Draft

City of Elk Grove
Multi-Sport Complex and Southeast Industrial Annexation Area Supplemental Environmental Impact Report




Prepared for:

City of Elk Grove

AECOM

October 2020

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Multi-Sport Complex and Southeast Industrial Annexation Area
Supplemental Environmental Impact Report

Prepared for:

City of Elk Grove
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LIST OF EXHIBITS

LIST OF ACRONYMS AND ABBREVIATIONS

°C	Celcius
2019 SOIA EIR	SEIR supplements the 2019 SOIA EIR
2020 MTP/SCS	*2020 Metropolitan Transportation Plan/Sustainable Communities Strategy*
AB	Assembly Bill
ADT	Average daily traffic
ADWF	average dry weather flow
af/ac/yr	acre-feet per acre per year
afy	acre-feet per year
Alternative GSP	Alternative Groundwater Sustainability Plan
APN	Assessor's Parcel Number
AQMP	Air Quality Management Plans
ARB	California Air Resources Board
BACT	Best Available Control Technology
Basin Plan	Water Quality Control Plan for the Sacramento-San Joaquin River Basins
BMPs	best management practices
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 Agency
CalEEMod	California Emissions Estimator Model
CalGEM	California Geologic Energy Management Division
CalGreen	California Green Building Standards Code
CALGreen Code	California Green Building Standards Code
CAP	Climate Action Plan
CASQA	California Stormwater Quality Association
CBC	California Building Standards Code
CCR	California Code of Regulations
CCSD	Cosumnes Community Service District
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CGS	California Geological Survey
CHP	California Highway Patrol

CHRIS	California Historical Resources Information System
City	City of Elk Grove
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNPS	California Native Plant Society
CO	Carbon monoxide
Construction General Permit	General Permit for Storm Water Discharges Associated With Construction and Land Disturbance Activities (Order 2009-009-DWQ as amended by Order 2012-0006-DWQ)
CPTED	Crime Prevention Through Environmental Design
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CUPA	Certified Unified Program Agency
CVFPP	Central Valley Flood Protection Plan
CVP	Central Valley Project
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
dbh	diameter at breast height
DDT	dichlorodiphenyltrichloroethane
Delta	Sacramento-San Joaquin Delta
DOF	California Department of Finance
DPM	diesel particulate matter
DPR	California Department of Parks and Recreation
DTSC	Department of Toxic Substances Control
DWR	California Department of Water Resources
ECL	Emission Control Labels
EDD	California Employment Development Department
EGUSD	Elk Grove Unified School District
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessment
ESA	federal Endangered Species Act
ESDs	Equivalent Single-Family Dwelling Units
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FHWA-RD-77-108	FHWA Highway Noise Prediction Model

FIRMs	Flood Insurance Rate Maps
FMMP	Farmland Mapping and Monitoring Program
GC	General Commercial/Commercial Office
GHG	greenhouse gas
gpd	gallon per day
GSAs	Groundwater Sustainability Agencies
GSP	Groundwater Sustainability Plan
GVWR	gross vehicle weight rating
GWTP	Groundwater Water Treatment Plant
Handbook	Air Quality and Land Use Handbook: A Community Health Perspective
HI	Heavy Industrial
HVAC	heating, ventilation, and air conditioning
IEPR	Integrated Energy Policy Report
IPCC	Intergovernmental Panel on Climate Change
IWFM	Integrated Water Flow Model
kBtu	British thermal units
kV	kilovolt
LAFCo	Local Agency Formation Commission
lb/day	pounds per day
L_{dn}	day-night average sound level
L_{eq}	equivalent sound level
LI	Light Industrial
LID	low impact development
LOS	level of service
LRA	Local Responsibility Area
MBTA	Migratory Bird Treaty Act
MERV	Minimum Efficiency Reporting Value
mgd	million gallons per day
MM therms	million therms
mph	miles per hour
MPO	Metropolitan Planning Organization
MRZ	Mineral Resource Zone
MS4	Municipal Separate Storm Sewer System
MS4 Permit	permit to discharge stormwater from municipal separate storm sewer systems
MTP	Metropolitan Transportation Plan
MU	Mixed Use
MW	megawatts

NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCIC	North Central Information Center
NEPA	National Environmental Policy Act
NHTSA	National Highway Traffic and Safety Administration
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	U.S. Natural Resources Conservation Service
NRHP	National Register of Historic Places
OEHHA	Office of Environmental Health Hazard Assessment
OHWD	Omochumne-Hartnell Water District
OSHA	federal Occupational Health and Safety Administration
P/OS	Parks and Open Space
PCBs	polychlorinated biphenyls
PG&E	Pacific Gas and Electric Company
PGA	Peak horizontal ground acceleration
PM	Particulate matter
PM_{10}	particulate matter with an aerodynamic diameter less than 10 microns
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than 2.5 microns
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
ppv	peak particle velocity
proposed project	Multi-Sport Complex and Southeast Industrial Annexation Area Project
PWWF	peak wet weather flow
RC	Regional Commercial
ROG	reactive organic gases
RPS	renewable portfolio standard
RWQCB	Regional Water Quality Control Board
SACOG	Sacramento Area Council of Governments
SAFE	Safer Affordable Fuel Efficient
SAFE Rule	Safer Affordable Fuel Efficient Vehicles Rule
SAHM	Sacramento Area Hydrology Model
SASD	Sacramento Area Sewer District
SB	Senate Bill
SCGA	Sacramento Central Groundwater Authority
SCS	Sustainable Communities Strategy

SCWA	Sacramento County Water Agency
SEIR	Supplemental Environmental Impact Report
SEPA	SouthEast Policy Area
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMUD	Sacramento Municipal Utility District
SO_2	Sulfur dioxide
SOIA	Sphere of Influence amendment
SO_X	oxides of sulfur
SR	State Route
SRCSD	Sacramento Regional County Sanitation District
SRWTP	Sacramento Regional Wastewater Treatment Plant
SSHCP	South Sacramento Habitat Conservation Plan
SVAB	Sacramento Valley Air Basin
SWCV	Solid Waste Collection Vehicles
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TMDLs	Total Maximum Daily Loads
TRUs	transportation refrigeration units
UCMP	U.C. Berkeley Museum of Paleontology
UCSB	University of California, Santa Barbara
UDA	Urban Development Area
UPRR	Union Pacific Railroad
USB	Urban Services Boundary
USTs	underground storage tanks
VdB	vibration decibel
VELB	valley elderberry longhorn beetle
VMT	vehicle miles travelled
WDRs	Waste Discharge Requirements
WRF	Water Reclamation Facility
WSMP	Water Supply Master Plan
ZNE	zero net energy

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EXECUTIVE SUMMARY

ES.1 THE EIR PROCESS

The City of Elk Grove (City) has prepared this Draft Supplemental Environmental Impact Report (SEIR) for the Multi-Sport Complex and Southeast Industrial Annexation Project (proposed project) per the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations Section 15000 et seq.). This SEIR evaluates the environmental impacts of implementation of the proposed changes to the project, which was adopted in 2019. The purpose of an EIR is neither to recommend approval nor denial of a project. An EIR is an informational document used in the planning and decision-making process by the lead agency and responsible and trustee agencies.

The City has chosen to prepare a SEIR based on Section 15163(a) of the State CEQA Guidelines, because only minor additions or changes would be necessary to make the previous EIR adequate to the project in the changed situation. The SEIR will contain only the information necessary to make the previous EIR adequate for the project as revised (State CEQA Guidelines Section 15163[b]).

This Draft SEIR has been released for public review and to receive input from responsible and trustee agencies, and interested persons and organizations, as to the scope and content of the SEIR and the environmental information to be analyzed in connection with the proposed modifications to Multi-Sport Complex and Southeast Industrial Annexation Project. Written responses to significant environmental points raised in comments will be prepared and published in a Final SEIR. Together, the Draft SEIR, and the comments and responses received on the Draft SEIR, will constitute the Final SEIR.

ES.2 PROJECT SUMMARY

ES.2.1 PROJECT SETTING

The Project site consists of approximately 561 acres located south of Grant Line Road (near its intersection with Waterman Road) and east of the Union Pacific Railroad (UPRR) tracks and State Route (SR) 99. The Project site extends eastward past the intersection of Grant Line Road and Mosher Road, and extends southward to the Sacramento County Urban Services Boundary.

