.0 | 32 | 100 | 317 | |
| Kammerer Road (Promenade Parkway to SR 99 SB Ramps) | 65.0 | 32 | 100 | 317 | |
| Grant Line Road (SR 99 SB Ramps to SR 99 NB Ramps) | 65.0 | 32 | 100 | 317 | |
| Grant Line Road (SR 99 NB Ramps to E Stockton Boulevard) | 69.0 | 80 | 252 | 797 | |
| Grant Line Road (E Stockton Boulevard to Waterman Road) | 69.0 | 80 | 252 | 797 | |
| Grant Line Road (Waterman Road to Mosher Road) | 69.0 | 80 | 252 | 797 | |
| Grant Line Road (Mosher Road to Bradshaw Road) | 69.9 | 99 | 312 | 986 | |
| Grant Line Road (Bradshaw Road to Elk Grove Boulevard) | 68.5 | 71 | 224 | 709 | |
| Willard Parkway (Bilby Road to Future Roadway Segment 2) | 68.5 | 71 | 224 | 709 | |
| Bilby Road (Willard Parkway to Coop Drive) | 68.5 | 71 | 224 | 709 | |
| Bilby Road (Coop Drive to Bruceville Road) | 54.6 | 3 | 9 | 29 | |
| Bruceville Road (Bilby Road to Whitelock Parkway) | 63.2 | 21 | 66 | 210 | |
| Bruceville Road (Whitelock Parkway to Civic Center Drive) | 63.2 | 21 | 66 | 210 | |
| Bruceville Road (Civic Center Drive to Elk Grove Boulevard) | 61.7 | 15 | 47 | 149 | |
| Willard Parkway (Bilby Road to Whitelock Parkway) | 65.9 | 39 | 123 | 389 | |
| Franklin Boulevard (Whitelock Parkway to Elk Grove Boulevard) | 65.9 | 39 | 123 | 389 | |
| Bruceville Road (Bilby Road to Kammerer Road) | 64.8 | 30 | 95 | 299 | |
| Bruceville Road (Kammerer Road to Eschinger Road) | 66.8 | 48 | 152 | 479 | |
| l-5 (Laguna Boulevard On/Off Ramps to Elk Grove Boulevard On/Off Ramps) | 49.9 | 1 | 3 | 10 | |
| I-5 (Elk Grove Boulevard On/Off Ramps to Hood Franklin Road On/Off Ramps) | 55.3 | 3 | 11 | 34 | |
| I-5 (Hood Franklin Road On/Off Ramps to Twin Cities Road On/Off Ramps) | 69.7 | 93 | 294 | 930 | |
| SR 99 (Bond Road On/Off Ramps to Elk Grove Boulevard On/Off Ramps) | 68.7 | 73 | 232 | 734 | |
| SR 99 (Elk Grove Boulevard On/Off Ramps to Grant Line Road On/Off Ramps) | 67.9 | 61 | 193 | 612 | |
| SR 99 (Grant Line Road On/Off Ramps to W Stockton Boulevard On/Off Ramps) | 71.6 | 146 | 460 | 1456 | |
| SR 99 (W Stockton Boulevard On/Off Ramps to Dillard Road On/Off Ramps) | 69.5 | 89 | 282 | 893 | |
| SR 99 (Dillard Road On/Off Ramps to Arno Road On/Off Ramps) | 69.4 | 87 | 275 | 869 | |

Notes: L_{dn} = Day-Night Level

All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow, and does not account for shielding of any type or finite roadway adjustments. All noise levels are reported as A-weighted noise levels. For additional details, refer to Appendix C for detailed traffic data, and traffic-noise modeling input data and output results.

Source: Data modeled by Ascent Environmental in 2017

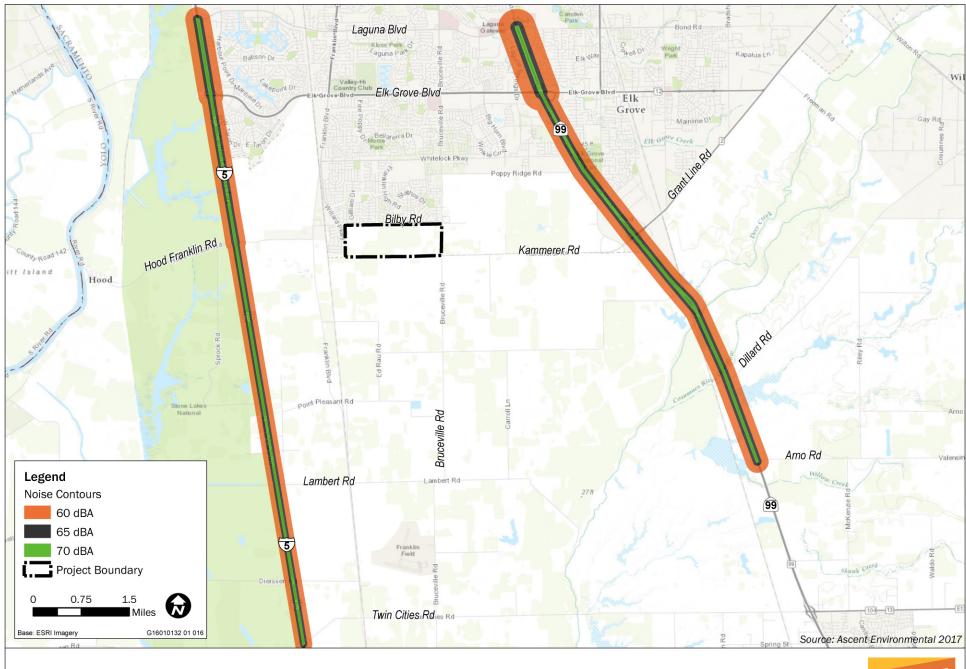


Exhibit 3.10-2

Existing Highway Noise Contours



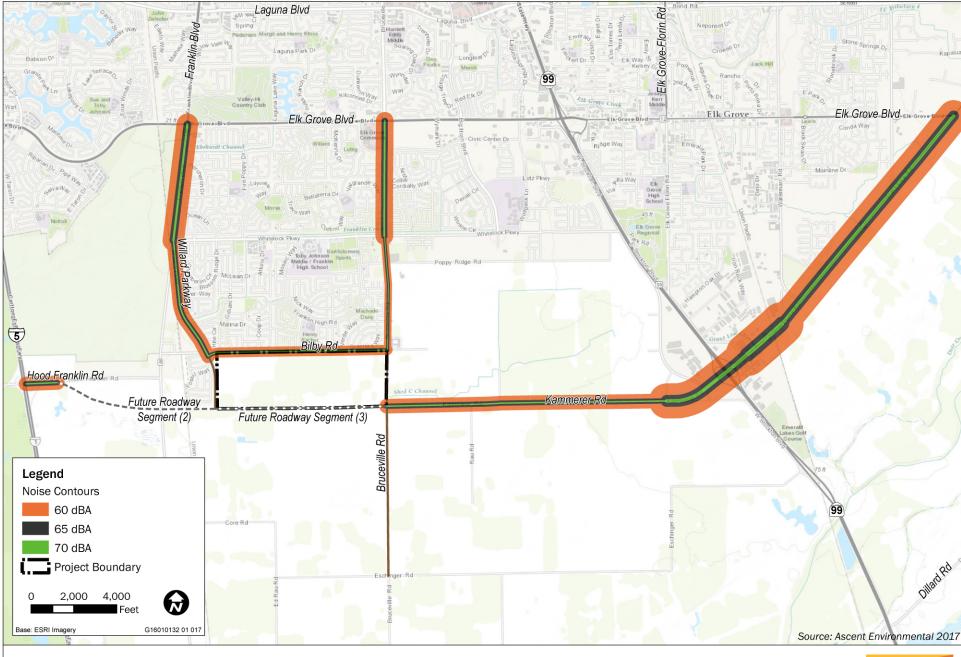


Exhibit 3.10-3

Existing Roadway Noise Contours



Existing Noise Survey

Two short-term noise measurements and one long-term noise measurement were conducted near the project study area to document the existing noise environment within the proposed SOIA area. The predominant noise source near the long-term measurement site is traffic noise emanating from Bilby Road and Bruceville Road, the intersection at which the noise measurement was taken. The noise measurements were collected starting on May 2, 2017 and ending on May 3, 2017. Noise level measurements were conducted in accordance with American National Standards Institute standards using Larson Davis Laboratories (LDL) Model 820 and LxT precision integrating sound level meters. The sound level meters were calibrated before and after use with an LDL Model CAL200 acoustical calibrator.

Meteorological conditions during the measurement period were adequate for reliable noise measurements, with clear skies, temperatures ranging from 65 degrees Fahrenheit (°F) to 91 °F, light winds averaging 1 to 3 miles per hour, and no precipitation. Results of the noise survey are shown in Table 3.10-4.

Table 3.10-4 Noise Measurement Summary

| Measurement | Start Date/Time | Stop Date/Time | | | Sou | ınd Level (| dB) | | |
|--------------------------|-----------------------|--------------------|-----------------|---|------------------|------------------|-----------------|------------------|------------------|
| Short-Term Measurements | | | L _{eq} | L _{max} | L _{min} | L ₁₀ | L ₅₀ | | L ₉₀ |
| Short-term Measurement 1 | 5/2/17, 10 a.m. | 5/2/17, 10:15 a.m. | 54.4 | 72.2 | 33.7 | 55.5 | 44.3 | | 37.1 |
| Short-term Measurement 2 | 5/2/17, 10:25 a.m. | 5/2/17, 10:40 a.m. | 58.9 | 73.7 | 35.3 | 62.9 | 50.4 | | 39.3 |
| L | Long-Term Measurement | | | Daytime Nighttime L _{dn} (7:00 a.m10:00 p.m. (10:00 p.m7:00 a.ı | | | | | |
| | | | | L _{eq} | L _{max} | L _{min} | L _{eq} | L _{max} | L _{min} |
| Long-term Measurement | 5/2/17, 11 a.m. | 5/3/17, 11 a.m. | 70.1 | 67.5 | 99.1 | 35.9 | 59.1 | 98.5 | 31.2 |

Refer to Exhibit 3.10-1 for ambient noise level measurement locations.

See Appendix C for detailed noise measurement data.

Source: Measurements conducted by Ascent Environmental in 2017.

3.10.2 Regulatory Framework

FEDERAL

U.S. Environmental Protection Agency Office of Noise Abatement and Control

The U.S. Environmental Protection Agency (EPA) Office of Noise Abatement and Control was originally established to coordinate Federal noise control activities. In 1981, EPA administrators determined that subjective issues such as noise would be better addressed at more local levels of government. Consequently, in 1982 responsibilities for regulating noise control policies were transferred to State and local governments. However, documents and research completed by the EPA Office of Noise Abatement and Control continue to provide value in the analysis of noise effects.

Federal Transit Administration

To address the human response to ground vibration, the Federal Transit Administration (FTA) has set forth guidelines for maximum-acceptable vibration criteria for different types of land uses. These guidelines are presented in Table 3.10-5.

Table 3.10-5 Ground-Borne Vibration Impact Criteria for General Assessment

| Land Has Catagony | GVB Impact Levels (VdB re 1 micro-inch/second) | | | | |
|---|--|--------------------------------|--------------------------------|--|--|
| Land Use Category | Frequent Events ¹ | Occasional Events ² | Infrequent Events ³ | | |
| Category 1: Buildings where vibration would interfere with interior operations. | 65 ⁴ | 65 ⁴ | 65 ⁴ | | |
| Category 2: Residences and buildings where people normally sleep. | 72 | 75 | 80 | | |
| Category 3: Institutional land uses with primarily daytime uses. | 75 | 78 | 83 | | |

Notes: VdB = vibration decibels referenced to 1 μ inch/second and based on the root mean square (RMS) velocity amplitude.

- 1. "Frequent Events" is defined as more than 70 vibration events of the same source per day.
- 2. "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.
- $^{3.}$ "Infrequent Events" is defined as fewer than 30 vibration events of the same source per day.
- 4. This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research would require detailed evaluation to define the acceptable vibration levels.

Source: FTA 2006

STATE

California Department of Transportation

In 2013, the Caltrans published its Transportation and Construction Vibration Manual (Caltrans 2013b). The manual provides general guidance on vibration issues associated with construction and operation of projects in relation to human perception and structural damage. Table 3.10-6 presents recommendations for levels of vibration that could result in damage to structures exposed to continuous vibration.

Table 3.10-6 Caltrans Recommendations Regarding Vibration Levels

| PPV (in/sec) | Effect on Buildings | | | |
|--|--|--|--|--|
| 0.4-0.6 | rchitectural damage and possible minor structural damage | | | |
| 0.2 Risk of architectural damage to normal dwelling houses | | | | |
| 0.1 Virtually no risk of architectural damage to normal buildings | | | | |
| 0.08 Recommended upper limit of vibration to which ruins and ancient monuments should be subjected | | | | |
| 0.006-0.019 | Vibration unlikely to cause damage of any type | | | |

Notes: PPV = peak particle velocity, in/sec = inches per second

Source: Caltrans 2013b: 24

LOCAL

City of Elk Grove General Plan

The project site is situated immediately south of and adjacent to residences that are located in the City of Elk Grove and the project site could be annexed into the City if approved by the Sacramento Local Agency Formation Commission in the future. The *Elk Grove General Plan* Noise Element (City of Elk Grove 2016) contains the following policies and standards related to noise. These policies are presented to determine whether the project would have any significant noise impacts based on application of the City's noise policies.

■ Policy NO-1. New development of the uses listed in Table NO-C [as shown in Table 3.10-7 of this EIR] 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 to achieve compliance with the City's noise standards.

■ 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 [as shown in Table 3.10-7 of this EIR] or the performance standards of Table NO-A [as shown in Table 3.10-8 of this EIR], an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.

- 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 [as shown in Table 3.10-8 of this EIR] as measured immediately within the property line of lands designated for noise-sensitive uses.
 - Policy NO-3 Action 1. Limit construction activity to the hours of 7 a.m. to 7 p.m. whenever such activity is adjacent to residential uses.
 - Policy NO-3 Action 2. Consider limiting the hours of operation for loading docks, trash compactors, and other noise-producing uses in commercial areas which are adjacent to residential uses.
 - Policy NO-3 Action 3. The City shall require that stationary construction equipment and construction staging areas be set back from existing noise-sensitive land uses.

Table 3.10-7 Maximum Allowable Noise Exposure from Transportation Noise Sources by Land Use Type

| Landline | Outdoor Activity Areas ¹ | Interior Spaces | |
|---|-------------------------------------|---------------------------|-----------------------------------|
| Land Use | L _{dn} /CNEL, dB | 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 | 405 | - |
| Transient Lodging | 60 4 | 45 | - |
| Hospitals, Nursing Homes | 60 ³ | 45 | - |
| Theaters, Auditoriums, Music Halls | - | - | 35 |
| Churches, Meeting Halls | 60 | - | 40 |
| Office Buildings | - | - | 45 |
| Schools, Libraries, Museums | - | - | 45 |
| Playgrounds, Neighborhood Parks | 70 | - | - |

Notes: L_{dn}= day-night average noise level; CNEL= Community Noise Equivalent Level

Source: City of Elk Grove 2016

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 designed as the outdoor activity area.

² As determined for a typical worst-case house during periods of use.

³ Where it is not possible to reduce noise in outdoor activity areas to 60 dB Ldn/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB Ldn/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.

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.

⁵ The intent of this noise standard is to provide increased protection against sleep disturbances located near railroad tracks.

Table 3.10-8 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 |

Notes:

- $1. These \, standards \, will \, apply \, generally \, to \, noise \, sources \, that \, are \, not \, tonal, \, impulsive, \, or \, repetitive \, in \, nature.$
- 2. Typical noise sources in this category would include HVAC systems, cooling towers, fans, blowers, etc.

Source: City of Elk Grove 2016

■ Policy NO-4. Where proposed non-residential land uses are likely to produce noise levels exceeding the performance standards of Table NO-A [as shown in Table 3.10-8 of this EIR] 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 as follow:

All acoustical analysis prepared pursuant to this Noise Element shall:

- A. Be the financial responsibility of the applicant.
- B. Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics.
- C. Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions and the predominant noise sources.
- D. Estimate existing and projected cumulative (20 years) noise levels in terms of L_{dn} or CNEL and/or the standards of Table NO-A [as shown in Table 3.10-8 of this EIR], and compare those levels to the adopted policies of the Noise Element.
- E. 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 which require the construction of noise barriers or structural modifications to buildings which contain noise-sensitive land uses.
- 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 which 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 [as shown in Table 3.10-7 of this EIR] 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 may be exposed to increased noise levels due to roadway improvement projects as a result of increased roadway capacity, increases in travel speeds, etc. It may not be practical to reduce increased traffic noise levels consistent with those contained in Table NO-C [as shown in Table 3.10-7 of this EIR].

Therefore, the following criteria shall be used as a test of significance for roadway improvement projects which are not directly tied to a development project:

- 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 sound walls in front yard areas to reduce noise to acceptable levels in residential areas which were originally constructed without sound walls. 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 indicated in Table NO-C [as shown in Table 3.10-7 of this EIR] and Table NO-A [as shown in Table 3.10-8 of this EIR], 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.

City of Elk Grove Municipal Code

Section 6.32.080 Exterior Noise Standards

Section 6.32.080 of the Elk Grove Municipal Code contains exterior noise standards for specific zoning districts (Table 3.10-9).

A. The following noise standards, unless otherwise specifically indicated in this chapter, shall apply to all properties within a designated noise area.

Table 3.10-9 Exterior Noise Standards

| Noise Area | City Zoning Districts | Time Period | Exterior Noise Standard (Leq) |
|---------------------------------|---------------------------|---------------------|-------------------------------|
| 1 | Advicultural Decidential | 7:00 a.m 10:00 p.m. | 55 dBA |
| l | Agricultural; Residential | 10:00 p.m 7:00 a.m. | 45 dBA |
| Source: City of Elk Grove 2017a | | | |

B. It is unlawful for any person at any location within the City to create any noise which causes the noise levels on an affected property, when measured in the designated noise area, to exceed for the duration of time set forth following the specified exterior noise standards in any one hour by:

| Cumulative Duration of the Intrusive Sound | Allowance Decibels |
|---|--------------------|
| 1. Cumulative of 30 minutes per hour | 0 |
| 2. Cumulative of 15 minutes per hour | +5 |
| 3. Cumulative of 5 minutes per hour | +10 |
| 4. Cumulative of 1 minutes per hour | +15 |
| 5. Level not to be exceeded for any time per hour | +20 |

- C. Each of the noise limits specified in subsection (B) above, shall be reduced by five dBA for impulsive or simple tone noises, or for noises consisting of speech or music.
- D. Boundary between Different Noise Areas. If the measurement location is on a boundary between two different designated noise areas, the lower noise level limit applicable to the two areas shall apply.
- E. If the ambient noise level exceeds that permitted by any of the first four noise-limit categories specified in subsection (B) of this section, the allowable noise limit shall be increased in five dBA increments in each category to encompass the ambient noise level. If the ambient noise level exceeds the fifth noise level category, the maximum ambient noise level shall be the noise limit for that category.

Section 6.32.090 Interior Noise Standards

Section 6.32.090 of the Elk Grove Municipal Code contains the following interior noise standards:

- A. In any apartment, condominium, townhouse, duplex or multiple dwelling unit it is unlawful for any person to create any noise from inside his unit that causes the noise level when measured in a neighboring unit during the periods 10:00 p.m. to 7:00 a.m. to exceed:
 - 1. 45 dBA for a cumulative period of more than five minutes in any hour;
 - 2. 50 dBA for a cumulative period of more than one minute in any hour;
 - 3. 55 dBA for any period of time.
- B. If the ambient noise level exceeds that permitted by any of the noise level categories specified in subsection (A) of this section, the allowable noise limit shall be increased in five dBA increments in each category to encompass the ambient noise level.
- C. Each of the noise limits specified in subsection (B) of this section shall be reduced by five dBA for impulsive or simple tone noises, or for noises consisting of speech or music.
- D. Boundary between Different Noise Areas. If the measurement location is on a boundary between two different designated noise areas, the lower noise level limit applicable to the two areas shall apply.
- E. If the ambient noise level exceeds that permitted by any of the first four noise-limit categories specified in subsection (B) of this section, the allowable noise limit shall be increased in five dBA increments in each category to encompass the ambient noise level. If the ambient noise level exceeds the fifth noise level category, the maximum ambient noise level shall be the noise limit for that category.

Section 6.32.100 Exemptions

- A. School bands, school athletic and school entertainment events:
- B. Outdoor gatherings, public dances, shows and sporting and entertainment events, provided said events are conducted pursuant to a license or permit by the City;

C. Activities conducted on parks, public playgrounds and school grounds, provided such parks, playgrounds and school grounds are owned and operated by a public entity or private school;

- D. Any mechanical device, apparatus or equipment related to or connected with emergency activities or emergency work; the exemption does not include permanently installed emergency generators;
- E. Noise sources associated with construction, repair, remodeling, demolition, paving or grading of any real property, provided said activities only occur between the hours of 7:00 a.m. and 7:00 p.m. when located adjacent to residential uses. Noise associated with these activities not located adjacent residential uses may occur between the hours of 6:00 a.m. and 8:00 p.m. However, when an unforeseen or unavoidable condition occurs during a construction project and the nature of the project necessitates that work in process be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work after 8:00 p.m. and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner;
- F. Noise sources associated with agricultural operations, provided such operations do not take place between the hours of 8:00 p.m. and 6:00 a.m.;
- G. All mechanical devices, apparatus or equipment which are utilized for the protection or salvage of agricultural crops during periods of adverse weather conditions or when the use of mobile noise sources is necessary for pest control;
- H. Any activity, to the extent provisions of Chapter 65 of Title 42 of the United States Code, and Articles 3 and 3.5 of Chapter 4 of Division 9 of the Public Utilities Code of the State of California preempt local control of noise regulations and land use regulations related to noise control of airports and their surrounding geographical areas, any noise source associated with the construction, development, manufacture, maintenance, testing or operation of any aircraft engine, or of any weapons system or subsystems which are owned, operated or under the jurisdiction of the United States, or any other activity to the extent regulation thereof has been preempted by State or Federal law or regulation;
- I. Any noise sources associated with the maintenance and operation of aircraft or airports which are owned or operated by the United States;
- J. Railroad Activities. The operation of locomotives, rail cars, and facilities by a railroad that is regulated by the State Public Utilities Commission:
- K. State or Federal Pre-Exempted Activities. Any activity, to the extent the regulation of it has been preempted by State or Federal law:
- L. Public Health and Safety Activities. All transportation, flood control, and utility company maintenance and construction operation at any time on public rights-of-way, and those situations that may occur on private property deemed necessary to serve the best interest of the public and to protect the public's health and well-being, including debris and limb removal, removal of damaged poles and vehicles, removal of downed wires, repairing traffic signals, repair of water hydrants and mains, gas lines, oil lines, and sewers, restoring electrical service, street sweeping, unplugging sewers, vacuuming catch basins, etc. The regular testing of motorized equipment and pumps shall not be exempt;
- M. Solid Waste Collection. Noise sources associated with the authorized collection of solid waste (e.g., refuse and garbage);
- N. Maintenance of Residential Real Property. Noise sources associated with the minor maintenance of residential real property, provided the activities take place between the hours of 7:00 a.m. and 10:00 p.m.

6.32.110 Machinery, equipment, fans and air conditioning.

It is unlawful for any person to operate any mechanical equipment, pump, fan, air conditioning apparatus, stationary pumps, stationary cooling towers, stationary compressors, similar mechanical devices, or any combination thereof in any manner so as to create any noise which would cause the maximum noise level to exceed a maximum limit of 55 dBA at any point at least one foot inside the property line of the affected residential property and three feet to five feet above ground level.

6.32.140 Prohibited activities.

- A. Construction Noise. Operating or causing the operation of tools or equipment on private property used in alteration, construction, demolition, drilling or repair work daily between the hours of 7:00 p.m. and 7:00 a.m. when located adjacent to residential uses, or between the hours of 8:00 p.m. and 6:00 a.m. when not located adjacent to residential uses, so that the sound creates a noise disturbance across a residential property line, except for emergency work of public service utilities. However, when an unforeseen or unavoidable condition occurs during a construction project and the nature of the project necessitates that work in process be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work after 8:00 p.m. and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner.
- B. Loading and Unloading Activities. Loading, unloading, opening, closing or other handling of boxes, crates, containers, building materials, garbage cans, or similar objects on private property between the hours of 10:00 p.m. and 7:00 a.m. in a manner to cause a noise disturbance.
- C. Sweepers and Associated Equipment. Operating or allowing the operation of sweepers or associated sweeping equipment (e.g., blowers) on private property between the hours of 10:00 p.m. and 7:00 a.m. in, or adjacent to, a residential zoning district.
- D. Places of Public Entertainment. Operating or allowing to be operated any loudspeaker, musical instrument, or other source of sound in any place of public entertainment that exceeds 95 dbA at any point normally occupied by a customer.
- E. Stationary Nonemergency Signaling Devices. Sounding or allowing the sounding of an electronically amplified signal from a stationary bell, chime, siren, whistle, or similar devices intended for nonemergency purposes, from a private property for more than ten consecutive seconds in any hourly period.
- F. Public Nuisance Noise. Public nuisance noise is noise that is generally not associated with a particular land use but creates a nuisance situation by reason of its being disturbing, excessive, or offensive. Examples would include excessively loud noise from alarms, animals and fowl in nonagricultural districts, horns, musical instruments, stereos, music players, televisions, vehicle or motorboat repairs and testing, and similar noise.

Sacramento County General Plan

The Noise Element of the Sacramento County General Plan (Sacramento County 2011) contains the following policies and standards related to noise that may be applicable to the project's noise relationship to adjoining areas not in the City of Elk Grove:

Table 3.10-10 Noise Standards for New Uses Affected by Traffic and Railroad Noise

| New Land Use | Sensitive ¹ Outdoor Area (L _{dn}) | Sensitive ² Interior Area (L _{dn}) | Notes |
|-----------------------------|--|---|---------|
| All Residential | 65 | 45 | 5 |
| Transient Lodging | 65 | 45 | 3, 5 |
| Hospitals and Nursing Homes | 65 | 45 | 3, 4, 5 |

Table 3.10-10 Noise Standards for New Uses Affected by Traffic and Railroad Noise

| New Land Use | Sensitive ¹ Outdoor Area (L _{dn}) | Sensitive ² Interior Area (L _{dn}) | Notes |
|---|--|---|-------|
| Theaters and Auditoriums | _ | 35 | 3 |
| Churches, Meeting Halls, Schools, Libraries, etc. | 65 | 40 | 3 |
| Office Buildings | 65 | 45 | 3 |
| Commercial Buildings | _ | 50 | 3 |
| Playgrounds, Parks, etc. | 70 | _ | - |
| Industry | 65 | 50 | 3 |

Notes:

- Sensitive areas are defined in acoustic terminology section.
- 2 Interior noise level standards are applied within noise-sensitive area of the various land uses, with windows and doors in the closed position.
- 3 Where there are no sensitive exterior spaces proposed for these uses, only the interior noise level standard shall apply.
- 4 Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
- 5 If this use is affected by railroad noise, a maximum (L_{max}) noise level standard of 70 dBA shall be applied to all sleeping rooms to reduce the potential for sleep disturbance during nighttime train passages.

Source: FTA 2006

- ▶ Policy NOI-1. The noise level standards for noise-sensitive areas of new uses affected by traffic or railroad noise sources in Sacramento County are shown by Table 1 [as shown in Table 3.10-10 of this EIR]. Where the noise level standards of Table 1 [as shown in Table 3.10-10 of this EIR] are predicted to be exceeded at new uses proposed within Sacramento County which are affected by traffic or railroad noise, appropriate noise mitigation measures shall be included in the project design to reduce projected noise levels to a state of compliance with the Table 1 [as shown in Table 3.10-10 of this EIR] standards.
- Policy NOI-5. The interior and exterior noise level standards for noise-sensitive areas of new uses affected by existing non-transportation noise sources in Sacramento County are shown by Table 2 [as shown in Table 3.10-11 of this EIR]. Where the noise level standards of Table 2 [as shown in Table 3.10-11 of this EIR] are predicted to be exceeded at a proposed noise-sensitive area due to existing non-transportation noise sources, appropriate noise mitigation measures shall be included in the project design to reduce projected noise levels to a state of compliance with the Table 2 [as shown in Table 3.10-11 of this EIR] standards within sensitive areas.
- Policy NOI-6. Where a project would consist of or include non-transportation noise sources, the noise generation of those sources shall be mitigated so as not exceed the interior and exterior noise level standards of Table 2 [as shown in Table 3.10-11 of this EIR] at existing noise-sensitive areas in the project vicinity.
- Policy NOI-7. The "last use there" shall be responsible for noise mitigation. However, if a noise-generating use is proposed adjacent to lands zoned for uses which may have sensitivity to noise, then the noise-generating use shall be responsible for mitigating its noise generation to a state of compliance with the Table 2 [as shown in Table 3.10-11 of this EIR] standards at the property line of the generating use in anticipation of the future neighboring development.

Table 3.10-11 Non-Transportation Noise Standards

| Describing Land Hee | Outdoor Area ² | | Interior ³ | |
|--|---|---|---|--|
| Receiving Land Use | Daytime (L ₅₀ /L _{max}) ¹ | Nighttime (L ₅₀ /L _{max}) ¹ | Day/Nigh t(L ₅₀ /L _{max}) ¹ | |
| All Residential | 55/75 | 50/70 | 35/55 | |
| Transient Lodging ⁴ | 55/75 | _ | 35/55 | |
| Hospitals & Nursing Homes ^{5, 6} | 55/75 | _ | 35/55 | |
| Theaters & Auditoriums ⁶ | _ | _ | 30/50 | |
| Churches, Meeting Halls, Schools, Libraries, etc. ⁶ | 55/75 | _ | 35/60 | |
| Office Buildings ⁶ | 60/75 | _ | 45/65 | |
| Commercial Buildings ⁶ | _ | _ | 45/65 | |
| Playgrounds, Parks, etc.6 | 65/75 | _ | _ | |
| Industry ⁶ | 60/80 | _ | 50/70 | |

Notes: L_{50} = noise level that occurs 50% of the time during measurement duration; L_{max} = the maximum instantaneous noise level

- 1 Standards in this table shall be reduced by 5 dBA for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the standards of this table, then the noise level standards shall be increased at 5 dBA increments to encompass the ambient.
- The primary outdoor activity area associated with any given land use at which noise-sensitivity exists and the location at which the County's exterior noise level standards are applied.
- 3 The primary outdoor activity area associated with any given land use at which noise-sensitivity exists and the location at which the County's exterior noise level standards are applied.
- 4 Outdoor activity areas of transient lodging facilities are not commonly used during nighttime hours.
- 5 Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
- 6 Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
- Where median (L₅₀) noise level data is not available for a particular noise source, average (L_{e0}) values may be substituted for the standards of this table provided the noise source in question operates for at least 30 minutes of an hour. If the source in question operates less than 30 minutes per hour, then the maximum noise level standards shown would apply.

Source: Sacramento County 2011: 15

- Policy NOI-8. Noise associated with construction activities shall adhere to the County Code requirements. Specifically, Section 6.68.090(e) addresses construction noise within the County.
- Policy NOI-13. Where noise mitigation measures are required to satisfy the noise level standards of this Noise Element, emphasis shall be placed on the use of setbacks and site design to the extent feasible, prior to consideration of the use of noise barriers.
- ▲ Policy NOI-16. The following sources of noise shall be exempt from the provisions of this Noise Element:
 - a. Emergency warning devices and equipment operated in conjunction with emergency situations, such as sirens and generators which are activated during power outages. The routine testing of such warning devices and equipment shall also be exempt provided such testing occurs during daytime hours.
 - b. Activities associated with events for which a permit has been obtained from the County.

In addition to the policies listed above, Sacramento County has established noise standards for the significant incremental increase in traffic noise in relation to transportation projects, as shown in Table 3.10-12.

| Table 3.10-12 | Significant Increase in Trans | portation Noise |
|---------------|-------------------------------|-----------------|
|---------------|-------------------------------|-----------------|

| Pre-Project Noise Environment (Ldn) | Significant Increase |
|-------------------------------------|----------------------|
| Less than 60 dBA | 5+ dBA |
| 60-65 dBA | 3+ dBA |
| Greater than 65 dBA | 1.5+ dBA |

Notes: L_{dn}= day-night average noise level

Source: Sacramento County 2011:11

Sacramento County Code

Section 6.68.070 of the Sacramento County Code contains exterior noise standards for specific zoning districts (Table 3.10-13).

Table 3.10-13 Exterior Noise Standards

| Noise Area | County Zoning Districts | Time Period | Exterior Noise Standard |
|--------------------------------|--|-------------------|-------------------------|
| 1 | RE-1, RD-1, RE-2, RD-2, RE-3, RD-3, RD-4, R-1-A, RD-5, R-2, RD-10, R-2A, | 7 a.m. to 10 p.m. | 55 dBA |
| | RD-20, R-3, R-D-30, RD-40, RM-1, RM-2, A-1-B, AR-1, A-2, AR-2, A-5, AR-5 | 10 p.m. to 7 a.m. | 50 dBA |
| Source: Sacramento County 2017 | | | |

Section 6.68.080 of the Sacramento County Code contains interior noise standards for specific zoning districts as detailed below.

- a. In any apartment, condominium, townhouse, duplex or multiple dwelling unit it is unlawful for any person to create any noise from inside his unit that causes the noise level when measured in a neighboring unit during the periods 10 p.m. to 7 a.m. to exceed:
 - 1. 45 dBA for a cumulative period of more than 5 minutes in any hour;
 - 2. 50 dBA for a cumulative period of more than 1 minute in any hour;
 - 3. 55 dBA for any period of time.
- b. If the ambient noise level exceeds that permitted by any of the noise level categories specified in subdivision (a) of this section, the allowable noise limit shall be increased in 5-dBA increments in each category to encompass the ambient noise level. (SCC 254 § 1, 1976.)

Section 6.68.090 of the Sacramento County Code provides the following exemption to its exterior noise standards:

Noise sources associated with construction, repair, remodeling, demolition, paving or grading of any real property, provided said activities do not take place between the hours of 8:00 p.m. and 6:00 a.m. on weekdays and Friday commencing at 8:00 p.m. through and including 7:00 a.m. on Saturday; Saturdays commencing at 8:00 p.m. through and including 7:00 a.m. on the next following Sunday and on each Sunday after the hour of 8:00 p.m. Provided, however, when an unforeseen or unavoidable condition occurs during a construction project and the nature of the project necessitates that work in process be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work after 8:00 p.m. and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner.

3.10.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

Construction Noise

The potential for construction activities to expose receptors to excessive noise levels was assessed based on the types of construction equipment that would be used, the noise levels typically generated by these types of equipment, the proximity of construction activity to existing receptors, and whether construction noise would be generated during noise-sensitive evening and nighttime hours. Referenced noise levels and usage factors for typical construction equipment are from FTA's *Guide on Transit Noise and Vibration Impact Assessment* methodology (FTA 2006) and FHWA's *Roadway Construction Noise Model User's Guide* (FHWA 2006).

Operational Noise

To assess potential long-term noise impacts because of project-generated increases in traffic, noise levels were estimated in using calculations consistent with the Federal Highway Administration's Traffic Noise Model Version 2.5 (FHWA 2004) and project-specific traffic data (Appendix C). The analysis is based on the reference noise emission levels for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and ground attenuation factors. Vehicle speeds on area roadways were based on existing speed limits. It should be noted that an existing-plus-project scenario was not directly provided by the traffic analysis. The existing-plus-project ADT volumes used as the basis for the traffic noise analysis were derived from the project trip generation and distribution completed for the existing, cumulative-no-project, and cumulative-plus-project scenarios examined in the traffic analysis. The same number of project-generated trips under and distribution and assignment of these trips under the cumulative condition was added to existing conditions. The comparison of the existing and existing-plus-project scenarios provides the most conservative analysis because of the logarithmic nature of sound addition because the increase in project-generated trips accounts for a larger percentage of the total trips along roadway segments in the existing scenario than in the cumulative scenario. The City of Elk Grove has the same incremental increase standards for evaluating traffic noise as the County, which are applied at noise-sensitive receptors located in both the City and the unincorporated area of the County.

The potential for long-term, non-transportation noise sources associated with development of the SOIA area to expose receptors to excessive noise levels was based on reconnaissance data, reference noise emission levels, and measured noise levels for activities and equipment associated with project operation (e.g., commercial loading docks), and standard attenuation rates and modeling techniques recommended by Caltrans (Caltrans 2013a) and the Federal Transit Administration (FTA 2006).

The significance determination of noise impacts were determined based on comparisons to applicable local noise.

THRESHOLDS OF SIGNIFICANCE

Based on the Appendix G of the State CEQA Guidelines, noise policies and standards established by the City of Elk Grove and Sacramento County, the development of the SOIA area would result in a significant impact related to noise if it would result in:

- construction-generated noise levels exposing noise-sensitive receptors in the City of Elk Grove or the unincorporated portion of Sacramento County to noise levels that exceed the respective applicable Noise Control Ordinance standards, as listed in Table 3.10-9 and Table 3.10-13, during the more noise-sensitive evening, nighttime, and early-morning hours;
- long-term, traffic-generated noise that results in exposure of noise-sensitive land uses located in the City of Elk Grove to noise levels that exceed the applicable normally acceptable noise standards for land use compatibility established by the City of Elk Grove (as listed in Table 3.10-7), or the exposure of noise-

sensitive land uses in the unincorporated portion of Sacramento County that exceed the applicable normally acceptable noise standards for land use compatibility established by Sacramento County (as listed in Table 3.10-10); or an increase in traffic noise levels at nearby noise-sensitive receptors located in the city or unincorporated part of the county that exceeds the applicable allowable noise increment standards identified in the City of Elk Grove General Plan Policy NO-6 or as listed in Sacramento County Table 3.10-12:

- ✓ long-term noise levels generated by stationary or area sources that exceed City of Elk Grove or County of Sacramento Noise Control Ordinance standards, as listed in Table 3.10-9 and Table 3.10-13;
- on-site noise levels exceeding the applicable normally acceptable noise standards for land-use compatibility (Table 3.10-7 and Table 3.10-8) as specified in the City of Elk Grove General Plan with respect to the proposed land uses;
- exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels;
- 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, expose people residing or working in the project area to excessive noise levels; or
- ✓ 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.

ISSUES NOT EVALUATED FURTHER

No major sources of vibration would be potentially constructed within the SOIA area and construction of any future development would not include vibration-intensive activities such as blasting or pile driving. This is based on the geology of the SOIA area does not require blasting activities for construction, and current suburban commercial land use types in the City of Elk Grove do not typically consist of multi-story structures that require pile-driving activities. This is supported based on the proposed City of Elk Grove General Plan Update's Draft Annexation Strategy identifying that the planning objective for the West Study Area is to create new diverse residential neighborhoods that include walkable parks, public services, and lower-intensity employment opportunities (City of Elk Grove 2017b). Thus, the project would not result in excessive vibration or vibration levels such that any receptors would be adversely affected and vibration-related impacts are not discussed further in this Draft EIR.

The project is not located within an airport land use plan, or within two miles of a public airport or public use airport. Additionally, the project is not located within two miles of a private airstrip; Borges-Clarksburg Airport is the closest airport and is located approximately 5.5 miles northwest of the project site. Thus, the project would not result in noise impacts related to the exposure of people residing or working in the project area to excessive aircraft-related noise levels. This issue is not discussed further.

IMPACT ANALYSIS

Impact 3.10-1: Construction-generated noise

Short-term construction-generated noise levels associated with the future development of the SOIA area upon annexation could expose nearby noise-sensitive receptors to noise levels that exceed applicable local standards. In addition, if construction activity were to occur during more noise-sensitive nighttime hours it could result in annoyance and sleep disruption to occupants of nearby residential land uses and substantial periodic increases in ambient noise levels. This would be a **significant** impact.

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If any future annexation request of the SOIA area is approved, construction of future development on the project site would involve noise-generating activities. Short-term construction noise levels on and near the project site would fluctuate depending on the type, number, and duration of usage for the varying heavy-duty equipment. The effects of construction noise largely depend on the type of construction activities being performed, noise levels generated by those activities, distances to noise-sensitive receptors, the relative locations of noise attenuating features such as vegetation and existing structures, and existing ambient noise levels.

Construction noise in any one area would be temporary and would include noise from activities such as excavation, site preparation, truck hauling of material, pouring of concrete, and use of power hand tools. It is not anticipated that pile driving or rock blasting would occur as part of construction. Construction noise typically occurs intermittently and varies depending on the nature of the construction activities being performed. Noise is generated by construction equipment, including excavation equipment, material handlers, and portable generators. Thus, existing and future residences, parks, agricultural uses, and commercial facilities located near areas of potential construction activity could be exposed to future construction noise from construction activity within the SOIA area, or from off-site construction activity associated with infrastructure improvements.

Noise-generating activities occurring during the more noise-sensitive evening and nighttime hours are of increased concern. Because exterior ambient noise levels typically decrease during the late evening and nighttime hours as typical levels of community activities (e.g., industrial activities, vehicle traffic) decrease, construction activities performed during the more noise-sensitive evening and nighttime hours can result in increased annoyance and potential sleep disruption for occupants of nearby residential land uses.

Based on the types of construction activities assumed for the project (e.g., paving, earth moving, trenching, structure erection) it is expected that the primary sources of noise would include backhoes, dozers, graders, excavators, dump trucks, pavers and various trucks (e.g., job trucks, water trucks, fuel trucks). Noise levels generated by common types of construction equipment are shown in Table 3.10-14.

 Table 3.10-14
 Noise Emission Levels from Construction Equipment

| Equipment Type | Typical Noise Level (dBA) @ 50 feet |
|------------------|-------------------------------------|
| Dump Truck | 76 |
| Drill Rig Truck | 79 |
| Concrete Mixer | 85 |
| Crane | 85 |
| Dozer | 85 |
| Grader | 85 |
| Excavator | 85 |
| Front End Loader | 80 |
| Paver | 89 |
| Roller | 85 |
| Scraper | 89 |

Notes: Assumes all equipment is fitted with a properly maintained and operational noise control device, per manufacturer specifications. Noise levels listed are manufacturer-specified noise levels for each piece of heavy construction equipment.

Source: FTA 2006

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Construction phasing and activity is not known at the time of writing this EIR as the project involves the amendment of the City of Elk Grove SOI boundary, and therefore, the construction-noise evaluation conservatively assumed that five of the highest noise-generating pieces of equipment could operate simultaneously near each other near the boundaries of any future project site within the SOIA area.

Based on the reference noise levels listed in Table 3.10-14 and accounting for typical usage factors of individual pieces of equipment, on-site construction-related activities could generate a combined hourly average noise level of approximately 88 L_{eq} and a maximum noise level as high as 92 L_{max} at 50 feet from the project boundary. Detailed inputs and parameters for the estimated construction noise exposure levels are provided in Appendix C.

Nearby existing noise-sensitive receptors that could be adversely affected by construction noise are shown in Table 3.10-15. The Bruceville Road residence is located in the unincorporated area of Sacramento County and the Bilby Ranch and Willard Parkway residences are located in the City of Elk Grove. The distance to, and daytime noise exposure levels at each receptor location were estimated for the closest possible construction activities (at the project boundary) and are also listed in Table 3.10-15. These values represent a conservative assessment because they do not account for any shielding provided by existing buildings and, as stated above, the modeling assumes that five of the highest noise-generating pieces of equipment could operate simultaneously near each other near the boundaries of the project site.

Table 3.10-15 Levels of Noise Exposure at Off-Site Noise-Sensitive Receptors during Typical Daytime Construction Activity

| Countities December Distance to Due | Distance to Dusingt City (fact) | Daytime Construction Noise Exp | osure Level at Sensitive Receptor ² | |
|---|---------------------------------|--------------------------------|--|--|
| Sensitive Receptor ¹ | Distance to Project Site (feet) | L _{eq} (dBA) | L _{max} (dBA) | |
| Bruceville Road Residence ⁴ | 60 | 86 | 90 | |
| Bilby Ranch Residences ^{3, 5} | 60 | 81 | 85 | |
| Willard Parkway Residences ^{3,5} | 200 | 71 | 75 | |

Notes:

- $^{\rm 1}~$ See Exhibit 3.10-1 for locations of sensitive land uses relative to the project site.
- ² Assumes all equipment is fitted with a properly maintained and operational noise control device, per manufacturer specifications. Noise levels listed are manufacturer specified noise levels for each piece of heavy construction equipment.
- ³ Accounts for 5 dBA decrease in noise levels where existing sound walls are located.
- 4 Receptor located in Sacramento County.
- ⁵ Receptor located in the City of Elk Grove.

Source: Data modeled by Ascent Environmental in 2017

As shown in Table 3.10-15, daytime construction-generated noise levels could be as high as $86 L_{eq}$ at the Bruceville Road residence, $81 L_{eq}$ at the Bilby Ranch residences, and $71 L_{eq}$ at the Willard Parkway residences. Thus, sensitive receptors located in the City of Elk Grove could experience construction-generated noise levels that exceed the City of Elk Grove daytime and nighttime exterior noise standards of $55 L_{eq}$ and $45 L_{eq}$, respectively (Table 3.10-9). Additionally, the Bruceville Road residence located in the County of Sacramento could experience construction-generated noise levels that exceed the County of Sacramento daytime and nighttime exterior noise standards of $55 L_{eq}$ and $50 L_{eq}$, respectively (Table 3.10-11). The City of Elk Grove Code, Section 6.32.100 Exemptions, exempts project construction associated noise adjacent to residential land uses during the timeframe of 7:00 a.m. and 7:00 p.m., Monday through Sunday. However, it is possible that certain construction activities would need to occur during the non-exempt and more noise-sensitive nighttime hours. For example, some foundation designs require that once the pouring of concrete begins, the pour must continue without pauses until complete. Nighttime construction activities are not exempt and would be subject to the City and County nighttime noise standards. Thus, depending on the activities being performed, as well as the duration and hours during

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which activities occur, construction generated noise levels at nearby existing or proposed residences could violate applicable noise standards. Additionally, activities occurring during the evening and nighttime hours, when people are more sensitive to noise, could result in increased levels of annoyance and sleep disruption to occupants of nearby residences. This would be a **significant** impact.

Mitigation Measure 3.10-1a: Implement construction-noise reduction measures.

At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants to comply with the following construction noise requirements. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

To minimize noise levels during construction activities, the applicant and their construction contractors to comply with the following measures during all construction work:

- Consistent with Elk Grove General Plan Policy NO-3-Action 3, all construction equipment and equipment staging areas shall be located as far as feasible from nearby noise-sensitive land uses.
- ▲ All construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturer's recommendations. Equipment engine shrouds shall be closed during equipment operation.
- Individual operations and techniques shall be replaced with quieter procedures (e.g., using welding instead of riveting, mixing concrete off-site instead of on-site) where feasible and consistent with building codes and other applicable laws and regulations.
- ▲ Consistent with Elk Grove General Plan Policy NO-3-Action 1, and to the maximum extent feasible, construction activity shall take place within the City of Elk Grove construction noise exemption timeframes (i.e., 7:00 a.m. and 7:00 p.m., Monday through Sunday). Noise associated with construction activities not located adjacent residential uses may occur between the hours of 6:00 a.m. and 8:00 p.m., Monday through Sunday.

Mitigation Measure 3.10-1b: Implement construction-noise reduction measures during noise-sensitive time periods.

At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants to comply with the following construction noise requirements. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

For all construction activity that would take place outside of the City of Elk Grove construction noise exemption timeframe when located adjacent to residential uses (i.e., 7:00 a.m. and 7:00 p.m., Monday through Sunday), and that is anticipated to generate more than 45 L_{eq}, the City shall require the applicant and their construction contractors to comply with the following measures:

- Implement noticing to adjacent landowners at least one week in advance if construction activity would take place outside of the City of Elk Grove's construction noise exemption timeframe when located adjacent to residential uses (i.e., 7:00 a.m. and 7:00 p.m., Monday through Sunday, as identified in General Plan Policy NO-3 – Action 1), and is anticipated to generate more than 45 L_{eq}.
- Install temporary noise curtains as close as feasible to noise-generating activity and that blocks the direct line of sight between the noise source and the nearest noise-sensitive receptor(s). Temporary noise curtains shall consist of durable, flexible composite material featuring a noise barrier layer bounded to sound-absorptive material on one side. The noise barrier layer shall consist of rugged, impervious, material with a surface weight of at least one pound per square foot.

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▲ Noise-reducing enclosures and techniques shall be used around stationary noise-generating equipment (e.g., concrete mixers, generators, compressors).

Operate heavy-duty construction equipment at the lowest operating power possible.

Significance after Mitigation

Implementation of mitigation measures 3.10-1a and 3.10-1b would provide substantial reductions in daytime and nighttime construction noise levels by ensuring proper equipment use; locating equipment away from sensitive land uses; and requiring the use of enclosures, shields, and noise curtains. However, construction activities could occur immediately adjacent to existing residential uses to the north, west, and east of the project area (within 60 feet), as well as adjacent to on-site residences that are constructed and inhabited before other portions of the on-site future development are complete. Although, noise reduction would be achieved with implementation of mitigation measures 3.10-1a and 3.10-1b, reductions of up to 41 dBA would be required during some of the more intensive nighttime construction (e.g., during the most intense construction periods, and during roadway construction and improvement projects) to comply with the City and County nighttime standards of 45 L_{eq} and 50 L_{eq} , respectively. Reductions of this magnitude may not be achievable under all circumstances with implementation of Mitigation Measures 3.10-1a and 3.10-1b. No other feasible mitigation is available; therefore, this impact would be **significant and unavoidable**.

Impact 3.10-2: Exposure of existing sensitive receptors to excessive traffic noise levels and/or substantial increases in traffic noise.

Future development within the SOIA area upon annexation could generate vehicle trips and result in an increase in ADT volumes on affected roadway segments and an increase in traffic source noise levels. However, existing receptors would not be exposed to traffic noise levels or traffic noise level increases that exceed applicable City of Elk Grove or Sacramento County noise standards. This impact would be **less than significant**.

Future development within the SOIA area upon annexation would generate vehicle trips and result in an increase in ADT volumes on affected roadway segments and an increase in traffic source noise levels. To analyze the impact of operational project-generated transportation noise sources, traffic noise levels under existing, and existing-plus-project conditions were modeled for affected roadway segments. For further details about traffic volumes and conditions, see Section 3.13, "Traffic, Transportation, and Circulation."

Table 3.10-16 summarizes the modeled traffic noise levels at the nearest existing off-site sensitive receptors under existing and existing-plus-project conditions, along with the overall net change in noise level as a result of the added traffic generated by development of the SOIA area. Roadway segments along which no nearby discrete noise-sensitive receptors were identified were modeled at 100 feet from the roadway centerline and analyzed using only the incremental increase standard for transportation noise. The modeling accounts for noise attenuation provided by existing sound walls, where present. The roadway segment of Bruceville Road from Bilby Road to Kammerer Road is not analyzed because of trip distribution changes associated with development of the SOIA area (extension of Kammerer Road from Bruceville Road to Hood Franklin Road) reducing the traffic volume on this roadway.

Table 3.10-16 Summary of Modeled Traffic Noise Levels under Existing and Existing -Plus-Project Conditions

| | Applicable Exterior L _{dn} | Allowable Exterior | L _{dn} at Nearest Sensitive Receptor | | |
|--|---|---|---|-------------------------------------|-----------------|
| Roadway Segment | Noise Standard for Land Uses along Roadway Segment (dBA) ^{1,2} | L _{dn} Noise Standard Increase (dBA) ⁵ | Existing-No- Project Condition | Existing-Plus- Project Condition | Change (dBA) |
| Hood Franklin Road (I-5 NB Off-Ramp to Kammerer Road) 4 | 60 | 3 | 64.9 | 66.0 | 1.1 |
| Kammerer Road (Hood Franklin Road to Willard Parkway) | 60 | NA | NA | 57.1 | NA |

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Table 3.10-16 Summary of Modeled Traffic Noise Levels under Existing and Existing -Plus-Project Conditions

| Table 3.10-10 Summary of Moc | Applicable Exterior L _{dn} Allowable Exterior | | L _{dn} at Nearest Sensitive Receptor | | |
|--|---|--|---|-------------------------------------|-----------------|
| Roadway Segment | Noise Standard for Land Uses along Roadway Segment (dBA) ^{1,2} | L _{dn} Noise Standard Increase (dBA) ⁵ | Existing-No- Project Condition | Existing-Plus- Project Condition | Change (dBA) |
| Kammerer Road (Willard Parkway to Bruceville Road) | 60 | NA | NA | 51.2 | NA |
| Kammerer Road (Bruceville Road to McMillan Road) | 60 ³ | 3 | 65.0 | 66.9 | 1.9 |
| Kammerer Road (McMillan Road to Driveway) | 65 | 5 | 58.5 | 59.4 | 0.9 |
| Kammerer Road (Driveway to Lent Ranch Parkway) ⁴ | 60 | 3 | 65.0 | 65.4 | 0.4 |
| Kammerer Road (Lent Ranch Parkway to Promenade Parkway) ⁴ | 60 | 3 | 65.0 | 65.4 | 0.4 |
| Kammerer Road (Promenade Parkway to SR 99 SB Ramps) 4 | 60 | 1.5 | 69.1 | 69.2 | 0.1 |
| Grant Line Road (SR 99 SB Ramps to SR 99 NB Ramps) 4 | 60 | 1.5 | 69.0 | 69.1 | 0.1 |
| Grant Line Road (SR 99 NB Ramps to E Stockton Boulevard) ⁴ | 60 | 1.5 | 69.0 | 69.0 | 0.0 |
| Grant Line Road (E Stockton Boulevard to Waterman Road) ⁴ | 60 | 1.5 | 69.9 | 70.0 | 0.1 |
| Grant Line Road (Waterman Road to Mosher Road) ⁴ | 60 | 1.5 | 68.5 | 68.5 | 0.0 |
| Grant Line Road (Mosher Road to Bradshaw Road) | 60 | 1.5 | 68.5 | 68.6 | 0.1 |
| Grant Line Road (Bradshaw Road to Elk Grove Boulevard) | 60 ³ | 1.5 | 71.5 | 71.5 | 0.0 |
| Willard Parkway (Bilby Road to Future Roadway Segment 2) | 60 ³ | 5 | 50.6 | 54.3 | 3.7 |
| Bilby Road (Willard Parkway to Coop Drive) | 60 ³ | 3 | 61.2 | 62.1 | 0.9 |
| Bilby Road (Coop Drive to Bruceville Road) | 60 ³ | 3 | 61.2 | 63.4 | 2.2 |
| Bruceville Road (Bilby Road to Whitelock Parkway) | 60 | 3 | 60.6 | 61.8 | 1.2 |
| Bruceville Road (Whitelock Parkway to Civic Center Drive) | 60 ³ | 3 | 61.6 | 62.2 | 0.6 |
| Bruceville Road (Civic Center Drive to Elk Grove Boulevard) | 60 ³ | 3 | 61.9 | 62.3 | 0.4 |
| Willard Parkway (Bilby Road to Whitelock Parkway) | 60 ³ | 3 | 60.7 | 62.0 | 1.3 |
| Franklin Boulevard (Whitelock Parkway to Elk Grove Boulevard) | 60 ³ | 3 | 60.3 | 60.7 | 0.4 |
| Bruceville Road (Kammerer Road to Eschinger Road) | 65 | 5 | 56.5 | 56.5 | 0.0 |
| I-5 (Laguna Boulevard On/Off Ramps to Elk Grove Boulevard On/Off Ramps) | 60 ³ | 3 | 61.1 | 61.1 | 0.0 |

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Table 3.10-16 Summary of Modeled Traffic Noise Levels under Existing and Existing -Plus-Project Conditions

| | Applicable Exterior Ldn | Allowable Exterior | L _{dn} at Nearest Se | | |
|---|---|---|-----------------------------------|-------------------------------------|-----------------|
| Roadway Segment | Noise Standard for Land Uses along Roadway Segment (dBA) ^{1,2} | L _{dn} Noise Standard Increase (dBA) ⁵ | Existing-No- Project Condition | Existing-Plus- Project Condition | Change (dBA) |
| I-5 (Elk Grove Boulevard On/Off Ramps to Hood Franklin Road On/Off Ramps) | 60 ³ | 3 | 60.1 | 60.2 | 0.1 |
| I-5 (Hood Franklin Road On/Off Ramps to Twin Cities Road On/Off Ramps) ⁴ | 65 | 1.5 | 67.9 | 67.9 | 0.0 |
| SR 99 (Bond Road On/Off Ramps to Elk Grove Boulevard On/Off Ramps) | 60 ³ | 3 | 62.7 | 62.7 | 0.0 |
| SR 99 (Elk Grove Boulevard On/Off Ramps to Grant Line Road On/Off Ramps) | 60 ³ | 3 | 63.5 | 63.5 | 0.0 |
| SR 99 (Grant Line Road On/Off Ramps to W Stockton Boulevard On/Off Ramps) | 60 ³ | 3 | 61.2 | 61.2 | 0.0 |
| SR 99 (W Stockton Boulevard On/Off Ramps to Dillard Road On/Off Ramps) | 65 | 3 | 62.0 | 62.0 | 0.0 |
| SR 99 (Dillard Road On/Off Ramps to Arno Road On/Off Ramps) | 65 | 5 | 58.2 | 58.2 | 0.0 |

Notes: L_{dn} = Day-Night Level; dBA = A-weighted decibels;

Refer to Appendix C for detailed traffic data, and traffic-noise modeling input data and output results.

Source: Noise levels modeled by Ascent Environmental in 2017

As shown in Table 3.10-16, project-generated traffic would not result in an exceedance of the City or County exterior noise compatibility standards (see Table 3.10-7 and Table 3.10-10) along any roadway segment that currently complies with City of Elk Grove and County of Sacramento exterior L_{dn} standards.

Additionally, as shown in Table 3.10-16, the addition of project-generated traffic to the surrounding roadway network would not result in any of the roadway study segments experiencing noise increases that exceed the incremental noise standards for noise-sensitive land uses (see Elk Grove General Plan Policy NO-6 and Table 3.10-12).

Therefore, existing receptors would not be exposed to traffic noise levels or traffic noise level increases that exceed applicable local noise standards. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

¹ 60 L_{dn}- Exterior Noise Standard for all residential, transient lodging, hospitals and nursing homes, and churches and meeting halls per the City of Elk Grove General Plan. See Table 3.10-7

^{2 65} L_{dn} - Exterior Noise Standard for all residential, transient lodging, hospitals and nursing homes, churches, meeting halls, schools, libraries, office buildings and industry per the County of Sacramento General Plan. See Table 3.10-10

³ Accounts for 5-dBA decrease in noise levels where existing sound walls are located.

⁴ Roadway segments along which no nearby noise-sensitive receptors were identified were modeled at 100 feet from the roadway centerline and analyzed using only the incremental increase standard for transportation noise.

⁵ Incremental traffic noise increase standard per the City of Elk Grove General Plan (see Policy NO-6) and County of Sacramento General Plan (see Table 3.10-12).

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Impact 3.10-3: Long-term operational non-transportation noise levels

The SOIA area could result in the future development of commercial land uses in proximity to existing noise-sensitive land uses. Noise sources generally associated with commercial/retail land uses include vehicular and human activity in parking lots, and loading dock and delivery activities. Existing off-site receptors could experience commercial-related noise levels that exceed the City and County's daytime and nighttime noise levels standards. This impact would be **significant**.

This impact assesses the long-term exposure of existing sensitive receptors to increased operational-source noise levels from the potential land use development scenario within the SOIA area.

The project includes development of commercial land uses as shown in Exhibit 2-4. However, the specific types of commercial uses to be developed are yet been determined. Noise generated at commercial land uses can vary substantially and can include occasional parking lot–related noise (e.g., opening and closing of vehicle doors, people talking) and loading dock operations (e.g., use of forklifts, hydraulic lifts). Noise commonly associated with commercial land uses, such as loading dock activities, including idling trucks, vehicle backup alarms, decompression of truck brakes, forklifts, and material loading and unloading activities can generate noise levels of approximately 71 Leq and 86 Lmax at a distance of 50 feet and activity at commercial and retail loading docks can occur during noise-sensitive nighttime hours. Based on these reference noise levels, the City and County's daytime exterior noise standard of 55 Leq for residential and agricultural receptors could be exceeded within approximately 205 feet from the loading dock. The County of Sacramento nighttime noise standard of 50 Leq could be exceeded within approximately 325 feet from of a loading dock, and the more stringent City of Elk Grove nighttime exterior noise standard of 45 Leq could be exceeded within approximately 500 feet from of a loading dock.

Additionally, the County's daytime noise standard of 75 L_{max} for residential receptors could be exceeded within approximately 130 feet from the loading dock and the nighttime noise standard of 70 L_{max} could be exceeded within approximately 205 feet from the loading dock.

The off-site noise-sensitive land uses nearest to potential locations of commercial land uses would include the residential dwellings located east of the project site along Bruceville Road, north of Bilby Road (Bilby Ranch), and west of Willard Parkway, and the agricultural land uses adjacent to, and south of the project site.

Based on the reference noise levels identified above, existing off-site residential and agricultural off-site receptors could be exposed to commercial-related noise levels that exceed the City and County's daytime and nighttime Leq noise standards. This would be a **significant** impact.

Mitigation Measure 3.10-3: Reduce noise exposure to existing sensitive receptors from proposed stationary noise sources.

At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants to comply with the following noise requirements in the design of the development. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

The applicant shall locate and design loading docks so that noise emissions do not exceed the applicable stationary noise source criteria (i.e., exterior daytime [7:00 a.m. to 10:00 p.m.] standards of 55 L_{eq} for receptors within the City and County, exterior nighttime [10:00 p.m. to 7:00 a.m.] standards of 45 L_{eq} for receptors within the City, and exterior nighttime [10:00 p.m. to 7:00 a.m.] standards of 50 L_{eq} for receptors within the County). At the time of approval of special permits and/or development plan review, the project applicant shall provide to the City a site-specific noise analysis to evaluate design and ensure compliance with City of Elk Grove and Sacramento County noise standards. Reduction of loading dock noise can be achieved by locating loading docks as far away as feasible from noise-sensitive land uses, constructing noise barriers between loading docks and noise-sensitive land uses, or using buildings and topographic features to provide acoustic shielding for noise-sensitive land uses. If needed, loading dock activity shall be prohibited during

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nighttime hours (i.e., 10:00 p.m. to 7:00 a.m.). This time-of-day restriction would be consistent with Section 6.32.140 Prohibited Activities of the City of Elk Grove Code, which states, "loading, unloading, opening, closing or other handling of boxes, crates, containers, building materials, garbage cans, or similar objects on private property between the hours of 10:00 p.m. and 7:00 a.m. in a manner to cause a noise disturbance," is prohibited. Additionally, as stated in City of Elk Grove General Plan, Policy NO-3 – Action 2, limiting the hours of operation for loading docks, trash compactors, and other noise-producing uses in commercial areas which are adjacent to residential uses should be considered. Final design, location, orientation and use restrictions shall be dictated by findings in the noise analysis and approved by City staff.

Significance after Mitigation

Implementation of Mitigation Measure 3.10-3 would require that loading docks are oriented, located, and designed in such a way to ensure that stationary noise sources would comply with City of Elk Grove and Sacramento County noise standards for sensitive receptors. Implementation of Mitigation Measure 3.10-3 would reduce predicted noise levels at proposed land uses consistent with City and County noise standards. With incorporation of available mitigation measures, predicted traffic noise levels at off-site sensitive land uses would not be anticipated to exceed the City and County noise standards. As a result, this impact would be reduced to a less-than-significant level.

Impact 3.10-4: Compatibility of project with on-site noise levels

Future annexation of the SOIA area could enable the development of a mix of various land uses, including residential, commercial, office, park, and school uses. Traffic and stationary noise sources near the project could expose newly developed noise-sensitive uses in the SOIA area to noise levels generated by traffic on adjacent roadways and by stationary sources that exceed applicable noise standards established by the City of Elk Grove. This impact would be **significant**.

Noise exposure to traffic noise and non-traffic noise are discussed separately below.

Exposure of New Sensitive Receptors to Traffic Noise

Noise sources associated with agricultural operations, provided such operations do not take place between the hours of 8:00 p.m. and 6:00 a.m. are exempt from City of Elk Grove Noise Control Ordinance standards (City of Elk Grove 2017). Agricultural operations are addressed in detail in Section 3.2, "Agricultural Resources." The City of Elk General Plan exterior noise standard is 60 L_{dn} for low density residential land uses and 70 L_{dn} for neighborhood parks, as shown in Table 3.10-7. The City of Elk Grove General Plan interior noise standard for low density residential is 45 L_{dn} and the City's interior noise standards for office buildings and schools is 45 L_{eq}. Land uses developed on the project site would be exposed to noise generated by traffic on adjacent roadways. Predicted traffic noise contours (in L_{dn}) for existing major roadways bordering the project site were modeled for future cumulative-plus-project conditions. The modeling was based on data contained within the project's traffic analysis found in Appendix C. Table 3.10-17 summarizes predicted distances to the 60, 65, and 70 L_{dn} contours for the major roadway segments, along Bilby Road, Bruceville Road, Willard Parkway, and Kammerer Road that would impact the potential future project land uses.

Table 3.10-17 Summary of Modeled Traffic Noise Contour Distances Under Cumulative-Plus-Project Conditions

| Doodway Codynant/Codynart Doodwiting | Distance (feet) from Roadway Centerline to L _{dn} (feet) | | |
|---|---|-----|-----|
| Roadway Segment/Segment Description | 70 | 65 | 60 |
| Existing External Roadways | | | |
| Bruceville Road (Bilby Road to Kammerer Road) | 8 | 24 | 77 |
| Bilby Road (Willard Parkway to Coop Drive) | 21 | 67 | 211 |
| Bilby Road (Coop Drive to Bruceville Road) | 52 | 166 | 524 |
| Willard Parkway (Bilby Road to Kammerer Road) | 18 | 58 | 182 |

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Table 3.10-17 Summary of Modeled Traffic Noise Contour Distances Under Cumulative-Plus-Project Conditions

| Doodway Cognant / Cognant Description | Distance (feet) from Roadway Centerline to Ldn (feet) | | |
|--|---|-----|-----|
| Roadway Segment/Segment Description | 70 | 65 | 60 |
| Potential New Roadway | | | |
| Kammerer Road (Willard Parkway to Bruceville Road) | 43 | 137 | 433 |

Notes: L_{dn} = Day-Night Level; dBA = A-weighted decibels;

For additional details, refer to Section 3.13, "Traffic, Transportation, and Circulation," and Appendix C for detailed traffic data, and traffic-noise modeling input data and output results.

The predicted noise contour distances do not account for shielding or reflection of noise from existing terrain or existing/future structures.

Source: Data modeled by Ascent Environmental in 2017

As noted in Chapter 2, "Project Description," the conceptual development plan includes a mix of land uses, including commercial, business parks, public parks, an elementary school, and residential development. Potential future residential land uses, could potentially be located within the projected 60 L_{dn} traffic noise contours. As a result, predicted noise levels at proposed residential land uses located near major roadways could exceed the City's exterior noise standard of 60 L_{dn} for residential land uses (see Table 3.10-7). As shown on the conceptual land use plan in Exhibit 2-4, the potential future public parks would not be located within the projected 70 L_{dn} traffic noise contours. However, the location of the park uses have yet to be determined and could be located within the 70 L_{dn} traffic noise contours of surrounding major roadways (Bilby Road, Bruceville Road, Willard Parkway, and the future extension of Kammerer Road).

Based on the modeled traffic noise levels, and given that new commercial buildings typically provide an exterior-to-interior noise reduction of 30 to 35 dBA (Caltrans 2002:7-37), exterior noise levels of the potential commercial, office, and school buildings would need to be at least 75 L_{eq} for office and school land use interior noise standard of 45 L_{eq} to be exceeded. Table 3.10-18 summarizes predicted distances to the 75 L_{eq} contours for the major roadway segments, along Bilby Road, Bruceville Road, Willard Parkway, and Kammerer Road that would adversely affect the potential future project land uses.

Table 3.10-18 Summary of Modeled Lea Traffic Noise Contour Distances Under Cumulative-Plus-Project Conditions

| Deadury Coment / Coment Description | Distance (feet) from Roadway Centerline to Leq (dBA) | | |
|--|--|--|--|
| Roadway Segment/Segment Description | 75 | | |
| Existing External Roadways | | | |
| Bruceville Road (Bilby Road to Kammerer Road) | 38 | | |
| Bilby Road (Willard Parkway to Coop Drive) | 3 | | |
| Bilby Road (Coop Drive to Bruceville Road) | 8 | | |
| Willard Parkway (Bilby Road to Future Roadway Segment 2) | 13 | | |
| Potential New Roadways | | | |
| Kammerer Road (Willard Parkway to Bruceville Road) | 76 | | |
| | | | |

Notes: L_{dn} = Day-Night Level; dBA = A-weighted decibels;

For additional details, refer to Section 3.13, "Traffic, Transportation, and Circulation," and Appendix C for detailed traffic data, and traffic-noise modeling input data and output results.

Source: Data modeled by Ascent Environmental in 2017

As shown in Table 3.10-18, the projected 75 L_{eq} traffic noise contours would extend up to 76 feet into the SOIA area. As a result, predicted noise levels at newly developed commercial and/or school land uses located within these noise contours could potentially exceed the City's interior noise standard of 45 L_{eq} (see Table 3.10-7).

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Exposure of New Sensitive Receptors to New Stationary Noise Sources

The City's daytime and nighttime stationary-source noise standards for noise sensitive land uses are based on exterior noise standards of 55 and 45 L_{eq}, respectively.

Proposed Commercial Land Uses

On-site commercial uses, as shown on the proposed land use plan, could be located directly adjacent to residential uses proposed within the SOIA area. Noise generated at commercial land uses can vary substantially and can include occasional parking lot–related noise (e.g., opening and closing of vehicle doors, people talking) and loading dock operations (e.g., use of forklifts, hydraulic lifts). Noise commonly associated with commercial land uses, such as loading dock activities, including idling trucks, vehicle backup alarms, decompression of truck brakes, forklifts, and material loading and unloading activities can generate noise levels of approximately 71 L_{eq} and 86 L_{max} at a distance of 50 feet and activity at commercial and retail loading docks can occur during noise-sensitive nighttime hours. Based on these reference noise levels, the City of Elk Grove daytime exterior noise standard of 55 L_{eq} for residential and agricultural receptors could be exceeded within approximately 205 feet from the loading dock. The City of Elk Grove nighttime exterior noise standard of 45 L_{eq} could be exceeded within approximately 500 feet from of a loading dock.

Thus, the operational noise levels associated with commercial land uses could potentially exceed the City's maximum allowable exterior noise standards at future on-site noise-sensitive receptors, particularly those residences proposed for construction adjacent to and surrounding the proposed commercial land uses, and the proposed nearby elementary school. In addition, increases in single-event noise levels, such as backup alarms from material delivery trucks, occurring during evening and nighttime hours could result in increased levels of disturbance and sleep disruption to occupants of nearby on-site residential dwellings.

Thus, considering the project's close proximity to proposed sensitive receptors, it is possible that new proposed commercial loading docks or new parking lots could exceed the City of Elk Grove's hourly daytime and nighttime allowable noise levels.

Summary

Predicted traffic noise levels at proposed residential, commercial, elementary school, and potential park uses located near Bilby Road, Bruceville Road, Willard Parkway, and Kammerer Road could exceed the City's applicable interior and exterior noise standards. Additionally, the noise generated by any future commercial land uses within the SOIA area could result in the City's noise standards being exceeded sensitive receptors because of the new stationary-source generated noise level on the project site. As a result, this impact would be **significant**.

Mitigation Measure 3.10-4a: Reduce transportation noise exposure to new on-site noise-sensitive receptors

At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants to comply with the following noise requirements in the design of the development. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

For new noise-sensitive receptors developed on the SOIA site and located within 77 feet of the centerline of Bruceville Road, within 211 feet of the centerline of Bilby Road between Willard Parkway and Coop Drive, within 524 feet of the centerline of Bilby Road between Coop Drive and Bruceville Road, within 182 feet of the centerline of Willard Parkway, or within 433 feet of the centerline of Kammerer Road between Willard Parkway and Bruceville Road (i.e., the distance from the centerline that is estimated, based on the noise modelling, to result in exceedance of the City of Elk Grove exterior noise compatibility standard of 60 L_{dn} for low density residential), the following design criteria shall be adhered to:

■ Where feasible, locate new sensitive receptors such that the primary outdoor activity area (e.g., backyard, balcony, or porch) is on the opposite side of the structure from major roadways such that the structure itself would provide a barrier between transportation noise and the primary outdoor activity area.

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▲ Locate new sensitive receptors such that buildings/structures are located between the sensitive land use and nearby major roadways.

▲ Setback sensitive receptors from major roadways sufficient distance to ensure they will not be exposed to noise levels that exceed the City of Elk Grove's exterior noise compatibility standard of 60 Ldn for lowdensity residential land uses.

Consistent with City of Elk Grove General Plan, Policy NO-8, if, and only if, implementation of the above measures does not reduce transportation-related noise levels to comply with the City of Elk Grove exterior noise compatibility standard of 60 L_{dn} for low-density residential and 70 L_{dn} school uses, and City of Elk Grove interior noise compatibility standards of 45 L_{eq} for office and school uses, then as part of improvement plans for land uses along Bilby Road, Bruceville Road, Willard Parkway, and Kammerer Road, landscaped noise barriers that demonstrate compliance with City noise standards (interior and exterior) shall be implemented.

Mitigation Measure 3.10-4b: Reduce noise exposure to proposed sensitive receptors from proposed stationary noise sources.

At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants to comply with the following noise requirements in the design of the development. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

The applicant shall locate and design loading docks so that noise emissions do not exceed the applicable stationary noise source criteria (i.e., exterior daytime [7:00 a.m. to 10:00 p.m.] standards of 55 Leq for receptors, and exterior nighttime [10:00 p.m. to 7:00 a.m.] standards of 45 Leg for receptors, within the City of Elk Grove). At the time of approval of special permits and/or development plan review, the project applicant shall provide to the City a site-specific noise analysis to evaluate design and ensure compliance with City of Elk Grove and Sacramento County noise standards. Reduction of loading dock noise can be achieved by locating loading docks as far away as feasible from noise-sensitive land uses, constructing noise barriers between loading docks and noise-sensitive land uses, or using buildings and topographic features to provide acoustic shielding for noise-sensitive land uses. If needed, loading dock activity shall be prohibited during nighttime hours (i.e., 10:00 p.m. to 7:00 a.m.). This time-of-day restriction would be consistent with Section 6.32.140 Prohibited Activities of the City of Elk Grove Code, which states, "loading, unloading, opening, closing or other handling of boxes, crates, containers, building materials, garbage cans, or similar objects on private property between the hours of 10:00 p.m. and 7:00 a.m. in a manner to cause a noise disturbance," is prohibited. Additionally, as stated in City of Elk Grove General Plan. Policy NO-3 - Action 2, limiting the hours of operation for loading docks, trash compactors, and other noise-producing uses in commercial areas which are adjacent to residential uses should be considered. Final design, location, orientation and use restrictions shall be dictated by findings in the noise analysis and approved by City staff.

Significance after Mitigation

Implementation of Mitigation Measure 3.10-4b would require all stationary noise sources to be oriented, located, and designed in such a way that reduces noise exposure to ensure that noise-sensitive receptors developed on the SOIA site would not be exposed to stationary-source noise that exceeds applicable City of Elk Grove noise standards. Implementation of mitigation measures 3.10-4a and 3.10-4b would reduce predicted noise levels at proposed land uses consistent with City noise standards. With incorporation of available mitigation measures, such as noise barriers, landscaped berms, building orientation and noise insulation building measures, predicted traffic noise levels at on-site residential land uses would not be anticipated to exceed the City noise standards. As a result, this impact would be reduced to a **less-than-significant** level.

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3.11 POPULATION AND HOUSING

This section describes the existing population and housing conditions on the site and its surrounding area. Descriptions and analysis in this section are based on information provided by the Elk Grove General Plan, the California Department of Finance (DOF), and the Sacramento Area Council of Governments (SACOG). The analysis includes a description of the methods used for assessment, as well as the potential direct and indirect impacts of project implementation.

Comments regarding growth inducement were received in response to the notice of preparation. This issue is addressed in this section.

3.11.1 Environmental Setting

POPULATION

The City of Elk Grove's total population has increased from 72,665 at its incorporation in 2000 to 171,059 in 2016, an increase of 135 percent, or about 5.5 percent annually (City of Elk Grove 2014; DOF 2017). According to the City, rate of growth occurred as a result of an increase in available jobs in the Sacramento region and the land that was made available in Elk Grove for residential development, as well as the annexation of the Laguna West-Lakeside Census Designated Place, which added 25,000 residents (City of Elk Grove 2014). Most the residential growth in the last decade occurred west of State Route 99. As of 2016, it was estimated that the city is almost 76 percent built-out in terms of residential uses (SACOG 2016). The City's population is expected to increase to 210,084 by 2036, an increase of 23 percent (SACOG 2016).

HOUSING

According to DOF, the total number of housing units in the City of Elk Grove was 53,829 in 2017, with an average household size of 3.29 persons per unit, compared to 2.82 countywide in Sacramento County (DOF 2017). Approximately 90 percent of these housing units were attached and detached single-family houses, compared to 71 percent countywide (DOF 2017).

SACOG estimates that the total number of housing units in the City of Elk Grove will be 65,282 by 2036 (SACOG 2016), a projected increase of 21 percent.

EMPLOYMENT

As of 2013, the City of Elk Grove has 44,806 jobs at 8,710 businesses (City of Elk Grove 2016). City job annual growth rate between 2000 and 2013 was 8.7 percent, with the following business types having the largest increases in employment between 2009 and 2013:

- ▲ Education services, health care, and social services: 4,353
- ▲ Retail: 1,923
- ▲ Administrative and waste services: 1,675
- ▲ Professional, scientific, and technical services: 702
- Accommodation and food services: 610 (City of Elk Grove 2016)

The SACOG 2036 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) projects that the City will have 50,865 jobs by the year 2036 and 55,966 jobs at build out (SACOG 2016).

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JOBS/HOUSING BALANCE

The jobs/housing balance is defined as the ratio of the number of jobs to the number of housing units in an area. Jobs and housing are balanced when there are an equal number of employed residents and jobs in an area, with a ratio of approximately 1.0. The City of Elk Grove has estimated that its current jobs/housing ratio is 0.84 and would be 1.25 at build out of its current General Plan. The SACOG 2036 MTP/SCS projects the City's job/housing ratio will be 0.80 by the year 2036 and 1.04 at build out (SACOG 2016).

3.11.2 Regulatory Framework

STATE

State California Environmental Quality Act Guidelines Section 15131

State CEQA Section 15131 provides that economic or social information may be included in an EIR, but those economic or social effects shall not be considered significant effects on the environment. In an EIR, the lead agency is responsible for researching economic or social changes resulting from a project, which may eventually lead to physical changes in the environment. These economic or social changes can be used to determine the significance of physical changes on the environment.

Government Code Section 65040.12

Government Code Section 65040.12 (e) defines environmental justice as: "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws and policies."

Cortese-Knox-Hertzberg Local Government Reorganization Act

The Cortese-Knox-Hertzberg Local Government Reorganization Act Section 56668(o) defines environmental justice as the fair treatment of people of all races, cultures, and incomes with respect to the location of public facilities and the provision of public services. Environmental justice addresses issues concerning whether an activity could expose minority or disadvantaged populations to proportionately greater impacts compared with those borne by other individuals.

Senate Bill 244, Disadvantaged Unincorporated Communities

In 2011, Senate Bill (SB) 244 was enacted, resulting in changes to the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Cortese-Knox-Hertzberg Act). LAFCos are now required to deny any application to annex to a city territory that is contiguous to a disadvantaged unincorporated community unless a second application is submitted to annex the disadvantaged community as well and LAFCos are required to evaluate disadvantaged unincorporated communities in a municipal service review. SB 244 defines "disadvantaged unincorporated community" as any area with 12 or more registered voters where the median household income is less than 80 percent of the statewide annual median.

No disadvantaged unincorporated communities are located on or contiguous to the project site (or "SOIA area") (Sacramento LAFCo 2016: Exhibit 3.11-2).

LOCAL

The project site lies within the jurisdictional boundaries of Sacramento County; therefore, the County's policies, as well as the Sacramento LAFCo's polices, would apply. Furthermore, if the SOIA is approved, it would likely lead to annexation to the City of Elk Grove. Thus, applicable policies of the City of Elk Grove's General Plan are described below.

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Sacramento LAFCo Policy, Standards, and Procedures Manual

Sacramento Local Agency Formation Commission (LAFCo) has developed standards and guidelines in its Plans, Policies, and Procedures Manual that aid in the implementation of the Cortese-Knox-Hertzberg Act (described in Section 3.9, "Land Use"). According to Standard F.4 in Chapter IV, Section F, a project would have substantial growth-inducing potential if it would:

- extend a major roadway into an undeveloped area;
- extend a sewer trunk line to a substantial area not currently served;
- extending water service to a substantial area not currently served;
- provide electric service to a substantial area not currently served;
- provide or require 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 project;
- provide any other public service or facility to a substantial area which could not grow without such service; and
- encourage or foster growth in a substantial area.

Sacramento Area Council of Governments' Blueprint

The Sacramento Area Council of Governments (SACOG) is an association of local governments in the six-county Sacramento Region that includes the City of Sacramento. SACOG provides transportation planning and funding for the region, prepares the region's long-range transportation plan, approves the distribution of affordable housing in the region, and assists in planning for transit, bicycle networks, and airport land uses. The Blueprint Project was a regional effort by SACOG to build a consensus around a long-term vision for the growth and development of the Sacramento region. The Blueprint was adopted by the SACOG Board of Directors in December 2004 and is a voluntary framework for guiding future growth in the region. The Blueprint is not a policy document and does not regulate land use or approve or prohibit growth in the region. The Blueprint is intended by SACOG to be advisory and to guide the region's transportation planning and funding decisions (such as the development of the MTP/SCS). The SOIA area is identified as a growth area under the Blueprint.

Sacramento Area Council of Government's Metropolitan Transportation Plan/Sustainable Communities Strategy

In 2016, the SACOG approved the 2036 MTP/SCS, which is a regional transportation plan and land use strategy designed to support good growth patterns, including:

- ▲ inwardly-focused growth and improved economic viability of rural areas;
- a transportation system that delivers cost- effective results and is feasible to construct and maintain;
- effective connections between people and jobs;

The MTP/SCS built on the foundation provided by the Blueprint project and includes a land use strategy to improve mobility and reduce travel demand from passenger vehicles by prioritizing compact and transit-oriented development, reducing the growth in vehicle miles traveled (VMT) and associated greenhouse gas emissions. The MTP/SCS also includes projections for the location of growth within the region, between jurisdictions and among housing place types (i.e., infill and greenfield development). The 2016 MTP/SCS maps

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show the SOIA area as "Blueprint Growth Footprint Not Identified for Development in the MTP/SCS Planning Period." The 2016 MTP/SCS includes no growth projections for the SOIA area for 2036 (SACOG 2016).

Sacramento County General Plan

The current County of Sacramento General Plan, titled Sacramento County General Plan of 2005–2030 (2030 General Plan), was adopted on November 9, 2011. The Sacramento County General Plan provides an inventory of land supply within the County, and projects the amount and location of land and density, and intensity of development that will be required to accommodate future populations and economic growth through 2030.

The following policies and actions from the Land Use Element of 2030 General Plan apply to the SOIA.

- Policy LU-2. The County shall maintain an Urban Service Boundary that defines the long-range plans (beyond twenty five years) for urbanization and extension of public infrastructure and services, and defines important areas for protecting as open space and agriculture.
- Policy LU-12. The County will prohibit land use projects which are not contiguous to the existing UPA, city boundaries, or existing planned communities or master plan areas (i.e. leapfrog development).
- Policy LU-111. Annexations should only be advocated which:
 - ensure provisions and demonstrate maintenance for adequate municipal services;
 - are consistent with state law and LAFCO standards and criteria;
 - provide for equitable distribution, based on region-wide analysis, of social services and low income housing needs; and
 - preserve community identity.

City of Elk Grove General Plan

Approval by LAFCo of this SOIA does not authorize any change in land use or governance. However, the project would adjust the City of Elk Grove's sphere of influence 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 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.

The following policies and actions from the Housing, Economic Development, and Land Use Elements of the City of Elk Grove General Plan. The reader is referred to Section 3.9, "Land Use," for a detailed description of the proposed City of Elk Grove General Plan Update.

- 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-12: Encourage the development of a variety of housing in order to maintain a diverse housing stock intended for all levels of income.

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■ Policy ED-1: Strive to establish a balanced mix of commercial, office and industrial businesses to the City to ensure a variety of employment and business opportunities.

- Policy ED-7: Maximize the use of non-residential land for employment -generating and revenuegenerating uses.
- Policy ED-9: Provide sufficient land for business expansion and attraction of new employers that utilize the City's existing labor pool.
- Policy LU-9: 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.
- ▲ Policy LU-13: 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 Prezoning and a plan for infrastructure financing and phasing;
 - Annexations should:
 - 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 environment al integrity, and providing for social equity.
 - Promote fiscally sound, efficient service boundaries.

3.11.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

Impacts on population and housing were assessed by reviewing existing and anticipated population and housing projections provided by the Elk Grove General Plan, DOF, and SACOG. The project's impacts were evaluated by determining their consistency with these estimates and projections. For further discussion of growth inducing effects, see Chapter 5, "Other CEQA Considerations."

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines and the Cortese-Knox-Hertzberg Local Government Reorganization Act, a population and housing impact would be significant if implementation of the project would do any of the following:

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■ 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);

- displace substantial numbers of existing homes, necessitating the construction of replacement housing elsewhere;
- displace substantial numbers of people, necessitating the construction of replacement housing elsewhere; or
- ✓ result in adverse effects or impacts that are appreciably more severe in magnitude or are predominately borne by low-income and minority populations or unincorporated disadvantage communities.

ISSUES NOT EVALUATED FURTHER

If approved, the SOIA would change a policy boundary, placing a portion of land that is currently subject to the jurisdiction of Sacramento County within the City of Elk Grove's sphere of influence. This would not affect the current land use jurisdiction. This boundary change would not displace either housing or people. There is no impact related to replacing substantial numbers of existing homes or substantial numbers of people as the SOIA area contains minimal housing (10 dwelling units); therefore, this topic is not discussed further.

The SOIA area and surrounding areas do not contain low-income and/or minority populations or unincorporated disadvantage communities (Sacramento LAFCo 2016: Exhibit 3.11-2). As shown in Exhibit 2-2, the SOIA area and land areas to the south and east consists of agricultural lands and open space. Therefore, there is no impact and this topic is not discussed further.

IMPACT ANALYSIS

Impact 3.11-1: Induce substantial population growth.

The SOIA could indirectly induce substantial population growth through removing an obstacle to future annexation of the SOIA area and development. This would be a **significant** impact.

The proposed SOIA does not include the construction of new houses 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. The project would not include any new roadways, sewer lines, water service, electric service, or additional public facilities.

However, expansion of the City's sphere of influence could remove a policy obstacle to future development of the project site. The proposed SOIA may indirectly affect population growth in the project site through the potential for future urbanization of the SOIA area. 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.

Implementing the proposed SOIA would provide a potential area for growth. Approval of the proposed SOIA would not require development of the SOIA area, but would allow for the City of Elk Grove to plan for and guide development in that area in consultation with the County and future developers. The SOIA would "square off" the City sphere of influence along the future extension of Kammerer Road. While the SOIA is likely to induce population growth inside of the SOIA area, it may induce or encourage population growth in the neighboring unincorporated area through additional SOIA requests. Any growth outside of the SOIA area would require its own LAFCo SOIA and environmental review outside of this SOIA process. As described previously, this area was assumed for future development by both Sacramento County and SACOG.

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Sacramento County included this area within their USB under the County's General Plan, indicating that it was appropriate to allow for development needing urban services in this area. The reader is referred to Section 3.9, "Land Use," for a further discussion of the Sacramento County General Plan and the USB. SACOG included this area in their growth footprint; however, it was assumed that the SOIA area would not develop in the current MTP/SCS Planning Period.

Nevertheless, the conceptual land use plan for Bilby Ridge SOIA Area shows a potential for 1,846 dwelling units; 5,540 residents; and 4,359 employees. This growth potential would be approximately 15 percent of the total growth expected to occur for the City of Elk Grove between the years 2020 and 2036. The project would have a jobs/housing ratio of 2.36 that would assist in current City planning efforts to improve the City's jobs/housing balance. Therefore, it is reasonably foreseeable that the approval of the SOIA would result in substantial population growth. The potential impacts related to substantial population growth is **significant**.

The physical environmental impacts associated with a substantial increase in population are described throughout the other sections of this EIR.

Mitigation Measures

There are no feasible mitigation measures available to address this impact. The only means to address this impact would be to deny the SOIA.

Significance after Mitigation

Mitigation presented throughout this EIR addresses directly the environmental issues associated with future development. The purpose of the project itself is to provide for consideration of future annexation of the SOIA area and future development of housing and employment opportunities, consistent with the applicable contemporary regulatory setting. There is no feasible mitigation to reduce this growth inducement impact to a less-than-significant level without changing the purposes of the project (planning for future growth needs of the City of Elk Grove). The impact is **significant and unavoidable**.

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3.12 PUBLIC SERVICES AND RECREATION

This section describes the existing public services and facilities, including fire protection, law enforcement, public schools, parks and recreation, and potential effects attributable to the project. Impacts are evaluated in relation to the actions needed to provide the services that could potentially lead to adverse physical environmental effects. Mitigation measures are recommended to address impacts determined to be significant or potentially significant.

There was one comment received during the notice of preparation (NOP) scoping process regarding school siting near agricultural resources. No potential school site or land uses would be approved for construction under this project. Future development of the potential school site would be required to meet all siting requirements (including setbacks from hazards) of the California Department of Education.

3.12.1 Environmental Setting

This section describes the existing public services near the project site (or SOIA area). Descriptions and analysis in this section are based on information provided by the City of Elk Grove General Plan and General Plan EIR, the Cosumnes Community Services District, the City of Elk Grove, the County of Sacramento General Plan and General Plan EIR, the Municipal Services Review prepared for the SOIA area, aerial photographs, and applicable state laws.

FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES

Fire protection, fire prevention, life safety and emergency services in this area of the County of Sacramento are provided by the Cosumnes Community Services District (CCSD) and the Sacramento Metropolitan Fire District (SMFD) (City of Elk Grove 2016a). The Sacramento Fire EMS Communication Center dispatches all fire agencies in Sacramento County. CCSD is the primary fire protection and emergency medical response service within the SOIA area. SMFD, the City of Sacramento Fire Department (SFD), and the CCSD share common jurisdictional boundaries and participate in a regional automatic/mutual aid agreement. The CCSD Fire Department also has a mutual aid agreement with the surrounding volunteer fire districts in southern Sacramento County, including Wilton, Courtland, Walnut Grove, and Herald Fire Districts. As a result of the existing automatic and mutual aid agreements, the closest unit available is dispatched to an incident and fire district boundaries are not an issue when an incident occurs (Local Agency Formation Commission [LAFCo] 2016).

The Bilby Ridge site is within the CCSD service boundary. The Fire Department is headquartered at 10573 East Stockton Boulevard, Elk Grove. The CCSD provides fire protection, fire prevention, and emergency medical, rescue and transportation services to the cities of Elk Grove and Galt, as well as unincorporated areas in the region covering over 157 square miles. The CCSD Fire Department operates out of eight fire stations: six in the Elk Grove area and two additional stations in the City of Galt, including a state-of-the-art fire training facility. The closest fire stations to the SOIA area are Station 72 or Station 74, at 10035 Atkins Drive and 6501 Laguna Park Drive, respectively. Station 72 is located approximately 1.3 miles north and Station 74 is located approximately 4.4 miles north of the project site.

Service Response

CCSD 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 Type 1 engine companies, one ladder truck company, seven ambulances, and a command vehicle each day on a 24-hour basis. The department

also operates eight Type III fire 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, a mass decontamination trailer, a mass casualty incident trailer, a swift water rescue boat, and two flood boat response trailers containing eight boats total (LAFCo 2016).

The department provides ambulance transportation and pre-hospital care for the portions of the unincorporated area of Sacramento County and the cities of Elk Grove and Galt. The department employs over 80 paramedics and 47 emergency medical technicians. The department's seven full-time ambulances are staffed and operate 24 hours per day. Three additional fire stations have been designated by the CCSD and the City within the SOIA area as follows:

- Station 77 is designated to be near the intersection of Poppy Ridge Road and Big Horn Boulevard;
- Station 78 is designed to be in the Sterling Meadows subdivision, approximately one-half mile north of Kammerer Road and just east of the future Lotz Parkway alignment; and
- ▲ Station 79 is designated to be near the intersection of Bradshaw Road and Grant Line Road.

The Fire Prevention Bureau is staffed by the Fire Marshal, five Fire Inspectors, and one Public Education Officer. The Bureau provides four primary services to the community including plan review and construction inspection, periodic inspection of buildings and hazardous processes, fire investigation, and public education (LAFCo, 2016).

Service Standards

CCSD is currently handling more emergency response calls than the state average, because of substantial growth, and increases in traffic volumes and traffic congestion. CCSD has established a response time goal of arriving on scene in seven minutes or less of a 911 call, 90 percent of the time (LAFCo 2016).

The Insurance Services Office (ISO) rating is the recognized classification for a fire department or district's ability to defend against major fires. A rating of 10 generally indicates no protection, whereas an ISO rating of 1 indicates high firefighting capability. The proposed SOIA area is considered "unwatered." 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 "build-out" exceeds 20 percent of the planned area. The project site is not currently equipped with hydrants, but would be required to do so as a condition in the event of subsequent development approval (LAFCo 2016).

LAW ENFORCEMENT

Sacramento County Sheriff's Department

The Sacramento County Sheriff's Department provides specialized law enforcement services to both the incorporated and unincorporated areas and local police protection to the unincorporated area and City of Rancho Cordova. Specialized law enforcement includes: providing court security services, operating a system of jails for pre-trial and sentenced inmates, and operating a training complex. Local police protection includes: response to calls and trouble spots, investigations, surveillance, and routine patrolling. Services are generally provided through patrol units consisting of a patrol car and deputy sheriff. The Sheriff's Department operates several facilities, including a headquarters building, main jail, the Rio Cosumnes Correctional Center, five station houses, ten community service centers, a training academy, firearms training facility, marine enforcement detail, and an air support bureau (Sacramento County 2010:4-4).

City of Elk Grove Police Department

Police protection in the City of Elk Grove is provided by the Elk Grove Police Department, which operates from headquarters on 8400 Laguna Palms Way. The department is comprised of the Field Services Division, Investigative Services Division, and Support Services Division. The Field Services Division provides essential

police services to the community and is the largest division within the department. Three Lieutenants are assigned as Watch Commanders who coordinate the organization, staffing, and operational activities for the Field Services Division. There are 140 sworn officers and 86 professional personnel in the department's workforce. The City of Elk Grove has been divided into five beats. Officers are assigned to a beat each year, enabling them to build relationships within the community, address potential crime-related problems, and engage in community-oriented policing within their beat (City of Elk Grove Police Department [EGPD] 2016a).

The City of Elk Grove experienced a decrease in most crime categories from 2015 to 2016; however, finalized crime data for the year is not available at the time of this writing. In 2015, the Department reported a total of 3,706 crimes (EGPD 2016b). Average response times to Priority 1 calls (in-progress felony, in-progress crime against person, or an incident where there is a high risk for harm against a person) was 5.3 minutes in 2016, with 57 percent of those calls receiving a response within 5 minutes (EGPD 2016a).

PUBLIC SCHOOLS

The Bilby Ridge site is located within the Elk Grove Unified School District (EGUSD), which is the fifth largest school district in California based upon student population. The district operates 40 elementary schools, nine comprehensive high schools, nine middle schools, four alternative education schools – including a virtual academy, a special education school, an adult education program, and a dependent charter school. Two additional elementary schools will be opening in the 2017-2018 school year (EGUSD 2017). Schools near the SOIA area include Franklin Elementary School, Toby Johnson Middle School, and Franklin High School. These schools are currently at or over capacity (EGUSD 2016).

EGUSD is known for the high quality of its schools, which consistently perform well in standardized tests. Growth in the district's service area in recent years has resulted in the need to add substantial new capacity, both at new schools and at existing schools. A recent *School Needs Facilities Analysis* (March 2017) released by EGUSD indicates that approximately 8,400 new residential units are projected within the district boundaries by 2021-2022 school year, which would result in approximately 3,906 new elementary school students, 1,068 new middle school students, and 1,946 new high school students. Upon adjusting for facilities capacity, approximately 3,216 elementary school students, 886 middle school students, 1,614 high school students, and 146 Severe Special Day Class students could not be accommodated by current facilities (EGUSD 2017).

Franklin Elementary School is located at 4011 Hood-Franklin Road and serves pre-kindergarten through sixth grade students. Franklin Elementary School was completed in 1995 and has 29 classrooms, a library, multipurpose room, cafeteria, playfields, and hard courts. EGUSD is projecting the construction of approximately 5,500 new homes within the school's current attendance area by 2025. As a result, the residing TK-6 general education student population is projected to increase by approximately 1,900 students and to exceed the school's traditional and multi-track year-round calendar capacities by 2025 (EGUSD 2016).

Toby Johnson Middle School is located at 10099 Franklin High Road and serves middle-school students. Toby Johnson Middle School was completed in 2002 and has 48 classrooms. Due to overcrowding, Toby Johnson Middle School was closed to intra-district transfers and open enrollment students. EGUSD does not project new housing within the school's current attendance area by 2025; however, enrollment is anticipated to increase by 120 students and continue to exceed the school's capacity (EGUSD 2016).

Franklin High School is located at 6400 Whitelock Parkway and serves high school students. Franklin High School was completed in 2002 and has 90 classrooms. Due to overcrowding at Franklin High School, it was closed to intra-district transfers and open enrollment students. EGUSD does not project new housing within the school's current attendance area by 2025; however, enrollment is anticipated to increase by 300 students and continue to exceed the school's capacity (EGUSD 2016).

Solutions presented in the *Facilities Masterplan 2010-2025* prepared by the District include constructing new schools and/or adjusting attendance boundaries. Changing to a multi-track year-round calendar or other measures may also be necessary (EGUSD 2016).

PARKS AND RECREATION

Cosumnes Community Services District

CCSD provides parks and recreation to the City of Elk Grove, as well as unincorporated areas in the region. CCSD currently operates 94 parks, two community centers, four recreation centers, 18 miles of trains, and two aquatic complexes. CCSD also provides many recreation programs and activities to residents within the district (CCSD 2017). CCSD has established a Parks Master Plan to plan for future parks and recreational facilities through 2025. 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. CCSD is active in planning and constructing park sites and recreational facilities to meet service demands and strives to achieve the goal of 5 acres per 1,000 residents (CCSD 2009). The closest park to the SOIA area is Backer Park, which is approximately 10.5 acres located north of Bilby Road. There are six additional parks located within approximately 2 miles north and east of the project site (CCSD 2017).

The City of Elk Grove and the CCSD have entered into a memorandum of agreement for the development and operation of new parks and recreation facilities in new development areas that include the Laguna Ridge Specific Plan and the Southeast Policy Area Community Plan that are adjacent to the SOIA area. The CCSD will own these facilities and exclusively provide their programming.

City of Elk Grove

The City of Elk Grove and CCSD have an agreement for joint ownership of all future parks in the Laguna Ridge Specific Plan (LRSP) and the future Civic Center Community Park located in the LRSP planned for a grand opening in 2018 (City of Elk Grove 2004; City of Elk Grove 2016b).

3.12.2 Regulatory Framework

FEDERAL

No federal plans, policies, regulation, or laws are applicable to the proposed project.

STATE

Fire Protection Services

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 guidelines on the handling of highly combustible materials; fire hose sizing requirements; restrictions on the use of compressed air; access roads; and the testing, maintenance, and use of all firefighting and emergency medical equipment.

California Fire Code

The California Fire Code, which is contained in Title 24, Part 9 of the California Code of Regulations, includes regulations related 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 first

responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises related to fire and life safety. The California Fire Code has been incorporated into Chapter 17.04 of the City of Elk Grove Municipal Code.

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.

Per the California Health and Safety Code, the Fire Code Official is both authorized to perform life safety inspection, and responsible for the enforcement of panic and life safety regulations adopted by the California State Fire Marshal in the California Building Standards. The Fire Prevention Bureau performs plan reviews and provides comments and field inspection on all construction projects within the jurisdiction. The Fire Inspectors also inspect occupancies and hazardous operations as required by the California Health and Safety Code.

State of California Emergency Medical Services regulations are set forth in Division 2.5 of the Health and Safety Code (Sections 1797-1799), which is known as the Emergency Medical Services System and the Prehospital Emergency Medical Care Personnel Act. The regulations include system administration, certification, medical control, facilities, and other facets of emergency medical care.

California Emergency Response/Evacuation Plans

The State of California passed legislation authorizing the Office of Emergency Services to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Noncompliance with SEMS could result in the State withholding disaster relief from the noncomplying jurisdiction in the event of an emergency disaster.

Schools

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 of 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:

- 1. Safety
- 2. Location
- 3. Environment
- 4. Soils
- 5. Topography
- 6. Size and Shape

- 7. Accessibility
- 8. Public Services
- 9. Utilities
- ▲ 10. Cost
- 11. Availability
- 12. Public Acceptance

California School Funding

California Education Code Section 17620 authorizes school districts to levy a fee, charge, dedication, or other requirement against any development project for the construction or reconstruction of school facilities, provided that the district can show justification for levying of fees. California Government Code Section 65995 limits the fee to be collected to the statutory fee unless a school district conducts a School Facility Needs Assessment (California Government Code Section 65995.6) and meets certain conditions.

Senate Bill 50 (Chapter 407, Statutes of 1998) instituted a school facility program by which school districts can apply for state construction and modernization funds. This legislation imposed limitations on the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development. It also provided the authority for school districts to levy fees at three different levels:

▲ Level I fees are the current statutory fees allowed under Education Code Section 17620. As mentioned above, this code section authorizes school districts to levy a fee against residential and commercial construction to fund school construction or reconstruction. These fees are adjusted every two years in accordance with the statewide cost index for Class B construction as determined by the State Allocation Board.

- ▲ Level II developer fees are outlined in Government Code Section 65995.5. This code section allows a school district to impose a higher fee on residential construction if certain conditions are met. These conditions include having a substantial percentage of students on multitrack year-round scheduling, having an assumed debt equal to 15–30 percent of the district's bonding capacity (the percentage is based on revenue sources for repayment), having at least 20 percent of the district's teaching stations housed in relocatable classrooms, and having placed a local bond on the ballot in the past 4 years that received at least 50 percent plus one of the votes cast. A facility needs assessment must demonstrate that the need for new school facilities for unhoused pupils is attributable to projected enrollment growth from the construction of new residential units over the next five years. As of September 2016, EGUSD's Level II fees are \$5.01 per square foot for residential development and \$0.56 per square foot for commercial/industrial construction. The EGUSD Mello-Roos Community Facilities District (CFD) No. 1 also provides school facility funding through the issuance of bonds not exceeding \$275 million. CFD No. 1 is not intended to address school facility needs from new development.
- ▲ Level III developer fees are outlined in Government Code Section 65995.7. This code section authorizes a school district that has been approved to collect Level II fees to collect a higher fee on residential construction if State funding becomes unavailable. This fee is equal to twice the amount of Level II fees. However, if a district eventually receives State funding, this excess fee may be reimbursed to the developers or subtracted from the amount of State funding.

In addition to the funding mechanisms for new development above, California Proposition 51 which was passed in November 2016, authorized \$9 billion in general obligation bonds for new construction and modernization of K-12 public school facilities; charter schools and vocational education facilities; and California Community Colleges facilities.

Parks and Recreation

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. 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 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. The City's standards for parkland dedication under the Quimby Act are provided in the discussion of local regulations below. 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.

LOCAL

The project site lies within the jurisdictional boundaries of Sacramento County; therefore, the County's policies, as well as the Sacramento LAFCo's policies, would apply. Furthermore, if the SOIA is approved, it may be annexed by the City of Elk Grove. Thus, applicable policies of the City of Elk Grove's General Plan are described below.

Sacramento County General Plan

The following policies from the Sacramento County General Plan would apply to the SOIA.

■ Policy PF-54: Require new development to install fire hydrants and associated water supply systems which meet the fire flow requirements of the appropriate fire district.

- Policy PF-55: New development shall provide access arrangements pursuant to the requirements of the California Fire Code.
- Policy PF-56: Infill development shall be provided adequate off-site improvements to meet on-site fire flow requirements.
- Policy PF-57: New development, redevelopment or traffic signal replacement shall require the installation of emergency signal activation systems in all street improvements requiring signalization when requested by a fire district.
- Policy PF-58: Traffic calming measures should be used wherever possible in a manner that does not delay emergency vehicle responses.
- Policy PF-59: Alternative methods of fire protection and access must be instituted if access is reduced to emergency vehicles.
- ▶ Policy PF-60: Require that structures of four stories or more in height provide on-site equipment and facilities to the satisfaction of the appropriate fire district, consistent with industry norms and standards.
- Policy PF-61: Mitigation fees may be established by the Board of Supervisors or Fire Districts for the purpose of funding adequate fire protection and emergency medical response facilities provided they find that such fees are critical and necessary to meet the facility funding needs of the fire district and that existing methods of financing are inadequate.
- Policy PF-62: The Board of Supervisors shall not require the collection of mitigation fees unless it has certified that the fire district has:
 - Adopted a facility plan consistent with industry norms and standards and the time horizon of the County General Plan that will maintain Insurance Service Office (ISO) ratings of 3 for hydrant areas and 8 for non-hydrant areas, and a response time of 5 minutes for emergency medical calls, where staffing levels are adequate. In areas that do not have public water supply which are increasing in number due to urbanization, the fire district should be able to provide a sufficient flow shuttle.
 - Adopted a financing plan delineating the source and amount of funds required to fully implement the facilities plan. Such plan shall indicate personnel requirements necessary to meet the standards in the facilities plan.
 - Demonstrate a commitment to and reasonable progress towards achieving efficiency improvements, such as inter-district agreements for sharing resources or district consolidation.
 - All reasonable efforts have been made to secure additional funding from any other available sources.
- ✓ Policy PF-63: Mitigation fees established by County ordinance or Fire District shall, together with other reasonably assured sources of funding identified in the fire district's financing plan, be sufficient to implement the adopted financing plan.
- Policy PF-64: No building permit for new residential or commercial construction shall be issued when there is a Board of Supervisors certified fire district financing plan for any applicable fire district, which provides for mitigation fees, until the applicant has contributed all required mitigation fees.

■ Policy SA-35: The County shall ensure that the siting of critical emergency response facilities such as hospitals, fire, sheriff's offices and substations, and other emergency service facilities and utilities have minimal exposure to flooding, seismic and geological effects, fire, and explosions.

- Policy PF-53: Design neighborhoods and buildings in a manner that prevents crime and provides security and safety for people and property; when feasible.
- Policy PF-27: Community plans shall identify all existing and planned school sites and shall include guidelines and conceptual examples for incorporating new schools into overall neighborhood design.
- Policy PF-29: Schools shall be planned as a focal point of neighborhood activity and interrelated with neighborhood retail uses, churches, neighborhood and community parks, greenways and off-street paths whenever possible.
- ✓ Policy PF-30: New elementary schools in the urban area should be planned whenever possible so that almost all residences will be within walking distance of the school (one mile or less) and all residences are within two miles of a school.
- Policy PF-31: Schools shall be planned adjacent to neighborhood parks whenever possible and designed to promote joint use of appropriate facilities. The interface between the school and park shall be planned with an open design and offer unobstructed views to promote safety.
- ✓ Policy PF-32: Elementary schools shall not be located along arterials and thoroughfares. Junior high and high schools should be located near roadways with adequate capacity and should provide adequate parking to facilitate the transport of students.
- Policy PF-33: New community college campuses and high schools within the urban service boundary shall be located along arterial or thoroughfare streets, with high priority to location adjacent to transportation corridors identified on the Transportation Plan Map.
- Policy PF-34: All school site plans shall be designed to minimize traffic speed and maximize traffic flow around the school, allowing for several access points to and from the site.
- Policy PF-35: New schools should link with planned bikeways and pedestrian paths wherever possible.
- Policy PF-37: Review district school facility plans with respect to their relationship to County-wide school facility planning objectives in conjunction with Board of Supervisors' adoption of supplemental financing programs.
- Policy PF-38: Land dedications or reservations for schools should meet state guidelines for school parcel size. Where more than one owner or development project is involved, there shall be appropriate assurances and conditions to assure that requisite acreage can and will be assembled to meet facility site requirements.
- ✓ Policy PF-39: Specific Plans shall show the location of future school sites based upon adopted school district master plans and criteria in the General Plan.
- Policy PF-120: The County will work cooperatively with the local recreation and park districts to help assure that the provision of additional parks and recreation facilities keeps pace with urban growth within the County.
- Policy PF-121: The County supports the adoption and implementation of Parks and Recreation Master Plans by local recreation and park districts to establish goals and policies for community-oriented parks and recreation facilities that are consistent with the goals and policies of this General Plan.

■ Policy PF-122: To help assure that local recreation and park district Master Plan standards for levels of service may be achieved and maintained, the County may require new development to dedicate land, pay in-lieu fees, development impact fees, or otherwise contribute a fair share to the acquisition and development of parks and recreation facilities. For development in infill areas where land dedication may not be practical, the County in cooperation with the affected park district may explore creative alternatives for providing park and recreation facilities.

- ▶ Policy PF-123: At a minimum, new residential developments approved by the County shall provide sites for local parks for their prospective residents consistent with the Quimby Act and the land dedication standards for each local recreation and park district adopted by Sacramento County in Chapter 22.40 of the Sacramento County Code. These requirements may be satisfied by land dedication, payment of fees in lieu of dedication, or on-site improvements per the provisions of Chapter 22.40, which will be regularly updated to reflect changing demography. These include the baseline standard of three acres of land for parks per 1,000 residents or in cases where existing parklands within a park district exceed three acres per 1,000 population, that higher ratio shall be the standard for new developments up to a maximum of five acres of land for parks per 1,000 residents based on calculations specified in SCC Chapter 22.40.
- Policy PF-124: Consistent with its infill development standards and mixed use Commercial Corridor plans, the County in consultation with the local recreation and park districts shall encourage new infill and Corridor development projects to provide small plazas, pocket parks, civic spaces, and other gathering places that are available to the public to help encourage pedestrian activity, meet recreational needs and service standards consistent with Smart Growth principles.
- Policy PF-125: The County shall promote the provision of on-site recreational amenities and gathering places that are available to the public by large scale development projects and may consider providing incentives such as density bonuses or increases in building coverage for that purpose.
- Policy PF-126: Encourage local park districts to develop user fee supporting recreation programs for those activities that go beyond providing for basic recreation needs. Examples include sports leagues, tennis and other court complexes, leisure enrichment classes for all ages, aquatic centers and splash parks, and community centers.
- Policy PF-127: Require new residential developments to participate in park 0 & M financing mechanisms where established by local park districts or the County.
- Policy PF-128: Encourage park development adjacent to school sites and the formation of joint use agreements between school and park districts.
- Policy PF-129: In cooperation with local park districts and County Regional Parks, the County shall assist in establishing permanent financing systems for the purpose of supporting an adequate level of park services and maintenance.
- Policy PF-130: Encourage local park districts to collaborate and coordinate with other districts, agencies, and organizations.
- Policy PF-131: Support the cooperation of local park districts and the County Department of Regional Parks to provide the most efficient delivery of parks and recreation services.

City of Elk Grove General Plan

The following policies from the City of Elk Grove's General Plan would apply to future annexation and development of the project site.

■ 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.

- 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 the Red Cross, the 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.
- Policy SA-29: The City shall regularly monitor and review the level of police staffing provided in Elk Grove, and ensure that sufficient staffing and resources are available to serve local needs.
- Policy SA-32: Cooperate with the Elk Grove Community Services District (EGCSD) Fire Department
 [Cosumnes Community Services District] to reduce fire hazards, assist in fire suppression, and promote
 fire safety in Elk Grove.
 - ▼ SA-32-Action 1 Review new development for adequate water supply and pressure, fire hydrants, and access to structures by firefighting equipment and personnel.
 - SA-32-Action 2 Review projects for compliance with the Fire Code as part of the building permit process.
 - ▼ SA-32-Action 4 Require, where appropriate, on-site fire suppression systems for all new commercial and industrial development to reduce the dependence on fire department equipment and personnel
- Policy SA-34: The City shall regularly monitor and review the level of police staffing provided in Elk Grove and ensure that sufficient staffing and resources are available to serve local needs.
- Policy SA-35: Design neighborhoods and buildings in a manner that prevents crime and provides security and safety for people and property when feasible.
- ✓ 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-17: While recognizing that school siting and development are not within the jurisdiction of the City to control, the City strongly encourages the School District to consider the following criteria:
 - Traffic impacts on nearby roadways are addressed and mitigated to meet City standards for level of service.

Schools should serve as a focal point of neighborhood activity and be interrelated with churches, parks, greenways and off-street paths whenever possible.

- ✓ Almost all residences will be within walking distance of a school (one mile or less) and all residences are within two miles of a school whenever possible.
- New schools are adjacent to neighborhood and community parks whenever possible and designed to promote joint use of appropriate facilities.
- New schools should link with trails, bikeways, and pedestrian paths wherever possible.
- Policy PF-18: The City supports state legislative efforts to secure additional state funding for school construction and ensure maintenance of local district priorities for funds in the state school bond program.
- 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 PTO-1: The City of Elk Grove supports the development, maintenance, and enhancement of parks and trails serving a variety of needs at the neighborhood, area, and citywide level. The City may seek to accomplish the provision of parks and trails in cooperation with the Cosumnes Community Services District (CCSD).
 - ▼ PTO-1-Action 1 As part of the review of development projects, ensure that public parks and trails are provided which meet the City's and CCSD's criteria and which implement the CCSD/City Parks Master Plan and City Bicycle, Pedestrian, and Trail Master Plan.
- Policy PTO-3: Funding for maintenance of parks and/or trails shall be assured to the City's satisfaction prior to the approval of any Final Subdivision Map which contains or contributes to the need for a public parks and facilities.
- Policy PTO-4: New residential developments may be required to, at a minimum, provide parks consistent with the Quimby Act (CA Govt. Code Section 66477), through land dedication, fees in lieu, or on-site improvements at a standard of five (5) acres of land for parks per 1,000 residents. Land dedication and/or payment of in-lieu fees shall be required consistent with state law. Land dedication and/or fees may be required pursuant to other policies in this Element with or without the use of the authority provided in the Quimby Act, or in combination with the Quimby Act and other legal authority.

City of Elk Grove Municipal Code Chapter 22.40 "Park and Recreation Dedication and Fees" Elk Grove Municipal Code Chapter 22.40 "Park and Recreation Dedication and Fees" provides standards and formulas for the dedication of parkland and in-lieu fees. These policies help the City acquire new parkland. The General Plan establishes the goal of providing 5 acres of parkland for each 1,000 residents of the City. The amount of land to be provided is determined based on the appropriate standards and formula contained in Chapter 22.40.

City of Elk Grove Municipal Code Chapter 16.95 "Development Impact Fees"

The Elk Grove City Code imposes six citywide development impact fees. Fees are assessed on landowners who develop property to provide funds for facilities required to meet the needs of, and address impacts caused by, the additional persons residing in or employed on the property as a result of the development. The fees are:

1. Capital Facilities Fee, which funds the following facilities: Civic Center; Police Facilities; Corporation Yard; Library Facilities; and Transit.

- 2. Affordable Housing Fee, which funds the construction, acquisition or financing of new or existing multi or single family affordable housing projects within the City for low- or very-low income residents.
- 3. Roadway Fee, which is a multi-zonal fee program that funds the center lanes and medians of major roadways, and funds major intersections, freeway interchanges, and bridges.
- 4. Fire Fee, which is a multi-zonal fee program that funds fire capital facilities and equipment.
- 5. Measure A Transportation Mitigation Fee, which funds regional transportation facilities. The City collects this fee on behalf of the Sacramento Transportation Authority (STA).

Cosumnes Community Services District Parks Master Plan

The Cosumnes Community Services District Parks Master Plan was initially approved by the CCSD in 2008, and the City gave its approval in 2010. The Park Master Plan takes a system-wide approach to address recreation needs in Elk Grove and provides infrastructure direction for all areas in the CCSD/City service area. If the project site were annexed into the City, the CCSD would be the responsible planning agency. A new Parks Master Plan is currently being prepared by the CCSD.

3.12.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

This analysis is based on the assumption that the SOIA would remove an obstacle to the eventual annexation and development of the project site in a manner generally consistent with the conceptual land use scenario. As such, the calculations of public services demand are based on the development potential identified in Chapter 2, "Project Description."

THRESHOLDS OF SIGNIFICANCE

The evaluation of impacts related to public services utilizes the following Appendix G thresholds of significance. The project would have a significant impact related to public services and recreation if it would:

- result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times or other performance objectives for fire protection, police protection, schools, or parks;
- increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or

IMPACT ANALYSIS

Impact 3.12-1: Increased demand for fire protection and emergency medical services.

Future development within the Bilby Ridge SOIA area could result in an increase in demand for fire protection and emergency services, which could require construction of new facilities that would result in environmental impacts. This impact would be a **potentially significant**.

The project consists of an expansion of the City of Elk Grove's Sphere of Influence to include the Bilby Ridge SOIA area. Although the SOIA does not propose any land use changes or development, future development could occur if the property is annexed. A preliminary land use scenario map includes commercial elements, a residential component, a business professional area, and parks. The future development could increase demand for fire protection and emergency medical services in the SOIA area. As the recognized primary service provider for fire protection and emergency medical and rescue services, the CCSD and the City would be encouraged to work together closely to identify fire station locations, equipment and personnel need to support any increased demands on the CCSD. The development review process should minimize service impacts to joint responder agencies, such as SMFD and SFD (LAFCo 2016).

Any future development in the SOIA area would undergo discretionary review by the City of Elk Grove, which would require General Plan consistency findings. Additionally, future project proponents would be required to incorporate California Fire Code, California Health and Safety Code, and Cal OSHA requirements into project design to address access and finished surfaces for firefighting equipment; fire hydrant placement and sufficiency of fire hydrants; and fire flow availability. These topics are addressed by the City's General Plan Policy PF-7, Action SA-37-Action 1, Action SA-37-Action 2, and Action SA-27-Action 4. Physical impacts associated with construction and operations of on-site public facilities are evaluated throughout this EIR. The placement of any new on-site fire protection facilities have been considered in other sections of this EIR, such as Section 3.3, "Air Quality," and Section 3.4, "Biological Resources," which specifically analyze the potential for project construction and implementation. The timing and specifics necessary to fully evaluate off-site projects are unknown and speculative for fire protection activities outside the SOIA area.

CCSD currently provides fire protection and emergency medical services to the area and would remain the provider if the SOIA is approved. The CCSD Fire Department receives its funding through property taxes, fees for services, and grant funding. New development projects are required to pay fire protection development fees to fund additional facilities and equipment. These funds would help pay for all costs associated with the development of a new fire station, if needed. A Community Facilities District (CFD) has also been established to assist in the long-term mitigation of growth impacts. Annexation into the CFD or lump sum payment to offset growth impacts are required of property owners of new growth development through a balloting process. Due to the substantial number of residents (an estimated 5,540 persons) and employees (an estimated 4,359 persons) that could be accommodated within the SOIA area, the CCSD anticipates the need to construct additional facilities and hire additional firefighters and emergency medical personnel to accommodate the increased demand for services. The construction and operation of new off-site facilities and expansion of existing off-site facilities by CCSD could result in significant environmental impacts Therefore, this impact would be **potentially significant**.

Mitigation Measure 3.12-1: Demonstrate adequate fire protection facilities are available before annexation of territory within the SOIA area.

At the time of submittal of any application to annex territory within the SOIA area, the City of Elk Grove shall demonstrate that CCSD fire protection and life safety facilities will meet the service demands of development identified for the annexation territory, or that fair-share funding will be provided for the construction of new or expansion of existing fire protection facilities, as needed, to accommodate the increase in demand resulting from development of the annexation territory. The City of Elk Grove shall demonstrate future development has incorporated adequate water supply and fire flow pressure, fire hydrants, and access to structures by firefighting equipment and personnel and where appropriate, identified on-site fire suppression systems for all

new commercial and industrial development into design plans consistent with General Plan polices PF-7, PF-21, and SA-32 and Action SA-37-Action 1, SA-37-Action 2, and SA-37-Action 4. Any expansion of service shall not adversely affect current service levels. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

Significance after Mitigation

Implementation of Mitigation Measure 3.12-1 would reduce significant impacts associated with increased fire protection services demand because the City of Elk Grove would reduce the dependence on fire department equipment and personnel by reducing fire hazards, assisting in fire suppression, and promoting fire safety in Elk Grove. Mitigation presented in this EIR for other environmental topic areas addresses potentially significant environmental impacts associated with overall development within the SOIA area. This mitigation could apply to the on-site public facilities elements of potential future development, in addition to the private development components.

Construction of future off-site fire protection facilities and expansion of existing facilities is the responsibility of CCSD. Implementation of mitigation measures would be the responsibility of the CCSD. However, physical environmental impacts from construction or operation of new or expansion of existing facilities could remain significant after implementation of mitigation (i.e., significant and unavoidable), or no feasible mitigation may be available to fully reduce impacts to a less-than-significant level. Potential significant environmental impacts from construction of off-site facilities could include, but not limited to, the following:

- ▲ Aesthetics: temporary and/or permanent alteration of public views from construction of infrastructure improvements
- ▲ Air Quality: air pollutant and toxic air contaminant emissions from construction activities that exceed thresholds recommended by the Sacramento Metropolitan Air Quality Management District
- Archaeological, Historical, and Tribal Cultural Resources: damage or loss of significant cultural resources from construction activities
- Biological Resources: loss of habitat and direct impacts to special status plant and animal species
- ▲ Hazards and Hazardous Materials: potential exposure or release of hazardous materials or contamination during construction
- Hydrology and Water Quality: construction-related stormwater quality impacts
- Noise: temporary excessive noise levels during construction on sensitive noise receptors
- ▲ Transportation: temporary disruption of roadways and congestion from construction activities and equipment.

Neither LAFCO nor the City of Elk Grove would have control over CCSD's future fire protection facilities planning, determination of siting (which could include improvements outside of the SOIA area) or the approval, timing, or construction. It cannot be determined at this time the extent of these impacts, and there is no additional feasible mitigation available to the City or LAFCo to ensure that impacts would be avoided. Therefore, the impact would remain **significant and unavoidable**.

Impact 3.12-2: Increased demand for law enforcement services.

Future development within the Bilby Ridge SOIA area could result in an increase in demand for law enforcement services, which could require construction of new facilities that would result in environmental impacts. This would be a **potentially significant** impact.

As discussed in Impact 3.12-1, the project consists of an expansion of the City of Elk Grove's Sphere of Influence, and future development could occur if the property is annexed. A preliminary land use scenario map includes commercial elements, a residential component, a business professional area, and parks. The future development could increase demand for law enforcement services in the SOIA area.

After annexation, the EGPD would provide law enforcement services to the SOIA. The EGPD operates out of one police station, located at 8400 Laguna Palms Way, approximately 3 miles from the SOIA area. If there is development in the future in the SOIA area, this could increase demand for law enforcement services. EPGD currently has a staffing ratio of 0.82 officers per 1,000 residents. With the addition of 5,540 residents identified in the development scenario, an estimated 5 officers could be needed.

The EGPD could need to hire additional officers and administrative staff or construct new on-site facilities to accommodate the increased demand for services. Physical impacts associated with construction and operation of future public facilities within the SOIA area are evaluated in the other sections of the EIR, such as Section 3.3, "Air Quality," and Section 3.4, "Biological Resources," and other sections, which provide analysis and mitigation of buildout of the SOIA area, including public facilities.

New staff, equipment, and facilities that would be necessary to provide additional law enforcement services would be funded by property taxes, development impact fees, and potentially other mechanisms. The EGPD collects development impact fees for police facilities. These funds would help pay for all costs associated with the development of a new police station, if needed. It is not currently known if the EGPD's existing law enforcement facilities would be adequate to meet the demands of future development. Due to the substantial number of residents (an estimated 5,540 persons) and employees (an estimated 4,359 persons) that could be accommodated within the SOIA area if it is developed in the future, the EGPD could need to construct additional off-site facilities to maintain adequate service, the construction of which could result in significant environmental impacts. Therefore, this impact would be **potentially significant.**

Mitigation Measure 3.12-2: Prepare a plan for service that demonstrates adequate police protection facilities are available before the annexation of territory within the SOIA area.

At the time of submittal of any application to annex territory within the SOIA area, the City of Elk Grove shall demonstrate that EGPD police protection and public safety facilities will meet the service demands of development identified for the annexation territory, or that fair-share funding will be provided for the construction of new on-site or off-site police protection facilities or expansion of existing police protection facilities, as needed, to accommodate the increase in demand resulting from development of the annexation territory. For any new off-site facility improvements, the City will demonstrate to LAFCo that the environmental review for the improvement has been completed and mitigation measures have been adopted to address identified significant environmental impacts. Any expansion of service shall not adversely affect current service levels. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

Significance after Mitigation

Mitigation Measure 3.12-2 would reduce potential significant service impacts associated with increased demand for law enforcement services because the City of Elk Grove would demonstrate EGPD police protection facilities will meet the service demands of development identified for the annexation territory, or that fair-share funding will be provided. This mitigation could apply to the public facilities elements of potential future development, in addition to the private development components. Mitigation measures

presented in this EIR for other environmental topic areas would address environmental impacts (though not fully mitigate in all cases) would apply to on-site improvements.

Construction of future off-site law enforcement facilities and expansion of existing facilities is the responsibility of the EGPD. Implementation of mitigation measures would be the responsibility of the EGPD. However, physical environmental impacts from construction or operation of new or expansion of existing facilities could remain significant after implementation of mitigation (i.e., significant and unavoidable), or no feasible mitigation may be available to fully reduce impacts to a less-than-significant level. Potential significant environmental impacts from construction of off-site facilities could include, but not limited to, the following:

- ▲ Aesthetics: temporary and/or permanent alteration of public views from construction of infrastructure improvements.
- ▲ Air Quality: air pollutant and toxic air contaminant emissions from construction activities that exceed thresholds recommended by the Sacramento Metropolitan Air Quality Management District.
- ▲ Archaeological, Historical, and Tribal Cultural Resources: damage or loss of significant cultural resources from construction activities.
- Biological Resources: loss of habitat and direct impacts to special status plant and animal species.
- ▲ Greenhouse Gases: temporary emission of greenhouse gases during construction.
- ▲ Hazards and Hazardous Materials: potential exposure or release of hazardous materials or contamination during construction.
- Hydrology and Water Quality: construction-related stormwater quality impacts.
- Noise: temporary excessive noise levels during construction on sensitive noise receptors.
- ▲ Transportation: temporary disruption of roadways and congestion from construction activities and equipment.

It cannot be determined at this time the extent of these impacts, and there is no additional feasible mitigation available to the City or LAFCo to ensure that impacts would be avoided. Therefore, the impact would remain **significant and unavoidable**.

Impact 3.12-3: Increased demand for schools.

Future development within the Bilby Ridge SOIA area could result in an increase in demand for schools, which could also require construction of new facilities that would result in environmental impacts. Payment of a school impact fee would reduce school demand impacts to less than significant.

As discussed in Impact 3.12-1, the project consists of an expansion of the City of Elk Grove's Sphere of Influence, and future development could occur if the property is annexed. A preliminary land use scenario map includes 10 acres of land designated for public school use. Physical impacts associated with construction and operation of future public facilities within the SOIA area are evaluated in the other sections of the EIR, which provide analysis and mitigation of buildout of the SOIA area.

The land use scenario contemplates a maximum of approximately 5,540 residents and 3,692 new students who would attend Franklin Elementary and Toby Johnson Middle Schools (approximately 1 mile northeast), and Franklin High School (approximately 1.3 miles northeast) (EGUSD 2017). However, EGUSD periodically changes its school boundaries if a new school is built or the population in an area changes significantly. The SOIA area is currently in the EGUSD but it should be noted that school attendance boundaries may change, so other schools may eventually provide school services. As described above, Franklin Elementary School is

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at capacity, and enrollment is closed at Toby Johnson Middle School and Franklin High School. Due to the population increase possible in the SOIA Area, the additional students would exceed the capacity of these schools. However, the project would not trigger the need for additional school facilities because it does not propose development. Additionally, exceeding school capacity is not considered a physical impact under CEQA. Pursuant to SB 50, at the time of subsequent annexation and development of the site, the project applicant would be required to pay all applicable State-mandated school impact fees to EGUSD. The City would determine the assessable square footage that would be subject to the fee at the time of development. EGUSD would determine the capacity of existing schools at the time of build-out of the SOIA area, would determine the need for new school facilities, and would perform the environmental review of and development of new facilities as needed. In the event that school impact fees are not adequate to cover the need for new school facilities, EGUSD has the ability to raise fees as necessary. The California Legislature has declared that payment of the applicable school impact fee is deemed to be full and adequate mitigation under CEQA for impacts on school facilities (California Government Code Section 65996). The impact related to increased demand for schools would be **less than significant**.

Depending upon the location and timing of new school facilities (including the potential for an on-site school), relative to possible future residential development within the SOIA area, future students could potentially be bused or driven to off-site schools within the EGUSD boundaries resulting in indirect impacts related to transportation, such as air pollutant emissions, greenhouse gas emissions, and transportation noise. It is possible that future residential development within the SOIA area would generate demand for school facilities that are not met within the SOIA area or are not for some period of time within the SOIA area as it builds out. The timing and specifics necessary to fully evaluate these impacts are unknown and speculative for schools outside the SOIA area and would be determined by the EGUSD. No further analysis can be provided in this document.

Mitigation Measures

No mitigation would be required.

Impact 3.12-4: Increased demand for park and recreation facilities.

Future development within the Bilby Ridge SOIA area could result in an increase in demand for park and recreation facilities, which would require construction of new facilities that would result in environmental impacts. New residential development within the SOIA Area would be required to comply with the Elk Grove Municipal Code Chapter 22.40, General Plan policies listed above, and Elk Grove Trails Master Plan requiring the dedication of park, recreation and trails facilities and/or the payment of an in-lieu fees. These impact fees could fund the development of new recreational facilities, or the maintenance of existing recreational facilities. Impacts would be **less than significant**.

The project consists of an expansion of the City of Elk Grove's Sphere of Influence, and future development could occur if the property is annexed. A preliminary land use scenario map includes up to 24.6 acres of land designated for public park use. Physical impacts associated with construction and operation of future public facilities within the SOIA area are evaluated in the other sections of the EIR, such as Section 3.3, "Air Quality," and Section 3.4, "Biological Resources," and other sections, which provide analysis and mitigation of buildout of the SOIA area, including public facilities.

The increase in population would increase demand on parks in the area. City and CCSD parkland standards require a minimum of 5 acres of developed parkland per 1,000 residents. Currently, CCSD serves an estimated population of 190,680 and approximately 1,000 acres of parks, corridors, and trails, at 5.2 acres per 1,000 residents. Future development within the SOIA area could add an estimated maximum of 5,540 residents to the CCSD service area and up to 24.6 acres of parkland. New residential development within the SOIA Area would be required to comply with the Elk Grove Municipal Code Chapter 22.40, General Plan policies listed above, and Elk Grove Trails Master Plan requiring the dedication of park, recreation and trails facilities and/or the payment of an in-lieu fees. These impact fees could fund the development of new recreational facilities, or the maintenance of existing recreational facilities. This impact would be **less than significant**.

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Mitigation Measures

No mitigation would be required.

3.13 TRAFFIC, TRANSPORTATION, AND CIRCULATION

This section describes the existing transportation system near the project site and evaluates the potential impacts on the system associated with future annexation and development of the SOIA area (or "project site"). Roadway, transit, bicycle, and pedestrian components of the overall transportation system are included in the analysis. This section also describes the analysis techniques, assumptions, and results used to identify potential significant impacts of the project on the transportation system. Transportation and circulation impacts are described and assessed, and mitigation measures are recommended for impacts identified as significant or potentially significant.

The Sacramento County Department of Transportation submitted a letter on the Notice of Preparation that provides general comments regarding the future development of the SOIA area and funding for future operation and maintenance of roadways, as well as specific recommendations regarding the traffic study. The recommended roadways for evaluation are addressed in this section.

3.13.1 Environmental Setting

This section describes the existing environmental setting, which is the baseline scenario upon which projectspecific impacts are evaluated. The baseline for this study represents conditions based on data collection and field observations conducted in April 2017.

PROJECT STUDY AREA

The study area was developed based on consideration of the following factors: the project's expected travel characteristics (including number of vehicle trips and directionality of those trips), primary travel routes to/from the project vicinity, and a project-area trip assignment using a modified version of the Sacramento Area Council of Government's (SACOG) SACMET regional travel demand forecasting model. Exhibit 3.13-1 shows the study area, project site, and 30 study roadways (including segments of State Route [SR] 99 and Interstate [I] 5) selected for analysis. The study area also includes bicycle, pedestrian, and transit facilities near the project.

EXISTING ROADWAY NETWORK

Key roadways within this system that would serve trips associated with the project are described below. Exhibit 3.13-2 shows the number of lanes on area roadways.

- <u>Bilby Road</u> is an east-west two-lane collector roadway that extends from Franklin Boulevard to Bruceville Road in the east. Bilby Road is designated in the City of Elk Grove General Plan as a two-lane collector between and Bruceville Road and as a four-lane arterial east of Bruceville Road to Promenade Parkway.
- Bruceville Road is a north-south road extending from Valley Hi Drive near the Kaiser-Permanente complex in unincorporated Sacramento County south through Elk Grove into San Joaquin County. Bruceville Road is four lanes between Sheldon Road and Laguna Boulevard, six lanes between Laguna Boulevard and Elk Grove Boulevard, four lanes between Elk Grove Boulevard and Whitelock Parkway, and two lanes south of Whitelock Parkway. Bruceville Road is designated as a six-lane arterial in the City of Elk Grove General Plan.
- 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. Franklin Boulevard 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,

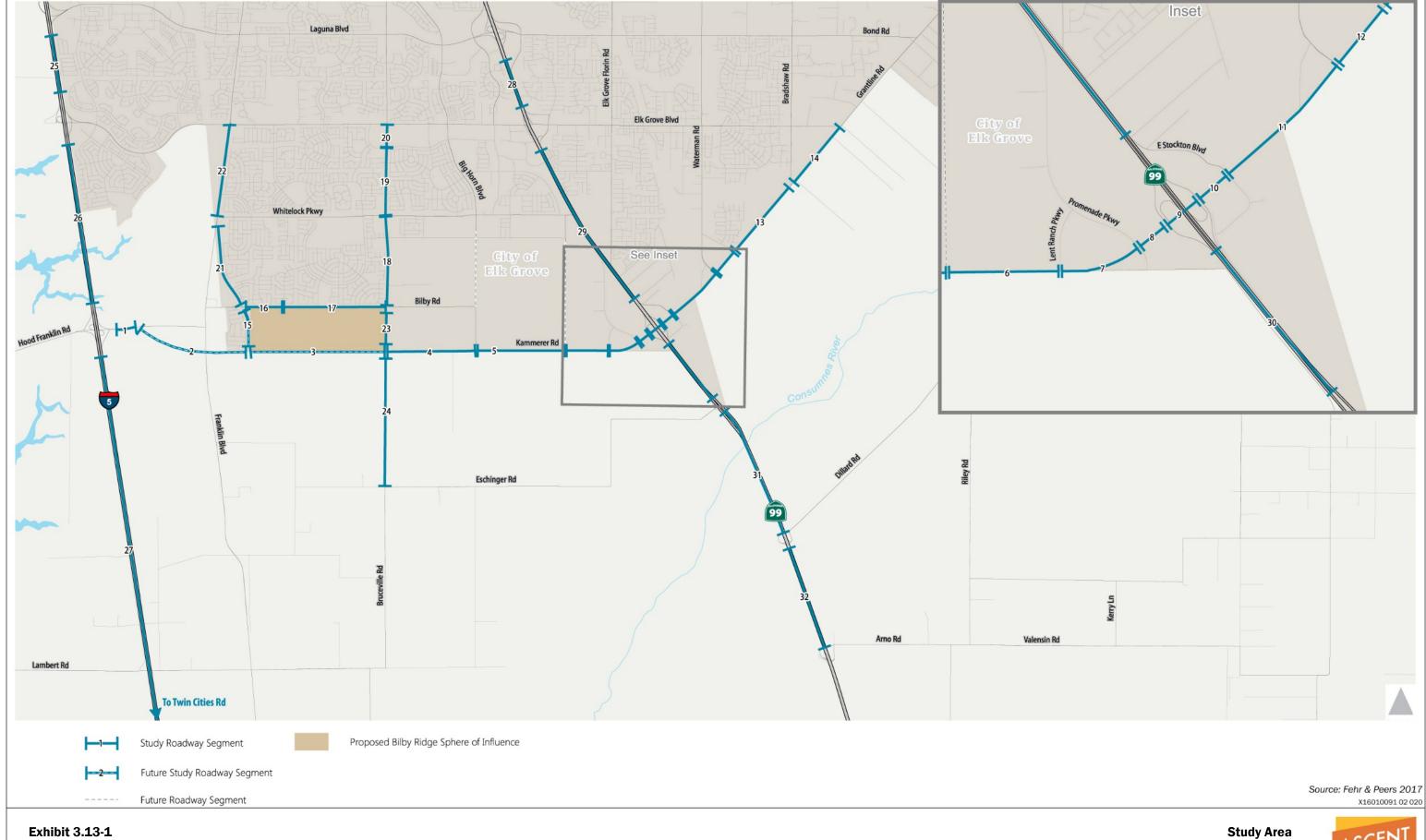
3.13-1

Franklin Boulevard is two lanes to Whitelock Parkway and four lanes between Whitelock Parkway and Elk Grove Boulevard. Franklin Boulevard is designated as a six-lane arterial in the General Plan.

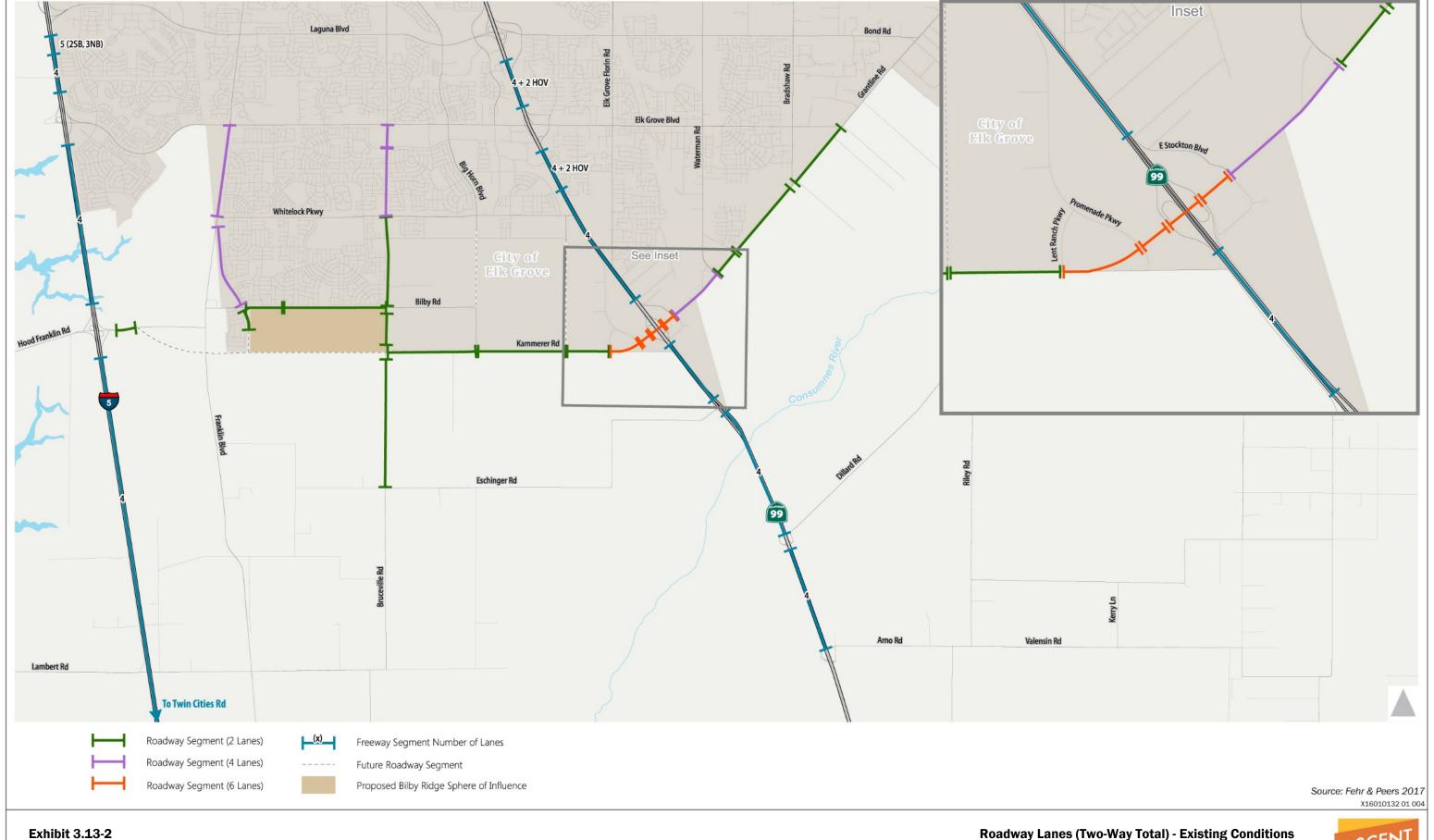
- ▲ Grant Line Road traverses Elk Grove in a southwest to northeast direction. Grant Line Road extends from SR 99 through Elk Grove to White Rock Road in Rancho Cordova. Grant Line Road is six lanes between SR 99 and East Stockton Boulevard, and four lanes between East Stockton Boulevard and Waterman Road with a grade-separated crossing of the Union Pacific Railroad. Grant Line Road is two lanes east of Waterman Road. Grant line Road is designated as an eight-lane arterial between SR 99 and Bradshaw Road and as a six-lane arterial east of Bradshaw Road. Grant Line Road is also part of the Capital SouthEast Connector project.
- ▲ 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. Hood Franklin Road is designated as a post 2030 thoroughfare in the Sacramento County General Plan and as a six-lane arterial in the City of Elk Grove General Plan. A portion of Hood-Franklin Road is near the I-5 interchange is part of the Capital SouthEast Connector project.
- ▲ Kammerer Road is an east-west road extending from Bruceville Road to West Stockton Boulevard. Kammerer Road is two lanes from just west of Lent Ranch Parkway to Bruceville Road. Kammerer Road is part of the Capital SouthEast Connector project and is designated in the City of Elk Grove General Plan as an eight-lane arterial from SR 99 to Lent Ranch Parkway and as a six-lane arterial from Lent Ranch Parkway to Franklin Boulevard. The Elk Grove General Plan includes the extension of Kammerer Road from Bruceville Road to Franklin Boulevard. The Capital SouthEast Connector Joint Powers Authority (Connector JPA), City of Elk Grove, and Sacramento County are coordinating on the proposed Kammerer Road Extension Project that is located south of the project site and would consist of a four-lane expressway with a Class 1 bicycle and pedestrian trail along the expressway.
- <u>Willard Parkway</u> is a north-south road that extends from Whitelock Parkway to south of Bilby Road.
 Willard Parkway is generally four lanes. Willard Parkway is designated in the City of Elk Grove General
 Plan as a six-lane arterial that will connect to the planned extension of Kammerer Road to Hood Franklin Road.
- ▲ State Route 99 (SR 99) is a north-south freeway that provides a connection between all of the major cities in the Central Valley, from Sacramento and Stockton in the north to the cities of Modesto, Merced, Fresno, and Bakersfield in the south. Access to SR 99 is provided through interchanges at Grant Line Road, Elk Grove Boulevard, Laguna Boulevard/Bond Road, and Sheldon Road. This section of SR 99 has two mainline travel lanes and one high occupancy vehicle (HOV) lane in either direction with a posted speed limit of 65 mph.
- Interstate 5 (I-5) is a north-south freeway that traverses California and is a major national freeway that connects between Mexico and Canada. Near the Hood Franklin Road interchange, I-5 is a four-lane freeway.

TRAFFIC DATA COLLECTION

Peak hour Intersection and roadway segment counts were collected in April 2015 and August 2014, respectively. During all counts, weather conditions were generally dry, no unusual traffic patterns were observed, and the Elk Grove Unified School District was in session. The weekday AM peak hour occurs between 7:00 and 9:00 a.m. and the PM peak hour occurs between 4:00 and 6:00 p.m. In addition to collecting vehicle turning movements at the study intersections, all intersection counts included pedestrian and bicycle activity.









STUDY PERIODS

The traffic analysis presented below includes analysis of daily and peak hour conditions. Based on the traffic data collection, the AM peak hour within most of the study area occurred from 7:15 to 8:15 a.m., and the PM peak hour within the entire study area occurred from 4:45 to 5:45 p.m.

ROADWAY SYSTEM

All roadway and freeway segments were analyzed by comparing average daily traffic volumes (two-way total) to the capacity thresholds presented in Table 3.13-1. In addition, roadway segments on Grant Line Road and Kammerer Road, which are part of the Capital Southeast Connector, were also analyzed using peak hour directional volumes.

The daily volume capacity thresholds for arterials and rural facilities are from the Sacramento County's July 2004 Traffic Impact Analysis Guidelines. The capacity thresholds for freeways are from the City of Elk Grove's July 2000 Traffic Impact Analysis Guidelines. These thresholds are used to identify the need for new or upgraded facilities. For freeway segments with high occupancy vehicle lanes, the analysis is based on the traffic volume in the general-purpose lanes only.

Under existing conditions, the peak hour roadway segments are consistent with the City of Elk Grove General Plan transportation impact analysis peak hour directional capacity thresholds, which applied a capacity of 990 vehicles per hour per lane for arterials and 2,200 vehicles per hour per lane for freeways. The peak hour service volume thresholds for the Capital Southeast Connector segments (i.e., analyzed under cumulative conditions) are from the Capital SouthEast Connector Planning and Evaluating Traffic Conditions White Paper, January 2017. The Capital SouthEast Connector Planning and Evaluating Traffic Conditions White Paper recommends operational analysis of roadways segments when the service volume exceed 85 percent of the roadways LOS E service volume of the ultimate roadway facility.

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.

Level of Service Definitions

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.

Table 3.13-1 Roadway Level of Service Definitions

| | FacilityTons | Number | | Maxir | num Volume Thresh | old | |
|------------------------------------|--------------------------------------|--------|----------------------|--------------------|-------------------|---------|---------|
| | Facility Type | | LOSA | LOS B | LOS C | LOS D | LOSE |
| | | Dai | ly Volume Threshold | ds (Two-way Total) | | | |
| | | 2 | 9,000 | 10,500 | 12,000 | 13,500 | 15,000 |
| | Low Access Control ¹ | 4 | 18,000 | 21,000 | 24,000 | 27,000 | 30,000 |
| | | 6 | 27,000 | 31,500 | 36,000 | 40,500 | 45,000 |
| | | 2 | 10,800 | 12,600 | 14,400 | 16,200 | 18,000 |
| Arterial | Moderate Access Control ² | 4 | 21,600 | 25,200 | 28,800 | 32,400 | 36,000 |
| | | 6 | 32,400 | 37,800 | 43,200 | 48,600 | 54,000 |
| | High Access Control ³ | 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 |
| | 2-Lane Highway | 2 | 2,400 | 4,800 | 7,900 | 13,500 | 22,900 |
| Rural | 2-Lane road Paved Shoulders | 2 | 2,200 | 4,300 | 7,100 | 12,200 | 20,000 |
| | 2-Lane road No Shoulders | 2 | 1,800 | 3,600 | 5,900 | 10,100 | 17,000 |
| | | 4 | 28,000 | 43,200 | 61,600 | 74,400 | 80,000 |
| | Freeway ⁴ | 6 | 42,000 | 64,800 | 92,400 | 111,600 | 120,000 |
| | | | 56,000 | 86,400 | 123,200 | 148,800 | 160,000 |
| | | Pea | k Hour Directional \ | olume Thresholds | | | |
| | Expressway | 2 | | | | | 3,290 |
| Connector Segments ⁵ | Artorial | 2 | | 85% of LOS E 9 | Service Volume | | 1,550 |
| | Segments ^o Arterial | | | 2,330 | | | |

Note:

- 1 Low access control roads generally have frequent driveways and speeds of 25 to 35 mph.
- 2 Medium access control roads generally have limited driveways and speeds of 30 to 35 mph.
- 3 High-access control roads generally have no driveways and speeds of 35 to 50 mph.
- 4 Freeway capacities from City of Elk Grove Traffic Impact Analysis Guidelines.
- 5 Peak hour directional volume thresholds from Capital SouthEast Connector Planning and Evaluating Traffic Conditions White Paper, January 25, 2017.

Source:

Sacramento County Traffic Impact Analysis Guidelines, 2004

City of Elk Grove Traffic Impact Analysis Guidelines, 2000 $\,$

Capital SouthEast Connector Planning and Evaluating Traffic Conditions White Paper, January 25, 2017.

Existing Traffic Volumes

Exhibit 3.13-3 displays existing daily roadway segment volumes (two-way total) and Exhibit 3.13-4 depicts AM and PM peak hour directional roadway segment volumes.

Existing Roadway Segment Operations

Table 3.13-2 displays existing daily roadway segment operation and Table 3.13-3 displays existing peak-hour directional roadway segment operations.

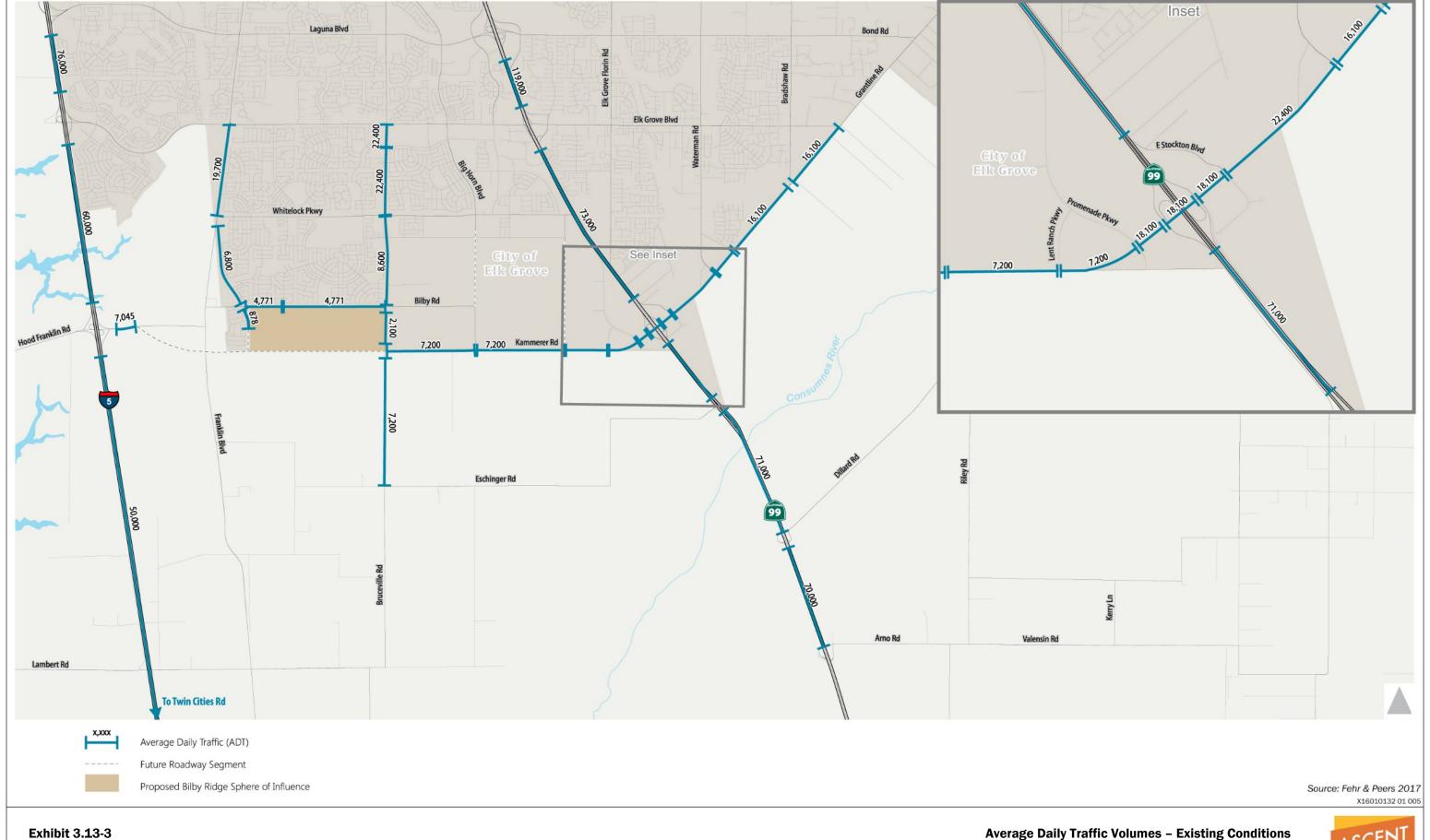




Exhibit 3.13-4

Peak Hour Traffic Volumes – Existing Conditions



Table 3.13-2 Daily Roadway Segment Operations – Existing Conditions

| Roadway Segment | Threshold LOS | Lanes (Two-Way Total) ¹ | Daily Capacity | Daily Volume | LOS | V/C Ratio |
|---|------------------|--|-------------------|-----------------|-----|-----------|
| 1. Hood Franklin Rd - I-5 NB Ramps to Kammerer Rd | D | 2 | 17,000 | 7,045 | D | 0.41 |
| 2. Kammerer Rd - Hood Franklin Rd to Willard Pkwy | - | - | - | - | - | - |
| 3. Kammerer Rd - Willard Pkwy to Bruceville Rd | - | - | - | - | - | - |
| 4. Kammerer Rd - Bruceville Rd to Big Horn Blvd | D | 2 | 18,000 | 7,200 | Α | 0.40 |
| 5. Kammerer Rd - Big Horn Blvd to Lotz Pkwy | D | 2 | 18,000 | 7,200 | Α | 0.40 |
| 6. Kammerer Rd - Lotz Pkwy to Lent Ranch Pkwy | D | 2 | 18,000 | 7,200 | Α | 0.40 |
| 7. Kammerer Rd - Lent Ranch Pkwy to Promenade Pkwy | D | 6 | 54,000 | 7,200 | Α | 0.13 |
| 8. Kammerer Rd - Promenade Pkwy to SR 99 SB Ramps | D | 6 | 54,000 | 18,100 | Α | 0.34 |
| 9. Grant Line Rd - SR 99 SB Ramps to SR 99 NB Ramps | D | 6 | 54,000 | 18,100 | Α | 0.34 |
| 10. Grant Line Rd - SR 99 NB Ramps to Survey Rd-E. Stockton Blvd | D | 6 | 54,000 | 18,100 | Α | 0.34 |
| 11. Grant Line Rd - Survey Rd-E. Stockton Blvd to Waterman Rd | D | 4 | 36,000 | 22,400 | В | 0.62 |
| 12. Grant Line Rd - Waterman Rd to Mosher Rd | D | 2 | 18,000 | 16,100 | D | 0.89 |
| 13. Grant Line Rd - Mosher Rd to Bradshaw Rd | D | 2 | 18,000 | 16,100 | D | 0.89 |
| 14. Grant Line Rd - Bradshaw Rd to Elk Grove Blvd | D | 2 | 18,000 | 16,100 | D | 0.89 |
| 15. Willard Pkwy - Kammerer Rd to Bilby Rd | D | 2 | 18,000 | 878 | Α | 0.05 |
| 16. Bilby Rd - Willard Pkwy to Coop Dr | D | 2 | 18,000 | 4,771 | Α | 0.27 |
| 17. Bilby Rd - Coop Dr to Bruceville Rd | D | 2 | 18,000 | 4,771 | Α | 0.27 |
| 18. Bruceville Rd - Bilby Rd to Whitelock Pkwy | D | 2 | 18,000 | 8,600 | Α | 0.48 |
| 19. Bruceville Rd - Whitelock Pkwy to Backer Ranch Rd-Civic Center Dr | D | 4 | 36,000 | 22,400 | В | 0.62 |
| 20. Bruceville Rd - Backer Ranch Rd-Civic Center Dr to Elk Grove Blvd | D | 4 | 36,000 | 22,400 | В | 0.62 |
| 21. Willard Pkwy - Bilby Rd (West) to Franklin Blvd | D | 4 | 36,000 | 6,800 | Α | 0.19 |
| 22. Franklin Rd - Whitelock Pkwy to Elk Grove Blvd | D | 4 | 36,000 | 19,700 | А | 0.55 |
| 23. Bruceville Rd – Bilby Rd to Kammerer Rd | D | 4 | 18,000 | 7,200 | Α | 0.40 |
| 24. Bruceville Rd – Kammerer Rd to Eschinger Rd | D | 2 | 17,000 | 2,100 | В | 0.12 |
| 25. I-5 Mainline - Elk Grove Blvd to Laguna Blvd | Е | 4 | 80,000 | 76,000 | Е | 0.95 |
| 26. I-5 Mainline - Hood Franklin Rd to Elk Grove Blvd | Е | 4 | 80,000 | 60,000 | С | 0.75 |
| 27. I-5 Mainline - Twin Cities Rd to Hood Franklin Rd | Е | 4 | 80,000 | 50,000 | С | 0.63 |
| 28. SR 99 Mainline - Elk Grove Blvd to Laguna Blvd-Bond Rd | Е | 4 | 80,000 | 119,000 | F | 1.49 |
| 29. SR 99 Mainline - Grant Line Rd to Elk Grove Blvd | Е | 4 | 80,000 | 73,000 | D | 0.91 |
| 30. SR 99 Mainline - Eschinger Rd to Grant Line Rd | Е | 4 | 80,000 | 71,000 | D | 0.89 |
| 31. SR 99 Mainline - Eschinger Rd to Dillard Rd | Е | 4 | 80,000 | 71,000 | D | 0.89 |
| 32. SR 99 Mainline - Arno Rd to Dillard Rd | Е | 4 | 80,000 | 70,000 | D | 0.88 |

Notes: **Bold** indicates level of service worse than threshold level of service. LOS = level of service. V/C = volume-to-capacity.

Source: compiled by Fehr & Peers, 2017

¹ The number of lanes listed for I-5 and SR 99 freeway segments are the two-way total of mainline general-purpose lanes.

| Table 3.13-3 | Peak Hour Dir | rectional Roadw | ay Segmen | t Operat | ions – Exi | sting Cor | ndition | S | | | |
|---------------------|-------------------------------|-------------------------------|------------------|----------|------------------|-----------|---------|-------------|--------|---------|-------------|
| | | | | | Peak | | Peak Ho | | PM | Peak Ho | our |
| Roadway | From | То | LOS Threshold | Lanes | Hour Capacity | Volume | LOS | VC Ratio | Volume | LOS | VC Ratio |
| 1. Hood Franklin Rd | I-5 NB Ramps | Kammerer Rd | D | 1 | 990 | 153 | Α | 0.15 | 403 | Α | 0.41 |
| I. HOOG FIAHKIII KU | Kammerer Rd | I-5 NB Ramps | D | 1 | 990 | 544 | Α | 0.55 | 142 | Α | 0.14 |
| 2. Kammerer Rd | Hood Franklin Rd | Willard Pkwy | - | - | - | - | - | - | - | - | - |
| 2. Kallillerer Ku | Willard Pkwy | Hood Franklin Rd | - | - | - | - | - | - | - | - | - |
| 3. Kammerer Rd | Willard Pkwy | Bruceville Rd | - | - | - | - | - | - | - | - | - |
| 5. Nammerer Ru | Bruceville Rd | Willard Pkwy | - | - | - | - | - | - | - | - | - |
| 4. Kammerer Rd | Bruceville Rd | Big Horn Blvd | D | 1 | 990 | 429 | Α | 0.43 | 287 | Α | 0.29 |
| 4. Nammerer Nu | Big Horn Blvd | Bruceville Rd | D | 1 | 990 | 209 | Α | 0.21 | 423 | Α | 0.43 |
| 5. Kammerer Rd | Big Horn Blvd | Lotz Pkwy | D | 1 | 990 | 436 | Α | 0.44 | 286 | Α | 0.29 |
| J. Nammerer Nu | Lotz Pkwy | Big Horn Blvd | D | 1 | 990 | 210 | Α | 0.21 | 430 | Α | 0.43 |
| 6. Kammerer Rd | Lotz Pkwy | Lent Ranch Pkwy | D | 1 | 990 | 443 | Α | 0.45 | 285 | Α | 0.29 |
| o. Kallillerer Ku | Lent Ranch Pkwy | Lotz Pkwy | D | 1 | 990 | 211 | А | 0.21 | 437 | А | 0.44 |
| 7 Vannarar Dd | Lent Ranch Pkwy | Promenade Pkwy | D | 3 | 2,970 | 443 | А | 0.15 | 285 | А | 0.10 |
| 7. Kammerer Rd | Promenade Pkwy | Lent Ranch Pkwy | D | 3 | 2,970 | 212 | А | 0.07 | 433 | А | 0.15 |
| 8. Kammerer Rd | Promenade Pkwy | SR 99 SB Ramps | D | 3 | 2,970 | 614 | А | 0.21 | 547 | А | 0.18 |
| o. Nammerer Ru | SR 99 SB Ramps | Promenade Pkwy | D | 3 | 2,970 | 506 | Α | 0.17 | 655 | Α | 0.22 |
| 9. Grant Line Rd | SR 99 SB Ramps | SR 99 NB Ramps | D | 3 | 2,970 | 739 | A | 0.25 | 618 | Α | 0.21 |
| 9. Grant Line Ru | SR 99 NB Ramps | SR 99 SB Ramps | D | 3 | 2,970 | 868 | A | 0.29 | 1,108 | Α | 0.37 |
| 10. Grant Line Rd | SR 99 NB Ramps | Survey Rd-E. Stockton Blvd | D | 3 | 2,970 | 1,197 | Α | 0.40 | 1,022 | Α | 0.34 |
| 10. Grant Line No | Survey Rd-E. Stockton Blvd | SR 99 NB Ramps | D | 3 | 2,970 | 887 | Α | 0.30 | 1,234 | Α | 0.42 |
| 11. Grant Line Rd | Survey Rd-E. Stockton Blvd | Waterman Rd | D | 2 | 1,980 | 908 | Α | 0.46 | 826 | Α | 0.42 |
| TI. Grant Line No | Waterman Rd | Survey Rd-E. Stockton Blvd | D | 2 | 1,980 | 865 | Α | 0.44 | 911 | Α | 0.46 |
| 12. Grant Line Rd | Waterman Rd | Mosher Rd | D | 1 | 990 | 741 | С | 0.75 | 631 | В | 0.64 |
| TE. GIGIR LINE NO | Mosher Rd | Waterman Rd | D | 1 | 990 | 627 | В | 0.63 | 680 | В | 0.69 |
| 13. Grant Line Rd | Mosher Rd | Bradshaw Rd | D | 1 | 990 | 749 | С | 0.76 | 564 | Α | 0.57 |
| | Bradshaw Rd | Mosher Rd | D | 1 | 990 | 539 | Α | 0.54 | 645 | В | 0.65 |
| 14. Grant Line Rd | Bradshaw Rd | Elk Grove Blvd | D | 1 | 990 | 477 | Α | 0.48 | 304 | Α | 0.31 |
| | Elk Grove Blvd | Bradshaw Rd | D | 1 | 990 | 294 | Α | 0.30 | 402 | Α | 0.41 |

Note: LOS = level of service. V/C = volume-to-capacity.

Source: compiled by Fehr & Peers, 2017

All roadway segments operate at LOS D or better based on both the daily (two-way total) and peak hour directional roadway segment threshold presented in Table 3.13-2 and Table 3.13-3, respectively. However, as shown in Table 3.13-2, the segment of SR 99 between Elk Grove Boulevard and Laguna Boulevard

operates at LOS F. In addition, the segment of I 5 between Elk Grove Boulevard and Laguna Boulevard operates at LOS E (VC of 0.95).

The roadway segment analysis documented in Table 3.13-2 does not capture localized congestion because of operational effects of closely spaced intersections (long vehicle queues, low vehicle speed, and long delay), experienced near freeway interchanges. Similarly, peak period operations on SR 99 and I-5 may be worse than reported because of reoccurring bottlenecks. As documented in the California Department of Transportation (CalTrans) Mobility Performance Report (Caltrans 2011), several bottleneck locations exist on SR 99 that meter traffic northbound in the morning and southbound in the evening, which cause congested conditions (i.e., vehicle speed of 35 miles per hour or less) and vehicle queuing on northbound SR 99 during the AM peak period. Similarly, bottlenecks on southbound SR 99 in the evening meter traffic on SR 99 through Elk Grove.

Vehicle Miles Traveled

As discussed under Section 3.13.2, "Regulatory Framework," implementation of Senate Bill 743 will involve adoption of updates to the CEQA Guidelines to identify the use of vehicle miles traveled (VMT) as the primary metric used to identify transportation impacts. The City of Elk Grove is also proposing the establishment of VMT standards in its General Plan Update. As part of the City's development of VMT standards, the City has identified the following 2015 average daily VMT per service population by land use types shown in Table 3.13-4

Table 3.13-4 City of Elk Grove Vehicle Miles Traveled Baseline (2015) by Land Use Designation

| Land Use Designation | Average Daily VMT per Service Population |
|----------------------------|---|
| Commercial and Em | nployment Land Use Designations |
| Community Commercial | 81.4 |
| Regional Commercial | 48.1 |
| Employment Center | 14 |
| Light Industrial/Flex | 30.8 |
| Light Industrial | 49.7 |
| Heavy Industrial | 36.6 |
| Mixed Use | e Land Use Designations |
| Village Center Mixed Use | 32 |
| Residential Mixed Use | 20.61 |
| Public/Quasi Public and | d Open Space Land Use Designations ² |
| Public Services | 23.5 |
| Residentia | al Land Use Designations |
| Rural Residential | 23.6 |
| Estate Residential | 18.8 ¹ |
| Low Density Residential | 14.1 |
| Medium Density Residential | 12.9 |
| High Density Residential | 9.21 |
| Other La | and Use Designations |
| Agriculture | 35.9 |

Source: City of Elk Grove General Plan Update, Introduction of Draft Mobility Policies and Process, Table 1 (City of Elk Grove 2017a)

¹ The City had limited operating land uses of this type in 2015. Therefore, the baseline 2015 VMT numbers for these land use designations were extrapolated based on most similar land uses.

² Parks and Open Space and Resource Management and Conservation land use designations are not anticipated to produce significant VMT, as they have no residents and limited to no employees.

The SACOG 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) protects that the regional weekday VMT in 2036 will be 74,519,700 miles (SACOG 2016).

TRANSIT SYSTEM

Based on the 2009-2013 American Community Survey, about 2 percent of Elk Grove residents use public transit to travel to work. In Elk Grove, fewer residents use public transportation to get to work compared to California residents overall (about 5 percent).

The City of Elk Grove is served by its own transit system, e-Tran, including e-Tran neighborhood shuttle service (ez-tran), limited local transit service, and commuter routes. Local transit service is provided on weekdays (six routes) and weekends (three routes). e-Tran provides nine commuter routes that operate midweek, including two reverse commuter routes. The current e-Trans system map is shown in Exhibit 3.13-5. The Purple Line Route, which travels on Bilby Road, provides service to passengers with employment destinations in Downtown Sacramento. The Purple Line Route is the closest service to the project site.

The route is open to the general public and will deviate up to a mile from the route for and e-van pick-up/drip-off. The Purple Line is a pilot route and will continue based on ridership levels.

The City of Elk Grove is studying the potential for a multi-modal facility to provide access to the e-Tran express bus, Regional Transit Light Rail, future bus rapid transit, and commuter rail. The City has identified four potential sites for a multi-modal facility: southwest corner of Elk Grove Boulevard and Franklin Boulevard intersection, west of the Willard Parkway and Matina Drive intersection, southeast corner of Elk Grove Boulevard and Big Horn Boulevard intersection, and the southeast corner of the Grant Line Road and Disposal Lane intersection (City of Elk Grove 2017b).

BICYCLE AND PEDESTRIAN FACILITIES

Based on the 2009-2013 American Community Survey, in Elk Grove and the State of California, most residents commute by automobile (drive alone or in carpool) to get to work. In Elk Grove, fewer Elk Grove residents (about 1 percent) rely on active transportation including walking and bicycling to work than the state as a whole (about 4 percent).

Most of the bike paths in the city limits are Class II lanes, which are located on existing streets or highways and are striped for one-way bicycle travel. Below are descriptions of bicycle paths and their classifications.

- Class I Bike Paths provide a completely separated right-of-way for the exclusive use of bicycles and pedestrian with cross-flow minimized.
- ▲ Class II Bike Lanes are striped lanes for one-way bike travel on a street or highway.
- ▲ Class III Bike Routes provide for shared use with pedestrians or motor vehicle traffic.

The City adopted the City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan (BPTMP) in July 2014. The BPTMP identifies existing facilities opportunities, constraints and destination points for bicycle users and pedestrians in the City of Elk Grove. Existing bicycle facilities, including Class I Bikeways (Multi-Use Trails) that accommodate pedestrians, documented in the BPMP are shown in Exhibit 3.13-6 (Figure 4.3 of the BPTMP).

Sidewalks exist on the north side of Bilby Road and generally along improved roadway frontages on Willard Parkway, Franklin Boulevard, and Bruceville Road.

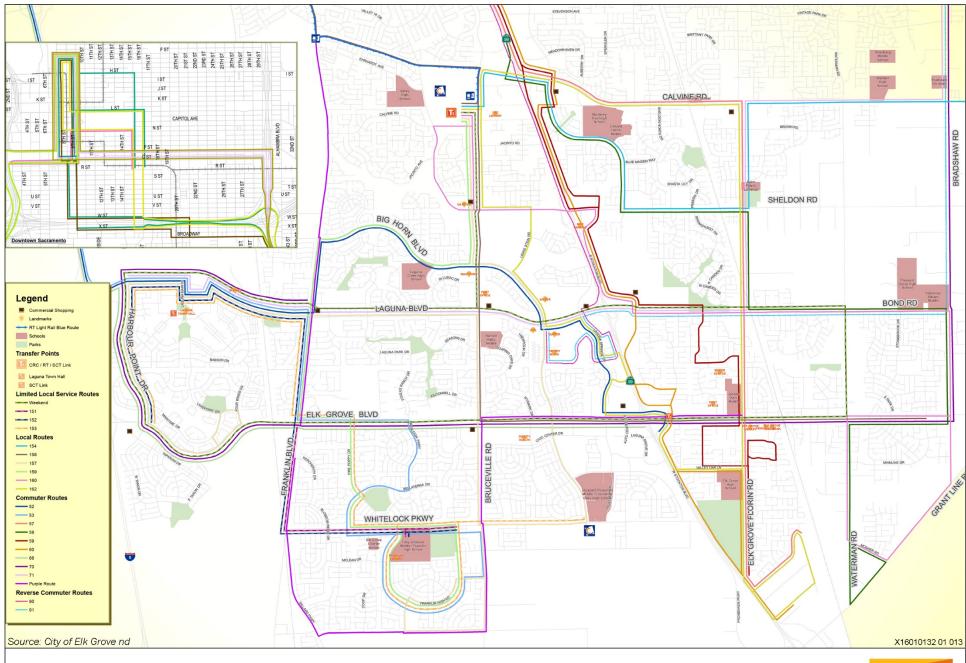


Exhibit 3.13-5

e-Trans System Map



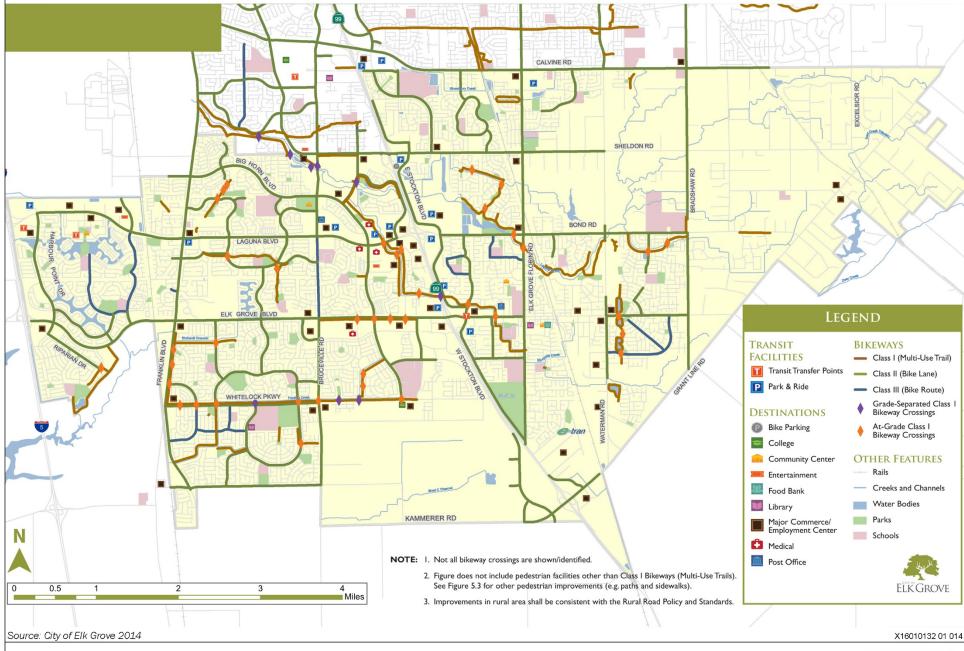


Exhibit 3.13-6

Existing Bicycle Facilities



3.13.2 Regulatory Framework

FEDERAL

No federal plans, policies, regulations, or laws are applicable to the project.

STATE

State Route 99 & Interstate 5 Corridor System Management Plan

In 2009, Caltrans released the State Route 99 & Interstate 5 Corridor System Management Plan (CSMP) that includes portions of SR 99 and I-5 within the study area. Table 7 of this report documents the following existing operations on SR 99 and I-5 within the study area:

- ▲ SR 99 (San Joaquin County Line to Elk Grove Boulevard) LOS D
- SR 99 (Elk Grove Boulevard to Mack Road) LOS F
- I-5 (Hood-Franklin Road to Laguna Boulevard) LOS D

The report also indicates a Concept LOS F for both facilities in the study area. The concept LOS represents the minimum acceptable service conditions over the next 20 years.

Senate Bill 743

Senate Bill 743, passed in 2013, requires the California Governor's Office of Planning and Research (OPR) to develop new CEQA guidelines that address traffic metrics under CEQA. As stated in the legislation, upon adoption of the new guidelines, "automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the guidelines, if any." OPR is currently updating its CEQA Guidelines to implement SB 743 and is proposing that vehicle miles traveled (VMT) be the primary metric used to identify transportation impacts.

LOCAL

The project site lies within the jurisdictional boundaries of Sacramento County; therefore, the County's policies would apply. Furthermore, if the SOIA is approved, it would likely lead to annexation to the City of Elk Grove. Thus, applicable policies of the City of Elk Grove's General Plan are described below.

Metropolitan Transportation Plan/Sustainable Communities Strategy

The SACOG is responsible for the preparation of, and updates to, the MTP/SCS (SACOG 2016) and the corresponding Metropolitan Transportation Improvement Program (MTIP) for the six-county Sacramento region. The MTP/SCS 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/SCS was adopted by the SACOG board in 2016.

I-5 Freeway Subregional Corridor Mitigation Program

The I-5 Freeway Subregional Corridor Mitigation Program (SCMP) is a voluntary development impact fee for new developments within the I-5 corridor between Elk Grove, Downtown Sacramento, and West Sacramento that is intended to be used to construct a set of transportation improvements identified in the SACOG 2016 MTP/SCS. Under the SCMP, a project applicant whose project would generate vehicle trips over the threshold could choose to either pay the fee, which would constitute mitigation of their development project's impacts on the freeway mainline, or conduct a Traffic Impact Study, which would evaluate that project's impact on the freeway system and identify mitigation for those impacts.

According to the *Draft Final Nexus Study for the I-5 Freeway Subregional Corridor Mitigation Program* (DKS Associates 2016), the following roadway improvements would be partially funded by the plan (with the remainder coming from other sources):

▲ Construction of HOV lanes on I-5 from Elk Grove to US 50.

Page 36 of the study specifies that "Caltrans would consider the fees as an adequate mitigation for freeway mainline impacts." Table 18 on Page 32 of the Nexus Study shows the proposed fee per dwelling unit, and per thousand square feet of non-residential space.

Sacramento County General Plan of 2005-2030

The Circulation Element of the Sacramento County General Plan outlines goals and policies that coordinate the transportation and circulation system with planned land uses. The following LOS policy is relevant to this study:

■ Policy Cl-10: Plan and design the roadway system in a manner that meets Level of Service (LOS) D on rural roadway and LOS E on urban roadway, unless it is infeasible to implement project alternatives or mitigation measures that would achieve LOS D on rural roadways or LOS E on urban roadways. 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.

The City of Elk Grove General Plan

The Circulation Element of the General Plan outlines goals and policies that coordinate the transportation and circulation system with planned land uses. The following policies are relevant to this study:

- Policy CI-1: Circulation planning for all modes of travel (vehicle, transit, bicycle, pedestrian, etc.) shall be coordinates 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. This may include joint transportation planning efforts, roadway construction, and funding.
- Policy Cl-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 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-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 Highway 99.

- Policy Cl-10: The City shall implement the roadway master plan shown in Figure Cl-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 roadway on which sufficient width is provided for middle two-way turn lane and/or expanded turn pockets at roadway intersections.
 - ▼ The City may make improvements to roadways in the Rural Area, when warranted, consistent with the provisions of the Rural Roads Improvement Policy.
 - Improvements to Grant Line Road shall consider regional planning activities and projects (e.g., the Capital SouthEast Connector) and should be considered after effects to the Rural Area have been identified. To the extent feasible, these effects shall be addressed as part of facility design.
- CI-10 Action 1 Require the dedication of right of way and the installation of roadway improvements as part of the review and approval of development projects. The City shall require the dedication of major road rights of way (general, arterials and thoroughfares) at the earliest opportunity in the development process in order to implement this policy.
- Policy Cl-11: The City shall assist Caltrans in implementing improvements to I-5 and Hwy 99 within the city.
- Policy Cl-12: The City supports efforts to develop the Capital SouthEast Connector, providing a regional roadway connection from Interstate 5, and State Route 99 in Elk Grove to Highway 50. The City recognizes the adopted conceptual route alignment for the Capital SouthEast Connector, utilizing Kammerer Road and Grant line Road through 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. The City acknowledges that the Capital SouthEast Connector has identified higher LOS standards for certain segments. The City will strive to achieve these standards to the extent feasible and will work with the JPA as necessary.
- 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 intersection. Roadway 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 show 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 requirement 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 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: Where a development project is required to perform new roadway construction or road widening, the entire roadway shall be completed to its planned width from curb-to-curb prior to operation of the project for which the improvements were constructed, unless otherwise approved by the City Engineer. Such roadway construction shall also provide facilities adequate to ensure pedestrian safety as determined by the City Engineer.

- Policy Cl-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 Community Services District to ensure adequate access for police and fire vehicles.
- Policy CI-23: All public streets should have sufficient width to provide for parking on both sides of the street and enough remaining pavement width to provide for fire emergency vehicle access.

City of Elk Grove General Plan Update

The City is developing VMT standards and thresholds of significance to be incorporated into the proposed General Plan Update and the City's Traffic Analysis Guidelines. Draft City mobility policies identify a proposed VMT target of a 15 percent reduction from 2015 VMT conditions (City of Elk Grove 2017a).

3.13.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

The transportation and circulation analysis methodology uses the anticipated travel characteristics of the development anticipated in the conceptual land use plan (see Exhibit 2-4 and Table 2-1), trip generation and mode split assumptions, and vehicle trip distribution, as described below.

As identified in Chapter 2, "Project Description," the SOIA would expand the City of Elk Grove's sphere of influence to include this project. Approval of this project would not modify the existing Sacramento County agricultural land use designations and zoning for the SOIA and would not entitle any development. Future development would occur at a later date if LAFCo approves annexation of the SOIA to the City. Development is not expected to occur in the SOIA for some time as the City of Elk Grove currently has entitled and unbuilt residential capacity to meet its housing needs beyond the year 2025. Therefore, this traffic impact analysis utilizes year 2036 conditions to quantify traffic impacts of the project in comparison to both year 2036 conditions and existing conditions.

Travel Demand Forecasting

A modified version of SACOG's MTP/SCS travel demand forecasting (TDF) model was used to develop daily, AM, and PM peak hour traffic volumes for the study facilities. The official version of the base year model is generally representative of 2012 conditions and the future year model has a 2036 forecast year. However, as is standard practice with large area travel demand models, a thorough model review was completed and the model was refined to ensure that it produced reasonable results in the study area. The following refinements were implemented in the study area:

- added roadway network detail;
- updated land use to reflect 2015 conditions in the study area;
- updated network attributes in the study area to reflect existing conditions (e.g., verified roadway network speeds, number of lanes on the roadway, and roadway capacities to reflect existing conditions);
- updated the future year roadway network in the study area to reflect the SACOG MTP/SCS constrained roadway network; and

■ updated the future land use information to reflect approved and reasonably foreseeable projects in the study area.

Exhibit 3.13-7 shows number of travel lanes (two-way total) on study roadways under cumulative conditions. Specific information related to the model's performance is described below.

Base Year Model Validation

Before any model can be applied for use in a major specific plan application, it should be evaluated against specific validation criteria identified by Caltrans, the Federal Highways Administration (FHWA), and the California Transportation Commission (CTC). These criteria were developed to ensure that a model is developed such that it can accurately forecast existing conditions based on land use and roadway network information, which improves the model's ability to accurately forecast future conditions. The state-of-the-practice for developing defensible forecasts for changes in the roadway network and/or changes in proposed land use is to use a valid base year model.

The first step of any model validation is to ensure that the model generally produces similar results to existing counts. Please note that, because the model is being used to generate AM peak hour and PM peak hour forecasts, the model must be valid at study facilities for both time periods.

Key metrics for model validation guidelines are described below:

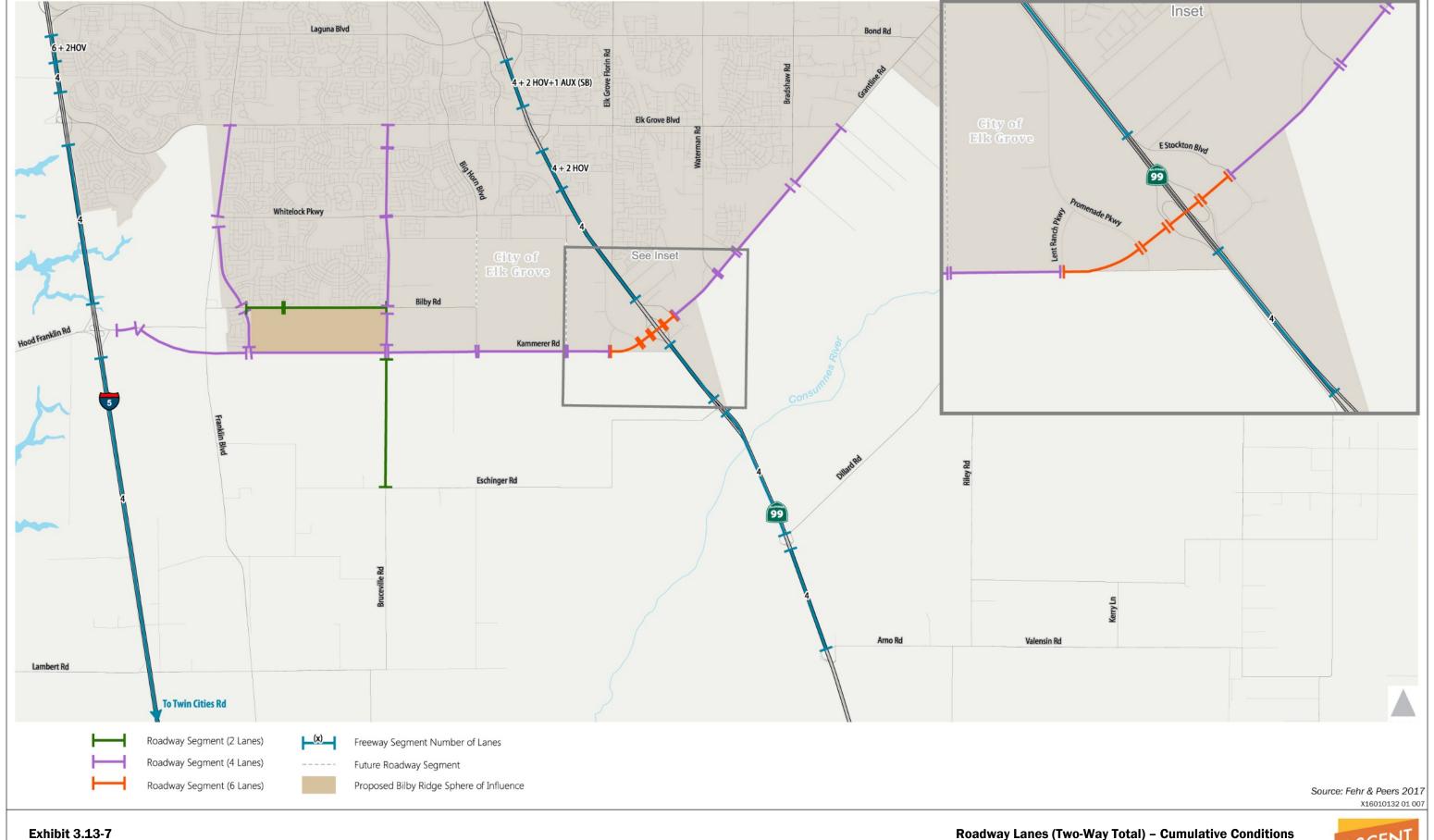
- The volume-to-count ratio is computed by dividing the volume assigned by the model and the actual traffic count for individual roadways (or intersections). The volume-to-count ratio should be less than 10 percent.
- The deviation is the difference between the model volume and the actual count divided by the actual count. Caltrans provides guidance on the maximum allowable deviation by facility type (e.g., lower-volume roadways can have a higher deviation than higher-volume roadways). 75 percent of the study facilities should be within the maximum allowable deviation.
- ✓ The correlation coefficient estimates the correlation between the actual traffic counts and the estimated traffic volumes from the model. The correlation coefficient should be greater than 0.88.
- ▲ The percent Root Mean Square Error (RMSE) is the square root of the model volume minus the actual count squared divided by the number of counts. It is a measure similar to standard deviation in that it assesses the accuracy of the entire model. The RMSE should be less than 40 percent.
- The model validation statistics are summarized in Table 3.13-5. As shown in Table 3.13-5, the model meets or exceeds the identified model validation target criteria in the study area. As such, the model is deemed appropriate for use in this assessment.

Table 3.13-5 Travel Demand Forecasting Model Sub-Area Validation

| Performance Metric | Torract Critorio | Peak Hour Model Validation | | | |
|----------------------------------|-----------------------|----------------------------|------|--|--|
| Performance Metric | Target Criteria | AM | PM | | |
| Model to Count Ratio | Between 0.90 and 1.10 | 0.91 | 0.95 | | |
| Percent Within Maximum Deviation | > 75% | 91% | 91% | | |
| Percent Root Mean Square Error | < 40% | 22% | 19% | | |
| Correlation Coefficient | > 0.88 | 0.93 | 0.94 | | |

Notes: Validation based on 35 count locations.

Source: compiled by Fehr & Peers 2017





Traffic Volume Forecast Development

The TDF model was used to develop traffic volume forecasts for project buildout conditions under cumulative conditions. The future year TDF model was modified to reflect buildout development levels in the City of Elk Grove under its General Plan, including buildout of the Laguna Ridge Specific Plan, Sterling Meadows, the Southeast Policy Area, and buildout of the following projects considered to be reasonably foreseeable:

- Elk Grove Multi-Sport Park Complex,
- ▲ Kammerer Road/Highway 99 Sphere of Influence Amendment, and
- Elk Grove Promenade (previously referred to as Lent Ranch Mall).

Year 2036 levels of development are assumed outside the City of Elk Grove. Project land use inputs used for analysis are shown in Table 3.13-6. The project land uses were added to the cumulative year traffic model to develop traffic volume forecasts under cumulative conditions without and with the project.

Table 3.13-6 Bilby Ridge Sphere of Influence Amendment Travel Forecasting Model Land Use Inputs

| Households | | | | Employment | | | | |
|---------------|--------------|--------|----------------|----------------|-----------|------------------------|-----------------|--|
| nouseiloius | | | | Non-Retail | | | | |
| Single Family | Multi-Family | Retail | General Office | Medical Office | Education | Manufacturing Other | K-12 Enrollment | |
| 1,848 | - | 611 | 650 | 108 | 50 | - | 1,000 | |

Notes:

Source: compiled by Fehr & Peers 2017

All forecasts are adjusted using a growth increment method (i.e., the difference method) that adds the growth in forecasts travel demand to existing traffic counts. The base year TDF model transportation network (in the study area) was modified to account of changes to the network that have occurred between 2012 and 2015 (i.e., when the traffic counts were collected). The 2036 transportation network is consistent with programmed improvements listed in the Final MTP/SCS 2016 project list.

Project Trip Generation

After the changes described above were completed, the modified TDF model was run for each analysis scenario. The TDF model accounts for the interaction of land uses in the project and in the region. For example, by design, land use diversity (i.e., a mix of residential, employment, and shopping uses), would result in trips that remain within the project site, trips being made by non-automobile modes (i.e., walk and bike trips), or result in shorter trips and reduced vehicle travel.

Table 3.13-7 summarizes trip generation for the anticipated level of development following potential annexation, based on the trip generation from the modified SACMET TDF model, which was used for the transportation analysis. For comparison, Table 3.13-8 summarizes trip generation based on published sources. The trip generation rates identified in Table 3.13-8 are average rates for the land use categories referenced. As shown in Table 3.3-8, the trip generation estimated using published trip generation rates is comparable to the trip generation from the modified SACMT TDF model and are well within the range of potential trip generation rates for each land use category.

Table 3.13-7 Bilby Ridge Vehicle Trip Generation – Modified SACMET TDF Model

| Development | | Total Vehicle Trips ¹ | | | | | |
|-------------|----------------|----------------------------------|-------|-------|--|--|--|
| | | Daily | AM | PM | | | |
| | Total Trips | 34,529 | 2,730 | 3,097 | | | |
| Build-out | Internal Trips | 3,926 | 2,439 | 2,739 | | | |
| | External Trips | 30,603 | 2,439 | 2,739 | | | |

Notes:

¹Trip generation is based on the Bilby Ridge Modified SACMET TDF model.

Source: compiled by Fehr & Peers 2017

Table 3.13-8 Bilby Ridge Vehicle Trip Generation – Published Rates

| ITE Land Use | Quantity Units | | | Trip Rate | | Trips | | |
|---|---|-------------------|-------|-----------|-------------|--------|-------|-------|
| HE Land USE | Qualitity | Ullits | Daily | AM | PM | Daily | AM | PM |
| Single Family Detached Housing (210) | 1,846 | Dwelling Units | 9.52 | 0.75 | 1.00 | 17,574 | 1,384 | 1,846 |
| General Office Building (710) | 159.2 | 1,000 SF | 11.03 | 1.56 | 1.49 | 1,756 | 249 | 237 |
| Shopping Center (820) | 399.2 | 1,000 SF | 42.70 | 0.96 | 3.71 | 17,045 | 384 | 1,481 |
| Elementary School (520) | 50 | Employees | 15.71 | 5.33 | 1.76 | 786 | 267 | 88 |
| | | | | | Total Trips | 37,161 | 2,284 | 3,652 |
| | Internal Trips ¹ 5,867 471 928 | | | | | | | 928 |
| External Trips 31,294 1,813 2,724 | | | | | | | 2,724 | |

Notes: Trip generation is based on the trip equations from the Institute of Transportation Engineers (ITE) Trip Generation Manual (9th Edition).

¹Internal trips based on MXD+

Source: compiled by Fehr & Peers 2017

In reviewing the traffic volume forecasts, different scenarios such as cumulative no project versus cumulative plus project should be treated as different "snapshots" of the future. When changing land uses or roadway networks between future scenarios, the model produces a new set of forecasts reflecting different trip distribution and trip assignment results based on the changed input. This capability of the model recognizes that travel patterns under existing conditions or 20 or more years in the future would likely be different if a significant roadway link is excluded or a major new land-use development is added. Under this approach, the project's traffic is not added to a fixed amount of traffic under the no project scenario. Therefore, the project may contribute traffic to many roadways under the cumulative no project and cumulative plus project scenarios, but may not necessarily result in higher volumes on a roadway segment when compared to the no project scenarios, and therefore not cause an impact.

Project Vehicle Trip Distribution

The following summarizes the general trip distribution with build-out of the Bilby Ridge project site consistent with the conceptual land use plan:

- To/From the North 51 percent
- To/From the South 1 percent
- ▲ To/From the East 36 percent

▲ To/From the West – 12 percent

Traffic Volume Forecasts

The traffic volume forecasts, developed using the methodology discussed above, are presented in the following exhibits.

- ▲ Exhibit 3.13-8 displays cumulative daily roadway segment volumes (two-way total).
- ▲ Exhibit 3.13-9 displays cumulative AM and PM peak hour directional roadway segment volumes.
- ▲ Exhibit 3.13-10 displays cumulative plus project daily roadway segment volumes (two-way total).
- ▲ Exhibit 3.13-11 displays cumulative plus project AM and PM peak hour directional roadway segment volumes.

THRESHOLDS OF SIGNIFICANCE

The significance criteria used to evaluate the project impacts to transportation and traffic under CEQA are based on Appendix G of the CEQA Guidelines, and thresholds of significance adopted by Sacramento County and the City of Elk Grove in applicable general plans and previous environmental documents.

Roadways

Roadway system thresholds for Sacramento County and City of Elk Grove facilities are summarized below. The impact analysis also qualitatively evaluates potential transportation impacts from project VMT in relation to SACOG 2016 MTP/SCS VMT reduction efforts and future VMT thresholds anticipated under the City of Elk Grove General Plan Update. No numeric thresholds have been adopted by the state, SACOG, or the City of Elk Grove as of the preparation of this Draft EIR.

Sacramento County

The following thresholds of significance were used to determine if an impact is significant and requires mitigation:

- ▲ A project is considered to have a significant effect if it would:
 - ▼ Result in a roadway operating at an acceptable LOS (i.e., LOS E in urban areas and LOS D in rural areas) to deteriorate to an unacceptable LOS.
 - ✓ Increase the volume-to-capacity ratio (V/C) by more than 0.05 at a roadway that is operating at an acceptable LOS (i.e., LOS E in urban areas and LOS D in rural areas) without the project.

City of Elk Grove

An impact to a roadway segment is considered significant, and mitigation measures must be identified when:

✓ The traffic generated by the project degrades the LOS from an acceptable LOS D or better (without the project) to an unacceptable LOS E or LOS F (with the project). For facilities that are or will be (cumulative condition), operating at unacceptable levels of service without the project, an impact is considered significant if the project: 1) increases average delay at intersections by more than 5 seconds, or 2) increases the V/C ratio by 0.05 or more on a roadway.

Freeway Facilities

An impact is considered significant on freeway facilities if the project causes the facility to change from acceptable to unacceptable LOS.

For facilities, which are or will be (in the cumulative condition), operating at unacceptable LOS without the project, an impact is considered significant if the project:

- ▲ increases the V/C ratio on a freeway mainline segment or freeway ramp junction by 0.05, or
- increases the number of peak hour vehicles on a freeway mainline segment or freeway ramp junction ramp junction by more than 5 percent.

According to the Guide for the Preparation of Traffic Impact Studies (Caltrans 2001), Caltrans strives to maintain a target LOS at the transition between LOS C and LOS D on State highway facilities; therefore, LOS D was selected as the minimum standard for all study freeway facilities.

Bicycle/Pedestrian/Transit Facilities

An impact is considered significant if implementation of the project would disrupt or interfere with existing or planned bicycle, pedestrian, or transit facilities.

Transportation Hazards

An impact is considered significant if the project would substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Emergency Access

An impact to emergency access are considered significant if the project would result in inadequate emergency access.

ISSUES NOT EVALUATED FURTHER

The closest public airport is Franklin Field, a small airport located 4 miles south of the SOIA area. While there is record of a private airport (Flying B Ranch Airport) 2 miles south of the SOIA area, it appears to be no longer in operation. The project would not have impacts on air traffic, and would not result in incompatible uses in the study area. This issue is not discussed further in this Draft EIR.



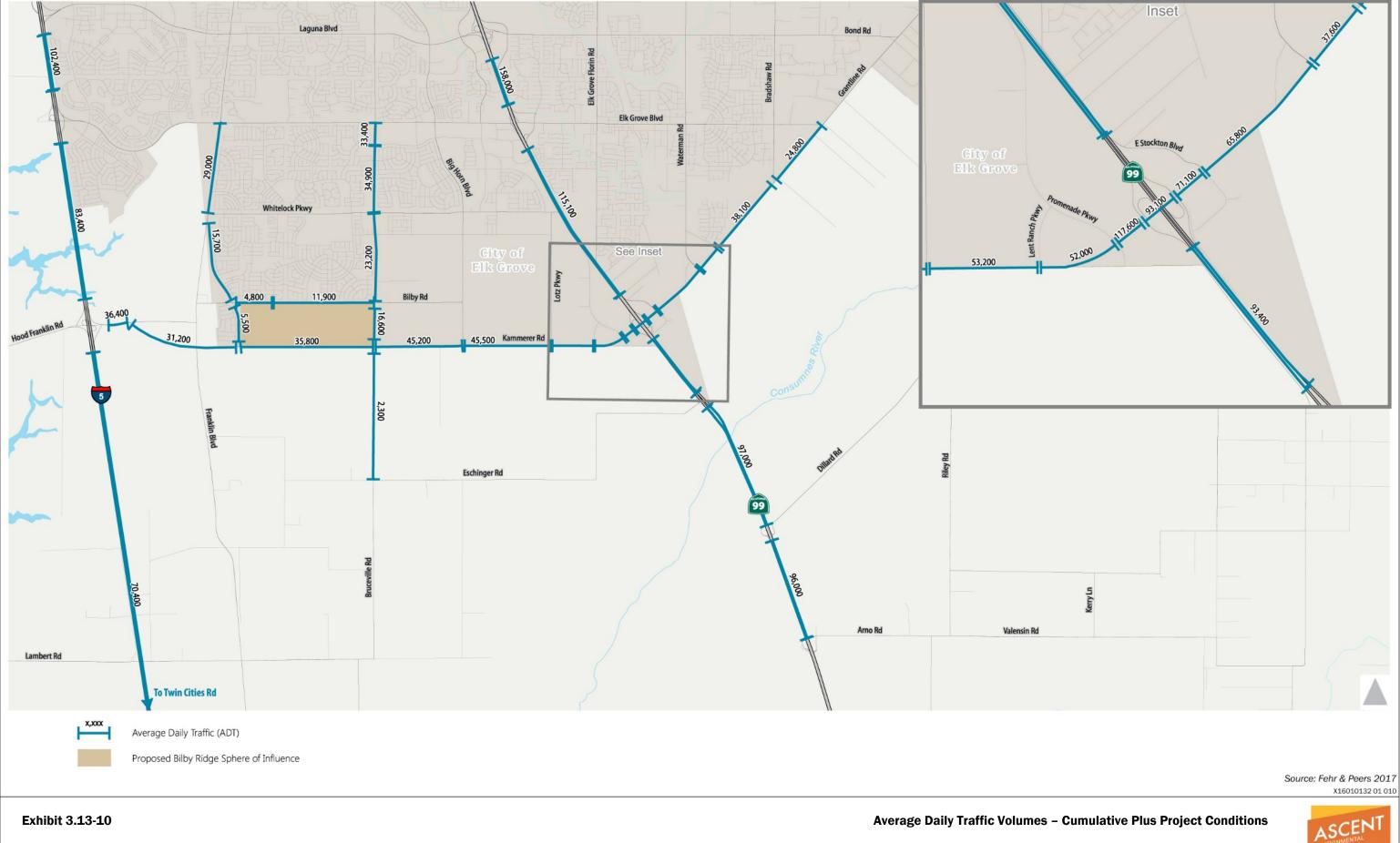


Exhibit 3.13-9

Peak Hour Traffic Volumes - Cumulative Conditions



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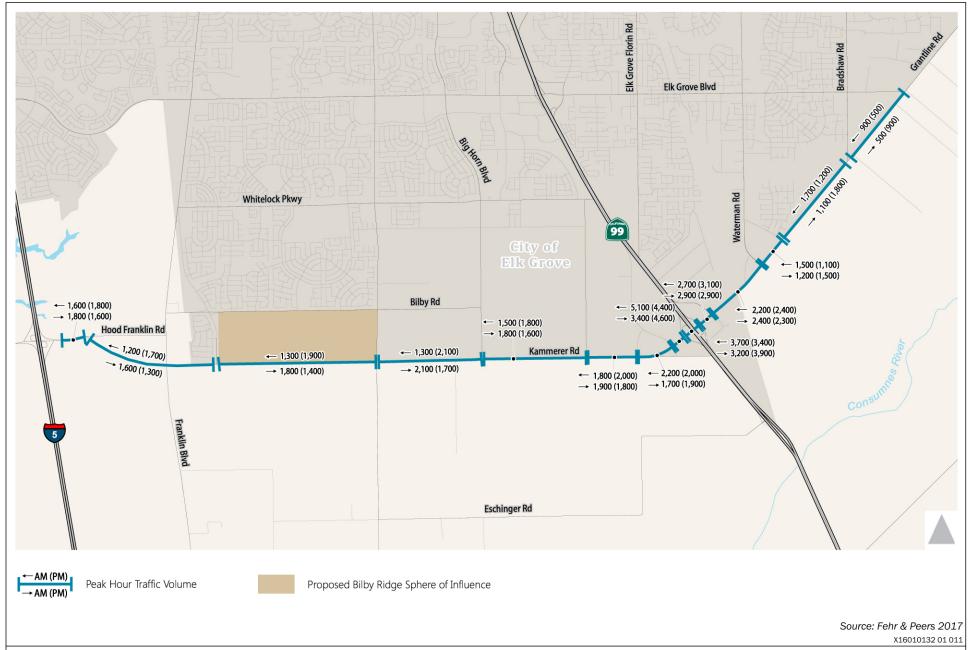


Exhibit 3.13-11

Peak Hour Traffic Volumes - Cumulative Plus Project Conditions



IMPACT ANALYSIS

Impact 3.13-1: Impacts to Roadway Operation.

Approval of the SOIA and future development of the SOIA area upon annexation could result in unacceptable operations and add traffic to study roadway segments that are projected to operate unacceptably. Potential future development of the SOIA area would also result in an increase in VMT in the project area. This would be a **significant** impact.

Traffic Operations

The SOIA would not directly result in additional traffic on area roadways. Rather, by amending the City of Elk Grove's SOI and providing a conceptual land use plan, the project would inform long-term planning. Through this process, roadway upgrades could be planned and funded prior to annexation or subsequent development.

The following addresses the potential for development of the SOIA area consistent with the conceptual land use plan, which may indirectly result from approval of the SOIA, to adversely affect roadway operation. Because annexation and development of the area is not anticipated in the near term, analysis of the development's effects on existing conditions would not adequately address potential effects. For this reason, the development's effects on future (2036) conditions have been evaluated.

Table 3.13-9 summarizes roadway segment operations based on daily (two-way total) roadway segment traffic volume forecasts. Under cumulative no project conditions, all study roadway segments on Kammerer Road and Grant Line Road between Bruceville Road and Bradshaw Road would operate unacceptably based on the daily roadway segment operations analysis.

Table 3.13-9 Daily Roadway Segment Operations – Cumulative Plus Project Conditions

| Roadway Segment | Threshold LOS | Lanes (Two- Way | Daily Capacity | Cumulat Co | tive No P Inditions | - | Cumulative Plus Project Conditions | | |
|---|------------------|-----------------------|-------------------|-----------------|------------------------|--------------|---------------------------------------|----------|--------------|
| | 200 | Total) ¹ | capacity | Daily Volume | LOS | V/C Ratio | Daily Volume | LOS | V/C Ratio |
| 1. Hood Franklin Rd - I-5 NB Ramps to Kammerer Rd | D | 4 | 40,000 | 34,400 | D | 0.86 | 36,400 | <u>E</u> | 0.91 |
| 2. Kammerer Rd - Hood Franklin Rd to Willard Pkwy | D | 4 | 40,000 | 29,100 | С | 0.73 | 31,200 | С | 0.78 |
| 3. Kammerer Rd - Willard Pkwy to Bruceville Rd | D | 4 | 40,000 | 32,500 | D | 0.81 | 35,800 | D | 0.90 |
| 4. Kammerer Rd - Bruceville Rd to Big Horn Blvd | D | 4 | 36,000 | 41,400 | F | 1.15 | 45,200 | <u>F</u> | <u>1.26</u> |
| 5. Kammerer Rd - Big Horn Blvd to Lotz Pkwy | D | 4 | 36,000 | 43,700 | F | 1.21 | 45,500 | <u>F</u> | <u>1.26</u> |
| 6. Kammerer Rd - Lotz Pkwy to Lent Ranch Pkwy | D | 4 | 36,000 | 52,600 | F | 1.46 | 53,200 | F | 1.48 |
| 7. Kammerer Rd - Lent Ranch Pkwy to Promenade Pkwy | D | 6 | 54,000 | 51,400 | Е | 0.95 | 52,000 | Е | 0.96 |
| 8. Kammerer Rd - Promenade Pkwy to SR 99 SB Ramps | D | 6 | 54,000 | 117,000 | F | 2.17 | 117,600 | F | 2.18 |
| 9. Grant Line Rd - SR 99 SB Ramps to SR 99 NB Ramps | D | 6 | 54,000 | 92,800 | F | 1.72 | 93,100 | F | 1.72 |
| 10. Grant Line Rd - SR 99 NB Ramps to Survey Rd-E. Stockton Blvd | D | 6 | 54,000 | 71,000 | F | 1.31 | 71,100 | F | 1.32 |

Table 3.13-9 Daily Roadway Segment Operations – Cumulative Plus Project Conditions

| Roadway Segment | Threshold LOS | Lanes (Two- Way | Daily Capacity | Cumulat Co | tive No P nditions | - | Cumulative Plus Project Conditions | | |
|--|------------------|-----------------------|-------------------|-----------------|-----------------------|--------------|---------------------------------------|----------|--------------|
| | | Total) ¹ | , , | Daily Volume | LOS | V/C Ratio | Daily Volume | LOS | V/C Ratio |
| 11. Grant Line Rd - Survey Rd-E. Stockton Blvd to Waterman Rd | D | 4 | 36,000 | 65,600 | F | 1.82 | 65,800 | F | 1.83 |
| 12. Grant Line Rd - Waterman Rd to Mosher Rd | D | 4 | 36,000 | 37,600 | F | 1.04 | 37,600 | F | 1.04 |
| 13. Grant Line Rd - Mosher Rd to Bradshaw Rd | D | 4 | 36,000 | 37,900 | F | 1.05 | 38,100 | F | 1.06 |
| 14. Grant Line Rd - Bradshaw Rd to Elk Grove Blvd | D | 4 | 36,000 | 24,700 | В | 0.69 | 24,800 | В | 0.69 |
| 15. Willard Pkwy - Kammerer Rd to Bilby Rd | D | 4 | 36,000 | 4,300 | Α | 0.12 | 5,500 | Α | 0.15 |
| 16. Bilby Rd - Willard Pkwy to Coop Dr | D | 4 | 18,000 | 3,700 | Α | 0.21 | 4,800 | Α | 0.27 |
| 17. Bilby Rd - Coop Dr to Bruceville Rd | D | 4 | 18,000 | 8,800 | Α | 0.49 | 11,900 | В | 0.66 |
| 18. Bruceville Rd - Bilby Rd to Whitelock Pkwy | D | 4 | 36,000 | 20,600 | Α | 0.57 | 23,200 | В | 0.64 |
| 19. Bruceville Rd - Whitelock Pkwy to Backer Ranch Rd-Civic Center Dr | D | 4 | 36,000 | 31,800 | D | 0.88 | 34,900 | <u>E</u> | 0.97 |
| 20. Bruceville Rd - Backer Ranch Rd-Civic Center Dr to Elk Grove Blvd | D | 4 | 36,000 | 31,100 | D | 0.86 | 33,400 | <u>E</u> | 0.93 |
| 21. Willard Pkwy - Bilby Rd to Franklin Blvd | D | 4 | 36,000 | 13,400 | Α | 0.37 | 15,700 | Α | 0.44 |
| 22. Franklin Rd - Whitelock Pkwy to Elk Grove Blvd | D | 4 | 36,000 | 27,300 | С | 0.76 | 29,000 | D | 0.81 |
| 23. Bruceville Rd - Bilby Rd to Kammerer Rd | D | 4 | 36,000 | 18,700 | Α | 0.52 | 16,600 | Α | 0.46 |
| 24. Bruceville Rd - Kammerer Rd to Eschinger Rd | D | 2 | 17,000 | 2,300 | В | 0.14 | 2,300 | В | 0.14 |
| 25. I-5 Mainline - Elk Grove Blvd to Laguna Blvd | E | 4 | 80,000 | 101,100 | F | 1.26 | 102,400 | <u>E</u> | <u>1.28</u> |
| 26. I-5 Mainline - Hood Franklin Rd to Elk Grove Blvd | E | 4 | 80,000 | 81,800 | F | 1.02 | 83,400 | <u>F</u> | <u>1.04</u> |
| 27. I-5 Mainline - Twin Cities Rd to Hood Franklin Rd | E | 4 | 80,000 | 70,400 | D | 0.88 | 70,400 | D | 0.88 |
| 28. SR 99 Mainline - Elk Grove Blvd to Laguna Blvd- Bond Rd | E | 4 +1 AUX | 90,000 | 156,000 | F | 1.73 | 158,000 | <u>F</u> | <u>1.76</u> |
| 29. SR 99 Mainline - Grant Line Rd to Elk Grove Blvd | E | 4 | 80,000 | 115,300 | F | 1.44 | 115,100 | F | 1.44 |
| 30. SR 99 Mainline - Eschinger Rd to Grant Line Rd | E | 4 | 80,000 | 93,100 | F | 1.16 | 93,400 | <u>F</u> | <u>1.17</u> |
| 31. SR 99 Mainline - Eschinger Rd to Dillard Rd | E | 4 | 80,000 | 96,800 | F | 1.21 | 97,000 | <u>F</u> | <u>1.21</u> |
| 32. SR 99 Mainline - Arno Rd to Dillard Rd | E | 4 | 80,000 | 95,800 | F | 1.20 | 96,000 | <u>F</u> | <u>1.20</u> |

Notes: **Bold** indicates level of service worse than threshold level of service. **Bold and underline** indicates a significant impact as compared to cumulative no project conditions. LOS = level of service. V/C = volume-to-capacity. AUX = auxiliary lane.

Source: compiled by Fehr & Peers 2017

As shown in Table 3.13-9, the addition of traffic from development of the project area would result in unacceptable operations on Hood Franklin Road and segments of Bruceville Road north of Whitelock Parkway under cumulative conditions as well as compared to existing level of service operations (see Table 3.13-2). In addition, the development would exacerbate unacceptable operations under cumulative no project conditions on Kammerer Road and Grant Line Road between Bruceville Road and Bradshaw Road,

¹The number of lanes listed for I-5 and SR 99 freeway segments are the two-way total of mainline general-purpose lanes.

which would result in impacts on two of these segments, based on established significance criteria. These roadway operation impacts may also affect the response times for emergency vehicles and law enforcement. These roadway segments would also worsen in operation as compared to existing conditions.

The roadway analysis based on peak hour directional volumes, shown in Table 3.13-10, is consistent with the results presented in Table 3.13-9. A notable difference is the segment of Hood Franklin Road, which would operate acceptably based on the peak hour directional analysis. No significant peak hour directional level of service impacts would occur under existing conditions (see Table 3.13-3).

Ascent Environmental Traffic, Transportation, and Circulation

 Table 3.13-10
 Peak Hour Directional Roadway Segment Operations – Cumulative Plus Project Conditions

| | | Cottonal Rodum | | • | | | | | roject Cond | | | Cum | ulative P | lus Projec | t Condition | s Peak H | our |
|----------------------|-------------------------------|-------------------------------|------------------|---------------|--------------|--------------|-----|--------------|-------------|----------|--------------|--------------|-----------|--------------|-------------|----------|--------------|
| Roadway | From To | | To Threshold LOS | | Peak Hour | AM Peak Hour | | PM | Peak Ho | (Hour Al | | AM Peak Hour | | PM | Peak Ho | our | |
| | | | 103 | (One- Way) | Capacity | Volume | LOS | V/C Ratio | Volume | LOS | V/C Ratio | Volume | LOS | V/C Ratio | Volume | LOS | V/C Ratio |
| 1. Hood Franklin Rd | I-5 NB Ramps | Kammerer Rd | D | 2 | 3,870 | 1,800 | Α | 0.47 | 1,500 | Α | 0.39 | 1,800 | Α | 0.47 | 1,600 | Α | 0.41 |
| 1. HOOG FIANKIIII KU | Kammerer Rd | I-5 NB Ramps | D | 2 | 3,870 | 1,500 | Α | 0.39 | 1,700 | Α | 0.44 | 1,600 | Α | 0.41 | 1,800 | Α | 0.47 |
| 2. Kammerer Rd | Hood Franklin Rd | Willard Pkwy | D | 2 | 3,870 | 1,600 | Α | 0.41 | 1,200 | Α | 0.31 | 1,600 | Α | 0.41 | 1,300 | Α | 0.34 |
| 2. Nammerer Ku | Willard Pkwy | Hood Franklin Rd | D | 2 | 3,870 | 1,100 | Α | 0.28 | 1,700 | Α | 0.44 | 1,200 | Α | 0.31 | 1,700 | Α | 0.44 |
| 3. Kammerer Rd | Willard Pkwy | Bruceville Rd | D | 2 | 3,870 | 1,800 | Α | 0.47 | 1,300 | Α | 0.34 | 1,800 | Α | 0.47 | 1,400 | Α | 0.36 |
| 5. Nammerer Ku | Bruceville Rd | Willard Pkwy | D | 2 | 3,870 | 1,200 | Α | 0.31 | 1,900 | Α | 0.49 | 1,300 | Α | 0.34 | 1,900 | Α | 0.49 |
| 4. Kammerer Rd | Bruceville Rd | Big Horn Blvd | D | 2 | 1,820 | 2,000 | F | 1.10 | 1,600 | D | 0.88 | 2,100 | <u>F</u> | <u>1.15</u> | 1,700 | <u>E</u> | 0.93 |
| 4. Nammerer Ku | Big Horn Blvd | Bruceville Rd | D | 2 | 1,820 | 1,200 | В | 0.66 | 2,100 | F | 1.15 | 1,300 | С | 0.71 | 2,100 | F | 1.15 |
| E Kommoror Dd | Big Horn Blvd | Lotz Pkwy | D | 2 | 1,820 | 1,700 | E | 0.93 | 1,600 | D | 0.88 | 1,800 | <u>E</u> | <u>0.99</u> | 1,600 | D | 0.88 |
| 5. Kammerer Rd | Lotz Pkwy | Big Horn Blvd | D | 2 | 1,820 | 1,400 | С | 0.77 | 1,800 | Е | 0.99 | 1,500 | D | 0.82 | 1,800 | Е | 0.99 |
| 6. Kammerer Rd | Lotz Pkwy | Lent Ranch Pkwy | D | 2 | 1,820 | 1,800 | Е | 0.99 | 1,800 | Е | 0.99 | 1,900 | E | <u>1.04</u> | 1,800 | Е | 0.99 |
| o. Nammerer Ku | Lent Ranch Pkwy | Lotz Pkwy | D | 2 | 1,820 | 1,800 | E | 0.99 | 2,000 | F | 1.10 | 1,800 | E | 0.99 | 2,000 | F | 1.10 |
| 7. Kammerer Rd | Lent Ranch Pkwy | Promenade Pkwy | D | 3 | 2,740 | 1,700 | В | 0.62 | 1,800 | В | 0.66 | 1,700 | В | 0.62 | 1,900 | В | 0.69 |
| 7. Kammerer Ku | Promenade Pkwy | Lent Ranch Pkwy | D | 3 | 2,740 | 2,200 | D | 0.80 | 2,000 | С | 0.73 | 2,200 | D | 0.80 | 2,000 | С | 0.73 |
| Q Kammarar Dd | Promenade Pkwy | SR 99 SB Ramps | D | 3 | 2,740 | 3,400 | F | 1.24 | 4,600 | F | 1.68 | 3,400 | F | 1.24 | 4,600 | F | 1.68 |
| 8. Kammerer Rd | SR 99 SB Ramps | Promenade Pkwy | D | 3 | 2,740 | 5,100 | F | 1.86 | 4,400 | F | 1.61 | 5,100 | F | 1.86 | 4,400 | F | 1.61 |
| 9. Grant Line Rd | SR 99 SB Ramps | SR 99 NB Ramps | D | 3 | 2,740 | 3,200 | F | 1.17 | 3,900 | F | 1.42 | 3,200 | F | 1.17 | 3,900 | F | 1.42 |
| 9. Grant Line Ku | SR 99 NB Ramps | SR 99 SB Ramps | D | 3 | 2,740 | 3,700 | F | 1.35 | 3,400 | F | 1.24 | 3,700 | F | 1.35 | 3,400 | F | 1.24 |
| 10 Grant Lina Pd | SR 99 NB Ramps | Survey Rd-E. Stockton Blvd | D | 3 | 2,740 | 2,900 | F | 1.06 | 2,900 | F | 1.06 | 2,900 | F | 1.06 | 2,900 | F | 1.06 |
| 10. Grant Line Rd | Survey Rd-E. Stockton Blvd | SR 99 NB Ramps | D | 3 | 2,740 | 2,700 | E | 0.99 | 3,100 | F | 1.13 | 2,700 | E | 0.99 | 3,100 | F | 1.13 |
| 11. Grant Line Rd | Survey Rd-E. Stockton Blvd | Waterman Rd | D | 2 | 1,820 | 2,400 | F | 1.32 | 2,300 | F | 1.26 | 2,400 | F | 1.32 | 2,300 | F | 1.26 |

Traffic, Transportation, and Circulation

Ascent Environmental

Table 3.13-10 Peak Hour Directional Roadway Segment Operations – Cumulative Plus Project Conditions

| | | | | Cumulative No Project Conditions | | | | | | Cumulative Plus Project Conditions Peak Hour | | | | | | | |
|-------------------|----------------|-------------------------------|----------------|----------------------------------|--------------|---------------|-----|--------------|--------|--|--------------|--------|--------------|--------------|--------|-----|--------------|
| Roadway | From | То | Threshold (One | | Peak Hour | AM Dook House | | PM Peak Hour | | AM Peak Hour | | | PM Peak Hour | | | | |
| | | | LOS | Way) | Capacity | Volume | LOS | V/C Ratio | Volume | LOS | V/C Ratio | Volume | LOS | V/C Ratio | Volume | LOS | V/C Ratio |
| | Waterman Rd | Survey Rd-E. Stockton Blvd | D | 2 | 1,820 | 2,200 | F | 1.21 | 2,400 | F | 1.32 | 2,200 | F | 1.21 | 2,400 | F | 1.32 |
| 10 Cront Line Dd | Waterman Rd | Mosher Rd | D | 2 | 1,820 | 1,300 | С | 0.71 | 1,500 | D | 0.82 | 1,200 | В | 0.66 | 1,500 | D | 0.82 |
| 12. Grant Line Rd | Mosher Rd | Waterman Rd | D | 2 | 1,820 | 1,500 | D | 0.82 | 1,100 | В | 0.60 | 1,500 | D | 0.82 | 1,100 | В | 0.60 |
| 12 Cront Line Dd | Mosher Rd | Bradshaw Rd | D | 2 | 1,820 | 1,100 | В | 0.60 | 1,800 | E | 0.99 | 1,100 | В | 0.60 | 1,800 | E | 0.99 |
| 13. Grant Line Rd | Bradshaw Rd | Mosher Rd | D | 2 | 1,820 | 1,700 | Ε | 0.93 | 1,200 | В | 0.66 | 1,700 | E | 0.93 | 1,200 | В | 0.66 |
| 14 Cront Line Dd | Bradshaw Rd | Elk Grove Blvd | D | 2 | 1,820 | 500 | Α | 0.27 | 900 | Α | 0.49 | 500 | Α | 0.27 | 900 | Α | 0.49 |
| 14. Grant Line Rd | Elk Grove Blvd | Bradshaw Rd | D | 2 | 1,820 | 900 | Α | 0.49 | 500 | Α | 0.27 | 900 | A | 0.49 | 500 | Α | 0.27 |

Note: **Bold** indicates level of service worse than threshold level of service. **Bold and underlined** indicates a significant impact. LOS = level of service. V/C = volume-to-capacity.

Source: compiled by Fehr & Peers 2017

¹ The number of lanes listed for I-5 and SR 99 freeway segments are the two-way total of mainline general-purpose lanes.

Table 3.13-11 compares the MTP/SCS 2016 transportation network on Kammerer Road and Grant Line Road to the planned SouthEast Connector JPA and the City of Elk Grove General Plan.

Table 3.13-11 Comparison of Planned Facilities for Kammerer and Grant Line Roads

| | Planned Network | | | | | | | | |
|---|----------------------------------|---|---|--|--|--|--|--|--|
| Source | Roadway | Segment | Facility | | | | | | |
| MTP/SCS 2016 | Kammerer Road Grant Line Road | I-5 to Bruceville Road Bruceville Road to Lent Ranch Parkway Lent Ranch Parkway to E. Stockton Boulevard E. Stockton Boulevard to Bradshaw Road Bradshaw Road to Calvine Road | 4-Lane Arterial 4-Lane Arterial 6-Lane Arterial 4-Lane Arterial 2-Lane Arterial | | | | | | |
| SouthEast Connector JPA (Interim Phase) | Kammerer Road Grant Line Road | I-5 to Bruceville Road Bruceville Road to Lent Ranch Parkway Lent Ranch Parkway to E. Stockton Boulevard E. Stockton Boulevard to Waterman Road Bradshaw Road to Calvine Road | 2-Lane Expressway 2/5-Lane Arterial 6-Lane Arterial 4-Lane Arterial 2-Lane Arterial | | | | | | |
| SouthEast Connector JPA Phase 1 Connector) | Kammerer Road Grant Line Road | I-5 to Bruceville Road Bruceville Road to Lent Ranch Parkway Lent Ranch Parkway to E. Stockton Boulevard E. Stockton Boulevard to Bradshaw Road Bradshaw Road to Calvine Road | 4-Lane Expressway 4-Lane Thoroughfare 6-Lane Thoroughfare 4-Lane Thoroughfare 4-Lane Thoroughfare | | | | | | |
| SouthEast Connector JPA (Ultimate Connector) | Kammerer Road Grant Line Road | I-5 to Bruceville Road Bruceville Road to Lent Ranch Parkway Lent Ranch Parkway to E. Stockton Boulevard E. Stockton Boulevard to Bond Road Bond Road to Calvine Road | 4-Lane Expressway 6-Lane Thoroughfare 6-Lane Thoroughfare 6-Lane Thoroughfare 4-Lane Thoroughfare | | | | | | |
| Elk Grove General Plan | Kammerer Road Grant Line Road | I-5 to Bruceville Road Bruceville Road to Lent Ranch Parkway Lent Ranch Parkway to E. Stockton Boulevard E. Stockton Boulevard to Bradshaw Road Bradshaw Road to Calvine Road | 6-Lane Arterial 6-Lane Arterial 8-Lane Arterial 8-Lane Arterial 6-Lane Arterial | | | | | | |

Unacceptable operations on these segments is due primarily to an imbalance between the constrained roadway network in the MTP/SCS (i.e., along this corridor) and the cumulative conditions population and employment growth levels, which includes 2036 development levels regionally and build-out of development projects considered to be reasonably foreseeable for the purposes of the CEQA analysis, that would have direct access to Kammerer Road and Grant Line Road. This would be a **significant** impact.

Vehicle Miles Traveled

The SACOG 2016 MTP/SCS identifies that the regional weekday VMT in 2012 was 57,009,900 miles (25.1 miles per capita) and would increase to 74,519,700 miles (24.2 miles per capita) by 2036 (SACOG 2016). Development under the SOIA conceptual land use plan is estimated to generate an annual VMT of 138,159,419 miles based on air quality modeling results from the California Emissions Estimator Model (CalEEMod) (see Section 3.3 "Air Quality," and Appendix B of this EIR). It should be noted that the CalEEMod estimates of VMT do not factor existing local land use conditions. This increase in VMT may be counter to SACOG 2016 MTP/SCS efforts to reduce per capita VMT as well as future thresholds to be established by the City of Elk Grove as part of its General Plan update process (City of Elk Grove 2017a). This would be a significant impact.

Mitigation Measure 3.13-1: Participation in transportation system improvements.

At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall consult with affected agencies to establish local and state highway transportation improvement plans and funding mechanisms to provide service levels consistent with the City's and County's general plans consistent with City of Elk Grove General Plan Policy CI-2. This shall include on-site transportation improvements for pedestrian, bicycle, and transit facilities that will interconnect with existing and planned City pedestrian, bicycle, and transit improvements consistent with the City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan. This will also include measures to achieve compliance with adopted VMT standards that may be established under the City of Elk Grove General Plan Update.

Future development within the SOIA area shall be responsible for constructing or contributing on a fair-share basis to roadway improvements necessary to serve development within the SOIA area. This may include participation in the I-5 Freeway Subregional Corridor Mitigation Program.

In addition, a detailed traffic study shall be completed after a more defined land use plan has been developed. Improvements needed from development in the SOIA area shall be established by subsequent traffic studies and LOS standards of affected agencies in effect at the time. Annexation and development activity within the SOIA area shall require the preparation of traffic impact report/s to establish the fair share and costing of required improvements. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

Significance after Mitigation

To accommodate development of the project area in combination regional population and employment growth and reasonable foreseeable development, substantial roadway improvements would have to be constructed. Future development within the SOIA area would be responsible for constructing and/or funding on- and off-site roadway infrastructure including implementation of the planned improvements on the SouthEast Connector, consistent with the Ultimate Connector or planned improvements included in the City of Elk Grove General Plan. Mitigation of impacts to these roadway facilities may take the form of direct construction or payment of transportation impact fees.

The timing of improvements would be established by subsequent transportation impact analysis that is conducted for future development proposals or updates to transportation impact fee nexus studies. Improvements to these roadways would require coordination and adherence to regulatory standards of the SouthEast Connector JPA and Sacramento County.

Because the location and intensity of future development within the proposed expansion of the City's sphere of influence is not known at this time, including potential off-site infrastructure improvements, it is not possible to identify what improvements may be necessary to comply with LOS and VMT policies and standards of the relevant affected agencies. In some circumstances, improvements to facilities that could be affected by future development within the SOIA area may require coordination among multiple agencies (e.g., City of Elk Grove, Sacramento County, and Caltrans).

Potential significant environmental impacts from construction of off-site facilities could include, but would not limited to, the following:

- Aesthetics: temporary and/or permanent alteration of public views from construction of improvements.
- ▲ Air Quality: air pollutant and toxic air contaminant emissions from construction activities that exceed thresholds recommended by the Sacramento Metropolitan Air Quality Management District.
- ▲ Archaeological, Historical, and Tribal Cultural Resources: damage or loss of significant cultural resources from construction activities.
- Biological Resources: loss of habitat and direct impacts to special status plant and animal species.

- Greenhouse Gases: temporary emission of greenhouse gases during construction.
- ▲ Hazards and Hazardous Materials: potential exposure or release of hazardous materials or contamination during construction.
- ▲ Hydrology and Water Quality: construction-related stormwater quality impacts.
- Noise: temporary excessive noise levels during construction on sensitive noise receptors.
- ▲ Transportation: temporary disruption of roadways and congestion from construction activities and equipment.

It cannot be determined at this time the extent of these impacts, and there is no additional feasible mitigation available to ensure that impacts would be avoided.

Implementation of this mitigation would reduce the impact; however, given the uncertainty of future potential land uses and participation of all agencies in the funding and development of roadway improvements, LAFCo finds that it is not now possible to define mitigation with certainty. With enforcement of the above mitigation measure, future development in the SOIA area and off-site improvements would be designed to minimize potential impacts. However, it is not possible to know at this time whether this mitigation would avoid a significant effect in every instance. Thus, this impact would be **significant and unavoidable**.

Impact 3.13-2: Impacts to Freeway Facilities.

Approval of the SOIA and future development of the SOIA area upon annexation would add traffic to segments of SR 99 and I-5 that are projected to operate unacceptably. This would be a **significant** impact.

As documented under existing conditions, congested conditions occur on SR 99 and I-5 under existing conditions because of bottlenecks that cause vehicle queuing on SR 99 and I-5 during the morning and evening peak periods. The addition of traffic because of future development of the SOIA area upon annexation would exacerbate these conditions.

The City of Elk Grove's General Plan Policy Cl-2 relates to coordination and participation with the City of Sacramento, Sacramento County, and Caltrans on roadway improvements that are shared by the jurisdictions to improve operations, including joint transportation planning efforts, roadway construction and funding. Consistent with Policy Cl-2, the City should continue to work with Caltrans and other affected agencies to address operational conditions on SR 99 and I-5. This commitment to improving operation on SR 99 and I-5 in the City is also demonstrated with Policy Cl-11, related to implementing improvements to I-5 and SR 99, and Policy Cl-12, related to the Capital SouthEast Connector project.

Table 3.13-9 displays freeway segment operations on SR 99 and I-5 under cumulative conditions with the project and subsequent development of the project area. As shown, the addition of the project when considered with other planned and reasonable foreseeable development in the region would add traffic to the study freeway facilities that are projected to operate unacceptably at LOS F under both existing conditions (see Table 3.13-2) and cumulative conditions. This would be a **significant** impact.

Mitigation Measures

Implement Mitigation Measure 3.13-1.

Significance after Mitigation

The SCMP is identified in Mitigation Measure 3.13-1. It is a voluntary development impact fee for new developments within the I-5 corridor between Elk Grove, Downtown Sacramento, and West Sacramento that is intended to be used to construct a set of transportation improvements identified in the SACOG 2016 MTP/SCS. Under the SCMP, a project applicant whose project would generate vehicle trips over the

threshold could choose to either pay the fee, which would constitute mitigation of their development project's impacts on the freeway mainline, or conduct a Traffic Impact Study, which would evaluate that project's impact on the freeway system and identify mitigation for those impacts.

According to the *Draft Final Nexus Study for the I-5 Freeway Subregional Corridor Mitigation Program* (DKS Associates, January 2016), the following roadway improvements would be partially funded by the plan (with the remainder coming from other sources):

▲ Construction of HOV lanes on I-5 from Elk Grove to US 50.

Page 36 of the study specifies that "Caltrans would consider the fees as an adequate mitigation for freeway mainline impacts." Table 18 on Page 32 of the Nexus Study shows the proposed fee per dwelling unit, and per thousand square feet of non-residential space.

However, even with payment of the SCMP fee and other improvements that would be identified under implementation of Mitigation Measure 3.13-1, there is no guarantee that the share of improvement funding from other development would be available and secured for the construction of identified improvements. In addition, because SR 99 and I-5 are under the jurisdiction of Caltrans, and these facilities are outside the City's jurisdiction to implement improvements, impacts to SR 99 and I-5 impacts would remain significant and unavoidable.

Impact 3.13-3: Impacts to Transit.

Approval of the SOIA and future development of the SOIA area upon annexation would increase demand for public transit service. No transit services or facilities are currently planned for the SOIA area. This would be a **significant** impact.

Implementation of the project and subsequent development of the project area would increase demand for public transit service. No transit services or facilities are currently planned for the SOIA area. However, the City's General Plan includes policy that supports development of an integrated, multimodal circulation system to accommodate transit, including Polices CI-3, CI-4, CI-5, CI-6, and CI-7, which include actions to implement transportation alternatives to the automobile. The project and subsequent development of the project area would place development adjacent to developed areas of the City that are served by transit.

Funding for transit operations and maintenance includes two sources from the Transportation Development Act that are based in part on local sales tax revenue, with allocation based on population and transit operator revenue. Historically, Transportation Development Act funds have kept pace with inflation. In addition, because a portion of the funding is indexed to population, it is reasonable to expect that funding for expanded transit service would be available to maintain a balance of demand and capacity.

However, the SOIA includes no design provisions for the accommodation of transit services. This would be a **significant** impact.

Mitigation Measures

Implement Mitigation Measure 3.13-1.

Significance after Mitigation

Mitigation Measure 3.13-1 would require future development of the SOIA area to identify transportation improvements for transit facilities (bus stops, shelters, turn-outs, and other related improvements) to accommodate the City of Elk Grove e-Tran transit services that may be extended from its current route along Bilby Road. The provision of transit facilities would ensure that City transit services can be effectively extended to the SOIA area upon annexation. Thus, transit service impacts would be mitigated to a less-than-significant level.

Impact 3.13-4: Impacts to Bicycle and Pedestrian Facilities

Approval of the SOIA and future development of the SOIA area upon annexation would increase demand for bicycle and pedestrian facilities. This would be a **significant** impact.

Development of the SOIA area would increase demand for bicycle and pedestrian facilities. Lying outside the City of Elk Grove, no bicycle or pedestrian facilities are currently planned for the Bilby Ridge SOIA area. There are numerous existing and proposed facilities adjacent to the project associated with the East Franklin Specific Plan, Laguna Ridge Specific Plan, and the Southeast Policy Area Community Plan (see Exhibit 3.13-6). However, it is not known how these facilities would connect and or interact with subsequent development in the Bilby Ridge SOIA. This would be a **significant** impact.

Mitigation Measures

Implement Mitigation Measure 3.13-1.

Significance after Mitigation

Implementation of Mitigation Measure 3.13-1 would require future development and the City of Elk Grove to implement the bicycle and pedestrian facilities necessary to support the increased demand in the project area and interconnect with existing City facilities consistent with the City's Bicycle, Pedestrian, and Trails Master Plan. This would ensure that bicycle and pedestrian facilities are available to future residents that would provide connection to other planned City facilities off-site. Therefore, this impact would be **less than significant** after mitigation.

Impact 3.13-5: Hazardous Design Features

All roadway improvements associated with future development of the SOIA area would be constructed in accordance with applicable City, County, and Caltrans design and safety standards. Thus, the project would not increase hazards because of a design feature or incompatible uses. This would be a **less-than-significant** impact.

Any future development within the SOIA area would be required to conform to the City of Elk Grove Improvement Standards; thus, ensuring adequate site distances, turning radii, and ingress/egress along all roadways. Additionally, Policy CI-2 of the City of Elk Grove General Plan 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 to improve operations. Therefore, any future roadway improvements would be constructed in accordance with City of Elk Grove, Sacramento County, and Caltrans roadway standards, as applicable. Thus, any future development within the SOIA area would not result in potential traffic related hazards. This impact would be **less than significant**.

Mitigation Measures

No mitigation required.

Impact 3.13-6: Impair Emergency Vehicle Access

Emergency access would be subject to review by the City of Elk Grove and responsible emergency service agencies; thus, ensuring any future development with the SOIA area would be designed to meet all City of Elk Grove emergency access and design standards. Therefore, adequate emergency access would be provided. This would be a **less-than-significant** impact.

Site-specific emergency access for any future development within the SOIA area would be evaluated upon submittal of a development application. Approval of a development application would require that the proposed development be designed to meet all City of Elk Grove design and safety standards as established by the City of Elk Grove Improvement Standards; thus, ensuring adequate emergency vehicle access. Additionally, the City of Elk Grove General Plan states that the City shall require the installation of traffic pre-

emption devices for emergency vehicles (police and fire) at all newly constructed intersections (Policy CI-21); 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 (Policy CI-22); and all public streets should have sufficient width to provide for parking on both sides of the street and enough remaining pavement width to provide for fire emergency vehicle access (Policy CI-23). Congestion and level of service issues related to roadway operations on response times is addressed under Impact 3.13-1 and 3.13-2. Therefore, adequate emergency access would be provided for any future development within the SOIA area. This impact would be less than significant.

Mitigation Measures

No mitigation required.

3.14 UTILITIES

This section addresses potential environmental effects associated with the increased demand for water, wastewater, stormwater, electricity and natural gas, and solid waste disposal services. The analysis includes a description of the existing environmental conditions, the methods used for assessment, the potential direct and indirect impacts of project implementation. The analysis is focused on those areas where demand for services may increase as a result of growth anticipated to result from future annexation and development. For discussions of drainage and groundwater, see Section 3.8, "Hydrology, Drainage, and Water Quality." For a discussion of energy infrastructure and use, see Section 3.6, "Energy."

Several responses to the notice of preparation were received from utility providers, including Sacramento County Water Agency (SCWA), Sacramento Regional County Sanitation District (Regional San) and Sacramento Area Sewer District (SASD), and Sacramento Municipal Utilities District (SMUD), which contained information about providing service to the SOIA area. In addition, the Environmental Council of Sacramento provided comments regarding water supply availability. As applicable, this information is addressed in the following section.

3.14.1 Environmental Setting

URBAN SERVICES BOUNDARY

The project site (or "SOIA area") is located within the Sacramento County General Plan's Urban Services Boundary (USB). The USB identifies the limits of the area where unincorporated urban growth is expected to occur beyond the 20-year General Plan planning period and indicates the ultimate boundary of the urban area in the unincorporated County. This boundary is based upon jurisdictional, natural, and environmental constraints to urban growth. The purpose of the USB is to allow for the planning of necessary infrastructure, such as sewer pipelines, which have service lives longer than 20 years (Sacramento County 2011 and SASD 2011:2-1).

Sacramento County adopted the USB to contain growth. Originally established with the 1993 County General Plan, it was refined as a part of the County's 2011 General Plan Update. The existing USB extends just south of the City of Elk Grove's boundaries along Kammerer Road and just southeast of the City along the 100-year floodplain. Several service providers have developed long-range infrastructure master plans based on the USB boundaries (LAFCo 2016:3.0-2).

WATER

Water is currently used on the project site both domestically and for the production of agriculture. The SOIA area is within SCWA's service area, but SCWA does not currently provide water to the project site. Water is currently drawn from private wells. As described in Section 3.2, "Agricultural Resources," the project site is current cultivated in hay and used as grazing land, with viniculture associated with the residence near the intersection of Bilby Road and Bruceville Road. Average annual water use per acre of agricultural land on the project site could range from 1.8 acre-feet per acre for small grans like barley, oats, and rye to 3.8 acre-feet per acre for alfalfa (Johnson and Cody 2015). It is estimated that existing water use for the SOIA area ranges between 765 acre-feet and 1,615 acre-feet a year (afy), based on current satellite imagery of the SOIA area that shows approximately 425 acres in active agricultural production.

The project site is located in Zones 40 and 41 of SCWA's service area, which have largely overlapping jurisdictional boundaries. Zone 40 is located in the central portion of the county and has traditionally been a largely rural, agricultural region. Zone 40 plans, acquires, constructs, and operates facilities for the conjunctive use of groundwater and surface water in the area of influence of the South Sacramento

Groundwater Basin. The project site is located in the South Service Area (SSA) of Zone 40, and unserved. The SSA is currently supplied by surface water from the Franklin Intertie and the Vineyard Surface Water Treatment Plant, groundwater from existing groundwater treatment plants (GWTPs) and some direct feed wells, and a small amount of recycled water. The capacities of all of the existing water supply facilities exceed the maximum daily demands (SCWA 2016a:5-1). Once planned facilities have been constructed by SCWA, they are operated and maintained by Zone 41, which retails the water to customers.

The Zone 40 Water System Infrastructure Plan Update (WSIP; SCWA 2016a) projects that total water demand in the service area, including water system losses, will be 102,400 acre-feet annually in 2052 (See Table 3.14-1). This is based on land use projections and estimated water demand factors based on land use type. At buildout, the SSA is projected to have 51,300 dwelling units and a population of 158,400, which would require an estimated 26,100 afy. Development of the project site was not considered in the cumulative buildout land use assumptions for the plan.

Table 3.14-1 Projected Zone 40 Water Demand

| Service Area | | Water Demand (acre-feet/year) | |
|--------------------------|--------|-------------------------------|-----------------|
| | 2015 | 2035 | 2052 (Buildout) |
| Zone 40 Study Area Total | 38,700 | 71,800 | 102,400 |
| South Service Area | 17,100 | 26,100 | 26,100 |

Available water supply in Zone 40 consists of a combination of surface water and groundwater sources (see Table 3.14-2).

Table 3.14-2 Zone 40 Water Supply in Acre-Feet Per Year

| Supply Source | Wet/Average Year | Drier Year | Driest Year | Long-term Average |
|-------------------------|------------------|------------|-------------|-------------------|
| Surface Water | 89,300 | 43,350 | 32,100 | 71,858 |
| Groundwater | 34,900 | 64,900 | 71,900 | 46,260 |
| Recycled Water | 3,300 | 3,300 | 3,300 | 3,300 |
| Total | 127,500 | 111,550 | 107,300 | 121,418 |
| Source: SCWA 2016a:4-11 | | | | |

3001CE. 3CWA 2010a.4-11

SCWA current surface water supply consists of the following sources:

- ▲ Central Valley Project Water (Public Law 101-514): SCWA has a water-service contract pursuant to Public Law 101-514 (referred to as "Fazio water") that provides a water supply of 22,000 afy, with 15,000 afy allocated to SCWA and 7,000 afy allocated to the City of Folsom.
- Sacramento Municipal Utility District (SMUD) Water (SMUD I and II): SCWA has entered into two three-party agreements with the City of Sacramento and SMUD for a total of 30,000 afy from SMUD's existing Central Valley Water contract.
- ▲ Appropriative Water: The State Water Resources Control Board (SWRCB) appropriates water from the American River and Sacramento River to SCWA under Permit 21029. The amount of appropriated water available could range up to 71,000 afy in wet years primarily during the winter months.

■ City of Sacramento's American River Place of Use Agreement: The City of Sacramento provides wholesale American River water to SCWA for use in a portion of SCWA 2030 Study Area that lies within the City of Sacramento's American River POU. The estimated long-term average volume of water that would be used by SCWA within this Place of Use Agreement would be approximately 9,300 afy. (SCWA 2016b)

Existing water supply facilities near the project site include transmission pipelines (i.e., pipes that are 16 inches or larger) in Bilby Road and Willard Parkway, and the Poppy Ridge well and GWTP near the intersection of Bruceville Road and Poppy Ridge Road north of the project site that is planned for expansion. The nearby Franklin GWTP is also planned for eventual expansion and a pipeline is proposed to extend south along Bruceville Road adjacent to the eastern boundary of the project site under Phases 2 and 3 of the WSIP. The WSIP does not identify any new facilities within the SOIA area (SCWA 2016a).

Groundwater

The Sacramento Central Groundwater Authority (SCGA) was formed in 2006 through a joint powers agreement signed by the Cities of Elk Grove, Folsom, Rancho Cordova, and Sacramento, and the County of Sacramento. SCGA was formed for several purposes including maintaining the long-term sustainable yield of the Central Basin, managing the use of groundwater in the Central Basin, and facilitating the implementation of a conjunctive use program. The Central Basin is defined as the area bounded on the west by the Sacramento River, on the north by the American River, on the south by the Cosumnes River, and on the east by the foothills of the Sierra Nevada Range. The Central Basin's boundaries are similar to the boundaries of the South American subbasin. The Water Forum defined the long-term sustainable average annual yield of the Central Basin to be 273,000 afy. Zone 40 lies within a portion of the Central Basin (SCWA 2016a). Annual groundwater pumping of the South American subbasin by SCWA ranged from 34,626 afy in 2011 to 24,652 afy in 2015 (SCWA 2016b).

The Sacramento Central Groundwater Authority's South American Subbasin Alternative Submittal (Sacramento Central Groundwater Authority 2016) evaluated the change in groundwater storage in the Central Basin from 2005 to 2015. The total annual average change in storage over the 2005 to 2015 time period was estimated to be approximately 4,000 afy. This is representative of a basin in equilibrium where natural recharge from deep percolation, hydraulically connected rivers, and boundary subsurface inflows are keeping up with active pumping and changes in hydrology. Over the 10-year period, the basin continues to recover at its deepest points and management is now focused on working with affected agencies to keep water from leaving the basin, and improving basin conditions where and when possible, in accordance with the Central Sacramento County Groundwater Management Plan (Central Sacramento County GMP) (Sacramento Central Groundwater Authority 2016).

Groundwater storage in the recharge area underlying Elk Grove and surrounding areas is continuing to increase from recharge from conjunctive use and surface water use expansion, increased use of recycled water, and water conservation. The increase in storage in this portion of the subbasin has filled the long-term cone of depression and has eroded the ridge of higher groundwater separating it from the Cosumnes Subbasin (Sacramento Central Groundwater Authority 2016). Groundwater extraction has been within the Water Forum Agreement's sustainable yield from 2005 (252,984 afy) to 2015 (217,111 afy). The least amount of groundwater extraction over this period occurred in 2011 (202,324 afy) and the most occurred in 2008 (260,200 afy). The average groundwater extraction during the drought years (2011–2015) was approximately 219,000 afy (Sacramento Central Groundwater Authority 2016).

The existing groundwater facilities in the SSA have the capacity to supply all the current maximum day demand. In addition, GWTPs proposed in the WSIP would provide a maximum day groundwater supply capacity that exceeds the SSA's projected buildout maximum day demand (SCWA 2016a)

Recycled Water

The Sacramento Regional County Sanitation District currently provides SCWA and CCSD with recycled water for landscape irrigation. In 2015, SCWA utilized 575 acre-feet of recycled water.

WASTEWATER

The SOIA area is not served by a municipal wastewater service provider. Rather, sanitary service is currently provided by on-site septic systems.

Sacramento Area Sewer District

SASD provides local wastewater collection and 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 Sacramento 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. The smaller local pipelines that SASD operates connect to the larger regional interceptors maintained by Regional San.

The project site is not within SASD's existing service area. However, the Sacramento County General Plan Urban Services Boundary (USB) constitutes the sphere of influence (SOI) for the SASD. The existing residential areas to the north and west of the project site are within the SASD service area and there is existing infrastructure in the area. Further, the project site is within the study area for SASD's 2010 Sewer System Capacity Plan. For areas outside of the urbanized area, the 2010 Sewer System Capacity Plan assumed that potential densities could be similar to those projected for near-term urban development. Therefore, an average density of 6 equivalent single family dwelling units per acre was assumed for these areas, except for areas designated as open spaces.

Sacramento Regional County Sanitation District

The Sacramento Regional County Sanitation District (Regional San) provides wastewater conveyance and treatment services to residential, commercial, and industrial customers in portions of unincorporated Sacramento County; the cities of Citrus Heights, Elk Grove, Folsom, Rancho Cordova, Sacramento, and West Sacramento; and the communities of Courtland and Walnut Grove. Wastewater travels through a system comprised of 169 miles of interceptor pipelines, 46 miles of force mains (pressurized pipes), and 11 pump stations before it reaches the Sacramento Regional Wastewater Treatment Plant (SRWTP). There, it is treated and discharged to the Sacramento River. In normal weather years, Regional San treats an average of approximately 150 million gallons of wastewater each day (mgd; Regional San 2015). Regional San's 2013 Interceptor Sequencing Study designated the project site as part of the Elk Grove SOI included in the study area. The USB constitutes the SOI for Regional San.

Sacramento Regional Wastewater Treatment Plant

Wastewater flows collected from Regional San's interceptors are ultimately transported into the SRWTP. The SRWTP is located west of Elk Grove and is owned and managed by Regional San. Currently, the SRWTP has a National Pollutant Discharge Elimination System (NPDES) permit issued by the Central Valley Regional Water Quality Control Board (RWQCB) for discharge of up to 181 mgd average dry-weather flow of treated effluent into the Sacramento River. The SRWTP has the potential for expansion to 218 mgd. As of 2015, the SRWTP receives and treats an average of 150 mgd each day and the SRWTP discharge constituents are below permitted discharge limits specified in the NPDES permit (Regional San 2015).

Regional San is upgrading the SRWTP. The upgrade, known as the EchoWater Project, must be built by 2021–2023 to meet new water quality requirements that were issued by the Central Valley RWQCB as part of Regional San's discharge permit.

The design of the SRWTP and collection system was balanced to have SRWTP facilities accommodate some of the wet-weather flows, while minimizing idle SRWTP facilities during dry weather. The SCRSD designed the SRWTP to accommodate some wet-weather flows with the storage basins and interceptors designed to accommodate the remaining wet weather flows. Regional San must complete construction of the new treatment facilities to achieve the permit and settlement requirements by May 2021 for ammonia and

nitrate and by May 2023 for compliance with pathogen requirements. The upgrade will not, however, result in a net increase in the permitted capacity of the SRWTP (Regional San 2015).

Regional San expects per capita consumption to fall 25 percent over the next 20 or more years through the ongoing installation and use of water meters, as well as compliance with recent conservation mandates. As such, substantial additional conservation is expected throughout the service area, allowing the existing 181 mgd average dry-weather flow capacity to be adequate for at least 40 more years (Regional San 2014:6-2).

SOLID WASTE DISPOSAL

The SOIA area is currently within the service boundaries of the Sacramento County Department of Waste Management and Recycling. Sacramento County has contracted out residential solid waste services (i.e., solid waste management and recycling) in the unincorporated area south of Calvine Road, which includes the SOIA area, to Central Valley Waste Services (dba Waste Management), a private commercial hauler. 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 (LAFCo 2016).

Residential solid waste services in the City of Elk Grove are provided by Republic Services (formally known as Allied Waste) under an exclusive franchise agreement. Services include collection of all solid waste, residential recyclables, used motor oil and yard trimmings, along with other services. 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 post a registration decal in their vehicles to operate. Businesses may select which commercial hauler to utilize for solid waste services (LAFCo 2016:4.0-20).

Commercial solid waste collected by private franchised haulers in Sacramento County and the City of Elk Grove is disposed of at various facilities – primarily Kiefer Landfill, L and D Landfill, and Yolo County Landfill. Table 3.14-3 shows the maximum capacity, remaining capacity, and closure date of these landfills. In 2015, the daily waste generation rate was 4.2 pounds per person and 13.9 pounds per employee in unincorporated Sacramento County and the daily waste generation rate was 2.7 pounds per person and 13.2 pounds per employee in the City of Elk Grove (CalRecycle 2015).

Table 3.14-3 Capacity of Area Landfills

| Landfill Name | Maximum Capacity | Remaining Capacity | Estimated Closure Date |
|------------------------------|------------------|-----------------------------|------------------------|
| Keifer Landfill | 117,400,000 CY | 112,900,000 CY (as of 2005) | 2064 |
| L and D Landfill | 6,031,055 CY | 4,100,000 CY (as of 2005) | 2023 |
| Yolo County Central Landfill | 49,035,200 CY | Not reported | 2081 |
| Source: CalPowele 2017 | | | |

Source: CalRecycle 2017

The City of Elk Grove also operates the Special Waste Collection Center at 9255 Disposal Lane in Elk Grove. The Special Waste Collection Center program helps residents dispose of or recycle their residential and business hazardous waste properly. Elk Grove residents and participating jurisdictions may drop off a full range of household hazardous wastes, which are reused, recycled, processed for energy recovery, or stabilized for proper disposal to achieve zero waste being landfilled.

3.14.2 Regulatory Framework

The reader is referred to Section 3.8, "Hydrology and Water Quality," for a discussion of applicable state and local groundwater regulations and plans.

FEDERAL

Resource Recovery and Conservation Act

The Resource Recovery and Conservation Act of 1976, Subtitle D focuses on state and local governments as the primary planning, regulating, and implementing entities for the management of nonhazardous solid waste, such as household garbage and nonhazardous industrial solid waste. To promote the use of safer units for solid waste disposal, Subtitle D provides regulations for the generation, transportation, and treatment, storage, or disposal of hazardous wastes. EPA developed federal criteria for the proper design and operation of municipal solid waste landfills and other solid waste disposal facilities, but state and local governments are the primary planning, permitting, regulating, implementing, and enforcement agencies for management and disposal subject to approval by EPA. EPA approved the State of California's program on October 7, 1993.

STATE

California Water Code

Water Code Section 10910 et seq. defines the projects for which the preparation of a Water Supply Assessment (WSA) is required as well as the lead agency's responsibilities related to the WSA. The Water Code also clarifies the roles and responsibilities of the lead agency under CEQA and of the water supplier with respect to describing current and future supplies compared to current and future demands. A WSA is required for:

- ▲ A proposed residential development of more than 500 dwelling units:
- ▲ A proposed shopping center or business establishment employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- ▲ A proposed hotel or motel, or both, having more than 500 rooms;
- ▲ A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area:
- ▲ A mixed-use development that includes one or more of the uses described above;
- ▲ A development that would demand a volume of water equivalent to or greater than the volume of water required by a 500-dwelling unit project; and
- ✓ For lead agencies with fewer than 5,000 water service connections, any new development that would increase the number of water service connections in the service area by 10 percent or more.

Under Section 10910 of the Water Code, the lead agency must identify the affected water supplier and ask the supplier whether the new demands associated with the project are included in the supplier's Urban Water Management Plan. If the Urban Water Management Plan includes the demands, it may be incorporated by reference in the WSA. If there is no public water system to serve the project, the lead agency must prepare the WSA.

California Model Water Efficient Landscape Ordinance

The California Model Water Efficient Landscape Ordinance (MWELO) sets restrictions on outdoor landscaping. Because both Sacramento County and the City of Elk Grove are "local agencies" under the MWELO, they must require project applicants to prepare plans consistent with the requirements of the MWELO for their review and approval. The MWELO was most recently updated by the Department of Water Resources and approved by the California Water Commission on July 15, 2015. All provisions became effective on February 1, 2016. The revisions, which apply to new construction with a landscape area greater than 500 square feet, reduced the allowable coverage of high-water-use plants to 25 percent of the landscaped area. The MWELO also requires use of a dedicated landscape meter on landscape areas for residential landscape areas greater than 5,000 square feet or non-residential landscape areas greater than 1,000 square feet, and requires weather-based irrigation controllers or soil-moisture based controllers or other self-adjusting irrigation controllers for irrigation scheduling in all irrigation systems.

California Green Building Standards Code

Chapter 4, Division 4.3 of the 2016 California Green Building Standards Code (CALGreen) requires conservation of water used indoors, outdoors, and in wastewater conveyance associated with residential land use. These include requiring the installation of water conserving plumbing fixtures and fittings, and requirements for outdoor potable water use in land use areas consistent with the MWELO. Division 4.4 relates to material conservation and resource efficiency for residential construction. This includes requirements for waste diversion and recycling of construction debris and building operation and maintenance. Similarly, Chapter 5, Division 5.3 includes standards for indoor and outdoor water use associate with non-residential land uses. Division 5.4 relates to material conservation and resource efficiency for residential construction. This includes requirements for waste diversion and recycling of construction debris and building operation and maintenance.

Cortese-Knox-Hertzberg Local Government Reorganization Act

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 establishes procedures for local government changes of organization, including annexations. The act addresses amendments to spheres of influence (California Government Code Sections 56425 – 56434). Pursuant to Section 56430, LAFCo must conduct a review of the municipal services provided in the county or other appropriate area to prepare and to update spheres of influence. In conducting a service review, the LAFCo must comprehensively review all of the agencies that provide services within the designated geographic area before, or in conjunction with, an action to establish or update a sphere of influence. Government Code Section 56653 requires that prior to a local agency submitting an application to LAFCo for a change of organization (annexation into the City) the local agency must submit a plan for providing services within the affected territory.

LOCAL

The project site lies within the jurisdictional boundaries of Sacramento County; therefore, the County's policies, as well as the Sacramento LAFCo's polices, would apply. Furthermore, if the SOIA is approved, it may lead to annexation to the City of Elk Grove. Thus, applicable policies of the City of Elk Grove's General Plan are described below.

Sacramento County Water Agency Planning Documents

The 2005 Water Supply Master Plan presents recommendations to meet future water demands in Zone 40 through the year 2030 with a regional conjunctive use program balancing the use of groundwater, surface water, and recycled water supplies. Subsequently, SCWA has developed the 2006 Central Sacramento County Groundwater Management Plan, the 2010 Urban Water Management Plan, and the 2016 WSIP.

Sacramento LAFCo Policies, Standards, and Procedures

Sacramento LAFCo Policies, Standards, and Procedures require that any proposed annexations are consistent with applicable service elements of the Sphere of Influence of the City and any affected agencies, and that adequate services be provided within the time frame needed for the inhabitants of the annexation

area (Section I, Standard Number 4). A Municipal Services Review (MSR) is prepared to meet these requirements. In addition, LAFCo requires that any annexation provides for the lowest cost and highest quality of urban services (Section I, Standard Number 5). Where local policies may be silent, the Commission will make findings pursuant to the Cortese-Knox-Hertzberg Local Government Reorganization Act. A draft MSR has been prepared for this project.

Sacramento County General Plan

The following policies from the Sacramento County General Plan would apply to the SOIA.

- Policy PF-1: New water facilities shall be planned to minimize impacts to in-stream water flow in the Sacramento and American Rivers.
- Policy 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.
- Policy PF-3: Public water agencies shall comply with General Plan policies prior to annexation of additional service areas.
- Policy PF-9: Design trunk and interceptor systems to accommodate flows generated by full urban development at urban densities within the ultimate service area. System design may take into consideration land that cannot be developed for urban uses due to long-term circumstances including but not limited to conservation easements, floodplains, public recreation areas etc. This could include phased construction where deferred capital costs are appropriate.
- Policy PF-87: Cooperate with local agencies in the locating and design of new transmission towers in urban areas in a manner that minimizes visual and environmental impacts, including impacts to historic buildings and view sheds.
- Policy PF-100: Galvanize-coated steel poles should be used where practical.
- Policy PF-101: Route new overhead sub-transmission lines within existing transmission line corridors, along railroad tracks, or major roadways. In an effort to reduce the visual impact of new lines combine circuits on existing 69 kV power poles, wherever feasible.

City of Elk Grove General Plan

The following policies from the City of Elk Grove's General Plan would apply to future annexation and development of the project site.

- 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-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.
- Policy PF-7: The City shall require that water flow and pressure be provided at sufficient levels to meet domestic, commercial, industrial, and firefighting needs.

✓ 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.

- Policy PF-14: Independent community sewer systems may not be established for new development.
- ✓ 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 CAQ-27: The City shall promote energy conservation measures in new development to reduce onsite emissions and power plant emissions. The City shall seek to reduce the energy impacts form new residential and commercial projects through investigation and implementation of energy efficiency measures during all phases of design and development.

3.14.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

A SOI indicates the probable physical boundaries and service area of a City over the next 20 years. This analysis is based on the assumption that the SOIA would lead to the eventual annexation and development of the project site in a manner generally consistent with the proposed conceptual land use scenario. As such, the calculations of utility demand are based on the development potential identified in Chapter 2, "Project Description." The planning of future land uses would be part of the pre-zoning associated with any future annexation of lands. LAFCo has prepared a draft MSR to determine if municipal service providers can feasibly finance and extend infrastructure, services, and facilities into the SOIA area to adequately serve projected future growth within the next 20 years with no adverse impact to current ratepayers, infrastructure, services, and/or facilities. This review has been used to inform the following analysis. If the SOIA is approved, any future annexation must be consistent with this MSR (LAFCo 2016).

THRESHOLDS OF SIGNIFICANCE

The following thresholds are used in determining the potential significance of project impacts based on the sample questions provided in Appendix G of the State CEQA Guidelines.

Impacts are considered significant if the project would:

- ▲ Fail to meet applicable wastewater treatment requirements;
- 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;
- ▲ Require new or expanded entitlements for adequate water supply;
- Result in a determination by the wastewater treatment provider that serves or may serve the project site that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Fail to comply with federal, state, and local statutes and regulations related to solid waste.

ISSUES NOT EVALUATED FURTHER

Wastewater Treatment Requirements

Future development of the SOIA area would convey wastewater to the SRWTP, which operates under waste discharge requirements issued by RWQCB. Because the SRWTP is regulated by RWQCB and would be required to ensure that its wastewater discharge to the Sacramento River meets all applicable water quality requirements, the project would not result in wastewater that would exceed the requirements of the RWQCB. This impact is not discussed further. The potential to overburden the existing wastewater treatment facility, requiring new or expanded facilities to meet applicable treatment requirements, is discussed below.

Compliance with Solid Waste Regulations

Future development of the SOIA area would generate solid waste associated with domestic use (e.g., food waste, paper, limited medical-related waste) and construction-related waste from grading, clearing, and erecting buildings. Construction and operation of the future development in the SOIA area would follow all relevant federal, state, and local statutes and regulations associated with collection and disposal of waste generated at the site. Thus, there would be no impact related to violation of solid waste laws and regulations and this topic is not discussed further.

IMPACT ANALYSIS

Impact 3.14-1: Require or result in the construction of new or expanded water or wastewater treatment facilities, the construction of which could cause significant environmental effects.

The SOIA would not directly require or result in the construction of new utilities. Rather, the SOIA and associated conceptual land use plan informs the long-term planning of applicable utility providers. If determined to be necessary, off-site improvements to water or wastewater treatment or conveyance facilities would be the responsibility of the utility and would be analyzed by the utility provider under separate environmental review. Physical environmental impacts from construction or operation of off-site improvements could remain significant after implementation of mitigation (i.e., significant and unavoidable) or no feasible mitigation may be available to fully reduce impacts to a less-than-significant level. This impact would be **significant**.

The SOIA would not directly require or result in the construction of new utilities. Rather, by amending the City of Elk Grove's SOI and providing a conceptual land use plan, the project would inform the long-term planning of applicable utility providers. Through this process, any necessary infrastructure upgrades could be planned and funded prior to annexation or subsequent development.

The following analysis considers the potential for the project site to increase demand for water or wastewater services such that new or expanded facilities would be required if the project site is annexed and developed in a manner consistent with the conceptual land use plan. In general, development projects are required to design and build project-specific on-site infrastructure that is sized appropriately for anticipated demand. Off-site infrastructure, including treatment facilities, are constructed by the service providers, but may be financed in part through development fees. The potential environmental effects of new or expanded off-site utilities would be considered by the utility provider through separate CEQA review.

<u>Water</u>

Although the SOIA area is included within SCWA's Zone 40, service to the area is not contemplated in the Zone 40 Water Supply Master Plan and demands for the area are not projected in the Urban Water Management Plan. Nevertheless, there is existing SCWA water supply infrastructure and service in close proximity to the site, and SCWA would be the logical municipal water purveyor in the area. The project site is currently included in SCWA's 2030 Study Area.

SCWA is capable of expanding infrastructure and services to provide adequate municipal water services in the SOIA area. Before water is supplied to development in the SOIA area, SCWA would require that the existing Zone 40 Water Supply Master Plan, WSIP, and Urban Water Management Plan are updated or amended. In order for SCWA to update these planning documents, water demand for the area must be calculated, a water source must be contemplated, and water supply infrastructure for the area must be identified (including a Capital Improvement Program and Fee Update). Additional infrastructure required to serve the SOIA area could include a groundwater treatment plant and storage facilities, water wells, and transmission and distribution mains. Area-specific planning would be conducted when service demands require an expansion of services in the area to ensure adequate facilities are available (LAFCo 2016: 4.0-5). SCWA would conduct project-level environmental analysis, if necessary, to analyze specific impacts for construction and operation of new off-site facilities.

Existing water supply facilities near the project site include transmission pipelines (i.e., pipes that are 16 inches or larger) in Bilby Road and Willard Parkway, and the Poppy Ridge well and GWTP near the intersection of Bruceville Road and Poppy Ridge Road north of the project site that is planned for expansion. The nearby Franklin GWTP is also planned for eventual expansion and a pipeline is proposed to extend south along Bruceville Road adjacent to the eastern boundary of the project site under Phases 2 and 3 of the WSIP. The WSIP does not identify any new facilities within the SOIA area (SCWA 2016a).

On-site water systems would be constructed to serve new development could consist of storage tanks, pump stations, and transmission and distribution mains. The City outlines specific requirements to ensure water systems are available to meet demands created by new development (Policy PF-3 of the General Plan). These requirements include demonstrating that on-site and off-site water systems are available to serve proposed development or that new development would contribute its fair share portion for funding new water systems (Policy PF-21 of the General Plan). In addition, the City requires that water supplies are available prior to approval of new development projects (Policy PF-3 of the General Plan). At the time of submittal of any application to annex territory within the SOIA area, the City of Elk Grove would prepare a Plan for Services, as required by Government Code Section 56653 or its successor. The Plan for Services would depict the locations and appropriate sizes of all water system facilities to accommodate the amount of development identified for the annexation territory and demonstrate adequate SCWA off-site water facilities are available to accommodate the amount of development identified in the annexation territory or that fair share funding would be provided for the construction of new or expansion and/or improvement of existing off-site water system facilities with no adverse impacts on existing ratepayers.

The SOIA would not directly require or result in the construction of new utilities. However, revising the City of Elk Grove's SOI would inform future planning efforts so that the anticipated demand from development could be accommodated. Further, as discussed above, the City of Elk Grove requires demonstration that water systems are available to meet demand prior to development, and SCWA would conduct appropriate environmental analyses for construction and operation of new off-site facilities.

Wastewater

The project site currently does not require municipal wastewater services. Existing agricultural and rural residential land uses on the project site are served by individual septic systems. However, the future development of the project site would require municipal wastewater service.

SASD would be the local wastewater collection service provider for development in project site. The project site is within SASD's SOI, and the City of Elk Grove would need to annex the SOIA area into the service area before service is provided. However, the existing residential areas to the north and west of the project site are within the SASD service area and there is existing infrastructure in the area. There are existing large capacity (i.e., 10 inches or larger) wastewater pipelines in Willard Parkway and following Bruceville Road along the western boundary of the project site. The Sewer System Capacity Plan (SASD 2011) identifies a future force main expansion pipeline from the existing pipeline in Willard Parkway to a future expansion pump station located just south of the central portion of the SOIA area. The Interceptor Sequencing Study (Regional San 2013) identifies several options for a force main that would follow Bilby Road along the northern boundary of the project site and extend east to a new pump station.

Further, the project site is within the study area for SASD's 2010 Sewer System Capacity Plan and the Regional San's 2013 Interceptor Sequencing Study. For areas outside of the urbanized area, the 2010 Sewer System Capacity Plan assumed that potential densities could be similar to those projected for near-term urban development. Therefore, an average density of 6 equivalent single-family dwelling units per acre was assumed for these areas, except for the open spaces. At this rate, the project site would be assumed to have approximately 2,874 dwelling units of wastewater generation potential.

According to consultation with SASD conducted in preparation of the draft MSR, and consistent with the 2010 Sewer System Capacity Plan that provides conceptual plans for providing sewer service to the undeveloped areas, approximately two thirds of the SOIA area is planned to be provided sewer relief by connecting to an existing trunk sewer main located in Willard Parkway. The remaining portion of the SOIA area (eastern side) would be required to connect to a future point of connection in Bruceville Road (LAFCo 2016:4.0-13 to 4.0-14).

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. Developers must complete a sewer study that includes connection points and phasing information to assess the capacity of the existing system to accommodate additional flows (Moore, pers. comm., 2017). SASD staff has indicated that the SASD system should have adequate capacity to meet future demands as a result of appropriate long-term service planning. SASD would issue sewer permits to connect to the system if it is determined that capacity is available and the SOIA area has met all other requirements for service (LAFCo 2016:4.0-14). In addition, the City of Elk Grove outlines specific requirements to ensure wastewater facilities are available to meet demands created by new development (Policy PF-8 of the General Plan). These requirements include demonstrating that on-site and off-site wastewater infrastructure provides sufficient capacity to serve proposed development.

The SRWWTP is permitted to treat an ADWF of 181 mgd, while the facility's 2014 ADWF was approximately 106 mgd. The 181 mgd permitted capacity has been in effect since 1990. While the approved EchoWater project will result in improved effluent water quality, this project does not increase treatment capacity of SRWWTP. In the 1990s and early 2000s, Regional San considered capacity expansion from 181 to 218 mgd ADWF and had flows as high as 155 mgd ADWF, with expectations that treatment needs would increase. Since then, water conservation and a reduction in water use have reversed the growth in wastewater capacity use. Regional San expects per capita consumption to fall 25 percent over the next 20 years through the ongoing installation and use of water meters, as well as compliance with water conservation measures. As such, substantial additional water conservation is expected throughout Regional San's service area, putting off the expectation that the existing 181 mgd ADWF capacity will be exhausted until at least 2050 (Regional San 2014:6-2.). Assuming that all of the water supplied to the SOIA area is converted to wastewater, the area is estimated to generated 901,671 gallons of wastewater each day. This would not substantially affect the remaining capacity of the SRWWTP.

Regional San has completed an Interceptor Sequencing Study that included study of the SOIA area and provides general information about the best way to serve the area, including reevaluating the current alignment and/or need for the South Interceptor and potential interim facilities that may be necessary to provide service. However, Regional San staff has stated that future sewer service to these areas cannot be planned until annexation into Regional San has occurred (LAFCo 2016:4.0-14).

The SOIA would not directly require or result in the construction of new utilities. Regional Sand and SASD design their sewer systems using predicted wastewater flows that are dependent on growth projections and land use information provided by the applicable land use authorities (Moore, pers. comm., 2017). Although revising the City of Elk Grove's SOI would inform future planning efforts so that the anticipated demand for transmission of wastewater from development could be accommodated, planning related Regional San infrastructure capacity would not occur until annexation.

At the time of submittal of any application to annex territory within the SOIA area, the City of Elk Grove would prepare a Plan for Services, as required by Government Code Section 56653 or its successor. The Plan for

Services would depict the locations and appropriate sizes of all wastewater system facilities to accommodate the amount of development identified for the annexation territory and demonstrate adequate off-site wastewater facilities are available to accommodate the amount of development identified in the annexation territory or that fair share funding will be provided for the construction of new or expansion and/or improvement of existing off-site wastewater system facilities with no adverse impacts on existing ratepayers.

Summary

If future studies indicate that the demand generated from annexation and development of the SOIA area would require off-site utility improvements, such improvements to water and wastewater facilities would be the responsibility of the utility and would be subject to separate environmental review. Implementation of any mitigation measures identified through this process would be the responsibility of the utility, and such measures would be implemented in accordance with the certified CEQA documents. However, physical environmental impacts from construction or operation of off-site improvements could remain significant after implementation of mitigation (i.e., significant and unavoidable), or no feasible mitigation may be available to fully reduce impacts to a less-than-significant level. Potential significant environmental impacts from construction of off-site infrastructure could include, but not limited to, the following:

- ▲ Aesthetics: temporary and/or permanent alteration of public views from construction of infrastructure improvements
- ▲ Air Quality: air pollutant and toxic air contaminant emissions from construction activities that exceed thresholds recommended by the Sacramento Metropolitan Air Quality Management District
- ▲ Archaeological, Historical, and Tribal Cultural Resources: damage or loss of significant cultural resources from construction activities
- Biological Resources: loss of habitat and direct impacts to special status plant and animal species
- Greenhouse Gases: temporary emission of greenhouse gases during construction
- ▲ Hazards and Hazardous Materials: potential exposure or release of hazardous materials or contamination during construction
- Hydrology and Water Quality: construction-related stormwater quality impacts
- Noise: temporary excessive noise levels during construction on sensitive noise receptors
- ▲ Transportation: temporary disruption of roadways and congestion from construction activities and equipment.

Neither LAFCo nor the City of Elk Grove would have control over the approval, timing, or implementation any facility improvements. This would be a **significant** impact.

Mitigation Measures

As noted above, future analysis by the developer, SCWA, and SASD would determine what off-site improvements are required to service development of the SOIA as part of an annexation request. SCWA and SASD would conduct the appropriate environmental review for these improvements and would adopt mitigation measures to address significant environmental impacts. LAFCo cannot determine what those future off-site improvements may be or require SCWA or SASD to adopt mitigation measures for improvements and impacts that have not been identified. Thus, there are no feasible mitigation measures available to LAFCo to address this impact.

Significance after Mitigation

The impacts of construction or operation of off-site improvements, if required, could result in significant environmental effects. Neither LAFCo nor the City of Elk Grove would have control over the approval, timing, or implementation these improvements. Therefore, the potential impact of constructing new or expanded water or wastewater treatment facilities to serve development of the SOIA area in in the future, if required and assuming eventual annexation and development, would be **significant and unavoidable**.

Impact 3.14-2: Require new or expanded entitlements to water.

Presently, there are no public water supply facilities within the SOIA area and water supplies are provided by irrigation wells. There are no changes to land uses proposed as part of this SOIA application. Therefore, the project would not immediately increase the demand for water. Future development of the SOIA area would require new water supply facilities to serve the site. Because there are identified adequate sources of water supply and the City would be required to demonstrate water availability prior to annexation, this impact would be **less than significant**.

Presently, there are no public water supply facilities within the SOIA area and water supplies are provided by irrigation wells. There are no changes to land uses proposed as part of this SOIA application. Therefore, the project would not immediately increase the demand for water supplies.

Based on the acreages of land uses assumed in the conceptual land use plan and the water demand factors used in the *Zone 40 Water System Infrastructure Plan Update* (SCWA 2016a), annual buildout water demand in the SOIA area is estimated to be 1,009.5 afy (Table 3.14-4). The WSIP projects that total water demand in the service area, including water system losses would be 102,400 acre-feet annually in 2052 (Table 3.14-1). Although development of the project site was not considered in the cumulative buildout land use assumptions for the plan, the addition of project water demand (a 1 percent increase) would not drastically change the assumptions used by SCWA, which are updated on a regular basis to reflect changes in land use and consumption rates. If a SRCSD recycled water program becomes available in the future, recycled water could be used for parks, landscape corridors, school playing fields and open space areas, which would substantially reduce potable water demand of the project. It is estimated that the SOIA area currently utilizes 765 to 1,615 afy of groundwater for agricultural operations. Thus, the project may result in net increase of 145.5 afy in water demand or a net decrease of 814.6 afy in water demand depending on the demands of future development.

Table 3.14-4 Conceptual Buildout Unit Water Demand for Bilby Ridge SOIA Area

| <u> </u> | | | | | | |
|--|--|---|--|--|--|--|
| Land Use | Acreage in Conceptual Land Use Plan | Gross Unit Water Demand Factors (acre-feet/acre/year) | Buildout Unit Water Demand (acre-feet/year) | | | |
| Low Density Residential | 409.4 | 2.13 | 872.0 | | | |
| Commercial/Office/Business Professional | 19.3 | 2.15 | 41.5 | | | |
| Commercial | 31.6 | 2.02 | 62.7 | | | |
| Public Schools | 10.0 | 0.81 | 8.1 | | | |
| Public Parks | 9.0 | 2.80 | 25.2 | | | |
| Total | 1,009.5 | | | | | |

Source: SCWA 2016a

The SSA is currently supplied by surface water from the Franklin Intertie and the Vineyard Surface Water Treatment Plant, groundwater from existing GWTPs and some direct feed wells, and a small amount of recycled water. The SSA has adequately planned supply facilities to be able to address both the wet/average

years and dry years. The excess supply during normal years is projected to range from 140,000 afy in 2020 to 84,600 afy in 2052, and in dry years the excess supply is projected to range between 60,700 afy in 2020 and 11,800 afy in 2052 (SCWA 2016). This illustrates capacity to serve potential future water demand generated by the SOIA area. Although existing information indicates that water supply in Zone 40 will exceed demand by more than the anticipated demand from the development of the SOIA area for the next 35 years, SCWA would need to conduct future water supply assessments and update its water supply master plan to determine if water supplies would meet the demand of development at the time development is proposed.

At the time of submittal of any application to annex territory within the SOIA area, the City of Elk Grove is required to prepare a Plan for Services, as required by Government Code Section 56653 or its successor. The Plan for Services would verify that SCWA water supplies are adequate to serve the amount of future development identified in the annexation territory in addition to existing and planned development under normal, single dry, and multiple dry years. The Plan for Services would demonstrate that the SCWA is a signatory to the Water Forum Agreement and that groundwater would be provided in a manner that ensures no overdraft would occur. Because the City would be required to demonstrate water availability prior to annexation, this impact would be **less than significant**. The reader is referred to Section 3.8, "Hydrology and Water Quality," regarding impacts to groundwater levels and supplies.

Mitigation Measures

No mitigation is required.

Impact 3.14-3: Exceed the capacity or the wastewater treatment provider.

The SRWTP has a design capacity of 181 mgd with the potential to expand to 218 mgd. Future development of the SOIA area according to the conceptual land use plan is estimated to generate less than 1 mgd of wastewater. It is anticipated that the SRWTP would have adequate capacity to treat wastewater flows generated by future development. This impact would be **less than significant**.

The SOIA would not directly result in wastewater production. Rather, by amending the City of Elk Grove's SOI and providing a conceptual land use plan, the project would inform Regional San's long-term planning. This analysis considers the potential effects on utility capacity if the project site is annexed and developed in a manner consistent with the conceptual land use plan.

The project site is within Regional San's SOI. As discussed above, the SRWTP has a design capacity of 181 mgd with the potential to expand to 218 mgd. As of 2015, the SRWTP receives and treats an average of 150 mgd each day. The SRCSD expects that substantial water conservation measures throughout the service area would allow the existing 181 mgd average dry-weather flow capacity to be adequate for at least 40 more years (Regional San 2014:6-2). Development of the SOIA area according to the conceptual land use plan is estimated to generate less than 1 mgd of wastewater. Therefore, it is anticipated that the SRWTP would have adequate capacity to treat wastewater flows generated by future development. This impact would be less than significant.

Mitigation Measures

No mitigation is required.

Impact 3.14-4: Generate solid waste that would exceed the permitted capacity of the landfill serving the area.

The SOIA would not change the existing rate of solid waste generation on the project site. If annexation and development occurs in the future, it would be required to be compliant with regulations pertaining to the reduction of solid waste. Based on the current rates of solid waste generation and the capacity of the landfills that serve the area, development of the project site in a manner consistent with the conceptual land use plan would have a **less-than-significant impact** on the permitted capacity of the affected landfills.

The SOIA would not change the existing rate of solid waste generation on the project site. Rather, by amending the City of Elk Grove's SOI and providing a conceptual land use plan, the project would inform the City of Elk Grove's long-term planning. This analysis considers the potential effects on utility capacity if the project site is annexed and developed in a manner consistent with the conceptual land use plan.

Construction of future development could result in site clearing and the generation of various construction-period wastes, including scrap lumber, scrap finishing materials, various scrap metals, and other recyclable and nonrecyclable construction-related wastes. The CALGreen Code (Title 24, Part 11 of the California Code of Regulations) requires all construction contractors to reduce construction waste and demolition debris by 50 percent. Code requirements include preparing a construction waste management plan that identifies the materials to be diverted from disposal by efficient usage, recycling, reuse on the project, or salvage for future use or sale; determining whether materials will be sorted on-site or mixed; and identifying diversion facilities where the materials collected will be taken.

Once built, 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 contractors (LAFCo 2016:4.0-21). Residential solid waste in the City of Elk Grove is disposed of at the Kiefer Landfill and commercial solid waste is primarily disposed of at the Kiefer Landfill, the L and D Landfill, and the Yolo County Landfill. Combined, these landfills have a large volume of landfill capacity (254 million cubic yards) available to serve future development. The closure dates of the Kiefer Landfill, L and D Landfill, and Yolo County Central Landfill are anticipated to be approximately January 1, 2064, January 1, 2023, and January 1, 2080, respectively. Assuming the solid waste generation rates for the City of Elk Grove in 2015, development of the SOIA area according to the conceptual land use plan would generate 14,958 pounds of garbage each day because of residential uses and 57,539 pounds of garbage each day because of employees of commercial, office, and industrial land uses, which would amount to approximately 15,699 cubic yards per year. Thus, the future annexation and development of the SOIA area would not substantially affect the permitted capacities of the landfills that serve the area. This would be a less-than-significant impact.

Mitigation Measures

No mitigation is required.

Ascent Environmental Hazards and Hazardous Materials

3.15 HAZARDS AND HAZARDOUS MATERIALS

This section describes the potential for existing hazards in the SOIA area (or "project site") and provides a qualitative evaluation of the project's potential to create a significant hazard for the public or the environment, conflict with airspace or adopted emergency response plans, or expose people to wildland fires. The analysis includes a description of the existing environmental conditions, the methods used for assessment, the potential direct and indirect impacts of project implementation.

No comments regarding potential hazards were received in response to the Notice of Preparation.

3.15.1 Environmental Setting

The SOIA area is within unincorporated Sacramento County and is primarily used for agricultural activities including field crops and grazing land. A small portion of the site associated with residential property includes viniculture. Review of historical imagery and documents shows that the SOIA area has been used for agriculture (farming and ranching) since the mid-1800s. Similarly, other adjacent parcels have historically been used for row crops, vineyards, and pasture.

POTENTIAL PRESENCE OF HAZARDOUS MATERIALS IN SOIL AND GROUNDWATER

Hazardous materials, including pesticides and herbicides, heavy metals, volatile organic compounds, and oil and gas, may be present in soil and groundwater in areas where land uses have resulted in leaking fuel or chemical storage tanks, or other releases of hazardous materials have occurred. Land uses that typically involve the handling of hazardous materials include agricultural areas where soils may contain pesticides and herbicides.

Hazardous Materials Associated with Agriculture

Agricultural enterprises have historically stored, handled, and applied pesticides and herbicides on orchards and row crops in the SOIA area. Pasture and natural grasses, such as those historically and currently grown on the SOIA area, typically require little to no application of environmentally persistent pesticides. However, agricultural chemicals used before the 1970s often included highly persistent compounds such as DDT. Inorganic compounds containing heavy metals such as arsenic, lead, and mercury were commonly used before the 1950s. Chemicals commonly used in the past have the potential to leave residual inorganic or organic components in shallow soils that could persist for many decades. If present in elevated concentrations, these residues could pose a potential health risk to future construction workers, residents, and other persons who may come in direct contact with surface soils.

Modern agricultural chemicals are generally less-persistent, organic compounds. Routine application of these materials does not generally result in accumulation to levels sufficient to cause concern because of product testing by the U.S. Environmental Protection Agency (EPA) before commercial use and regulation related to product application. Areas that are typically of concern include (1) pesticide-handling areas that lack concrete pads, berms, or cribs to contain spills or leaks during handling and storage, and (2) rinse water from washout facilities for pesticide-application equipment that has not been properly collected and treated before discharge. Equipment-repair and petroleum-storage areas might also be of concern.

Lead, Asbestos, and Other Hazardous Materials in Buildings

Hazardous materials are commonly found in building materials that may be affected during demolition and renovation activities associated with redevelopment. Prior to 1978, lead compounds were commonly used in interior and exterior paints. Prior to the 1980s, building materials often contained asbestos fibers, which were used to provide strength and fire resistance. In addition, other common items present in buildings,

Hazards and Hazardous Materials Ascent Environmental

such as electrical transformers, fluorescent lighting, electrical switches, heating/cooling equipment, and thermostats, can contain hazardous materials that may pose a health risk if not handled and disposed of properly. Among these hazardous materials are polychlorinated biphenyls (PCBs), which were used in hundreds of industrial and commercial applications because of their non-flammability, chemical stability, high boiling point, and electrical insulating properties. Equipment on the project site that might contain PCBs includes electrical equipment and thermal insulation material (e.g., fiberglass, felt, foam, or cork). Older, pole-mounted electrical transformers can also contain PCBs.

Documented Sites of Contamination

According to the *City of Elk Grove General Plan Background Report*, an "active" status does not mean that the site poses an environmental or human safety risk, only that there is a hazardous material occurrence associated with the facility and that the site is presently undergoing remediation or is under further regulatory review. The California Department of Toxic Substances Control (DTSC) maintains a hazardous waste and substances site list (Cortese list) pursuant to Government Code Section 65962. None of the sites identified by the City of Elk Grove *General Plan Background Report* were listed on the Cortese List (City of Elk Grove 2003a). In addition, as of June 2017, the SOIA area is not on the Cortese list (DTSC 2017).

The City of Elk Grove General Plan Background Report contains a list of known "inactive" hazardous sites within the City's Planning Area, which includes the SOIA area. "Inactive" sites are defined as having been investigated and remediated to the satisfaction of the lead oversight agency. Two sites are within 0.5 mile of the project site to the west, and include 10413 Franklin Boulevard and 10464 Franklin Boulevard (City of Elk Grove 2003a).

The Sacramento County General Plan does not identify any hazardous materials near the SOIA area. The closest listed site in the Sacramento County General Plan is the closed Elk Grove Landfill, an estimated 3 miles north of the SOIA area (Sacramento County 2011).

A search of the EPA's Envirofacts web site and the State Water Resources Control Board's (SWRCB's) GeoTracker web site to identify toxic releases, hazardous waste, or other violations that could affect the SOIA revealed no records of any toxic releases, hazardous waste, or other violations that would affect the SOIA Area (EPA 2017, SWRCB 2017).

The SOIA area was not listed on any county, State, or federal government lists as a contaminated site. There were no known contaminated municipal groundwater wells, active or inactive landfills, producing California Division of Oil and Gas petroleum wells, or registered underground storage tanks located on, adjacent to, or within one-half mile of the SOIA area. No confirmed, State or federal "Superfund" sites were identified within 1 mile of the property.

TRANSPORT OF HAZARDOUS MATERIALS

Hazardous materials, hazardous wastes, and petroleum products are a subset of the goods routinely shipped along the transportation corridors in the Plan area. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by the DTSC. DTSC maintains a list of active registered hazardous waste transporters throughout California, and the California Department of Public Health regulates the haulers of hazardous waste. Three agencies maintain searchable databases that track hazardous material releases in reportable quantities: EPA maintains the Hazardous Materials Incident Report System that contains data on hazardous material spill incidents reported to the U.S. Department of Transportation (USDOT); the California Office of Emergency Services (OES) maintains the California Hazardous Materials Incident Report System that contains information on reported hazardous material accidental releases or spills; and SWRCB's Site Cleanup Program maintains information on reported hazardous material accidental releases or spills. USDOT also provides grants to local agencies for preparation and training for hazardous materials incidents through its Hazardous Materials Emergency Preparedness Program administered by OES.

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Hazardous materials are transported on area roadways, including State Route (SR) 99 and Franklin Boulevard, continually. The only roadway and transportation route approved for the transportation of explosives, poisonous inhalation hazards, and radioactive materials in the City of Elk Grove is Interstate 5, located more than 2 miles west of the SOIA area. Smaller quantities of hazardous materials, such as medical supplies, pool chemicals, cleansing agents, paint, and household chemicals, may be transported on all roadways.

SCHOOLS

Children are particularly susceptible to long-term effects from emissions of hazardous materials. Therefore, locations where children spend extended periods of time, such as schools, are particularly sensitive to hazardous air emissions and accidental release associated with the handling of extremely hazardous materials, substances, or wastes.

Carrol Elementary School, operated by Elk Grove Unified School District, is located approximately 0.14 mile north of the SOIA area.

AIRPORTS AND AIRSTRIPS

No active public airports or private airstrips exist within 2 miles of the SOIA area. While there is record of a private airport (Flying B Ranch Airport) two miles south of the SOIA area, it appears to be no longer in operation. The closest public airport is Franklin Field located at 12480 Bruceville Road, approximately 4 miles south of the SOIA area. Franklin Field is a public use airport owned and operated by the County of Sacramento. There are two paved runways that are 204 feet and 100 feet in length. The facility does not have an air traffic control tower or personnel, and it serves the general aviation community exclusively. Approximately 36,000 operations take place each year at Franklin Field, much of which are flight training activities.

The Sacramento Area Council of Governments Board of Directors serves as the Airport Land Use Commission for airports in Sacramento County, including Franklin Field. One of the Airport Land Use Commission's primary functions is to develop and adopt a plan that identifies zones for safety, noise contours, and height restrictions, along with associated compatible land uses, for each public-use airport. The Franklin Field Comprehensive Land Use Plan was prepared in 1988 and last amended in 1992. The SOIA area is not within the overflight zone mapped for Franklin Field.

WILDLAND FIRE HAZARDS

While all of California is subject to some degree of wildfire hazard, there are specific features that make certain areas more hazardous. The California Department of Forestry and Fire Protection (CAL FIRE) is required by law to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors (Public Resources Code [PRC] 4201-4204 and Government Code 51175-89). Factors that increase an area's susceptibility to fire hazards include slope, vegetation type and condition, and atmospheric conditions. When development spreads into less densely populated, often hilly areas, it increases the number of people living in areas that are prone to wildfire.

"Local responsibility areas," which are under the jurisdiction of local entities (e.g., cities, counties), are required to identify very high fire hazard severity zones. The SOIA area is within a local responsibility area and CAL FIRE identifies the SOIA area as a non-very high fire hazard severity zone (CAL FIRE 2017). The Cosumnes Community Service District (CCSD) Fire Department is responsible for providing fire protection services to the SOIA area.

SUBURBAN PROPANE

Suburban Propane facility is located at 10450 Grant Line Road and is approximately 3.2 miles from the eastern boundary of the SOIA area. Suburban Propane receives and stores pressurized and refrigerated propane from trucks and railcars and loads trucks for off-site transport. The facility operates four 60,000-

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gallon, pressurized, ambient-temperature propane storage tanks and two 12-million-gallon refrigerated, low-pressure storage tanks. The tanks are 146 feet in diameter and 122 feet tall.

The City of Elk Grove reviewed several technical reports that evaluated a range of hypothetical accident scenarios and the potential effects from an explosion, radiant heat, fire, shrapnel, and chemical exposure, including potential injuries and fatalities that are the basis of policies and actions in the Safety Element of the General Plan. The SOIA area is outside of the Suburban Propane risk contours.

3.15.2 Regulatory Framework

FEDERAL

Hazardous Materials Management

EPA has primary responsibility for enforcing and implementing federal laws and regulations pertaining to hazardous materials. Applicable regulations are contained mainly in Titles 29, 40, and 49 of the Code of Federal Regulations (CFR). Hazardous materials, as defined in the CFR, are listed in 49 CFR 172.101. Management of hazardous materials is governed by the laws summarized below.

- Resource Conservation and Recovery Act of 1976 (RCRA): The RCRA (42 U.S. Code [USC] 6901 et seq.) established a federal regulatory program for the generation, transport, and disposal of hazardous substances. Under the RCRA, EPA regulates the generation, transportation, treatment, storage, and disposal of hazardous substances. The RCRA was amended by the Hazardous and Solid Waste Amendments of 1984, which banned the disposal of hazardous waste on land and strengthened EPA's reporting requirements. EPA has delegated authority for many RCRA requirements to DTSC.
- ▲ Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA): CERCLA, also called the Superfund Act (42 USC 9601 et seq.), provided broad federal authority and created a trust fund for addressing releases and threatened releases of hazardous substances that could endanger public health or the environment.
- Superfund Amendments and Reauthorization Act of 1986 (SARA): The Superfund Hazardous Substance Cleanup Program (Public Law 96-510) was established on December 11, 1980. The program was expanded and reauthorized by the Superfund Amendments and Reauthorization Act of 1986 (Public Law 99-499), also known as SARA Title III. SARA created the Emergency Planning and Community Right-to-Know Act of 1986, also known as SARA Title III, a statute designed to improve community access to information about chemical hazards and to facilitate the development of chemical emergency response plans by state, tribal, and local governments.
- Toxic Substances Control Act: The Toxic Substances Control Act (15 USC 2601 et seq.) provides EPA with authority to require reporting, recordkeeping and testing, and restrictions related to chemical substances and/or mixtures. The Toxic Substances Control Act addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos, radon, and lead-based paint.
- ✓ Clean Air Act: Regulations under the Clean Air Act (42 USC 7401 et seq., as amended) are designed to prevent accidental releases of hazardous materials. The regulations require facilities that store a threshold quantity or greater of listed regulated substances to develop a risk management plan that includes hazard assessments and response programs to prevent accidental releases of listed chemicals.

These laws and associated regulations include specific requirements for facilities that generate, use, store, treat, and/or dispose of hazardous materials. EPA is responsible for compiling the National Priorities List for known or threatened release sites of hazardous substances, pollutants, or contaminants (commonly referred to as "Superfund sites"). EPA provides oversight of and supervision for Superfund investigation/remediation

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projects, evaluates remediation technologies, and develops hazardous materials disposal restrictions and treatment standards.

Occupational Safety and Health Administration Worker Safety Requirements

The Occupational Safety and Health Administration (OSHA) is responsible for ensuring worker safety. OSHA sets federal standards for implementation of workplace training, exposure limits, and safety procedures for handling hazardous substances and addressing other potential industrial hazards. OSHA also establishes criteria by which each state can implement its own health and safety program. The Hazard Communication Standard (CFR Title 29, Part 1910) requires that workers be informed of the hazards associated with the materials they handle. Workers must be trained in safe handling of hazardous materials, use of emergency response equipment, and building emergency response plans and procedures. Containers must be labeled appropriately, and material safety data sheets must be available in the workplace.

Hazardous Materials Transportation Act

The USDOT has developed regulations in Titles 10 and 49 of the CFR pertaining to the transport of hazardous substances and hazardous wastes. The Hazardous Materials Transportation Act is administered by the Research and Special Programs Administration of the USDOT. The act provides the USDOT with a broad mandate to regulate the transport of hazardous materials, with the purpose of adequately protecting the nation against risk to life and property that is inherent in the commercial transportation of hazardous materials. USDOT regulations that govern the transportation of hazardous materials are applicable to any person who transports, ships, causes to be transported or shipped, or who is involved in any way with the manufacture or testing of hazardous materials packaging or containers.

Federal Insecticide, Fungicide, and Rodenticide Act

Pesticides are regulated under the Federal Insecticide, Fungicide and Rodenticide Act by EPA. This includes labeling and registration of pesticides as to how they may be used. EPA delegates pesticide enforcement activities in California to the California Department of Pesticide Regulation, under Title 3 of the California Code of Regulations and the California Food and Agriculture Code. The California Department of Pesticide Regulation registers pesticides for use in California, and licenses pesticide applicators and pilots, advisors, dealers, brokers, and businesses.

STATE

Hazardous Materials Management

Several state agencies regulate the transportation and use of hazardous materials to minimize potential risks to public health and safety. The California Environmental Protection Agency (Cal/EPA) and the Governor's Office of Emergency Services establish rules governing the use of hazardous substances in California. Within Cal/EPA, DTSC is primarily responsible for regulating the generation, transport, and disposal of hazardous substances under the authority of the Hazardous Waste Control Law; enforcement is delegated to local jurisdictions. Regulations implementing the Hazardous Waste Control Law list hazardous chemicals and common substances that may be hazardous; establish criteria for identifying, packaging, and labeling hazardous substances; prescribe hazardous-substances management; establish permit requirements for treatment, storage, disposal, and transportation of hazardous substances; and identify hazardous substances prohibited from landfills. These regulations apply to the protection of human health and the environment during construction.

State regulations applicable to hazardous materials are contained primarily in Title 22 of the California Code of Regulations (CCR). CCR Title 26 is a compilation of those CCR chapters or titles that are applicable to hazardous materials management. California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA) standards are presented in CCR Title 8; these standards are more stringent than federal OSHA regulations and address workplace regulations involving the use, storage, and disposal of hazardous materials.

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California Hazardous Materials Release Response Plans and Inventory Law of 1985

This law requires preparation of hazardous materials business plans and disclosure of hazardous materials inventories. Such plans must include an inventory of hazardous materials handled, as well as facility floor plans showing where hazardous materials are stored, an emergency response plan, and emergency response procedures that provide for employee training (California Health and Safety Code, Division 20, Chapter 6.95, Article 1). The business plan program is administered by the California Emergency Management Agency.

Cal/OSHA Worker Safety Requirements

Cal/OSHA assumes primary responsibility for developing and enforcing workplace safety regulations in California. Cal/OSHA regulations for the use of hazardous materials in the workplace (CCR Title 8) require safety training, available safety equipment, accident and illness prevention programs, hazardous-substance exposure warnings, and preparation of emergency action and fire prevention plans. Cal/OSHA enforces regulations on hazard communication programs and mandates specific training and information requirements. These requirements include procedures for identifying and labeling hazardous substances, providing hazard information about hazardous substances and their handling, and preparing health and safety plans to protect workers and employees at hazardous-waste sites. Employers must make material safety data sheets available to employees and document employee information and training programs.

California Accidental Release Prevention Program

The goal of the California Accidental Release Prevention Program (CCR Title 19, Division 2, Chapter 4.5) is to reduce the likelihood and severity of consequences of any releases of extremely hazardous materials. Any business that handles regulated substances (chemicals that pose a major threat to public health and safety or the environment because they are highly toxic, flammable, or explosive, including ammonia, chlorine gas, hydrogen, nitric acid, and propane) must prepare a risk management plan. The risk management plan is a detailed engineering analysis of the potential accident factors present at a business and the measures that can be implemented to reduce this accident potential. The plan must provide safety information, hazard data, operating procedures, and training and maintenance requirements. The list of regulated substances is found in Article 8, Section 2770.5 of the program regulations.

Emergency Response to Hazardous Materials Incidents

California has developed an emergency response plan to coordinate emergency services provided by federal, State, and local governments and private agencies. Response to hazardous material incidents is one part of this plan. The plan is managed by the California Emergency Management Agency, which coordinates the responses of other agencies, including Cal/EPA, the California Highway Patrol, the California Department of Fish and Wildlife, and Regional Water Quality Control Boards (RWQCBs).

Unified Program

Cal/EPA has adopted regulations implementing the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program). The six program elements of the Unified Program are hazardous-waste generation and on-site treatment, underground storage tanks, aboveground storage tanks, hazardous-material release response plans and inventories, risk management and prevention programs, and Uniform Fire Code hazardous materials management plans and inventories. The program is implemented at the local level by a local agency, referred to as the Certified Unified Program Agency (CUPA), which is responsible for consolidating the administration of the six program elements within its jurisdiction. The Sacramento County Environmental Management Department (EMD) is the CUPA for Sacramento County and its incorporated cities, including Elk Grove.

California Government Code Section 65962.5 (Cortese List)

The provisions of California Government Code Section 65962.5 are commonly referred to as the "Cortese List" (after the legislator who authored the law). The Cortese List is a planning document used by State and local agencies to comply with CEQA requirements in providing information about the location of hazardous materials release sites. Section 65962.5 requires Cal/EPA to develop an updated Cortese List at least annually. DTSC is responsible for a portion of the information contained in the Cortese List. Other State and local government

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agencies in California, such as the State Water Resources Control Board, also must provide additional release information. As of June 2017, the SOIA area is not on the Cortese list (DTSC 2017).

Asbestos Abatement

Asbestos abatement efforts must be completed in compliance with 7 CCR Section 5208, 8 CCR Section 1529, and 8 CCR Sections 341.6 through 341.14. The regulations in 7 CCR Section 5208 implement worker exposure limits, require exposure monitoring, implement compliance programs, require employee protection and hazard communication, and require employee medical surveillance and reporting. Asbestos exposure for construction work is regulated by 8 CCR Section 1529, which includes exposure limits and procedures for handling and removal. Requirements for transport and disposal are included in 8 CCR Sections 341.6 through 341.14.

Section 19827.5 of the California Health and Safety Code, adopted January 1, 1991, prohibits local agencies from issuing demolition or alteration permits until the applicant has demonstrated compliance with applicable regulations. If there is 100 square feet or more of asbestos-containing material, renovation or demolition of buildings containing asbestos must be conducted by a licensed contractor and the work must comply with requirements included in 8 CCR Sections 1529 and 341.6 through 341.14. Cal/OSHA must be notified 10 days before the start of construction and demolition activities. Asbestos encountered during demolition of an existing building must be transported and disposed of at an appropriate facility. The contractor and hauler of the material must file a hazardous-waste manifest that provides disposal details.

Lead and Lead-Based Paint Abatement

Regulation of lead and lead-based paint is described in 29 CFR 1926.62 and 8 CCR Section 1532.1. These regulations cover the demolition, removal, cleanup, transportation, storage, and disposal of lead-containing material. The regulations outline the permissible exposure limit, protective measures, and monitoring. Cal/OSHA's Lead in Construction Standard requires notification and a lead compliance plan with safe work practices and a detailed plan to protect workers from lead exposure.

California Education Code

Sections 17071.13, 17072.13, 17210, 17210.1, 17213.1-3, and 17268 of the California Education Code became effective January 1, 2000. Together, they establish requirements for assessments and approvals regarding toxic and hazardous materials that school districts must follow before receiving final site approval from the Department of Education and funds under the School Facilities Program. For example, the site approval package must include written determinations regarding the presence of hazardous wastes or pipelines carrying hazardous substances on the site (the adopted CEQA document is often used for these purposes). In addition, Section 17213(b) requires the local education agency to consult with the applicable air district to identify facilities within 0.25 mile of the proposed site that might reasonably be anticipated to emit hazardous air emissions or handle hazardous materials, substances, or wastes and prepare written findings that either there are not such facilities, the facilities do not pose a health risk, or corrective measures will be taken (consistent PRC Section 21151.8). The code also requires that a Phase I Environmental Site Assessment (ESA) is conducted according to the American Society of Testing and Materials standards (ASTM E-1527-2000) and transmitted to DTSC. If the Phase I ESA concludes that further investigation is needed or DTSC requires it, a PEA must be completed under DTSC oversight and review.

California Fire Code

The California Fire Code (CFC) is Chapter 9 of CCR Title 24. It is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The CFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The CFC and the California Building Code use a hazard classification system to determine what protective measures are required to protect fire and life safety. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, the CFC employs a permit system based on hazard classification. The CFC is updated every 3 years.

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LOCAL

The project site lies within the jurisdictional boundaries of Sacramento County; therefore, the County's policies, as well as the Sacramento LAFCo's polices, would apply. Furthermore, if the SOIA is approved, it would likely lead to annexation to the City of Elk Grove. Thus, applicable policies of the City of Elk Grove's General Plan are described below.

Sacramento County General Plan

The following policies from the Sacramento County General Plan would apply to the SOIA.

- Policy HM-4: The handling, storage, and transport of hazardous materials shall be conducted in a manner so as not to compromise public health and safety standards.
- ✓ Policy HM-7: Encourage the implementation of workplace safety programs and to the best extent possible ensure that residents who live adjacent to industrial or commercial facilities are protected from accidents and the mishandling of hazardous materials.
- Policy HM-8: Continue the effort to prevent ground water and soil contamination.
- ▲ Policy HM-9: Continue the effort to prevent surface water contamination.
- Policy HM-10: Reduce the occurrences of hazardous material accidents and the subsequent need for incident response by developing and implementing effective prevention strategies.
- Policy HM-11: Protect residents and sensitive facilities from incidents which may occur during the transport of hazardous materials in the County.

City of Elk Grove General Plan

The following policies from the City of Elk Grove's General Plan would apply to future annexation and development of the project site.

- 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-2: In considering the potential impact of hazardous facilities on the public and/ or adjacent or nearby properties, the City will consider the hazards posed by reasonably foreseeable events. Evaluation of such hazards will address the potential for events at facilities to create hazardous physical effects at off-site 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.

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.

Table 3.15-1 Reasonably Foreseeable Probability of Occurrence

| Land Use | Probability of Occurrence Per Year |
|--|--|
| "Agriculture, Light Industrial, and Industrial" Uses involving continuous access and the presence of limited numbers of people but easy evacuation, e.g., open house, warehouses, manufacturing plants, etc. | Between 100 in one million and 10 in one million (10 ⁻⁴ to 10 ⁻⁵) |
| "Commercial" | Between 10 in one million and 1 in one million (105 to 106) |

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| Table 3.15-1 Rea | sonably Foreseeable | Probability of | Occurrence |
|------------------|---------------------|----------------|-------------------|
|------------------|---------------------|----------------|-------------------|

| Land Use | Probability of Occurrence Per Year | | | |
|--|---|--|--|--|
| Uses involving continuous access but of easy evacuation, e.g., commercial uses, offices. | | | | |
| "Residential" All other land uses without restriction including institutional uses, residential areas, etc. | 1 in one million and less (10 ⁻⁶) | | | |
| Source: City of Elk Grove General Plan, adopted November 2003, Amended July 2016 | | | | |

- 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 on the following page.
 - ➤ SA-3-Action 1: As part of the environmental review process for proposed projects, the City will analyze potential safety-related impacts resulting from or affecting new development which could cause or be affected by reasonably foreseeable events. This analysis will 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 (page SA-6 of the City's General Plan reproduced below as Table 3.15.2.

Table 3.15-2 Maximum Acceptable Exposure Criteria for Agricultural, Residential, and Non-Residential Land Uses (City of Elk Grove General Plan Table SA-A)

| Land Use | | Maximum Acce | Maximum Acceptable Exposure | | | |
|---|-------------------------|---|--|--|--|--|
| | Overpressure | Airborne Toxic Substances | Radiant Heat | Shrapnel | | |
| Agriculture | 3.4 psig ⁽¹⁾ | Dose = ERPG-2 ⁽²⁾ ppm for 60 min Exposure time | Radiant dose = 200 kJ/ m ^{2 (3)} | All uses shall be | | |
| Residential (all density ranges) ⁵ | 1.0 psig | = 60 min For example: chlorine ERPG-2 = 3 ppm | Exposure time = 30 sec Target radiant energy = Radiant | located such that the possibility of injury for an unprotected person due to shrapnel released by a reasonably foreseeable event (4) is less than 1/10-6 (1/1,000,000) | | |
| Office/Commercial | 1.0 psig | Dose = 3 ppm x 60 min = 180 ppm-min Target concentration = Dose/Exposure time Target concentration = (180 ppm-min)/60 min Target concentration = 3 ppm chlorine | dose/Exposure time Target radiant energy = (200 kJ/m²)/30 sec Target radiant energy = 6.67 kW/m² | | | |
| Light Industrial | 1.25 psig | Dose = ERPG-2 ppm for 60 min Exposure time = 30 min For example: chlorine ERPG-2 = 3 ppm Dose = 3 ppm x 60 min = 180 ppm-min Target concentration = Dose/Exposure time Target concentration = (180 ppm-min)/30 min Target concentration = 6 ppm chlorine | Radiant dose = 200 kJ/m² Exposure time = 15 sec Target radiant energy = Radiant dose/ Exposure time Target radiant energy = (200 kJ/m²)/15 sec Target radiant energy = 13.34 kW/m² | | | |
| Industrial | 3.4 psig | Dose = ERPG-2 ppm for 60 min Exposure time = 15 min For example: chlorine ERPG-2 = 3 ppm Dose = 3 ppm x 60 min = 180 ppm-min Target concentration = Dose/Exposure time Target concentration = (180 ppm-min)/15 min Target concentration = 12 ppm chlorine | | | | |

Notes:

- (1) psig: pounds per square inch gauge.
- (2) ERPG-2: Emergency Response Planning Guidelines. The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour without experiencing or developing irreversible or other serious health effects or symptoms which could impair an individual's ability to take protective action; ppm: parts per million.
- (3) kJ/m2: kiloJoules per square meter (a measure of radiant heat received); kW/m2: kilowatts per square meter; 1.0 kJ/m2 = 1.0 kW/m2 for 1 sec = 1 kW/ (m2-sec).
- (4) As defined in Policy SA-3
- (5) Includes schools, parks, libraries, and other similar public gathering places regardless of their location.

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■ Policy SA-4: The Maximum Acceptable Exposure standards shown in Table SA-A [page SA-6 of the City General Plan, reproduced below as Table 3.15-2] 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-8: Storage of hazardous materials and waste shall be strictly regulated, consistent with state and federal law.
 - 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.
- 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.

Elk Grove Municipal Code—Section 23.60.030, "Hazardous Materials"

The City has developed the following standards to ensure that the use, handling, storage, and transportation of hazardous materials comply with all applicable State laws (Section 65850.2 of the Government Code and Section 25505 et seq. of the Health and Safety Code) and that appropriate information is reported to the Fire Department as the regulatory authority.

- A. Reporting Requirements. All businesses required by State law (Section 6.95 of the Health and Safety Code) to prepare hazardous materials release response plans and hazardous materials inventory statements shall, upon request, submit copies of these plans, including any revisions, to the Fire Department.
- B. Underground Storage. Underground storage of hazardous materials shall comply with all applicable requirements of state law (Section 6.7 of the Health and Safety Code and Articles 679 and 680 of the California Fire Code, or as subsequently amended). Businesses that use underground storage tanks shall comply with the following procedures:

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1. Notify the Fire Department of any unauthorized release of hazardous materials prescribed by City, county, state and federal regulations;

- 2. Notify the Fire Department and the Sacramento County Health Department of any proposed abandoning, closing or ceasing operation of an underground storage tank and actions to be taken to dispose of any hazardous materials; and
- 3. Submit copies of the closure plan to the Fire Department.
- C. Above-Ground Storage. Above-ground storage tanks for hazardous materials and flammable and combustible materials may be allowed subject to the approval of the Fire Department.
- D. New Development. Structures adjacent to a commercial supply bulk transfer delivery system with at least six (6) inch pipes shall be designed to accommodate a setback of at least one hundred (100) feet from that delivery system. The setback may be reduced if the Planning Director, with recommendation from the Fire Department, can make one or more of the following findings:
 - 1. The structure would be protected from the radiant heat of an explosion by berming or other physical barriers;
 - 2. A one hundred (100) foot setback would be impractical or unnecessary because of existing topography, streets, parcel lines or easements; or
 - 3. A secondary containment system for petroleum pipelines and transition points shall be constructed. The design of the system shall be subject to the approval of the Fire Department.
- E. Notification Required. A subdivider of a development within five hundred (500) feet of a pipeline shall notify a new/potential owner before the time of purchase and the close of escrow of the location, size and type of pipeline.

Sacramento Metropolitan Air Quality Management District Asbestos Program

The Sacramento Metropolitan Air Quality Management District regulates asbestos in building materials. The program applies to renovations or demolitions of jurisdictional structures in Sacramento County that include asbestos. This program requires and asbestos survey to identify all of the asbestos in building materials and abatement by a licensed asbestos contractor.

Sacramento County Environmental Management Department, Hazardous Materials Division

The Hazardous Materials Division of the Sacramento County EMD is the designated CUPA for Sacramento County, including Elk Grove. The Sacramento County EMD has a 24-hour hazardous materials incident response team and responds to incidents involving chemical releases, as well as any other hazardous materials situations. As the CUPA, the Hazardous Materials Division is responsible for implementing six statewide environmental programs for Sacramento County:

- Underground storage of hazardous substances (underground storage tanks)
- ▲ Hazardous materials business plan requirements
- ▲ Hazardous waste generator requirements
- ▲ California Accidental Release Prevention Program
- Uniform Fire Code hazardous materials management plan
- ▲ Aboveground storage tanks (spill prevention control and countermeasures plan)

Sacramento County Local Hazard Mitigation Plan

The Sacramento County Local Hazard Mitigation Plan (Sacramento County 2016), as amended, to which the City of Elk Grove is a signatory, includes a risk assessment of existing hazards such as severe weather, dam failure, flooding, earthquakes, wildfire, drought, health hazards, landslides, and volcanoes, and a mitigation

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strategy. The plan includes countywide recommended action items to reduce the economic effects and the loss of life and property.

Sacramento County Evacuation Plan

The Sacramento County Evacuation Plan is developed as an Annex to the Sacramento County 2008 All-Hazards Emergency Operations Plan. The purpose of this evacuation plan is to document the agreed upon strategy for the County's response to emergencies that involve the evacuation of persons from an impacted area to a safe area. This involves coordination and support for the safe and effective evacuation of the general population, and for those who need additional support to evacuate. Focus areas within this evacuation plan include public alert and warning, transportation, and care and shelter.

Primary evacuation routes are established for each of the seven County Sheriff Districts. These include major interstates, highways and prime arterials within Sacramento County. Local jurisdictions will work with the County, and especially the Operation's Section, Law Enforcement Branch and the Evacuation Movement Unit to identify and update evacuation routes and evacuation transfer points. The primary evacuation routes will usually be major interstates and other highways, and major roadways within and out of the county - unless otherwise determined by the County Department of Transportation (DOT). During an evacuation, County DOT traffic engineers would be able to quickly calculate traffic flow capacity and decide which of the available traffic routes should be used to move people in the correct directions. In many cases, the traffic engineers will need to reevaluate and re-calculate best traffic routes based on situational data. Interstate 5, which is located less than 2 miles west of the SOIA area is identified as a key evacuation route.

3.15.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

The following evaluation is based on a review of documents and publicly available information about hazardous and potentially hazardous conditions in the SOIA area to determine the potential for project implementation to result in an increased health or safety hazard to people or the environment. This includes city and county planning documents, and SWRCB and DTSC hazardous materials database information. Physical surveys of the SOI area were not conducted. Rather, this program-level analysis is based on hazards typically associated with certain land uses and an overall understanding of the key safety concerns that could result from implementation of the proposed Plan.

There are no changes to land uses proposed as part of this SOIA application. However, to facilitate environmental analysis for this SOIA request, the applicant has developed a conceptual land use scenario. It is possible that, if future development is proposed, it could involve land uses that are potentially capable of exposing the public or the environment to hazards and/or hazardous materials. The evaluation of hazards and hazardous materials impacts assumes that any construction and development of subsequent projects would adhere to the latest federal, State, and local regulations, and conform to the latest required standards in the industry.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, an impact related to hazards or hazardous materials is considered significant if implementation of the project would do any of the following:

- ▲ 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 or through the routine transport, use, or disposal of hazardous materials;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school;

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■ 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 create a significant hazard to the public or the environment:

- Result in a safety hazard for people residing or working in a project area that is located within 2 miles of a public airport or public use airport;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- ▲ 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 residences are intermixed with wildlands.

ISSUES NOT EVALUATED FURTHER

Public Airport and Private Airstrip Hazards

The SOIA area is not located within 2 miles of any active airport. The closest public-use airport is Franklin Field, approximately 4 miles from the SOIA area. There are no active private airstrips located in the vicinity. As a result, impacts related to safety hazards associated with the operation of a public airport or private airstrip would not occur. Therefore, this issue is not addressed further in this EIR.

IMPACT ANALYSIS

Impact 3.15-1: Create a significant hazard through transport, use, or disposal of hazardous materials.

Future development of the SOIA area upon annexation could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials during demolition, construction, or operation activities. However, because of compliance with applicable rules and regulations specifically designed to protect the public health through improved procedures for the handling of hazardous materials, the impact to the public through routine, transport, use, and disposal would be **less than significant.**

Construction activities associated with future development would temporarily increase the regional transport, use, storage, and disposal of hazardous materials and petroleum products (such as diesel fuel, lubricants, paints and solvents, and cement products containing strong basic or acidic chemicals) that are commonly used at construction sites. Hazardous waste generated during construction may consist of welding materials, fuel and lubricant containers, paint and solvent containers, and cement products containing strong basic or acidic chemicals.

Hazardous materials transported by truck use many of the same freeways, arterials, and local streets as other traffic. This creates a risk of accidents and associated release of hazardous materials for other drivers and for people along these routes. Although the transportation of hazardous materials could result in accidental spills, leaks, toxic releases, fire, or explosion, the USDOT Office of Hazardous Materials Safety prescribes strict regulations for the safe transportation of hazardous materials, as described in Title 49 of the CFR. These standard accident and hazardous materials recovery training and procedures are enforced by the State and followed by private State-licensed, certified, and bonded transportation companies and contractors.

Further, pursuant to 40 CFR 112, the project would be required to prepare a spill prevention and treatment plan for rapidly, effectively, and safely cleaning up and disposing of any spills or releases that may occur during construction at the SOIA site. As required under state and federal law, notification and evacuation procedures for site workers and local residents would be included as part of the plan in the event of a hazardous materials release during on-site construction.

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In addition to 40 CFR 112, SWRCB Construction General Permit (2009-0009 DWQ) requires spill prevention and containment plans to avoid spills and releases of hazardous materials and wastes into the environment. Inspections would be conducted to verify consistent implementation of general construction permit conditions and best management practices (BMPs) to avoid and minimize the potential for spills and releases, and of the immediate cleanup and response thereto. BMPs include, for example, the designation of special storage areas and labeling, containment berms, coverage from rain, and concrete washout areas. Compliance with the aforementioned regulations would minimize the potential risk of a spill or accidental release of hazardous materials during construction.

Development would increase population, jobs, and households and a variety of land uses including residential, commercial, and industrial. Specific uses, such as dry cleaners and gas stations, would involve routine transport, use, and disposal of hazardous materials such as household hazardous wastes (e.g., paints, cleaning supplies, solvents, and petroleum products) and commercial and industrial hazardous waste. Exposure to hazardous materials could cause various short-term and/or long-term health effects. Possible health effects could be acute (immediate, or of short-term severity), chronic (long-term, recurring, or resulting from repeated exposure), or both. Acute effects, often resulting from a single exposure, could result in nausea, vomiting, headache, dizziness, or burns. Chronic exposure could result in systemic damage or damage to organs, such as the lungs, liver, or kidneys. Health effects would be specific to each hazardous material.

Development could also involve the use of hazardous materials or petroleum products. The operation of businesses that use, create, or dispose of hazardous materials is regulated and monitored by federal, State, and local regulations that provide a high level of protection to the public and the environment from the hazardous materials manufactured within, transported to, and disposed within the region. RCRA, Title 22 of the CCR, and the Hazardous Waste Control Law regulate the generation, transportation, treatment, storage, and disposal of hazardous waste. These laws impose regulatory systems for handling hazardous waste in a manner that protects human health and the environment, including requirements for the classification of materials, packaging, hazard communication, Cal/EPA oversees the regulation and management of hazardous materials on a statewide level through DTSC. Use of hazardous materials requires permits and monitoring to avoid hazardous waste release through the local CUPA. Additionally, businesses that generate hazardous waste are required to have an EPA identification number to monitor and track hazardous waste activities.

If future development occurs within the SOIA area upon annexation, such development would occur under the jurisdiction of the City of Elk Grove. The City of Elk Grove and any construction contractors would be required to comply with Cal/EPA's Unified Program (e.g., hazardous materials release response plans and inventories, California Uniform Fire Code hazardous materials management plans and inventories). USDOT (through the Hazardous Materials Transportation Act), and other regulatory agencies (including the California Public Utilities Commission for natural gas transmission lines) provide standards designed to avoid releases including provisions regarding securing materials and container design.

Facilities that would use hazardous materials on-site would be required to obtain permits and comply with appropriate regulatory agency standards designed to avoid hazardous waste releases and protect the public health. Regulated activities would be managed by the Sacramento County EMD, the designated CUPA, and would be required to comply with CCR Title 8, "Industrial Relations," for workplace regulations addressing hazardous materials, as well as Title 26, "Toxics." Title 26, Division 6 contains requirements for CHP enforcement of hazardous materials storage and rapid-response cleanup in the event of a leak or spill. Compliance with these regulations would reduce the potential for accidental release of hazardous materials during future construction and operation and to minimize both the frequency and the magnitude if such a release occurs.

In addition, the City of Elk Grove would enforce its General Plan and Municipal Code through project conditions of approval. The City would be required to comply with State regulations and the City would assess future discretionary entitlement requests for consistency with City General Plan policies for safety, including hazardous materials (described in Policy SA-8 and associated action measures, Policy SA-9, Policy SA-10 and associated actions).

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With enforcement of existing hazardous materials regulations and the application of relevant City of Elk Grove policies and code requirements as conditions of approval, future development in the of the SOIA area would be designed to minimize potential impacts from the release of hazardous materials and to minimize both the frequency and the magnitude if such a release occurs. The impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.15-2: Create potential human hazards from exposure to existing on-site hazardous materials.

Future development of the SOIA area upon annexation could expose construction workers to hazardous materials present on-site during construction activities and hazardous materials on-site could create an environmental or health hazard for later residents or occupants, if left in place. This impact would be **potentially significant**.

A preliminary review of environmental risk databases was conducted. The SOIA area was not listed on any county, State, or federal government lists as a contaminated site. There were no known contaminated municipal groundwater wells, active or inactive landfills, producing California Division of Oil and Gas petroleum wells, or registered underground storage tanks located on the proposed site. As of June 2017, the SOIA area is not on the Cortese list (DTSC 2017). This analysis did not include any sampling, site-specific review, laboratory analysis, or inspection of buildings or site surfaces. Site-specific investigation for future development would be required to address hazardous materials conditions.

Hazardous Building Materials

Existing structures are believed to contain hazardous materials, including asbestos, lead, and heavy metals – primarily because many of the existing structures were constructed when the use of these materials was not heavily restricted. Demolition of structures could result in inadvertent release or improper disposal of debris containing potentially hazardous materials; however, federal, state, and local regulations have been developed to address potential impacts related to the handling and disposal of hazardous materials during demolition. Potential impacts would be minimized through adherence to regulatory standards that prescribe specific methods of material characterization and handling.

Federal and state regulations govern the renovation and demolition of structures where materials containing lead and asbestos are present. Asbestos and lead abatement must be performed and monitored by contractors with appropriate certifications from the State Department of Health Services. In addition, Cal/OSHA has regulations concerning the use of hazardous materials, including requirements for safety training, availability of safety equipment, hazardous materials exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA enforces the hazard communication program regulations, which include provisions for identifying and labeling hazardous materials, describing the hazards of chemicals, and documenting employee-training programs. All demolition that could result in the release of lead and/or asbestos must be conducted according to Cal/OSHA standards. Specific actions required by law include the following.

Asbestos. Prior to demolition, all structures would be tested for the presence of asbestos-containing materials. Any asbestos would be removed and disposed of by an accredited contractor in compliance with federal, state, and local regulations (including the Toxic Substances Control Act and the National Emission Standard for Hazardous Air Pollutants). The City of Elk Grove would regulate asbestos through conditions of approval and the Sacramento Metropolitan Air Quality Management District would be notified 10 days in advance of any proposed demolition or abatement work. Compliance with these regulations would result in the safe disposal of asbestos-containing materials.

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▲ Lead-based paint or other coatings. A survey for indicators of lead-based coatings would be conducted before demolition to further characterize the presence of lead on the project site. For the purposes of compliance with Cal/OSHA regulations, all coated surfaces would be assumed to potentially contain lead. There is also a potential for soil contamination because of deposition of deteriorated (i.e., flaked, peeled, chipped) lead-based paint adjacent to structures where lead-based exterior paints were used. Loose or peeling paint may be classified as a hazardous waste if concentrations exceed total threshold limits. Cal/OSHA regulations require air monitoring, special work practices, and respiratory protection during demolition where even small amounts of lead have been detected.

▲ Heavy metals and PCBs. Spent florescent light bulbs and ballasts, thermostats, and other electrical equipment may contain heavy metals, such as mercury, or PCBs. If concentrations of these materials exceed regulatory standards, they would be handled as hazardous waste in accordance with hazardous waste regulations.

Agricultural Chemicals

Due to historical use for agricultural purposes, it is anticipated that residue from pesticides, fertilizers, and other agricultural chemicals may be present on the site. As detailed in the setting section above, current agricultural practices do not generally employ toxic chemicals with long-persistence; however, chemicals formerly used in agriculture included heavy metals and organic compounds, such as DDT, which may persist in soil for decades. These residues could potentially pose a health risk to persons coming into contact with those chemicals.

Although, substantial concentrations of hazardous materials are not anticipated to occur on the site, based on recent use of the property, the presence of agricultural chemicals should be assumed. The City of Elk Grove would enforce its General Plan and Municipal Code through project conditions of approval, specifically General Plan Policy SA-8 Action 4 states that if sites and surrounding area are suspected or known to contain hazardous materials, these areas will be reviewed, tested, and remediated for potential hazardous materials in accordance with all local, State, and federal regulations prior to site improvements.

Other Existing On-Site Hazardous Materials

Construction activities that disturb subsurface materials could encounter previously unidentified contamination from past practices or placement of undocumented fill or even unauthorized disposal of hazardous wastes. Encountering these hazardous materials could expose workers, the public or the environment to adverse effects depending on the volume, materials involved, and concentrations.

If contaminated soils and/or groundwater (i.e., identifiable by soil staining or odors) are encountered during construction activities, work would cease until appropriate worker health and safety precautions, as specified by CCR Title (Section 5194) promulgated by Cal/OSHA, are implemented. A qualified hazardous materials specialist would be notified for an evaluation and the appropriate regulatory agency would be contacted. If deemed necessary by the appropriate agency, remediation would be undertaken in accordance with existing federal, State, and local regulations/requirements and guideline established for the treatment of hazardous substances. Work would cease in the contaminated area until the nature and extent of contamination have been established, and proper disposal or remediation has occurred. Any contaminated soils and/or groundwater encountered during construction would require proper disposal. This would likely require removal from the site and transportation to an EPA-approved disposal facility by a USDOT-certified hazardous waste transporter. The designation of encountered contamination would be based on the chemicals present and chemical concentrations detected through laboratory analysis. Based on the analytical results, appropriate disposal of the material in accordance with EPA, DTSC, and RWQCB guidelines would be implemented.

To address the potential for documented and undocumented hazards on a site, the American Society for Testing and Materials has developed widely accepted practice standards for the preliminary evaluation of site hazards (E-1527-05). Phase I ESAs include an on-site visit to determine current conditions; an evaluation of possible risks posed by neighboring properties; interviews with persons knowledgeable about the site's history; an examination of local planning files to check prior land uses and permits granted; file searches with

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appropriate agencies having oversight authority relative to water quality and/or soil contamination; examination of historic aerial photography of the site and adjacent properties; a review of current topographic maps to determine drainage patterns; and an examination of chain-of-title for environmental lines and/or activity and land use limitations. If a Phase I ESA indicates the presence, or potential presence of contamination, a site-specific Phase II ESA is generally conducted to test soil and/or groundwater. Based on the outcome of a Phase II ESA, remediation of contaminated sites under federal and State regulations may be required prior to development. Phase I ESAs can also be used to identify the potential for presence of hazardous building materials in situations where older structures intended for demolition could contain lead-based paint, asbestos containing materials, mercury, or polychlorinated biphenyls. It is common practice for lending institutions to require a Phase I ESA to be prepared to research and disclose the prior uses of the site and the likelihood that residual hazardous materials and/or waste might be present in underlying soil and/or groundwater when properties change hands. However, there are no general regulatory requirements to conduct a Phase I ESA, or subsequent investigation of potential contamination. Therefore, because it cannot be assumed these practices would occur, the impacts related to changes in land use are considered potentially significant.

Mitigation Measure 3.15-2a: Prepare Environmental Site Assessments

At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require a site assessment, including an updated review of environmental risk databases, for the presence of potential hazardous materials. If this assessment indicates the presence or likely presence of contamination, the project sponsor shall prepare a Phase I ESA in accordance with the American Society for Testing and Materials' E-1527-05 standard. For work requiring any demolition, the Phase I ESA shall make recommendations for any hazardous building materials survey work that shall be done. All recommendations included in a Phase I ESA prepared for a site shall be implemented. If a Phase I ESA indicates the presence or likely presence of contamination, the City of Elk Grove shall require a Phase II ESA, and recommendations of the Phase II ESA shall be fully implemented prior to ground disturbance. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

Mitigation Measure 3.15-2b: Prepare a Hazardous Materials Contingency Plan for Construction Activities

At the time of any application to annex territory within the Bilby Ridge SOIA area, the City of Elk Grove shall require that the applicants provide a hazardous materials contingency plan to Sacramento County EMD. The plan will describe the necessary actions that would be taken if evidence of contaminated soil or groundwater is encountered during construction. The contingency plan shall identify conditions that could indicate potential hazardous materials contamination, including soil discoloration, petroleum or chemical odors, and presence of underground storage tanks or buried building material.

The plan shall include the provision that, if at any time during the course of constructing the project, evidence of soil and/or groundwater contamination with hazardous material is encountered, the project applicant shall immediately halt construction and contact Sacramento County EMD. Work shall not recommence until the discovery has been assessed/treated appropriately (through such mechanisms as soil or groundwater sampling and remediation if potentially hazardous materials are detected above threshold levels) to the satisfaction of Sacramento County EMD, RWQCB, and DTSC (as applicable). The plan, and obligations to abide by and implement the plan, shall be incorporated into the construction and contract specifications of the project. Evidence of compliance with this mitigation measure shall be provided in the annexation application to LAFCo.

Significance after Mitigation

With enforcement of the above mitigation measures and adherence to existing hazardous materials regulations, impacts from any existing hazardous materials would be minimized. Preparation of, and compliance with, a Phase I ESA for properties at risk of potential hazardous materials and/or waste contamination would avoid adverse impacts associated with build-out. This would minimize the risk of an accidental release of hazardous substances that could adversely affect human health or the environment.

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Mitigation Measure 3.15-2b would establish a hazardous materials contingency plan to address potential soil and groundwater contamination, if discovered during construction activities. This impact would be reduced to a **less-than-significant** level.

Impact 3.15-3: Create a significant hazard to the public or environment due to upset and accident conditions.

Future development of the SOIA area upon annexation 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 through compliance with existing regulations. This impact would be less than significant.

Construction future development could result in impacts related to use of hazardous materials and disturbance of potentially hazardous materials. The most likely incidents involving construction-related hazardous materials are generally associated with minor spills or drips. Small fuel or oil spills are possible, but would have a negligible impact on public health. All hazardous materials would be stored, handled, and disposed of according to the manufacturers' recommendations, and spills would be cleaned up in accordance with applicable regulations. Hazardous materials spills or releases, including petroleum products such as gasoline, diesel, and hydraulic fluid, regardless of quantity spilled, must be immediately reported if the spill has entered or threatens to enter a water of the State, including a stream, lake, wetland, or storm drain, or has caused injury to a person or threatens injury to public health. Immediate notification must be made to the local emergency response agency, or 911, and the Governor's Office of Emergency Services Warning Center. For non-petroleum products, additional reporting may be required if the release exceeds federal reportable quantity thresholds over a release period of 24 hours as detailed in HSC Section 25359.4 and Title 40, Section 302.4 of the CFR.

The disturbance of undocumented hazardous wastes could also result in hazards to the environment and human health. Grading and excavation activities may expose construction workers and the public to hazardous substances present in the soil or groundwater, but which may not have been anticipated based on information about existing conditions. Potential hazards to human health include ignition of flammable liquids or vapors, inhalation of toxic vapors in confined spaces such as trenches, and skin contact with contaminated soil or water.

During operation, businesses that store hazardous materials could potentially experience accidents or upset conditions that result from their routine use. These businesses are required to prepare spill prevention, containment, and countermeasures plans (pursuant to 40 CFR 112) or, for smaller quantities, a spill prevention and response plan, that identify best management practices for spill and release prevention and provide procedures and responsibilities for rapidly, effectively, and safely cleaning up and disposing of any spills or releases. Oversight is provided by the CUPA. As discussed above, the severity of potential effects varies with the activity conducted and the concentration and type of hazardous materials involved; however, most minor spills associated with vehicle maintenance would be remediated immediately pursuant to the requirements and liabilities of applicable regulations and would not pose a substantial hazard to the public or the environment. The possible adverse effects on the public or environment from these and other activities would more likely be acute (immediate, or of short-term severity) as a result of short-term exposure.

Future development projects could increase the potential for unintentional upset and accident conditions. Existing regulations effectively reduce the potential for individual projects to create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

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Impact 3.15-4: Emit hazardous emissions or handle hazardous materials within 0.25 mile of a school.

Future development of the SOIA area upon annexation could include the construction of new on-site schools. However, compliance with CDE school siting criteria ensures schools would not be located near hazardous material handlers and emitters. This impact would be **less than significant**.

The SOIA area is approximately 0.14-mile south of Carrol Elementary. However, land uses identified in the SOIA conceptual land use plan (see Exhibit 2-4) would not place any land uses that could handle hazardous materials within 0.25 miles of the school. Any new commercial or industrial operations in proximity to existing schools would be required to comply with regulations related to the routine use, storage, and transport of hazardous materials. As discussed in detail above, compliance with existing regulations would reduce the exposure to potential hazards associated with these land uses.

For new schools that may be developed within the SOIA area, the California Education Code, including *Education Code* Section 17213(b), establishes requirements for assessments and approvals that address the potential for existing contamination on the site, and whether nearby land uses might reasonably be anticipated to emit hazardous air emissions or handle hazardous materials. Assessment of existing contamination is conducted in coordination with DTSC's School Property Evaluation and Cleanup Division, which is responsible for assessing, investigating, and cleaning up proposed school sites. This Division ensures that selected properties are free of contamination or, if the properties were previously contaminated, that they have been cleaned up to a level that protects the students and staff who will occupy a new school. All proposed school sites that would receive State funding for acquisition or construction are required to go through a rigorous environmental review and cleanup process under DTSC's oversight.

During construction, demolition, and excavation activities, projects could potentially produce hazardous air emissions or involve the handling of extremely hazardous wastes. During operation, projects could use and produce hazardous materials that may be transported on roadways included in the SOIA area. As discussed above, all projects would comply with federal and state regulations that are designed to reduce the potential for the release of large quantities of hazardous materials and wastes into the environment to an acceptable level, and in particular to protect schools. This impact would be **less than significant.**

Mitigation Measure

No mitigation is required.

Impact 3.15-5: Impair emergency response or evacuation plans.

Future development in the SOIA area upon annexation would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. This impact would be less than significant.

In the event of an emergency that would require citizens to evacuate, including those citizens who live in the City of Elk Grove, Sacramento County would implement its emergency operations plan, evacuation plan, and mass care and shelter plan. The emergency evacuation plan identifies Interstate 5 as a key evacuation route, but is adapted to specific situations and updated in response to changes in growth patterns and development.

Construction activities could result in temporary lane closures, increased truck traffic, and other roadway effects that could slow or stop emergency vehicles, temporarily increasing response times and impeding existing services. Construction activities in the SOIA area do not, however, have the potential to substantially hinder emergency response activities or physically interfere with established evacuation routes. Projects requiring encroachment permits for temporary construction activities in public roadways that could be used for emergency response or evacuation are required to prepare traffic mitigation plans that address traffic control during the period the project is occurring within public right of way. To address any temporary road

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closures that would be required during construction, standard construction mitigation includes notification of emergency responders.

The closest fire stations to the SOIA area are Station 72 or Station 74, at 10035 Atkins Drive and 6501 Laguna Park Drive, respectively. Station 72 is located approximately 1.3 miles north and Station 74 is located approximately 4.4 miles north of the project site near the SOIA area. Future streets included within SOIA area will comply with the City's and CCSD Fire Department's design standards pertaining to emergency access. Any future changes in land use would be reflected in updated emergency evacuation plans.

The potential for construction activities or development to impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan would be **less than significant**.

Mitigation Measure

No mitigation is required.

Impact 3.15-6: Create a significant risk from wildfires.

Future development of the SOIA area upon annexation would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. This impact would be **less than significant**.

The SOIA area is within a Local Response Area where fire protection is provided by the nearby CCSD. In the event of a nearby grass fire or a fire within pastureland that adjacent to the SOIA Area, CCSD would respond (see Section 3.12, "Public Services and Recreation," for further discussion of the CCSD Fire Department facilities and response times). CAL FIRE has designated the areas as a non-very high fire hazard severity zone (CAL FIRE 2017), which is defined as an area not prone to intense, damaging wildfires.

The SOIA area is actively farmed and vegetation would generally be cleared before earthwork on the site. Adjacent properties are developed or farmed and actively irrigated. New construction is subject to the CFC, which includes safety measures to minimize the threat of fire. Title 14 of the CCR sets forth the minimum development standards for emergency access, fuel modification, setback, signage, and water supply, which help prevent damage to structures or people by reducing wildfire hazards. Therefore, future development within the SOIA area would not be exposed to significant risks of wildfire. This impact would be less than significant.

Mitigation Measure

No mitigation is required.

4 CUMULATIVE IMPACTS

4.1 CEQA REQUIREMENTS

CEQA requires that an EIR include an assessment of the cumulative impacts that could be associated with project implementation. This assessment involves examining project-related effects on the environment in the context of similar effects that have been caused by past or existing projects, and the anticipated effects of future projects. An EIR must discuss the cumulative impacts of a project when its incremental effect will be cumulatively considerable. Although project-related impacts may be individually minor, the cumulative effects of these impacts, in combination with the impacts of other projects, could be significant under CEQA and must be addressed (CEQA Guidelines, Section 15130(a)). Section 15130(a)(3) states that an EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable, and thus not significant, if a project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. Section 15130(b) indicates that the level of detail of the cumulative analysis need not be as great as for the project impact analyses, that it should reflect the severity of the impacts and their likelihood of occurrence, and that it should be focused, practical, and reasonable.

4.2 CUMULATIVE IMPACT ANALYSIS

4.2.1 Cumulative Impact Analysis Methodology

Cumulatively considerable, as defined in State CEQA Guidelines Section 15065(a)(3), means that the "incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." State CEQA Guidelines Section 15355 defines a cumulative impact as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time. Section 15130(a)(3) of the State CEQA Guidelines states that an EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable, and thus not significant, if a project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact.

The State CEQA Guidelines (Section 15130) identify two basic methods for establishing the cumulative environment in which the project is to be considered: the use of a list of past, present, and probable future projects, or the use of adopted projections from a general plan, other regional planning document, or a certified EIR for such a planning document. This analysis uses a combination of the list and planning document approach, as described further below.

PAST, PRESENT, AND PROBABLY FUTURE PROJECTS

The effects of past and present projects on the environment are reflected by the existing conditions in the project area that includes the development of the East Franklin Specific Plan area and the partial development of the Laguna Ridge Specific Plan area. A list of probable future projects is provided below. Probable future projects are those in the project vicinity that have the possibility of interacting with the project to generate a cumulative impact (based on proximity and construction schedule) and either:

are partially occupied or under construction,

- have received final discretionary approvals,
- have applications accepted as complete by local agencies and are currently undergoing environmental review, or

■ are proposed projects that have been discussed publicly by an applicant or that otherwise become
 known to a local agency and have provided sufficient information about the project to allow at least a
 general analysis of environmental impacts.

The cumulative list considers related projects likely to be partially or fully constructed by the year 2036. This time period was selected because it coincides with the timing of the introduction of project impacts (i.e., project impacts would be introduced by construction and operational activities) and it is consistent with the timing requirements for water supply assessments.

4.2.2 Cumulative Setting

GEOGRAPHIC SCOPE

The geographic area that could be affected by the project varies depending on the environmental resource topic. When the effects of the project are considered in combination with those other past, present, and probable future projects to identify cumulative impacts, the specific projects considered may also vary depending on the type of environmental effects being assessed. Table 4-1 presents the general geographic areas associated with the different resource topics addressed in this analysis.

Table 4-1 Geographic Scope of Cumulative Impacts

| Resource Topic | Geographic Area |
|---|--|
| Agricultural Resources | State/Sacramento County |
| Air Quality | Sacramento Valley Air Basin |
| Biological Resources | Sacramento Valley/South Sacramento County |
| Archaeological, Historic, and Tribal Cultural Resources | Sacramento County/City of Elk Grove |
| Geology and Soils | Sacramento Valley |
| Greenhouse Gases and Climate Change | Global/state-wide |
| Hazards and Hazardous Materials | Sacramento County/City of Elk Grove |
| Hydrology and Water Quality | Sacramento County/City of Elk Grove Drainage Shed C |
| Land Use | Sacramento County/City of Elk Grove |
| Noise | Immediate project vicinity where project-generated noise could be heard concurrently with noise from other sources |
| Population and Housing | Sacramento County/City of Elk Grove |
| Public Services | City of Elk Grove/ Cosumnes Community Services District |
| Transportation and Circulation | Regional and local roadways and freeways where the Bilby Ridge SOIA could contribute traffic that could alter traffic conditions |
| Visual Resources | Sacramento County/City of Elk Grove |
| Utilities | Sacramento County/City of Elk Grove |
| Energy | Sacramento Municipal Utility District and Pacific Gas and Electric Company service areas |

PROJECT LIST

Probable future projects considered in the cumulative analysis meet the criteria described above: they are in the project vicinity and have the possibility of interacting with the project to generate a cumulative impact (Table 4-2). This list of projects was considered in the development and analysis of the cumulative settings and impacts for most resource topics within the geographic scope of each resource topic (as listed in Table 4-1). Past and present projects in the vicinity were also considered as part of the cumulative setting, as they contribute to the existing conditions upon which the SOIA and probable future projects' environmental effects are compared.

Table 4-2 Cumulative Project List

| | Project Name | Location | Description | Status |
|----|---|---|---|--|
| 1 | Bruceville Meadows | Northeast corner of Kammerer Road and Bruceville Road, Elk Grove | Special Planning Area Amendment to reconfigure land uses within 114-acre project site. Proposes 324 single family residential lots total on 77 acres, 10 acres of multi-family, and 20 acres of public facilities. | Planning Review |
| 2 | Vineyard at Madeira Phase III | | | Construction Plan Review |
| 3 | Souza Diary | Whitelock Parkway and Promenade Parkway, Elk Grove | Tentative Subdivision Map to create more than 500 small residential lots | Planning Approved |
| 4 | Outlet Collection at Elk Grove | 10465 Promenade Parkway, Elk Grove | 775,000 square feet of commercial uses. | Construction Plan Review |
| 5 | Feletto Property Southwest and southeast corners of Kammerer Road and South Promenade Park Way, Elk Grove A District Development Plan for a 13-acre visitor commercial district within the Lent Ranch Special Planning Area. | | Planning Approved | |
| 6 | SMUD Franklin Electric Transmission Project | | | Approved |
| 7 | | | Amendment to the City of Elk Grove's Sphere of Influence to include approximately 1,156 acres adjacent to the City's southern boundary. | Final EIR in process |
| 8 | Capital Southeast Connector | Extends from the Interstate 5/Hood Franklin Road interchange in southwest Sacramento County to U.S. Highway 50 in the community of El Dorado Hills | 35-mile-long multi-modal transportation facility that would link communities in Sacramento and El Dorado Counties, including Elk Grove, Rancho Cordova, Folsom, and El Dorado Hills. | Construction scheduled between 2019 and 2022 |
| 9 | Kammerer Road Extension Project | Kammerer Road, near the City of Elk Grove's southern boundary | Widen and extend Kammerer Road from State Route 99 to Interstate 5 | Draft EIR/EA in preparation |
| 10 | Elk Grove Multi-Modal Facility | Multiple sites in the City under consideration. | The City of Elk Grove is studying the potential for a multi- modal facility to provide access to e-Tran express bus, Regional Transit Light Rail, future bus rapid transit, and commuter rail. The City has identified four potential sites for a multi-modal facility: southwest corner of Elk Grove Boulevard | Feasibility study in process |

Table 4-2 Cumulative Project List

| Project Name | | Location | Description | Status | |
|--------------|--|--|--|--|--|
| | | | and Franklin Boulevard intersection, west of the Willard Parkway and Matina Drive intersection, southeast corner of Elk Grove Boulevard and Big Horn Boulevard intersection, and the southeast corner of the Grant Line Road and Disposal Lane intersection. | | |
| 11 | Treasure Homes Amendment | Bilby Road near Bruceville Road, Elk Grove | Proposal includes a General Plan Amendment to reconfigure the boundaries and redistribute the acreages of the existing land use designations, a Laguna Ridge Specific Plan Amendment and Rezone to create a new land use/zoning designation and reconfigure the boundaries and redistribute the acreages for the new and existing land use/zoning designations, and a Tentative Subdivisions Map to subdivide the 57.1-acre project site into 204 single-family residential lots, two park lots, two open space lots, and two landscape corridor lots. | Planning Review | |
| 12 | Mesa at Laguna Ridge | 10371 Bruceville Road, Elk Grove | A Specific Plan Amendment to change the land use designation from Medium Density Residential to Multi-Family Residential, a rezone to change the zone district, and a Design Review to construct a 180-unit multi-family unit apartment complex with associated parking, lighting, and landscaping. | Construction Plan Review – Concurrent | |
| 13 | Tuscan Ridge South II | 7911 Elefa Avenue, Elk Grove | General Plan Amendment, Laguna Ridge Specific Plan Amendment, revised Tentative Subdivision Map for Village 1 of the Tuscan Ridge East Tentative Subdivision Map | Planning Review | |
| 14 | Wilton Rancheria | West of State Route 99 and north of Kammerer Road in Elk Grove | Proposed 609,000 square foot casino and hotel, including restaurants, retail, fitness center, spa, and convention center on a 35-acre site. The proposed hotel would be 12 stories with a total of 302 guest rooms. | The Record of Decision signed January 2017 | |
| 15 | Southeast Specific Plan (Southeast Area Plan) | South of the Laguna Ridge Specific Plan area and west of Lent Ranch/Elk Grove Promenade and the approved Sterling Meadows development in Elk Grove | A strategic plan for 1,200 acres that includes high-level supportive infrastructure analysis, community design guidelines and standards, and programmatic environmental review. The land use plan consists of mixed-use, commercial, office, and industrial/flex space that would generate approximately 23,410 new jobs, approximately 4,790 residential units of varying types and densities, three elementary schools, and parks. | Adopted July 2014 | |
| 16 | Laguna Ridge Specific Plan | West of State Route 99, south of Elk Grove Boulevard, east of Bruceville Road and the East Franklin Specific Plan area, and north of Bilby Road and the Southeast Policy Area in Elk Grove | The Land Use Plan consists of approximately 5,887 single family homes and 1,800 multi-family or medium density units for a total of 7,767 dwelling units, and approximately 265 acres of commercial, office and civic uses (which will allow for approximately 330 thousand square feet of space at typical densities) on approximately 1,900 acres. | Adopted in June 2004 | |
| 17 | Multi-Sport Complex Annexation and Sphere of Influence Amendment | South of Grant Line Road near Waterman Road | A proposed new Multi-Sport Park complex to support area long-field sports (e.g., soccer, rugby, lacrosse), including training and tournament play. | Draft EIR preparation in process. | |

Sources:

 $Elk\ Grove\ (http://www.elkgrovecity.org/cms/One.aspx?portalld=109669\&pageld=2275644)\ and\ City\ of\ Elk\ Grove\ 2017a$

Sac County (https://planningdocuments.saccounty.net/)

Sac LAFCo (http://www.saclafco.org/Pages/default.aspx)

PLANNING DOCUMENTS

Sacramento Area Council of Governments 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy

In 2016, the Sacramento Area Council of Government's (SACOG) approved the 2036 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS), which is a regional transportation plan and land use strategy designed to support good growth patterns, including:

- Increased housing and transportation options;
- ▲ Inwardly-focused growth and improved economic viability of rural areas;
- ▲ Minimized direct and indirect transportation impacts on the environment;
- ▲ A transportation system that delivers cost- effective results and is feasible to construct and maintain;
- ▲ Effective connections between people and jobs;
- Improved opportunities for businesses and citizens to easily access goods, jobs, services, and housing; and
- Real, viable choices for methods of travel.

The MTP/SCS built on the foundation provided by the Blueprint project and includes a land use strategy to improve mobility and reduce travel demand from passenger vehicles by prioritizing compact and transit-oriented development, reducing the growth in vehicle miles traveled (VMT) and associated greenhouse gas emissions. The MTP/SCS also includes projections for the location of growth within the region, between jurisdictions and among housing place types (i.e., infill and greenfield development). The 2016 MTP/SCS maps show the SOIA area as "Blueprint Growth Footprint Not Identified for Development in the MTP/SCS Planning Period." The 2016 MTP/SCS includes no growth projections for the SOIA area for 2036.

Sacramento County General Plan

The current County of Sacramento General Plan, titled Sacramento County General Plan of 2005–2030 (2030 General Plan), was adopted on November 9, 2011. The Sacramento County General Plan provides an inventory of land supply within the County, and projects the amount and location of land and density, and intensity of development that will be required to accommodate future populations and economic growth through 2030.

City of Elk Grove General Plan

The 2003 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. Build-out under the 2003 General Plan would result in 77,716 dwelling units, 252,560 residents, and 97,373 jobs.

The City is in the process of updating its General Plan that would increase development potential beyond the current General Plan. The preferred land use map under the General Plan update (if approved) would result in 101,665 dwelling units, 328,378 residents, and 122,802 jobs based on City of Elk Grove General Plan Update Notice of Preparation (City of Elk Grove 2017b). The General Plan Update establishes four Study Areas (West, South, East, and North) that are currently located outside of the City boundaries that may be annexed in the future. The Study Areas consist of 7,797 acres and would provide up to 30,332 dwelling units (97,971 residents) and 40,356 jobs at build out (City of Elk Grove 2017b). The SOIA area is located within the north portion of the West Study Area that consists of 1,982 acres. The City's Draft Annexation Strategy identifies that the planning objective for the West Study Area is to create new diverse residential neighborhoods that include walkable parks, public services, and lower-intensity employment opportunities (City of Elk Grove 2017c).

4.3 ANALYSIS OF CUMULATIVE EFFECTS

The basis of the cumulative analysis varies by technical area. For example, air quality impacts are evaluated against conditions in the air basin. Other cumulative analyses, such as cultural resources, consider the potential loss of resources in a broader, more regional context. Cumulative impacts for each technical area are discussed below.

Significance criteria, unless otherwise specified, are the same for cumulative impacts as project impacts for each environmental topic area. When considered in relation to other probable future projects, cumulative impacts to some resources could be significant and more severe than those caused by the proposed project alone.

4.3.1 Aesthetics

The visual resources cumulative setting consists of the existing suburban visual character of the City of Elk Grove and the agricultural/open space and rural conditions south of the City. The existing and projected future urban development in the cities of Elk Grove, Rancho Cordova, Sacramento, Galt, and Sacramento County is expected to further contribute to the cumulative conversion of open space and agricultural areas to suburban uses and new lighting and glare sources. This cumulative impact would be significant.

Future development of the SOIA area upon annexation to the City would alter the existing visual landscape characteristics of the 480 acres of the project area from open space/grazing and grasslands to suburban uses (buildings, dense development, parks, and new roadway facilities). This would substantially alter public views of the SOIA area from public roadways and would also introduce new sources of lighting and glare. The project would contribute to the regional loss of open space and agricultural lands because of development in the City of Sacramento, City of Sacramento, City of Folsom, and Sacramento County (based on the development projects identified in Table 4-2). Cumulatively, the loss of open space as an aesthetic feature would be a significant impact.

While Mitigation Measure 3.1-1 would address visual character of future development and its consistency with the character of the City, the project would ultimately result in the conversion of open space land and further contribute to regional losses of this visual resource Thus, the project's contribution to this impact would be **cumulatively considerable**. Because of the scale and location of the SOIA area, there is no feasible mitigation available to offset the aesthetic resource impacts associated with the conversion of open space and agricultural lands to suburban development. The project's contribution to cumulative impacts related to the regional loss of the open space and agricultural lands is considered **cumulatively considerable and significant and unavoidable**.

4.3.2 Agricultural Resources

Development in the Sacramento region along with implementation of the City of Elk Grove General Plan and the Sacramento County General Plan would result in the continued loss of important farmland in the region. The Sacramento County General Plan EIR identified that implementation of General Plan planned land uses would result in the loss of up to 8,867 acres of designated farmland (Sacramento County 2010:1-7). This cumulative impact would be significant.

As discussed in Section 3.2. "Agricultural Resources," approximately 475 acres of Farmland of Statewide Importance and Farmland of Local Importance would be converted from future development of the SOIA area (this would also include "prime agricultural land" as defined under Section 56064 of the Cortese-Knox-Hertzberg Local Government Reorganization Act). In 2016, an estimated 101,252 acres of Farmland of Statewide Importance existed in Sacramento County. A conversion of an estimated 475 acres of Farmland of Statewide Importance and Farmland of Local Importance would account

for approximately 0.5 percent of this total. The total conversion of Important Farmland would be relatively small in the context of the county's entire agricultural land base and would not likely cause a substantial reduction in the county's total agricultural production. However, the conversion of agricultural land would contribute to the incremental decline of Important Farmland in the county and would result in the irreversible conversion of this agricultural land. In addition, future development of the Bilby Ridge SOIA area could adversely affect nearby agricultural uses and result in the conversion of adjacent agricultural lands. The project's contribution would be **cumulatively considerable**.

Implementation of Mitigation Measure 3.2-1 and 3.2-3 would assist in reducing the project's contribution to this cumulative impact. However, these mitigation measures would not create new farmland to replace farmland that could be lost. There is no additional feasible mitigation available. Thus, the project's contribution would remain **cumulatively considerable** and **significant and unavoidable**.

4.3.3 Air Quality

AIR POLLUTANTS

Construction and operation of future development of the SOIA area could result in emissions of criteria air pollutants in Sacramento County within the jurisdiction of the Sacramento Metropolitan Air Quality Control District (SMAQMD). Sacramento County is currently in nonattainment for Ozone, PM_{10} , and $PM_{2.5}$ with respect to the California Ambient Air Quality Standards (CAAQS), and with respect to the National Ambient Air Quality Standards high traffic volumes may result in considerable contributions to nearby existing land uses. This cumulative impact would be significant.

As shown in Table 3.3-4, maximum daily construction emissions of NO_X and PM₁₀ could potentially exceed applicable mass emission thresholds. Daily emissions of ROG and PM_{2.5}, and annual emissions of PM₁₀ and PM_{2.5} would not exceed the respective thresholds. However, it is likely that emissions of NO_X and PM₁₀ would exceed applicable thresholds. Additionally, due to the nonattainment status of Sacramento County and the Sacramento Valley Air Basin (SVAB) with respect to the CAAQS for PM₁₀ and the NAAQS for PM_{2.5}, construction-generated fugitive dust emissions may result in adverse air quality impacts to existing surrounding land uses and may contribute to the existing adverse air quality condition in the SVAB. Ozone impacts are the result of the cumulative emissions from numerous sources in the region and transport from outside the region. Ozone is formed in chemical reactions involving NO_X, ROG, and sunlight. All but the largest individual sources emit NO_X and ROG in amounts too small to have a measurable effect on ambient ozone concentrations by themselves. However, when all sources throughout the region are combined, they can result in severe ozone problems.

As shown in Table 3.3-5, operation-related activities of future development of the SOIA area could result in mass emissions of ROG, NO_x , PM_{10} , and $PM_{2.5}$ that exceed the SMAQMD-recommended thresholds of significance. Thus, ROG, NO_x , PM_{10} , and $PM_{2.5}$ emissions generated under full build out of the SOIA could result in adverse air quality impacts to existing surrounding land uses and may contribute to the adverse air quality conditions in the SVAB.

Implementation of Mitigation Measures 3.3-1 and 3.3-2 would assist in reducing construction and operational air quality emissions from future development of the SOIA area. Although the project would reduce construction and operational emissions to the extent feasible, long-term emission reductions cannot be quantified or verified, and the possibility remains that emissions may not be reduced to a less than significant level into perpetuity. Project operations may contribute to the nonattainment status of the region and may conflict with CAAQS and NAAQS. Thus, the project's contribution to cumulative operational air quality impacts is considered **cumulatively considerable** and **significant and unavoidable**.

CARBON MONOXIDE CONCENTRATIONS

As identified in Section 3.13, "Traffic, Transportation, and Circulation," the highest daily volume for the cumulative-plus-project condition along the roadway segments analyzed is estimated to be 158,000 for SR 99 from the Bond Road on/off ramps to the Elk Grove Boulevard on/off. The percentage of daily traffic that occurs in the peak period (a.k.a., the K factor) for SR 99 in Sacramento County ranges from 6.35 percent to 10.31 percent. Conservatively assuming the highest end of this range and applying it to the highest-volume roadway segment in the study area of 158,000 vehicles per day, the segment of SR 99 from the Bond Road on/off ramps to the Elk Grove Boulevard on/off ramps would experience a peak-hour volume of approximately 16,290 vehicles per hour. This peak-hour volume does not approach the SMAQMD screening level of 31,600 vehicles per hour. Additionally, due to stricter vehicle emissions standards in newer cars, new technology, and increased fuel economy. CO emissions are expected to be substantially lower in future years compared to the vehicle fleet operating in the region under existing conditions. The mix of vehicle types generated by the conceptual land use scenario within the SOIA area is not anticipated to have a greater percentage of heavy-duty vehicles and would not be substantially different from the County average. Furthermore, the project would not contribute traffic to a tunnel, parking garage, bridge underpass, urban street canyon, below-grade roadway, or other location in which horizontal or vertical mixing of mobile-source CO emissions would be substantially limited. Thus, project-generated local mobile-source CO emissions would not result in or substantially contribute to concentrations of CO that exceed the 1-hour or 8-hour CAAQS and NAAQS. As a result, the project's contribution to cumulative CO concentrations would not be cumulatively considerable.

TOXIC AIR CONTAMINANTS

As identified in Section 3.3, "Air Quality" operation of the conceptual land use plan for the SOIA area could result in new sources of toxic air contaminants (TACs) associated with new vehicular trips on existing and new roadways as well as new sources of diesel PM associated with commercial delivery trucks occurring within the commercial and office land uses. Guidance from SMAQMD's Recommended Protocol for Evaluating the Location of Sensitive Land Uses Adjacent to Major Roadways and CARB's Air Quality and Land Use Handbook recommends that new sensitive receptors should not be placed within 500 feet of freeways or urban streets with traffic volumes that exceed 100,000 vehicles per day or rural roads with 50,000 vehicles per day. As described in Section 3.13, "Traffic, Transportation, and Circulation," the project would generate approximately 34,529 daily trips (i.e., new TAC sources) that travel on the surrounding roadway network. Further, under cumulative –plus-project conditions, traffic volumes along roadways adjacent to the SOIA area would range from 4,800 to 35,800 vehicles per day. These traffic volumes would not exceed the 100,000-vehicles-per-day criterion identified by SMQMD and CARB and would be spread through the City's roadway network, thus new and existing sensitive receptors would not be exposed to increased health risk. As a result, the project's contribution to cumulative TAC concentrations would not be cumulatively considerable.

The nearest roadways which would experience traffic volumes that exceed 100,000 vehicles per day in the cumulative plus project scenario are I-5 and SR-99 which would daily traffic volumes of 102,400 and 158,000 vehicles per day along their most heavily traveled segments within the study area. The SOIA area is approximately 1.75 miles east of I-5, and 2.5 miles west of SR-99. Thus, new sensitive receptors as a result of the project would not located within 500 feet of either freeway, and thus, would not be exposed to excessive health risk. No other urban roadways or freeways near the SOIA area would experience volumes that exceed the applicable thresholds in the cumulative-plus-project scenario. As a result, the project's contribution to new TAC exposure under cumulative conditions would not be cumulatively considerable.

4.3.4 Biological Resources

The SOIA area is bounded to the south by agricultural land; however, over the past 10 to 15 years, significant urban and suburban development have taken place north of the SOIA area. The overall trend of urban and suburban development, and conversion of existing agricultural land, will continue throughout the region

within the vicinity of the project. Development within the vicinity of the project can be placed into two categories, including commercial and residential development, and roadway construction and widening. Several projects will include conversion of agricultural land, while others involve development on land that has been previously developed (see Table 4-2). Impacts to special-status plant and wildlife species, and sensitive natural communities, from these projects in the region would be the same as those described in Section 3.4, "Biological Resources," of this EIR. This cumulative impact would be significant.

All potential cumulative projects within must comply with federal, state, and local regulations, including ESA, CESA, CWA, and CEQA regarding listed or other protected species and habitats. Potential impacts to special-status plants, special-status wildlife, and sensitive natural communities will require mitigation to reduce project impacts to a less-than-significant level. Implementation of the SSHCP, if adopted, would provide habitat conservation and avoidance and minimization measures to preserve biological diversity and provide a framework for development that would not likely jeopardize the continued existence of covered species. The SSHCP would reduce site-specific and cumulative impacts of development by replacing project-by-project mitigation with comprehensive, long-term strategies for conserving, protecting, and maintaining viable populations of covered species and natural habitats.

As described in Section 3.4, "Biological Resources," future development in the SOIA area upon annexation would contribute to cumulative impacts to special-status plants, giant gartersnake, western pond turtle, burrowing owl, Swainson's hawk, northern harrier, white-tailed kite, song sparrow ("Modesto" population), tricolored blackbird, vernal pool fairy shrimp, vernal pool tadpole shrimp, American badger, and jurisdictional wetlands. The mitigation measures for these resources (Mitigation Measures 3.4-1, 3.4-2a, 3.4-2b, 3.4-2c, 3.4-2d, 3.4-2e, 3.4-2f, 3.4-2g, 3.4-3, and 3.4-4) would reduce impacts to less-than-significant levels with the exception of the loss of Swainson's hawk habitat and the regional loss of habitat for special-status species. Therefore, the project's contribution would be **cumulative considerable** and **significant and unavoidable**.

4.3.5 Cultural and Paleontological Resources

The cumulative context for cultural and paleontological resources is the Sacramento County, including the City of Elk Grove. Continued urbanization of the region in accordance with applicable land use plans as well as those approved and proposed development projects described above, could result in the damage to or destruction of cultural and paleontological resources in the region. This cumulative impact would be significant.

HISTORIC RESOURCES

No known historic resources are located within the boundaries of the project site, however access to the site was not allowed at the time of the preparation of this EIR to evaluate whether the on-site buildings would be eligible as historic resources for inclusion in the NRHP or CRHR. Future development of the site could result in the loss of buildings or structures that have not yet been evaluated for historical significance. Implementation of Mitigation Measures 3.5-1 would ensure that the project's contribution would not be cumulatively considerable by requiring a historic structure report and evaluation of resources prior to ground-disturbing activities and would require all report recommendations be implemented to offset the project's contribution. Therefore, the project's contribution to cumulative historic resource impacts **would not be cumulatively considerable**.

ARCHAEOLOGICAL RESOURCES

No known archaeological resources are located within the boundaries of the project site; nonetheless, project-related earth-disturbing activities could potentially damage undiscovered archaeological resources. Implementation of Mitigation Measures 3.5-2 would ensure that the project's contribution would not be cumulatively considerable by requiring an archaeological survey prior to ground-disturbing activities and requiring construction work to cease in the event of an accidental find and requiring evaluation/treatment of

the potential resource. This mitigation measure would offset the project's contribution. Therefore, the project's contribution to cumulative archaeological resource impacts **would not be cumulatively considerable**.

TRIBAL CULTURAL RESOURCES

As discussed under Impact 3.5-5, no tribal cultural resources (TCRs) have been identified in the SOIA area and would not contribute to the regional loss of TCRs. Thus, the project **would not have a cumulative impact** to TCR resources.

PALEONTOLOGICAL RESOURCES

The project, in combination with other development in the region, could cause a substantial adverse change in the significance of a paleontological resource. Because all significant cultural resources are unique and nonrenewable members of finite classes, meaning there are a limited number of significant cultural resources, all adverse effects erode a dwindling resource base. The loss of any one paleontological resource could affect the scientific value of others in a region because these resources are best understood in the context of the entirety of the system of which they are a part. No known paleontological resources are located within the boundaries of the project site; nonetheless, project-related earth-disturbing activities could potentially damage undiscovered paleontological resources. Implementation of Mitigation Measures 3.5-4 would ensure that the project's contribution would not be cumulatively considerable by requiring project applicants to inform all construction personnel involved with earthmoving activities regarding the possibility of encountering fossils; requiring construction work to cease in the event of an accidental find; and requiring evaluation/treatment of the specimen. This mitigation measure would offset the project's contribution. Therefore, the project's contribution to cumulative paleontological resource impacts would not be cumulatively considerable.

4.3.6 Energy

The geographic area considered for cumulative impacts related to energy use includes the service areas for SMUD and PG&E. These providers employ various programs and mechanisms to support provision of these services to new development; various utilities charge connection fees and re-coup costs of new infrastructure through standard billings for services. There is currently sufficient infrastructure and energy supply to support existing demand. SMUD is planning to offset growth in peak demands through implementation of energy efficiency and conservation measures. Through a combination of increases in energy efficiency and power management strategies (e.g., importation of power from the grid during peak usage periods), SMUD is anticipated to maintain sufficient capacity to provide power through 2050. (City of Sacramento 2016:4.5-24). No significant cumulative impact would occur.

WASTEFUL, INEFFICIENT, OR UNNECESSARY CONSUMPTION OF ENERGY

Implementation of Mitigation Measure 3.7-1a provided in Section 3.7, "Greenhouse Gas Emissions," would further improve the energy efficiency of the project through increase use of on-site renewable energy, efficient lighting, energy efficient plumbing fixtures, and/or consideration of zero net energy development (if feasible), among other measures. Implementation of Mitigation Measure 3.7-1a would also further reduce project VMT through measures such as on- and off-site safety improvements for bike, pedestrian, and transit connections, and/or implement relevant improvements identified in the City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan (see also Mitigation Measure 3.13-1). Through incorporation of bicycle, pedestrian, and transit facilities and amenities, and reduction of fuel usage by providing for infrastructure for electric vehicle charging at residences and the commercial land uses, future projects within the SOIA area would not result in a wasteful or inefficient use of transportation-related energy. Thus, the project's contribution to cumulative energy use would not be cumulatively considerable.

ENERGY INFRASTRUCTURE

Cumulative development in the region would increase electricity and natural gas consumption and may require new utility connections and infrastructure improvements that could result in significant cumulative environmental impacts. While the conceptual land use plan provides no details on the extension of electrical and natural gas infrastructure into the SOIA area, there are existing electrical and natural gas infrastructure facilities along the roadway network surrounding the SOIA area that are available for connection. Electrical infrastructure around the SOIA area includes a 69 kilovolt (kV) overhead line and a 12kV underground line north of Bilby Road, as well as 12kV and 69kV overhead lines along Bruceville Road. PG&E has stated that natural gas service could be provided to the SOIA area in the event of development. Natural gas facilities could be extended from nearby facilities to serve the proposed SOIA Area (LAFCo 2016: 4.0-41).

SMUD and PG&E would review development plans once the applicant submits them to the appropriate design and construction services departments, and determine infrastructure connection specifics at that time. The potential environmental effects of any new or expanded off-site utilities to accommodate cumulative growth would be considered by the utility provider through separate CEQA review. The physical environmental impacts from construction or operation of off-site improvements could remain significant after implementation of Mitigation Measure 3.6-2 (i.e., significant and unavoidable), or no feasible mitigation may be available to fully reduce impacts to a less-than-significant level. Neither LAFCo nor the local land use agencies would have control over the approval, timing, or implementation any facility improvements. The project would contribute to the need for new/expanded energy infrastructure that could result in significant environmental impacts. Therefore, the project's contribution would be **cumulatively considerable** and **significant and unavoidable**.

4.3.7 Greenhouse Gas Emissions

As discussed in Section 3.7, "Greenhouse Gas Emissions," impacts of greenhouse gas emissions and climate change are inherently cumulative because project emissions of GHGs by themselves would not be so substantial as to alter the global climate. As identified in this section, implementation of Mitigation Measures 3.3-2, 3.7-1a, and 3.7-1b could offset future development greenhouse gas emissions such that the project's GHG impacts. However, Sacramento LAFCo cannot guarantee the success of these mitigation measures for offsetting project emissions. Confirmation of compliance with the mitigation measures would require monitoring of the GHG reduction actions as development occurs. LAFCo would not be able to verify or enforce these measures after annexation. The City of Elk Grove is also in the process of updating its Climate Action Plan (CAP) and may alter the mitigation approach for the development of this project (after annexation) to match the updated CAP GHG reduction measures. Because of this uncertainty in achieving no net increase in GHG emission, the project's contribution to this significant cumulative impact would be cumulatively considerable and significant and unavoidable.

4.3.8 Hydrology, Drainage, and Water Quality

Previous, on-going, and future development in the southern portion of Sacramento County and the City of Elk Grove have contributed to additional demands on groundwater resources that may further drawdown groundwater elevations and available water supply, surface and groundwater water quality impacts, and regional increases in peak drainage flows from increased impervious surfaces. This cumulative impact would be significant.

WATER QUALITY

As identified in Impact 3.8-1, future development of the SOIA area upon annexation could introduce construction and operational water pollutants into stormwater discharges Implementation of Mitigation Measure 3.8-1 would require that stormwater drainage master planning be prepared for the entire SOIA area

as part of future site development that would require compliance with City stormwater quality requirements that are tied to its NDPES permit requirements to protect surface water quality. This mitigation measure would offset project's contribution to cumulative water quality impacts. Therefore, the project's contribution to cumulative water quality impacts would not be cumulatively considerable.

GROUNDWATER RESOURCES

The project site was included in the SCWA Zone 40 Water Supply Master Plan's 2030 Study Area. As evaluated further in Section 3.14, "Utilities," the SCWA manages water conjunctively; adjusting the mix of surface and groundwater supplied based on rainfall and availability of surface water. The WSIP (SCWA 2016) projects that total water demand in the service area, including water system losses will be 102,400 acre-feet per year (afy) in the year 2052. The service area has adequately planned supply facilities to be able to address both the wet/average years and dry years. The excess supply during normal years is projected to range from 140,000 afy in 2020 to 84,600 afy in 2052, and in dry years the excess supply is projected to range between 60,700 afy in 2020 and 11,800 acre-feet per year in 2052 (SCWA 2016). The addition of 1,009.5 afy of potential project water demand based on the conceptual land use plan (see Exhibit 2-4) (a 1 percent increase) would not drastically change the assumptions used by SCWA, which have a margin of error and are updated on a regular basis to reflect changes in land use and consumption rates.

The Water Forum estimated that the long-term average annual sustainable yield of the Central Basin was 273,000 afy, while extractions were estimated at 217,111 afy in 2015. The CSCGMP identifies provisions to maintain groundwater pumping levels within the sustainable yield, including reducing demand, conjunctive use, and aquifer storage and recovery projects that apply to SCWA's water supply provision of the project. The Sacramento Central Groundwater Authority Alternative Submittal demonstrates subbasin operations from 2005 to 2015 did not exceed the sustainable yield conditions set forth by the Water Forum Agreement of 273,000 afy. If approved, the 273,000 afy sustainable yield set forth by the Water Forum Agreement will be incorporated into the Alternative Submittal, and will be the base year for measuring the long-term sustainability of groundwater in the subbasin. The project's increased water demands would not cause groundwater pumping within the Central Basin to exceed its sustainable yield. Thus, the future development of the SOIA area is not expected to substantially deplete groundwater supplies or lower groundwater levels beyond projected levels. As a result, the project's contribution to potential groundwater use under cumulative conditions would not be cumulatively considerable.

DRAINAGE

As identified in Impact 3.8-3, future development of the SOI area would increase the quantity of impervious surfaces, which could alter the drainage pattern, or increase the rate or amount of surface runoff. The increased runoff could also discharge at a greater rate, leading to higher peak flows during storm events that could increase the potential for stormwater to cause flood conditions and to transport urban pollutants. This would contribute to cumulative flow conditions associated with City's Drainage Shed C, which covers nearly 7,900 acres, that drains eventually into the Sacramento River. Implementation of Mitigation Measure 3.8-1 would require that stormwater drainage master planning be prepared for the entire SOIA area as part of future site development that would require compliance with City drainage and stormwater quality requirements, require no increase in existing no drainage flows off-site, and require coordination with planned drainage improvements associated with the Southeast Area Plan that is located east of the SOIA area. Therefore, the project's contribution to cumulative drainage impacts would not be cumulatively considerable.

4.3.9 Land Use

As identified in Impacts 3.9-1, 3.9-2, and 3.9-3, the SOIA would not result in any land use policy or LAFCo provision inconsistencies. There would be **no cumulative impact** related to land use plan consistency.

As identified in Table 3.2-1, Sacramento County has lost 23,996 acres of agricultural land since 2004. This county-wide loss of agricultural lands is considered a significant cumulative impact for agricultural resources and open space lands. Section 56059 of the Cortese-Knox-Hertzberg Local Government Reorganization Act utilizes the open space definition under Government Code Section 65560 that includes agricultural lands. The future development of the SOIA area would further contribute to this on-going loss of agricultural lands. Implementation of Mitigation Measure 3.2-1 would partially offset the direct conversion of agricultural lands that could occur within the SOIA area, but this approach would not create new agricultural lands to replace lands that could be lost. Therefore, the project's contribution to cumulative open space loss would be cumulatively considerable and significant and unavoidable.

Cumulative effects of the physical changes related to the project are discussed in the other topics in this section.

4.3.10 Noise and Vibration

CONSTRUCTION NOISE

The nature of construction noise effects are such that project-related construction activities would have to occur simultaneously and near those of other projects for a cumulative effect to occur. The land directly surrounding the project area on the north and west is already developed and, therefore, it is not anticipated that construction activities would occur in these areas. However, development is planned directly east of the project site (Bruceville Meadows) and could potentially occur concurrently with construction at the SOIA area. Existing and new sensitive receptors along Bruceville Road could potentially be exposed to construction noise from both site. Thus, a potentially significant cumulative construction noise impact could occur.

Construction of the project would generate noise localized to the project area, and when combined with other nearby future construction activities could result in sensitive receptors located in the City of Elk Grove experiencing construction-generated noise levels that exceed the City of Elk Grove daytime and nighttime exterior noise standards of 55 Leq and 45 Leq, respectively (see Table 3.10-10), and sensitive receptors located in the County of Sacramento experiencing construction-generated noise levels that exceed the County of Sacramento daytime and nighttime exterior noise standards of 55 Leq and 50 Leq, respectively (see Table 3.10-12). The City of Elk Grove Code, Section 6.32.100 Exemptions, exempts project construction associated noise adjacent to residential land uses during the timeframe of 7:00 a.m. and 7:00 p.m., Monday through Sunday. However, it is possible that certain construction activities on the sites would need to occur during the non-exempt and more noise-sensitive nighttime hours at both sites. As such, if construction-noise at the project were to occur concurrently with future construction activities located at nearby development, the project could combine and result in a **considerable contribution to a potentially significant cumulative impact**.

Implementation of Mitigation Measures in 3.10-1a and 3.10-1b, would include a variety of measures to reduce exposure to construction-generated noise; however, these measures would not be sufficient to avoid significant construction noise impacts associated with the project if nighttime construction activities where to occur concurrently with future construction activities located at nearby development. Thus, the incremental contribution of the project to this significant cumulative impact would remain **cumulatively considerable** and **significant and unavoidable**.

CUMULATIVE TRAFFIC NOISE

Future cumulative traffic noise levels would be affected by additional build-out of surrounding land uses and increases in vehicular traffic on affected roadways. Several new large developments (e.g., Bruceville Meadows, Southeast Specific Plan, and Laguna Ridge Specific Plan) and others (see Table 4-2 for a complete list) are planned in the area surrounding the project area and would generate vehicle trips on many of the same roadways as land uses developed on the SOIA site.

Traffic-noise modeling was conducted for the future (cumulative) condition with and without new development on the SOIA area, the results of which are shown in Table 3.10-20.

Table 4-3 Summary of Modeled Traffic Noise Levels under Cumulative and Cumulative Plus Project Conditions

| Commont Description | Roadway | Applicable Exterior L _{dn} Noise Standard for Land | Allowable Exterior Ldn Noise Standard Increase (dBA) ⁵ | | | L _{dn} at Nearest | |
|---|-----------------|---|--|--------------------------|----------------------------|-------------------------------|--|
| Segment Description | Segment | Uses along Roadway Segment (dBA) ^{1,2} | Existing No Project | Cumulative No Project | Cumulative Plus Project | Sensitive Receptor | |
| Hood Franklin Road (I-5 NB Off-Ramp to Kammerer Road) ⁴ | 60 | 1.5 | 64.9 | 71.8 | 72.0 | 0.2 | |
| Kammerer Road (Hood Franklin Road to Willard Parkway) | 60 | 3 | NA | 63.5 | 63.8 | 0.3 | |
| Kammerer Road (Willard Parkway to Bruceville Road) | 60 | 3 | NA | 61.2 | 61.6 | 0.4 | |
| Kammerer Road (Bruceville Road to McMillan Road) | 60 ³ | 1.5 | 65.0 | 72.6 | 73.0 | 0.4 | |
| Kammerer Road (McMillan Road to Driveway) | 65 | 1.5 | 58.5 | 66.3 | 66.5 | 0.2 | |
| Kammerer Road (Driveway to Lent Ranch Parkway) ⁴ | 60 | 1.5 | 65.0 | 73.6 | 73.7 | 0.0 | |
| Kammerer Road (Lent Ranch Parkway to Promenade Parkway) ⁴ | 60 | 1.5 | 65.0 | 73.5 | 73.6 | 0.1 | |
| Kammerer Road (Promenade Parkway to SR 99 SB Ramps) ⁴ | 60 | 1.5 | 69.1 | 77.1 | 77.1 | 0.0 | |
| Grant Line Road (SR 99 SB Ramps to SR 99 NB Ramps) 4 | 60 | 1.5 | 69.0 | 76.1 | 76.1 | 0.0 | |
| Grant Line Road (SR 99 NB Ramps to E Stockton Boulevard) 4 | 60 | 1.5 | 69.0 | 75.0 | 75.0 | 0.0 | |
| Grant Line Road (E Stockton Boulevard to Waterman Road) 4 | 60 | 1.5 | 69.9 | 74.6 | 74.6 | 0.0 | |
| Grant Line Road (Waterman Road to Mosher Road) ⁴ | 60 | 1.5 | 68.5 | 72.2 | 72.2 | 0.0 | |
| Grant Line Road (Mosher Road to Bradshaw Road) | 60 | 1.5 | 68.5 | 72.2 | 72.2 | 0.0 | |
| Grant Line Road (Bradshaw Road to Elk Grove Boulevard) | 60 ³ | 1.5 | 71.5 | 73.4 | 73.4 | 0.0 | |
| Willard Parkway (Bilby Road to Future Roadway Segment 2) | 60 ³ | 5 | 50.6 | 57.5 | 58.6 | 1.1 | |
| Bilby Road (Willard Parkway to Coop Drive) | 60 ³ | 3 | 61.2 | 60.1 | 61.3 | 1.1 | |
| Bilby Road (Coop Drive to Bruceville Road) | 60 ³ | 3 | 61.2 | 63.9 | 65.2 | 1.3 | |
| Bruceville Road (Bilby Road to Whitelock Parkway) | 60 | 3 | 60.6 | 64.4 | 64.9 | 0.5 | |
| Bruceville Road (Whitelock Parkway to Civic Center Drive) | 60 ³ | 3 | 61.6 | 63.1 | 63.5 | 0.4 | |
| Bruceville Road (Civic Center Drive to Elk Grove Boulevard) | 60 ³ | 3 | 61.9 | 63.3 | 63.6 | 0.3 | |

Table 4-3 Summary of Modeled Traffic Noise Levels under Cumulative and Cumulative Plus Project Conditions

| Correspond Description | Roadway | Applicable Exterior L _{dn} Noise Standard for Land Uses along Roadway Segment (dBA) ^{1,2} | Allowable Exterior L _{dn} Noise Standard Increase (dBA) ⁵ | | | L _{dn} at Nearest |
|---|-----------------|---|--|--------------------------|----------------------------|-------------------------------|
| Segment Description | Segment | | Existing No Project | Cumulative No Project | Cumulative Plus Project | Sensitive Receptor |
| Willard Parkway (Bilby Road to Whitelock Parkway) | 60 ³ | 3 | 60.7 | 63.7 | 64.4 | 0.7 |
| Franklin Boulevard (Whitelock Parkway to Elk Grove Boulevard) | 60 ³ | 3 | 60.3 | 61.8 | 62.0 | 0.3 |
| Bruceville Road (Bilby Road to Kammerer Road) | 65 | 3 | NA | 62.4 | 61.9 | -0.5 |
| Bruceville Road (Kammerer Road to Eschinger Road) | 65 | 5 | 56.5 | 51.5 | 51.5 | 0.0 |
| I-5 (Laguna Boulevard On/Off Ramps to Elk Grove Boulevard On/Off Ramps) | 60 ³ | 3 | 61.1 | 62.3 | 62.4 | 0.1 |
| I-5 (Elk Grove Boulevard On/Off Ramps to Hood Franklin Road On/Off Ramps) | 60 ³ | 3 | 60.1 | 61.4 | 61.5 | 0.1 |
| I-5 (Hood Franklin Road On/Off Ramps to Twin Cities Road On/Off Ramps) ⁴ | 65 | 1.5 | 67.9 | 69.4 | 69.4 | 0.0 |
| SR 99 (Bond Road On/Off Ramps to Elk Grove Boulevard On/Off Ramps) | 60 ³ | 3 | 62.7 | 63.8 | 63.9 | 0.1 |
| SR 99 (Elk Grove Boulevard On/Off Ramps to Grant Line Road On/Off Ramps) | 60 ³ | 1.5 | 63.5 | 65.5 | 65.5 | 0.0 |
| SR 99 (Grant Line Road On/Off Ramps to W Stockton Boulevard On/Off Ramps) | 60 ³ | 3 | 61.2 | 62.3 | 62.4 | 0.0 |
| SR 99 (W Stockton Boulevard On/Off Ramps to Dillard Road On/Off Ramps) | 65 | 3 | 62.0 | 63.3 | 63.3 | 0.0 |
| SR 99 (Dillard Road On/Off Ramps to Arno Road On/Off Ramps) | 65 | 5 | 58.2 | 59.6 | 59.6 | 0.0 |

Notes: L_{dn} = Day-Night Level; dBA = A-weighted decibels;

Source: Noise levels modeled by Ascent Environmental in 2017

As shown in Table 4-3, the cumulative-plus-project condition would not result in roadways that currently do not exceed the City of Elk Grove or County of Sacramento maximum allowable exterior noise level under existing conditions to exceed these levels in the cumulative-plus-project condition. Additionally, the applicable noise increment increase standard (used for considerable contribution thresholds) would not be exceeded along any of the roadway segments analyzed under the existing-plus-project condition (as shown in Table 3.10-17) or under the cumulative-plus-project condition (as shown in Table 4-3). Thus, the project would not result in a considerable contribution such that a new significant traffic noise impact would occur.

¹ 60 L_{dn}- Exterior Noise Standard for all residential, transient lodging, hospitals and nursing homes, and churches and meeting halls per the City of Elk Grove General Plan. See Table 3.10-8

² 65 L_{dn} – Exterior Noise Standard for all residential, transient lodging, hospitals and nursing homes, churches, meeting halls, schools, libraries, office buildings and industry per the County of Sacramento General Plan. See Table 3.10-11

³ Accounts for 5-dBA decrease in noise levels where existing sound walls are located.

⁴Roadway segments along which no nearby noise-sensitive receptors were identified were modeled at 100 feet from the roadway centerline and analyzed using only the incremental increase standard for transportation noise.

⁵ Incremental traffic noise increase standard per the City of Elk Grove General Plan (see Policy NO-6) and County of Sacramento General Plan (see Table 3.10-13). Refer to Appendix C for detailed traffic data, and traffic-noise modeling input data and output results.

CUMULATIVE OPERATIONAL NOISE

As described in Section 3.10, "Noise and Vibration," operational noise levels associated with operation of commercial land uses that could be developed on the SOIA area would not result in noise levels that exceed applicable exterior or interior noise compatibility standards at off-site receptors. Further with mitigation, the on-site residential receptors would not be subject to substantial operational noise from the commercial land use activities. Therefore, the project **would not result in a considerable contribution** such that a new significant operational noise impact would occur.

4.3.11 Population and Housing

At a regional level, the population of the SACOG region is expected to increase to 3,078,772 by 2036, while the City of Elk Grove is expected to continue to see population growth with 210,084 residents by the year 2036. Increased population and employment in the region could generate the need for additional housing and infrastructure, which could lead to conversion of undeveloped land and associated adverse physical environmental impacts of the sort that are addressed in this section of the EIR. This cumulative impact would be significant.

As identified in Table 2-1, future development of the SOIA area upon annexation could result in 1,846 dwelling units (5,540 new residents) and 4,359 jobs that were not considered in the current City of Elk Grove General Plan or the Sacramento County General Plan. The SACOG 2016 MTP/SCS identifies the project site as part of the "Blueprint Growth Footprint Not Identified for Development in the MTP/SCS Planning Period." Though the 2016 MTP/SCS does not assume any development in these areas by 2036, it is an area identified for development under the SACOG Blueprint.

Thus, the proposed SOIA would indirectly result in a **cumulatively considerable** contribution to population growth beyond current general plans that would result in significant environmental impacts. As identified in this section, mitigation measures have been identified that would reduce the project's contribution to the environmental impacts associated with its growth potential. However, there is no feasible mitigation to reduce all identified environmental impacts to a less-than-cumulatively considerable level. Thus, the incremental contribution of the project to this significant cumulative impact would remain **cumulatively considerable** and **significant and unavoidable**.

4.3.12 Public Services

Implementation of the project in combination with development in the vicinity of the project and located within the City of Elk Grove and Sacramento County identified in Table 4-2 would contribute to potentially significant cumulative impacts on public services (fire protection, law enforcement, and public schools) and recreation in the region.

The SOIA area is located within an area that has experienced significant urban and suburban development over the last 10- to 15- years. The overall trend of urban and suburban development, and conversion of existing agricultural land, will continue throughout the region within the vicinity of the project. As identified in Table 4-2, large projects in the region include the Sacramento Area Council of Government's 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy, which suggests new transportation and land use projects, and the ongoing update to the City of Elk Grove's General Plan. In addition, there are several proposals for development throughout the area (Southeast Policy Area, Souza Dairy, Kammerer SOIA, Bruceville Meadows, Treasure Homes Amendment, Tuscan Ridge South II, and Vineyard at Madeira Phase III) that would contribute to an increased cumulative demand for public services if approved. As identified under Impacts 3.12-1, 3.12-2, 3.12-3, and 3.12-4, the project would contribute to the cumulative need for new fire protection, police protection services, public school facilities, and parks.

Implementation of Mitigation Measure 3.12-1 and 3.12-2 would require that the project develop adequate fire and police facilities to service the Bilby Ridge SOIA area prior to annexation of the territory. However, because specific facilities are not proposed at this time, and the construction and operation of new facilities could result in significant physical environmental impacts that would remain significant after mitigation, it cannot be guaranteed that mitigation measures would be able to reduce all significant impacts to less than significant. Thus, the incremental contribution of the project to this significant cumulative impact would remain **cumulatively considerable** and **significant and unavoidable**.

4.3.13 Traffic, Transportation, and Circulation

As discussed in Section 3.13, "Traffic, Transportation, and Circulation," the transportation impact analysis is based on year 2036 cumulative conditions in regard to future development and planned transportation improvements in the region (see Impact 3.13-1 and 3.13-2). As identified in Impact 3.13-1 and 3.13-2, significant cumulative transportation impacts would occur with the project. Mitigation Measure 3.13-1 would reduce this impact through participation in roadway and state highway improvements as well as provision of bicycle, pedestrian, and transit improvements and inter-connections with the rest of the City. Because the location and intensity of future development within the proposed expansion of the City's sphere of influence is not known at this time, including potential off-site infrastructure improvements, it is not possible to identify what improvements may be necessary to comply with level of service policies of the relevant affected agencies. In some circumstances, improvements to facilities that could be affected by future development within the SOIA area may require coordination among multiple agencies (e.g., City of Elk Grove, Sacramento County, and Caltrans). Thus, the incremental contribution of the project to this significant cumulative impact would remain **cumulatively considerable** and **significant and unavoidable**.

Implementation of Mitigation Measure 3.13-1 would offset project bicycle, pedestrian, and transit impacts under cumulative conditions by the provision of on-site transportation improvements that would interconnect with existing and planned City pedestrian, bicycle, and transit improvements consistent with the City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan. Thus, the incremental contribution of the project to this cumulative impact would not be cumulatively considerable.

4.3.14 Utilities

WATER SUPPLY

The SOIA area is in the South Service Area (SSA) of Zone 40. The SSA is currently supplied by surface water from the Franklin Intertie and the Vineyard Surface Water Treatment Plant, groundwater from existing groundwater treatment plants (GWTPs) and some direct feed wells, and a small amount of recycled water. The SSA has adequately planned supply facilities to be able to address both the wet/average years and dry years. The excess supply during normal years is projected to range from 140,000 acre-feet per year in 2020 to 84,600 acre-feet per year in 2052, and in dry years the excess supply is projected to range between 60,700 acre-feet per year in 2020 and 11,800 acre-feet per year in 2052 (SWCA 2016). This illustrates capacity to serve the approximate 1,009.5 acre-feet per year of demand generated by the SOIA area. No significant cumulative water supply impacts would occur. Further, because adequate supplies are available, the project would not have a cumulatively considerable contribution such that a new significant cumulative water supply impact would occur.

The impacts of construction or operation of off-site water distribution improvements, if required, could result in significant environmental effects. Neither LAFCo nor the City of Elk Grove would have control over the approval, timing, or implementation these improvements. Therefore, the potential impact of constructing new or expanded water facilities to serve cumulative development would be significant. Thus, the incremental contribution of the project to this significant cumulative impact would remain **cumulatively considerable** and **significant and unavoidable**.

WASTEWATER SERVICE

Sacramento Area Sewer District (SASD) would be the local wastewater collection service provider for future development in the region and the SOIA area.

The SRWWTP is permitted to treat an ADWF of 181 mgd, while the facility's 2014 ADWF was approximately 106 mgd. The 181 mgd permitted capacity has been in effect since 1990. While the approved EchoWater project will result in improved effluent water quality, this project does not increase treatment capacity of SRWWTP. In the 1990s and early 2000s, Regional San considered capacity expansion from 181 to 218 mgd ADWF and had flows as high as 155 mgd ADWF, with expectations that treatment needs would increase. Since then, water conservation and a reduction in water use have reversed the growth in wastewater capacity use. Regional San expects per capita consumption to fall 25 percent over the next 20 years through the ongoing installation and use of water meters, as well as compliance with water conservation measures. As such, substantial additional water conservation is expected throughout Regional San's service area, putting off the expectation that the existing 181 mgd ADWF capacity will be exhausted until at least 2050 (Regional San 2014:6-2.). Assuming that all of the water supplied to the SOIA area is converted to wastewater, the area is estimated to generated 901,671 gallons of wastewater each day. This would not substantially affect the remaining capacity of the SRWWTP. No significant cumulative wastewater treatment capacity impacts would occur. Further, because adequate capacity is available, the project would not have a cumulatively considerable contribution such that a new significant cumulative wastewater treatment impact would occur.

Regional San has completed an Interceptor Sequencing Study that included study of the SOIA area and provides general information about the best way to serve the area, including reevaluating the current alignment and/or need for the South Interceptor and potential interim facilities that may be necessary to provide service. However, Regional San staff has stated that future sewer service to these areas cannot be planned until annexation into Regional San has occurred (LAFCo 2016:4.0-14). If future studies indicate that the demand generated from annexation and development of future development and the SOIA area would require off-site utility improvements, such improvements to wastewater facilities would be the responsibility of the utility and would be subject to separate environmental review. Implementation of any mitigation measures identified through this process would be the responsibility of the utility, and such measures would be implemented in accordance with the certified CEQA documents. However, physical environmental impacts from construction or operation of off-site improvements could remain significant after implementation of mitigation (i.e., significant and unavoidable), or no feasible mitigation may be available to fully reduce impacts to a less-than-significant level. Thus, the incremental contribution of the project to this significant cumulative impact would remain cumulatively considerable and significant and unavoidable.

SOLID WASTE SERVICE

As identified under Impact 3.14-5, the Kiefer, Forward, L and D, and Yolo County Central landfills have a large volume of landfill capacity (254 million cubic yards) available to serve future development. The closure dates of the Kiefer Landfill, L and D Landfill, and Yolo County Central Landfill are anticipated to be approximately January 1, 2064, January 1, 2023, and January 1, 2080, respectively. There is adequate permitted landfill capacity available to accommodate the project and future growth into the foreseeable future. This is a less-than-significant cumulative impact and the project's cumulative demands **would not result in a considerable contribution** such that new significant cumulative impact would occur.

4.3.15 Hazards

The project's public health hazard impacts related to the use, handling, and transportation of hazardous materials and contamination, are associated with site-specific issues that are not connected to cumulative conditions in the region. On a cumulative basis, hazardous impacts would be less-than-significant.

There is no existing significant adverse cumulative condition relating to hazards and hazardous materials in the vicinity of the project and, alone, the incremental impacts of the project would not cause a significant adverse cumulative impact. Further, construction activities associated with the project would not substantially increase the hazard potential in the study area, and operation of the project would not cause a significant adverse cumulative impact. Mitigation is recommended to address the project's site-specific impacts to a less-than-significant level. As a result, the project would not have a considerable contribution such that a new significant cumulative public health hazard impacts would occur.

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5 OTHER CEQA CONSIDERATIONS

5.1 GROWTH INDUCEMENT

CEQA specifies that growth-inducing impacts of a project must be addressed in an EIR (Public Resources Code, Section 21100[b][5]). Specifically, Section 15126.2(d) of the California Code of Regulations states that the EIR shall:

Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also, discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

Direct growth inducement would result if a project involved construction of new housing, which would facilitate new population to an area. Indirect growth inducement would result, for instance, if implementing a project resulted in any of the following:

- substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises);
- substantial short-term employment opportunities (e.g., construction employment) that indirectly stimulates the need for additional housing and services to support the new temporary employment demand; and/or
- removal of an obstacle to additional growth and development, such as removing a constraint on a required public utility or service (e.g., construction of a major sewer line with excess capacity through an undeveloped area).

The State CEQA Guidelines do not distinguish between planned and unplanned growth for purposes of considering whether a project would foster additional growth. Therefore, for purposes of this EIR, to reach the conclusion that a project is growth-inducing as defined by CEQA, the EIR must find that it would foster (i.e., promote, encourage, allow) additional growth in economic activity, population, or housing, regardless of whether the growth is already approved by and consistent with local plans. The conclusion does not determine that induced growth is beneficial or detrimental, consistent with Section 15126.2(d) of the State CEQA Guidelines.

If the analysis conducted for the EIR results in a determination that a project is growth-inducing, the next question is whether that growth may cause adverse effects on the environment. Environmental effects resulting from induced growth (i.e., growth-induced effects) fit the CEQA definition of "indirect" effects in Section 15358(a)(2) of the State CEQA Guidelines. These indirect or secondary effects of growth may result in significant environmental impacts. CEQA does not require that the EIR speculate unduly about the precise location and site-specific characteristics of significant, indirect effects caused by induced growth, but a good-faith effort is required to disclose what is feasible to assess. Potential secondary effects of growth could include consequences – such as conversion of open space to developed uses, increased demand on community and public services and infrastructure, increased traffic and noise, degradation of

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air and water quality, or degradation or loss of plant and wildlife habitat – that are the result of growth fostered by the project.

The decision to allow those projects that result from induced growth is the subject of separate discretionary processes by the lead agency responsible for considering such projects. Because the decision to allow growth is subject to separate discretionary decision making, and such decision making is itself subject to CEQA, the analysis of growth-inducing effects is not intended to determine site-specific environmental impacts and specific mitigation for the potentially induced growth. Rather, the discussion is intended to disclose the potential for environmental effects to occur more generally, such that decision makers are aware that additional environmental effects are a possibility if growth-inducing projects are approved. The decision of whether impacts do occur, their extent, and the ability to mitigate them is appropriately left to consideration by the agency responsible for approving such projects at such times as complete applications for development are submitted.

5.1.1 Growth Variables

The timing, magnitude, and location of land development and population growth in a community or region are based on various interrelated land use and economic variables. Key variables include regional economic trends, market demand for residential and nonresidential uses, land availability and cost, the availability and quality of transportation facilities and public services, proximity to employment centers, the supply and cost of housing, and regulatory policies or conditions.

5.1.2 Growth-Inducing Impacts of the Project

The SOIA would remove an obstacle to the future and annexation and development of the site. Further, approval of the SOIA would allow the City of Elk Grove and other service providers to plan for future urbanization of the approximately 480-acre site as an area planned for potential urban growth. However, approval of the SOIA would not authorize changes in land use or governance by the City unless the project site is annexed to the City. Annexation of the project site to the City is not an action under consideration for this project. Rather, LAFCo is requested to consider whether the Bilby Ridge site should be included in the SOI for the City as a logical expansion of potential urban growth for the City. If the SOIA were approved, land use activities within the project site would remain under the jurisdiction of Sacramento County until annexation is approved by LAFCo at some future time.

The Bilby Ridge SOIA does not include land use designations or zoning as specific approval actions. Proposed land use and zoning designations for a site are provided at the time a request for annexation of the site is submitted to LAFCo. However, in order for LAFCo to understand and fully evaluate the direct and indirect impacts associated with consideration of the Bilby Ridge SOIA, it must also consider the reasonable development pattern and intensity that could occur at the site from subsequent land use approvals. The project applicant has identified land use and development capacities for the project site that could allow 1,846 residential dwelling units (5,540 residents) and 4,359 jobs (Table 2-1 and Exhibit 2-4). The SOIA area is located within the City of Elk Grove Planning Area as established in the 2003 General Plan and has been identified for potential urban development in the proposed General Plan Update as part of the West Study Area. For additional discussion of impacts associated with growth inducement, refer to Section 3.11, "Population and Housing."

EFFECTS ASSOCIATED WITH POPULATION GROWTH

Approval of the SOIA area and future annexation would foster short-term and long-term economic growth as a result of new construction, increased residential units, and employment. Construction activities would generate the need for construction workers during this time period and is anticipated to utilize people who are employed in the construction industry in the region. Therefore, it would be reasonable to expect that

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construction workers for the project would not relocate to the City for a temporary job. During operation, it is anticipated that up to 5,540 new residents would occupy the on-site residences and that the commercial uses could employ 4,359 workers. Increased City resident and employment levels are considered to result in direct growth-inducing effects. The environmental impacts associated with these direct growth-inducing effects are described throughout this EIR.

EFFECTS ASSOCIATED WITH REMOVAL OF BARRIERS TO POPULATION GROWTH

The project would remove barriers to population growth insofar as the project would expand the City's sphere of influence and provide the path to future annexation to the City for land use and infrastructure planning. This could place pressure on areas adjacent to the SOIA area to seek development entitlements or annexation applications.

EFFECTS ASSOCIATED WITH EMPLOYMENT GROWTH AND OTHER ECONOMIC-RELATED GROWTH

Facilitation of new employment, goods, and services from future development of the SOIA area could result in increased economic growth within the City and would be considered an indirect growth-inducing effect. Potential secondary effects of growth could include environmental consequences, such as conversion of open space to developed uses, increased demand on community and public services and infrastructure, increased traffic and noise, degradation of air and water quality, or degradation or loss of plant and wildlife habitat. While the SOIA may induce or encourage population growth in the neighboring unincorporated area through additional SOIA requests, any growth outside of the SOIA area would require its own LAFCo SOIA and environmental review outside of this SOIA process.

5.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

CEQA requires that EIRs assess whether the proposed project would result in significant irreversible changes to the physical environment. The State CEQA Guidelines discuss three categories of significant irreversible changes that should be considered. Each is addressed below.

- ▲ Changes in Land Use Which Commit Future Generations the SOIA would not change the existing land use designations or authority.
- ✓ Irreversible Damage from Environmental Accidents the SOIA does not include construction or any other activities that would be anticipated to result in accidental spills or explosion of a hazardous material.
- ✓ Consumption of Nonrenewable Resources the SOIA would not directly result in increased energy consumption, conversion of agricultural lands, or lost access to mining reserves. To the extent that the SOIA facilitates the eventual annexation and future development of the project area, the SOIA could result in indirect conversion of agricultural land and consumption of fossil fuels and other non-renewable or slowly renewable resources through the operation of vehicles and equipment for site grading and construction activities and additional electricity, water, and natural gas demand following development. The reader is referred to Section 3.7, "Energy," regarding energy demands of future development of the SOIA area.

5.3 SIGNIFICANT AND UNAVOIDABLE IMPACTS

Detailed mitigation measures are identified in Chapter 3 of the DEIR that are intended to mitigate project effects to the extent feasible. All of these mitigation measures are identified in ES-1. After implementation of the proposed mitigation measures, nearly all of the adverse effects associated with the project would be reduced to a less-than-significant level.

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Following is a listing of significant and unavoidable impacts associated with implementation of the SOIA.

Aesthetics (Section 3.1)

- Impact 3.1-1: Substantially degrade the existing visual character or quality of the site and its surroundings
- Impact 3.1-2: Create a new source of substantial light or glare

Agricultural Resources (Section 3.2)

- ▲ Impact 3.2-1: Direct conversion of Important Farmland and prime agricultural land to non-agricultural use
- Impact 3.2-2: Conflict with existing Williamson Act contracts
- Impact 3.2-3: Involve other changes in the existing environment which, because of their location or nature, could result in conversion of Farmland, to non-agricultural use
- Cumulative loss of Important Farmland and prime agricultural land

Air Quality (Section 3.3)

- ▲ Impact 3.3-1: Construction emissions of criteria air pollutants and ozone precursors
- ▲ Impact 3.3-2: Long-term operational emissions of air pollutants
- ▲ Cumulative air quality impacts to the nonattainment status of Sacramento Valley Air Basin

Biological Resources (Section 3.4)

- Impact 3.4-2: Disturbance to or loss of special-status wildlife species and habitat: Swainson's hawk and other nesting raptors
- Cumulative loss of Swainson's hawk habitat

Energy (Section 3.6)

- Cumulative demand for energy services and facilities

Greenhouse Gases (Section 3.7)

▲ Impact 3.7-1: Project-generated greenhouse gas emissions

Land Use (Section 3.9)

- Impact 3.9-4: Conversion of open space
- ▲ Cumulative loss of open space

Noise and Vibration (Section 3.10)

- ▲ Impact 3.10-1: Construction-generated noise
- Cumulative construction-generated noise

Population and Housing (Section 3.11)

- Impact 3.11-1: Induce substantial population growth
- Cumulative population growth

Public Services and Recreation (Section 3.12)

▲ Impact 3.12-1: Increased demand for fire protection and emergency medical services

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- ▲ Impact 3.12-2: Increased demand for law enforcement services
- ▲ Cumulative fire protection and law enforcement service impacts

Transportation and Circulation (Section 3.13)

- ▲ Impact 3.13-1: Impacts to roadway operation
- ▲ Impact 3.13-2: Impacts to freeway facilities
- Cumulative traffic operation impacts on roadways and freeway facilities

Utilities (Section 3.14)

- Impact 3.14-1: Require or result in the construction of new or expanded water or wastewater treatment facilities, the construction of which could cause significant environmental effects
- ▲ Cumulative water and wastewater facility impacts

Other CEQA Considerations Ascent Environmental

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6 PROJECT ALTERNATIVES

6.1 CALIFORNIA ENVIRONMENTAL QUALITY ACT REQUIREMENTS

The State CEQA Guidelines require analysis of a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the project's basic objectives and avoid or substantially lessen any of the significant effects of the project (Section 15126.6[a]). The range of potentially feasible alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The potential feasibility of an alternative may be determined based on a variety of factors, including economic viability, availability of infrastructure, and other plans or regulatory limitations. Specifically, Section 15126.6(f) (1) of the State CEQA Guidelines states, in part:

Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

In determining what alternatives should be considered in the EIR, it is important to acknowledge the objectives of the project, the project's significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). The State CEQA Guidelines further require that the alternatives be compared to the project's environmental impacts and that the "no project" alternative is considered (Section 15126.6[d] [e]).

An EIR need not evaluate the environmental effects of alternatives in the same level of detail as the project, but must include enough information to allow meaningful evaluation, analysis, and comparison with the project. The requirement that an EIR evaluate alternatives to the project or alternatives that address the location of the project is a broad one; the primary intent of the alternatives analysis is to disclose other ways that the objectives of the project could be attained while reducing the magnitude of, or avoiding, the environmental impacts of the project. Alternatives that are included and evaluated in the EIR must be feasible alternatives. However, the Public Resources Code (PCR) and the CEQA Guidelines direct that the EIR need "set forth only those alternatives necessary to permit a reasoned choice." The ultimate determination as to whether an alternative is feasible or infeasible is made by the lead agency's decision-making body (see PRC Section 21081[a] [3].)

6.2 CONSIDERATIONS FOR SELECTION OF ALTERNATIVES

6.2.1 Attainment of Project Objectives

As described above, one factor that must be considered in selection of alternatives is the ability of a specific alternative to attain most of the basic objectives of the project (CEQA Guidelines Section 15126.6[a]). Chapter 2, "Project Description," articulates the following project objectives:

amend the Sphere of Influence (SOI) boundary beyond the existing Elk Grove city limits to accommodate orderly and sustainable growth compatible with the Sacramento LAFCo, City of Elk Grove, and Sacramento County growth goals and policies, including promoting a sustainable jobs to housing ratio;

■ implement the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 consistent with public service conditions present or reasonably foreseeable in the proposed Bilby Ridge SOIA area;

- establish a logical boundary within which future annexation requests by the City of Elk Grove may be considered; and
- establish an expanded SOI for the City of Elk Grove that will facilitate the protection of important environmental, cultural, and agricultural resources.

6.2.2 Environmental Impacts of the Project Impacts

Sections 3.1 through 3.15 of this Draft EIR address the environmental impacts of implementation of the Bilby Ridge SOIA. Potentially feasible alternatives were developed with consideration of avoiding or lessening the significant adverse impacts of the project, as identified in this draft EIR. In summary, the significant impacts of the project are:

Aesthetics: The project could result in the following impacts:

- While approval of the SOIA alone would not result in physical visual changes to the site, future development of the SOIA area could convert the open space character of project site to suburban uses, which would further expand suburban development conditions south of the existing City of Elk Grove. This may substantially alter public views. Mitigation has been identified to minimize this impact, but would not reduce it to a less-than-significant level. Therefore, the impact would be significant and unavoidable. (Impact 3.1-1)
- The SOIA would not result in any changes in existing land uses and, as such, would not result in new sources of substantial light or glare. If the site is annexed and developed in the future, development could result in the introduction of buildings and facilities that may create lighting and glare on adjoining areas. Mitigation has been identified to minimize this impact, but would not reduce it to a less-than-significant level. Therefore, the impact would be significant and unavoidable. (Impact 3.1-2)

Agricultural Resources: The project could result in the following impacts:

- While the SOIA would not result in direct physical changes to the site, future development facilitated by subsequent annexation within the Bilby Ridge site could result in the direct conversion of up to 362 acres of Farmland of Statewide Importance, 70 of which are also considered prime agricultural land by LAFCo, to nonagricultural urban uses. Mitigation has been identified to minimize this impact, but would not reduce it to a less-than-significant level. Therefore, the impact would be significant and unavoidable. (Impact 3.2-1)
- ✓ Future development within the Bilby Ridge site could result in conflicts with existing Williamson Act contracts that that protect farmland in the SOIA and require filing of non-renewals or cancelations of the contracts. Mitigation has been identified to minimize this impact, but would not reduce it to a less-than-significant level. Therefore, the impact would be significant and unavoidable. (Impact 3.2-2)
- The project would establish an expanded sphere of influence for the City of Elk Grove that would likely facilitate the subsequent annexation and development of the project site. New urban land uses in the project area may impair or result in conflicts with adjacent agricultural activities. Mitigation has been identified to minimize this impact, but would not reduce it to a less-than-significant level. Therefore, the impact would be significant and unavoidable. (Impact 3.2-3)

Air Quality: The project could result in the following impacts:

✓ Construction-related activities associated with future development within the SOIA area upon annexation would result in emissions of ROG, NO_X, PM₁₀ and PM_{2.5} from site preparation (e.g., excavation, clearing), off-road equipment, material and equipment delivery trips, and worker commute trips, and other miscellaneous activities (e.g., building construction, asphalt paving, application of architectural coatings). Construction activities would result in mass emissions of NO_X and PM₁₀ that exceed SMAQMD's thresholds of 85 pounds per day (lb/day) and 80 lb/day, respectively. Mitigation has been identified to minimize this impact, but would not reduce it to a less-than-significant level. Therefore, the impact would be significant and unavoidable. (Impact 3.3-1)

- While approval of the SOIA would not result in any physical changes to the environment, development in the SOIA area upon future annexation could result in long-term operational emissions of ROG, NO_X, PM₁₀ and PM_{2.5} that exceed SMAQMD-recommended mass emission thresholds and, therefore, could conflict with the air quality planning efforts and contribute substantially to the nonattainment status of the SVAB with respect to the CAAQS and NAAQS for ozone, the CAAQS forPM₁₀ and the NAAQS forPM_{2.5}. Mitigation has been identified to minimize this impact, but would not reduce it to a less-than-significant level. Therefore, the impact would be significant and unavoidable. (Impact 3.3-2)
- New operational TAC sources associated with commercial development may expose existing or new receptors to TAC emissions. Mitigation has been identified that would reduce this impact to a less-than-significant level. (Impact 3.3-4)
- While approval of the SOIA would not result in any physical changes to the environment, future development of the SOIA area upon annexation could introduce new odor sources into the area (e.g., temporary diesel exhaust emissions during construction and delivery trucks associated with commercial land uses). Thus, receptors located near the commercial land uses may be exposed to odorous emissions depending upon the specific land uses developed. Mitigation has been identified that would reduce this impact to a less-than-significant level. (Impact 3.3-5)

Biological Resources: The project could result in the following impacts:

- Potential land uses and development projects that may be approved and implemented in the future in the proposed SOIA area could result in disturbance or loss of several special-status plant species. Mitigation has been identified that would reduce this impact to a less-than-significant level. (Impact 3.4-1)
- Potential land uses and development projects that may be approved and implemented in the future under the proposed SOIA area could adversely affect several special-status wildlife species, including reptiles, nesting birds, invertebrates, and mammals. Future development construction activities such as ground disturbance and vegetation removal, as well as overall conversion of habitat to urban uses, could result in the disturbance or loss of individuals and reduced breeding productivity of these species. Mitigation has been identified to minimize this impact, but would not reduce it to a less-than-significant level. Therefore, the impact would be significant and unavoidable. (Impact 3.4-2)
- Wetlands, including vernal pools, and other waters of the United States and waters of the state may be present in the SOIA. Future land use changes and development related to the proposed establishment of the SOIA and future annexation could result in conversion of wetland habitat to urban uses. Mitigation has been identified that would reduce this impact to a less-than-significant level. (Impact 3.4-3)

Cultural and Paleontological Resources: The project could result in the following impacts:

▲ There are several historic-age buildings on the projects site that have not been evaluated for NRHP- or CRHR-eligibility. If the SOIA is approved and subsequent annexation of all or a portion of the site to the City of Elk Grove occurs, development of the SOIA area could result in damage to or destruction to these

buildings. Mitigation has been identified that would reduce this impact to a **less-than-significant level**. (Impact 3.5-1)

- Ground-disturbing activities from development upon annexation to the City of Elk Grove could result in discovery or damage of as yet undiscovered archaeological resources as defined in CEQA Guidelines Section 15064.5. Mitigation has been identified that would reduce this impact to a less-than-significant level. (Impact 3.5-2)
- ▲ Any future development within the SOIA area could potentially affect undiscovered paleontological resources. Mitigation has been identified that would reduce this impact to a less-than-significant level. (Impact 3.5-4)

Energy: The project could result in the following impacts:

- Future development of the SOIA area would increase electricity and natural gas consumption at the site relative to existing conditions. Mitigation has been identified that would reduce this impact to a less-than-significant level. (Impact 3.6-1)
- Electrical and natural gas infrastructure would need to be extended by PG&E and SMUD to meet the energy needs of future development within the SOIA area upon annexation. If determined to be necessary, off-site improvements to electrical and natural gas facilities would be the responsibility of the utility and would be analyzed by the utility provider under separate environmental review. Physical environmental impacts from construction or operation of off-site improvements could remain significant after implementation of mitigation (i.e., significant and unavoidable) or no feasible mitigation may be available to fully reduce impacts to a less-than-significant level. No additional mitigation is available to address this impact. Therefore, the impact would be significant and unavoidable. (Impact 3.6-2)

Greenhouse Gas Emissions: The project could result in the following impacts:

✓ Future development of the SOIA area upon annexation is estimated to generate 5,116 MTCO₂e from construction activities and 71,113 MTCO₂e operation-related emissions at assumed buildout of the conceptual land use plan. Total emissions attributed to the conceptual land use plan would be 71,318 MTCO₂e/year with combined amortized construction emissions. This level of greenhouse gas (GHG) emissions has the potential to result in a considerable contribution to cumulative emissions related to global climate change and conflict with State GHG reduction targets established for 2030 and 2050. Mitigation has been identified that could mitigate this impact. However, Sacramento LAFCo cannot guarantee the success of these mitigation measures for offsetting project emissions. Confirmation of compliance with the mitigation measures would require monitoring of the GHG reduction actions as development occurs. LAFCo would not be able to verify or enforce these measures after annexation. The City of Elk Grove is also in the process of updating its CAP and may alter the mitigation approach for the development of this project (after annexation) to match the updated CAP GHG reduction measures. Because of this uncertainty in achieving no net increase in GHG emission, the project's contribution to this significant cumulative impact would be cumulatively considerable and significant and unavoidable. (Impact 3.7-1)

Hydrology and Water Quality: The project could result in the following impacts:

- ✓ Future development of the SOIA area from future annexation could result in water quality degradation from construction activities, as well as from operational sources of water pollutants. Mitigation has been identified that would reduce this impact to a less-than-significant level. (Impact 3.8-1)
- ✓ Future development of the SOIA area upon annexation could lead to alteration of the drainage pattern of the site. This could result in increased stormwater runoff and an increase in susceptibility to downstream flooding and sediment issues. Mitigation has been identified that would reduce this impact to a lessthan-significant level. (Impact 3.8-3)

▲ A portion of the SOIA area is mapped as 200-year floodplain that could expose future SOIA area residents to flooding. Mitigation has been identified that would reduce this impact to a less-thansignificant level. (Impact 3.8-4)

Land Use: The project could result in the following impacts:

▲ Establishment of the SOIA and the future annexation and development of the area could result in the loss of open space resources, as defined by Sacramento LAFCo, to urban uses. Mitigation has been identified to minimize this impact, but would not reduce it to a less-than-significant level. Therefore, the impact would be significant and unavoidable. (Impact 3.9-4)

Noise and Vibration: The project could result in the following impacts:

- Short-term construction-generated noise levels associated with the future development of the SOIA area upon annexation could expose nearby noise-sensitive receptors to noise levels that exceed applicable local standards. In addition, if construction activity were to occur during more noise-sensitive nighttime hours it could result in annoyance and sleep disruption at to occupants of nearby residential land uses and substantial periodic increases in ambient noise levels. Mitigation has been identified to minimize this impact, but would not reduce it to a less-than-significant level. Therefore, the impact would be significant and unavoidable. (Impact 3.10-1)
- The SOIA area could result in the future development of commercial land uses in proximity to existing noise-sensitive land uses. Noise sources generally associated with commercial/retail land uses include vehicular and human activity in parking lots, and loading dock and delivery activities. Existing off-site receptors could experience commercial-related noise levels that exceed the City and County's daytime and nighttime noise levels standards. Mitigation has been identified that would reduce this impact to a less-than-significant level. (Impact 3.10-3)
- ✓ Future annexation of the SOIA area would enable the development of a mix of various land uses, including residential, commercial, office, park, and school uses. Traffic and stationary noise sources in the vicinity of the project could expose newly developed noise-sensitive uses in the SOIA area to noise levels generated by generated by traffic on adjacent roadways and by stationary sources that exceed applicable noise standards established by the City of Elk Grove. Mitigation has been identified that would reduce this impact to a less-than-significant level. (Impact 3.10-4)

Population and Housing: The project could result in the following impacts:

✓ The SOIA would indirectly induce substantial population growth through fostering future annexation of the SOIA area and development. Mitigation has been identified to minimize this impact, but would not reduce it to a less-than-significant level. Therefore, the impact would be significant and unavoidable. (Impact 3.11-1)

Public Services and Recreation: The project could result in the following impacts:

- ▲ Future development within the Bilby Ridge SOIA area could result in an increase in demand for fire protection and emergency services, which could require construction of new facilities that would result in environmental impacts. Mitigation has been identified to minimize this impact, but would not reduce it to a less-than-significant level. Therefore, the impact would be **significant and unavoidable**. (Impact 3.12-1)
- Future development within the Bilby Ridge SOIA area could result in an increase in demand for law enforcement services, which would require construction of new facilities that would result in environmental impacts. Mitigation has been identified to minimize this impact, but would not reduce it to a less-than-significant level. Therefore, the impact would be significant and unavoidable. (Impact 3.12-2)

Transportation and Circulation: The project could result in the following impacts:

▲ Approval of the SOIA and future development of the SOIA area upon annexation could result in increases in local vehicle miles traveled, unacceptable operations and add traffic to study roadway segments that are projected to operate unacceptably. Mitigation has been identified to minimize this impact, but would not reduce it to a less-than-significant level. Therefore, the impact would be significant and unavoidable. (Impact 3.13-1)

- ▲ Approval of the SOIA and future development of the SOIA area upon annexation would add traffic to segments of SR 99 and I-5 that are projected to operate unacceptably. Mitigation has been identified to minimize this impact, but would not reduce it to a less-than-significant level. Therefore, the impact would be significant and unavoidable. (Impact 3.13-2)
- ▲ Approval of the SOIA and future development of the SOIA area upon annexation would increase demand for public transit service. Mitigation has been identified that would reduce this impact to a less-thansignificant level. (Impact 3.13-3)
- ▲ Approval of the SOIA and future development of the SOIA area upon annexation would increase demand for bicycle and pedestrian facilities. Mitigation has been identified that would reduce this impact to a less-than-significant level. (Impact 3.13-4)

Utilities: The project could result in the following impacts:

A Revising the City of Elk Grove's SOI would inform future planning efforts so that the anticipated demand from development could be accommodated in the area. If determined to be necessary, off-site improvements to water or wastewater treatment or conveyance facilities would be the responsibility of the utility and would be analyzed by the utility provider under separate environmental review. Physical environmental impacts from construction or operation of off-site improvements could remain significant after implementation of mitigation (i.e., significant and unavoidable) or no feasible mitigation may be available to fully reduce impacts to a less-than-significant level. Therefore, the impact would be significant and unavoidable. (Impact 3.14-1)

Hazards and Hazardous Materials: The project could result in the following impacts:

■ Future development of the SOIA area upon annexation could expose construction workers to hazardous materials present on-site during construction activities and hazardous materials on-site could create an environmental or health hazard for later residents or occupants, if left in place. Mitigation has been identified that would reduce this impact to a less-than-significant level. (Impact 3.15-2)

6.3 ALTERNATIVES DISMISSED FROM DETAILED EVALUATION

6.3.1 Buffer Alternative/ Changes in Land Use of the Sphere of Influence Amendment Alternatives

Comments received on the notice of preparation suggested that the EIR consider a land use design that would provide for buffering and/or development density transitions along the SOIA area's southern boundary with the Sacramento County Urban Services Boundary.

The Bilby Ridge SOIA would allow the City of Elk Grove and other service providers to plan for future urbanization of the approximately 480-acre site as an area planned for potential urban growth. However, approval of the SOIA would not authorize changes in land use or governance by the City unless the project site is annexed to the City. Annexation of the project site to the City is not an action under consideration for

this project. Sacramento LAFCo does not have land use authority to establish the land use pattern for the SOIA and can only consider boundary adjustments to the SOI. An alternative that reduces land use densities as they transition to neighboring agricultural properties is not within the purview of LAFCO's authority under this discretionary action. Thus, this alternative is considered infeasible. However, alternate land use scenarios may be considered upon annexation of all or a portion of the site by the City.

6.4 EVALUATION OF ALTERNATIVES

The following alternatives to the proposed project are evaluated in detail, as described below:

- ▲ Alternative 1: No Project This alternative would consist not approving the Bilby Ridge SOIA and the SOIA area would remain under the jurisdiction of Sacramento County with no changes to current agricultural land use designation and zoning.
- ▲ Alternative 2: Reduced Sphere of Influence This alternative would reduce the SOIA area from 480 acres to 240 acres as shown in Exhibit 6-1.
- ▲ Alternative 3: Off-Site Alternative This alternative would involve the establishment of the SOIA area adjacent to the proposed Elk Grove Multi Sport Complex that is proposed for annexation south of Grant Line Road (see Exhibit 6-2).

6.4.1 Alternative 1: No Project Alternative

Under the No Project Alternative, the proposed SOIA would not be established and the SOIA area would remain under Sacramento County's jurisdiction. The County General Plan land use designation would remain as Agricultural Cropland. The No Project Alternative would not meet any of the project objectives. However, consistent with State CEQA Guidelines Section 15126.6(e), the No Project Alternative is nevertheless evaluated in this Draft EIR.

EVALUATION OF ENVIRONMENTAL EFFECTS

Aesthetics

The No Project Alternative provides for the continued use of the project area for agricultural uses and would retain the existing visual character and lighting conditions of the area. While project impacts to the visual character and lighting/glare conditions of the area are significant and unavoidable under project and cumulative conditions, this impact would be avoided under the No Project Alternative. Therefore, the visual and lighting impacts of the No Project Alternative would be less.

Agricultural Resources

The No Project Alternative would allow for the continued use of the project area for agricultural uses. While the project would result in the significant and unavoidable impacts under project and cumulative conditions for the loss of Important Farmland as well as prime agricultural land defined by LAFCo to nonagricultural uses, this alternative would not result in the conversion of any agricultural lands. The No Project Alternative would also avoid the significant and unavoidable land use compatibility impacts with adjacent agricultural operations identified for the project. Overall, the agricultural resource impacts of the No Project Alternative would be less.

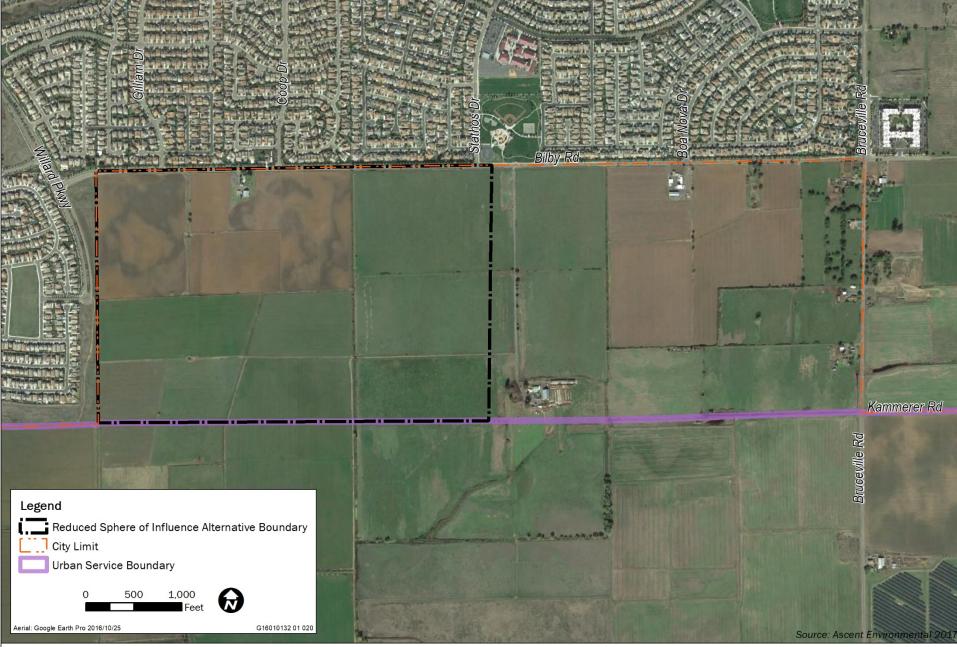


Exhibit 6-1

Alternative 2: Reduced Sphere of Influence



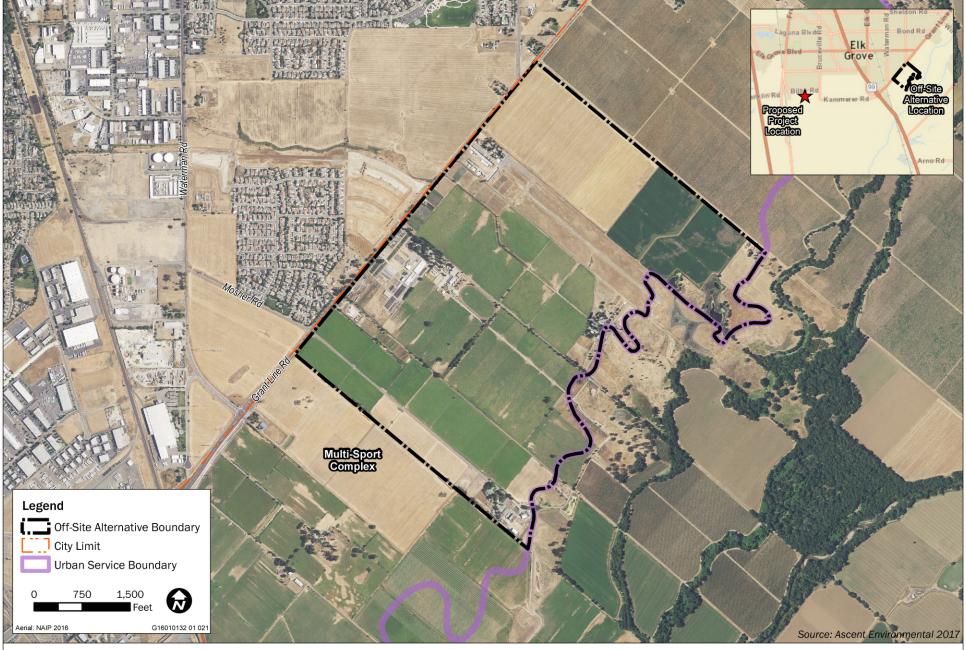


Exhibit 6-2 Alternative 3: Off-Site Alternative



Air Quality

The No Project Alternative would generate lower air pollutant emissions (particulate matter and ozone precursors) as a result of continued agricultural activities. This alternative would avoid project air quality impacts related to TAC and potential odor generation. The significant construction, operational, and cumulative air quality impacts identified for the project would not occur. Therefore, the air quality impacts of the No Project Alternative would be less than those that would occur with the project.

Biological Resources

Under the No Project Alternative, activity within the project would be limited to the continued operation of agricultural uses. This would retain the grasslands, agricultural habitat, and trees in the SOIA area that support special-status plant and wildlife species known to occur in the region. While mitigation is available to reduce some project biological resource impacts to a less-than-significant level, these impacts would be substantially reduced or avoided under the No Project Alternative. Therefore, the biological resource impacts of the No Project Alternative would be less.

Cultural and Paleontological Resources

Under the No Project Alternative, impacts to archaeological, historical, paleontological, and tribal cultural resources would be less under the No Project Alternative because of the minimal ground disturbance from new agricultural activities as compared to the project. Overall, impacts would be less.

Energy

The No Project Alternative would have a substantial reduction in operational and transportation energy demand as compared to the project and would not require the extension of off-site energy infrastructure that would result in significant and unavoidable impacts for the project. The No Project Alternative would have substantially less energy demands, and no off-site energy infrastructure impacts as compared to the project.

Greenhouse Gases Emissions

The No Project Alternative would generate lower GHG emissions from continued agricultural operations in the SOIA area. The significant and cumulative GHG emission impacts that would contribute to climate change identified for the project would not occur, and no mitigation would be required for this alternative. Overall, the GHG emission impacts of the No Project Alternative would be less than those that would occur with the project.

Hydrology and Water Quality

The No Project Alternative would avoid an increase in impervious surface area as compared to future development potential under the project, which would increase surface water infiltration and reduce sedimentation and other pollutants in stormwater runoff. This alternative would still be exposed to existing 200-year flood hazards like the project that can be mitigated. Overall, the hydrology and water quality impacts of the No Project Alternative would be less.

Land Use

Under the No Project Alternative, the SOIA area would remain an agricultural nature that is consistent with its current Sacramento County General Plan land use designation and zoning. This alternative would not result in any conflicts with existing land uses or divide an established community. No conflicts with plans adopted for the purpose of avoiding or mitigating a significant environmental impact would occur. The No Project Alternative would avoid the loss of open space lands identified for the project. Overall, land use impacts under this alternative would be less.

Noise and Vibration

The No Project Alternative would avoid construction noise that was identified for the project. Continued use of the SOIA area for agricultural use would also avoid operational noise impacts that could exceed

Sacramento County and City of Elk Grove noise standards. Therefore, the noise impacts of the No Project Alternative would be less.

Population and Housing

The No Project Alternative would not generate substantial new growth of residents or employment, and would not remove any housing. The project's growth potential (1,846 dwelling units; 5,540 residents; and 4,359 employees) was identified as a significant and unavoidable impact. Growth inducement impacts under this alternative would be less.

Public Services and Recreation

The No Project Alternative would not trigger the need for new or improved fire, police, or park facilities associated with the continuation of agricultural activities. While mitigation is available to reduce project impacts to public facilities, these impacts would be avoided under the No Project Alternative. Overall, the public service impacts of the No Project Alternative would be less.

Traffic, Transportation, and Circulation

The No Project Alternative would remain in agricultural operation and would avoid the project's significant and unavoidable traffic impacts to the operation of Hood-Franklin Road, Bruceville Road, Kammerer Road, Grant Line Road, and segments of Interstate 5 and State Route 99. This alternative would also avoid significant transit, bicycle, and pedestrian facility and service impacts of the project. Overall, the transportation impacts of the No Project Alternative would be less.

Utilities

Under the No Project Alternative, agricultural activities would continue to utilize groundwater wells and septic systems and would avoid the project's significant and unavoidable impacts related to the extension of off-site infrastructure. Solid waste generation would also be substantially reduced as compared to the project. The No Project Alternative would have fewer impacts than those that would occur with the project.

Hazards and Hazardous Materials

Under the No Project Alternative, there would not be the potential to expose new residents to sources of contamination from site development. While mitigation is available to reduce project hazards to a less-than-significant level, these impacts would be avoided under the No Project Alternative. Therefore, the hazard impacts of the No Project Alternative would be less.

6.4.2 Alternative 2: Reduced Sphere of Influence

This alternative would reduce the SOIA area from 480 acres to approximately 240 acres as shown in Exhibit 6-1. The mix of possible future land uses was based on the project's conceptual land use plan would consist of the following:

- 96.5 acres Residential (RD-4: 4 dwelling units per acre): 386 dwelling units (1,158 residents)
- 85.3 acres Residential (RD-5: 5 dwelling units per acre): 426 dwelling units (1,278 residents)
- 10 acres of park uses
- 10 acres for public elementary school site
- 19.6 acres commercial (549 jobs)
- 19.3 acres of business professional (3,474 jobs). This alternative could result in 1,034 fewer dwelling units (3,104 fewer residents) and 336 fewer jobs as to the project's conceptual land use plan.

This alternative was developed to reduce identified significant ground disturbance (e.g., biological and cultural resources, noise, air, GHG) and traffic operation impacts of the project.

EVALUATION OF ENVIRONMENTAL EFFECTS

Aesthetics

Like the project, Alternative 2 would result in alteration of the existing visual character of approximately half of the site and introduction of new light and glare sources to the area from public views. The reduced land area for the SOIA under Alternative 2 would lessen the extent of this impact for views along Bruceville Road, Kammerer Road, and a portion of Bilby Road, because development would be in the western portion of the site. The aesthetic impacts under Alternative 2 would be significant and unavoidable under project and cumulative conditions similar to the proposed SOIA. Alternative 2's visual and lighting impacts would be less than those that would occur with the project because of the reduced extent of future development potential.

Agricultural Resources

Alternative 2 would result in the loss of Important Farmland as well as prime agricultural land defined by LAFCo from potential future development. However, this alternative would retain approximately 240 acres of Important Farmland and LAFCo designated prime agricultural land because of the reduced SOIA area. Alternative 2 would also result in the significant and unavoidable land use compatibility impacts with adjacent agricultural operations identified for the project. Overall, the agricultural resource impacts of Alternative 2 would be less than those that would occur with the project.

Air Quality

Alternative 2 would generate lower air pollutant emissions (particulate matter and ozone precursors) from future construction and operational air emission sources because of the reduced size of the SOIA and development potential. However, these air quality impacts are anticipated to remain significant and unavoidable for this alternative like the project. This alternative would also result in significant air quality impacts related to TAC and potential odor generation similar to the project. Nonetheless, the air quality impacts of Alternative 2would be less than those that would occur with the project because of its reduced development potential.

Biological Resources

Alternative 2 would reduce the loss of grasslands, agricultural habitat, and trees in the SOIA area by approximately 240 acres as compared to the project. This acreage reduction would lessen the impacts on special-status plant and wildlife species known to occur in the region. While mitigation is available to reduce some project biological resource impacts to a less-than-significant level, with the exception of the loss of Swainson's hawk habitat, and could be applied to the project, significant biological impacts would still remain under this alternative. Nonetheless, the biological resource impacts of Alternative 2 would be less than those that would occur with the project because of its reduced development potential.

Cultural and Paleontological Resources

Alternative 2 would reduce impacts to archaeological, historical paleontological, and tribal cultural resources as a result of the smaller footprint that could be developed. Overall, impacts would be less than those that would occur with the project.

Energy

Alternative 2 would have a substantial reduction in operational and transportation energy demand as compared to the project as result of its smaller development potential (1,034 few dwelling units and 336 fewer jobs). Alternative 2 could still result in the need for the extension of off-site energy infrastructure that would result in significant and unavoidable impacts similar to the project. Overall, Alternative 2 would have substantially less energy demand impacts.

Greenhouse Gases Emissions

Alternative 2 would generate lower greenhouse gas (GHG) emissions compared to the project because of its smaller development potential (1,034 few dwelling units and 336 fewer jobs). Mitigation would be available

to reduce this alternative's impact similar to the project. Overall, the GHG emission impacts of Alternative 2 would be less than that would occur with the project.

Hydrology and Water Quality

Alternative 2's reduced development potential would result in less impervious surface area compared to future development potential under the project, which would reduce the volume of stormwater flows. Mitigation identified for the project would also address drainage and water quality impacts of Alternative 2. Overall, the hydrology and water quality impacts of Alternative 2 would be less than those that would occur with the project.

Land Use

This alternative would not result in any conflicts with existing land uses or divide an established community similar to the project. No conflicts with plans adopted for the purpose of avoiding or mitigating a significant environmental impact would occur. Alternative 2 would reduce the loss of open space lands by 240 acres as compared to the project. Overall, land use impacts under this alternative would be less to those that would occur with the project.

Noise and Vibration

Alternative 2's reduced development potential would reduce the duration, extent, and area over which construction noise impacts would occur compared to the project. This alternative would result in similar operational noise impacts that could exceed Sacramento County and City of Elk Grove noise standards because similar commercial uses would be developed under this alternative. Mitigation identified for the project would also address potential noise impacts of Alternative 2 that would reduce the impact to a less than significant level. Nonetheless, the noise impacts of Alternative 2 would be less than those that would occur with the project.

Population and Housing

Alternative 2 would have a reduced growth potential as compared to the project because of its smaller development potential (1,034 few dwelling units and 336 fewer jobs). Growth inducement impacts under this alternative would be less than those that would occur with the project.

Public Services and Recreation

Alternative 2 would trigger the need for new or improved fire, police, and park facilities similar to the project. However, this alternative would have a reduced demand for these services because of its reduced development potential. While mitigation is available to reduce project impacts to public facilities, these impacts would not be avoided under this alternative. Overall, the public service impacts of Alternative 2 would be less than those that would occur with the project.

Traffic, Transportation, and Circulation

Alternative 2's reduced development potential would result in reductions traffic impacts to the operation of Hood-Franklin Road, Bruceville Road, Kammerer Road, Grant Line Road, and segments of Interstate 5 and State Route 99. However, this impact would remain significant and unavoidable. This alternative would result in similar significant transit, bicycle, and pedestrian facility and service impacts identified for the project as none of these facilities exist in the SOIA area. Overall, the transportation impacts of Alternative 2 would be less than those that would occur with the project.

Utilities

Alternative 2's reduced development potential would result in decreases in water supply, wastewater service, and solid waste service demands. Specifically, this alternative would reduce water supply demand by approximately 710.6 acre-feet per year, wastewater generation by approximately 0.70 million gallons per day, and solid waste generation by approximately 8,791 cubic yards per year. This alternative would result in similar significant and unavoidable off-site infrastructure impacts as the project. Impacts of Alternative 2 would be less than those that would occur with the project.

Hazards and Hazardous Materials

Like the project, Alternative 2 could result potential exposure of new residents to sources of contamination during site development. Mitigation is available to reduce the project's and this alternative's hazards impacts to a less-than-significant level. Therefore, the hazard impacts of Alternative 2 would be similar to those that would occur with the project.

6.4.3 Alternative 3: Off-Site Alternative

This alternative would involve the establishment of the SOIA area adjacent to the proposed Elk Grove Multi Sport Complex that is proposed for annexation south of Grant Line Road (see Exhibit 6-2). This area was chosen because it is a large land area that is within Sacramento County's Urban Services Boundary. Additionally, this site is located adjacent to the Elk Grove Multi Sport Complex project area that includes a request for annexation and expansion of the City of Elk Grove's sphere of influence between the Multi Sport Complex site and the Union Pacific railroad line to the west. Similar to the project, location of a SOIA in this area would provide a logical expansion of the City's SOI. This alternative assumes the same conceptual land use mix as the project.

EVALUATION OF ENVIRONMENTAL EFFECTS

Aesthetics

Like the project, Alternative 3 would result in alteration of the existing visual character and introduction of new light and glare sources to the area from public views. Alternative 3 would alter public views along Grant Line Road that currently consist of agricultural lands and operations (e.g., Big Oak Nursery), residential development, and the Sunset Skyranch Airport. Further, this alternative would push urban development closer to the natural areas of the Deer Creek corridor. The aesthetic impacts under Alternative 3 would be significant and unavoidable under project and cumulative conditions similar to the proposed SOIA. Alternative 3's visual and lighting impacts would be similar to those that would occur with the project because of the magnitude of development that would occur within an area with agricultural visual characteristics.

Agricultural Resources

Alternative 3 would also result in the loss of Important Farmland and potentially prime agricultural land defined by LAFCo. Alternative 3 would also result in the significant and unavoidable land use compatibility impacts with adjacent agricultural operations identified for the project because surrounding land uses are primarily agricultural. Nonetheless, the agricultural resource impacts of Alternative 3 would be less than those that would occur with the project.

Air Quality

Alternative 3 would result in similar air pollutant emissions (particulate matter and ozone precursors) from future construction and operational air emission sources because of similar site development potential (i.e., size and intensity of development). Thus, air quality impacts are anticipated to remain significant and unavoidable for this alternative like the project. This alternative would also result in significant air quality impacts related to TAC and potential odor generation similar to the project as it would result in a similar land use mix. Therefore, the air quality impacts of Alternative 3 would be similar to those that would occur with the project.

Biological Resources

Alternative 3 would result in the loss of grasslands, agricultural habitat, and trees similar to the project. This would result in similar impacts on special-status plant and wildlife species known to occur in the region. Mitigation is available to reduce some project biological resource impacts to a less-than-significant level, with the exception of the loss of Swainson's hawk habitat. Therefore, the biological resource impacts of Alternative 3 would be similar to those that would occur with the project because of its similar development potential.

Cultural and Paleontological Resources

Alternative 3 would result in similar impacts to historical and paleontological resources as the project because a similar area of land would be developed. However, this alternative may have a higher potential to encounter archaeological resources and tribal cultural resources given its proximity to Deer Creek because significant cultural resources are typically more prevalent in proximity to watercourses. Overall, impacts would be similar to those that would occur the project.

Energy

Alternative 3 would have similar operational and transportation energy demands as the project because the same land use concept would be developed at this site. Alternative 3 would need to extend off-site energy infrastructure to the site and the construction of these facilities could result in significant and unavoidable impacts similar to the project. Overall, Alternative 3 would have similar energy demand impacts as the project.

Greenhouse Gases Emissions

Alternative 3 would generate similar GHG emissions as the project because the same land use concept would be developed. Mitigation would be available to reduce this alternative's impact similar to the project. Overall, the GHG emission impacts of Alternative 3 would be similar to those that would occur with the project.

Hydrology and Water Quality

Alternative 3 would have similar drainage and water quality impacts as the project because of its similar development potential. Mitigation identified for the project would also address drainage and water quality impacts of Alternative 3. This alternative could also have similar 200-year flood hazards associated with Deer Creek. Overall, the hydrology and water quality impacts of Alternative 3 would be similar those that would occur with the project.

Land Use

This alternative would not result in any conflicts with existing land uses or divide an established community similar to the project because unincorporated communities exist in the area. No conflicts with plans adopted for the purpose of avoiding or mitigating a significant environmental impact would occur. Alternative 3 would have the same loss of open space lands as compared to the project. Overall, land use impacts under this alternative would be similar to those that would occur with the project.

Noise and Vibration

Alternative 3 would result in similar construction noise that was identified for the project because noise-sensitive receptors exist north of Grant Line Road. This alternative would result in similar operational noise impacts that could exceed Sacramento County and City of Elk Grove noise standards associated with future commercial uses. Mitigation identified for the project would also address potential noise impacts of Alternative 3 would be similar to those that would occur with the project.

Population and Housing

Alternative 3 would have the same growth potential as the project because the same land use concept would be developed. Growth inducement impacts under this alternative would be similar those that would occur with the project.

Public Services and Recreation

While mitigation is available to reduce project impacts to public facilities, the extension of services and facility needs impacts would not be avoided under the project or this alternative. Overall, the public service impacts of Alternative 3 would be similar to those that would occur with the project.

Traffic, Transportation, and Circulation

Alternative 3 would relocate its traffic impacts to occur largely east of State Route 99. Road facilities that would likely support this alternative's traffic include Grant Line Road, Waterman Road, Bradshaw Road, Elk

Grove Boulevard, and segments of State Route 99. These traffic impacts would be anticipated to be significant and unavoidable. This alternative would result in similar significant transit, bicycle, and pedestrian facility and service impacts identified for the project. Overall, the transportation impacts of Alternative 3 would be similar those that would occur with the project.

Utilities

Alternative 3 would result in the same water supply, wastewater service, and solid waste service demands as the project and would require the same infrastructure upgrades and extensions to serve the development. Thus, impacts of Alternative 3 would be similar those that would occur with the project.

Hazards and Hazardous Materials

Alternative 3 would involve the redevelopment of the Big Oak Nursery and the Sunset Skyranch Airport, which is anticipated to result in a higher potential for on-site contamination hazards from these existing uses as compared to the project. Alternative 3 would also be within 0.6 mile of the Suburban Propane facility that could be exposed to hazards (fire and shrapnel) from accidents at Suburban Propane. Mitigation is available to reduce project and this alternative's hazards impact to a less-than-significant level. Therefore, the hazard impacts of Alternative 3 would be greater than those that would occur with the project.

6.4.4 Comparative Evaluation of Environmental Effects

Table 6-1 summarizes the environmental analyses provided above for the project alternatives.

| Table 6-1 | Comparison of the Environ | mental Impacts of the Alterna | tives in Relation to the Proposed Project |
|-----------|---------------------------|-------------------------------|---|
| | | | |

| Environmental Topic | Project | Alternative 1: No Project Alternative | Alternative 2: Reduced Sphere of Influence | Alternative 3: Off-Site |
|--|---|--|--|-------------------------|
| Aesthetics | Significant and Unavoidable | Less | Less | Similar |
| Agricultural Resources | Significant and Unavoidable | Less | Less | Less |
| Air Quality | Significant and Unavoidable | Less | Less | Similar |
| Biological Resources | Significant and Unavoidable | Less | Less | Similar |
| Cultural and Paleontological Resources | Less than Significant (with mitigation) | Less | Less | Greater |
| Energy | Significant and Unavoidable | Less | Less | Similar |
| Greenhouse Gas Emissions | Significant and Unavoidable | Less | Less | Similar |
| Hydrology and Water Quality | Less than Significant (with mitigation) | Less | Less | Similar |
| Land Use | Significant and Unavoidable | Less | Similar | Similar |
| Noise and Vibration | Significant and Unavoidable | Less | Less | Similar |
| Population and Housing | Significant and Unavoidable | Less | Less | Similar |

Table 6-1 Comparison of the Environmental Impacts of the Alternatives in Relation to the Proposed Project

| Significant and Unavoidable | Less | Less | |
|---|---|---|--|
| | | LESS | Similar |
| Significant and Unavoidable | Less | Less | Similar |
| Significant and Unavoidable | Less | Less | Similar |
| Less than Significant (with mitigation) | Less | Similar | Greater |
| | Unavoidable Significant and Unavoidable Less than Significant (with mitigation) | Unavoidable Significant and Unavoidable Less Less than Significant (with mitigation) Less | Unavoidable Significant and Unavoidable Less Less |

Source: Data compiled by Ascent Environmental

6.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

State CEQA Guidelines Section 15126.6 states that "If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." Here, the No Project Alternative is the environmentally superior alternative because all the significant impacts of the project would be avoided. However, the No Project Alternative would not meet any of the project's objectives.

Under Alternative 2, impacts to aesthetics, agricultural resources, air quality, biological resources, cultural and paleontological resources, energy, greenhouse gas emissions, hydrology and water quality, noise, public services and recreation, traffic, and utilities would be reduced, when compared to the project. Because it would result in less overall environmental impact than the project, the Reduced Sphere of Influence Alternative would be considered environmentally superior. However, the Reduced Sphere of Influence Alternative may result in irregular jurisdictional boundaries if the Kammerer Road extension is completed in the future.

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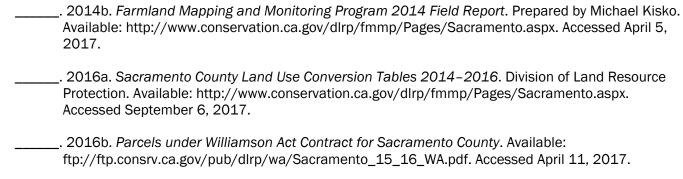
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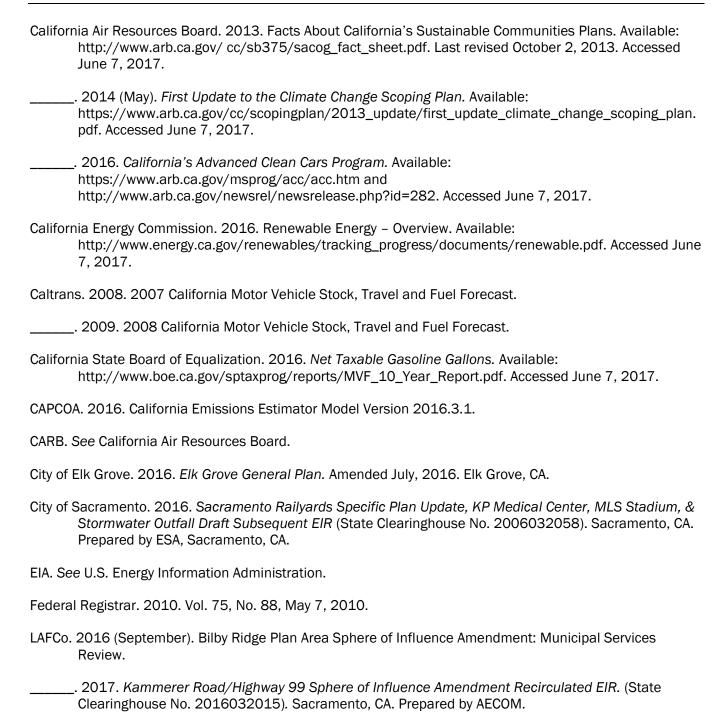
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