ES.2.2 SUMMARY PROJECT DESCRIPTION

The City is proposing a change in the proposed General Plan land use designations and pre-zoning designations for the project site compared to the array of uses assumed in the EIR certified by the Sacramento Local Agency Formation Commission (LAFCo) in May of 2019 for the Project site. The project site in its entirety was a part of a proposed Sphere of Influence amendment (SOIA), which was approved by LAFCo along with the EIR certification (2019 SOIA EIR). The area that was included in the approved Sphere of Influence amendment will not change as a result of the revised land uses that are proposed in this SEIR.

Revisions in the assumed land uses for the Project site focus on the approximately 100-acre City-owned parcel in the center of the project site. This parcel was formerly proposed for Public Open Space/Recreation and now would be designated for Light Industrial uses. The Project site would have a reduction in the land area of Parks

and Open Space, an increase in both Light Industrial and Heavy Industrial uses, a reduction in the amount of mixed General Commercial and Commercial Office uses, and a new use, Regional Commercial, proposed for 20 acres of land.

The on-site infrastructure needs at the project site were evaluated in the 2019 SOIA EIR. However, since the 2019 SOIA EIR was approved, additional detailed studies have been conducted relative to the infrastructure that would be required to serve the Project site. In particular, this SEIR evaluates the potential environmental impacts of proposed additional off-site drainage improvements.

This SEIR considers impacts associated with annexation and buildout of the Project site. Development of the Project site is assumed to start as soon as 2021 and continue for approximately 20 years. The specific timing of construction and operation of any individual use within the Project site is unknown, and subject to market conditions and other factors outside the control of the City. Construction of future development projects would require demolition and disposal of existing structures, grading and excavation, construction of building foundations, trenching and installation of utilities, paving of parking lots and internal roadways, lighting, and construction of commercial and industrial buildings subject to review under the City's zoning regulations and design guidelines. Project site development would require various permits and other types of approvals from agencies with a purview over air quality, biological resources, water quality, public services and utilities, and other topics.

ES.3 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Table ES-1 summarizes the impacts, mitigation measures, and resulting level of significance after mitigation for the relevant environmental issue areas evaluated for the proposed project. The table provides an overview. Details for each issue areas are included in the corresponding section of this SEIR.[1]

ES.4 ALTERNATIVES

CEQA Guidelines Section 15126.6(e)(2) states that a discussion of the "No Project" alternative must consider "what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans." For purposes of this SEIR, Alternative 1, the No-Project Alternative, assumes continued agricultural use on 527 acres and intensive industrial development on 41 acres. Alternative 2 is the Reduced Size Alternative. Under this alternative, development would be limited to the 100-acre City property and the Kendrick and Cypress Avenue properties, approximately 385 acres total. Alternative 1 would have the greatest number of reduced impacts and therefore Alternative 1: No Project Alternative would be the Environmentally Superior Alternative. Other than the No-Project Alternative, Alternative 2: Reduced Size Alternative would provide the most benefit relative to reducing environmental effects compared to the proposed Project. See Chapter 5 of this SEIR for more detail.

1 Please see Chapter 4 for cumulative impacts.

ES.5 AREAS OF CONTROVERSY KNOWN TO THE LEAD AGENCY

CEQA Guidelines Section 15123 suggests that an EIR include a summary of "areas of controversy known to the Lead Agency" and "[i]ssues to be resolved." Topics addressed in responses to the City's NOP represent the most comprehensive list of issues of interest for the proposed Project and include:

- Cultural and Tribal Cultural Resources
- Drainage improvements and avoiding mosquito breeding potential
- Water supply, including groundwater
- Conversion of agricultural land to urban uses
- Special-status species and sensitive habitats

Table ES-1. Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
3.2 Aesthetics			
Impact 3.2-1: Substantial Degradation of Existing Visual Character.	S	No feasible mitigation measures	SU
Impact 3.2-2: Potential Loss of Trees of Local Importance.	PS	**Mitigation Measure 3.2-2: Prepare and Implement a Tree Mitigation Plan to Reduce Effects on Trees of Local Importance (2019 SOIA EIR Mitigation Measure 3.2-2).** Mitigation for the removal of trees of local importance shall be provided according to the Elk Grove Municipal Code, Title 19, "Trees," Chapter 19.12, "Tree Preservation and Protection." Mitigation will provide 1 new inch diameter at breast height (dbh) of tree for each inch dbh lost (1:1 ratio) through on-site or off-site replacement, payment of an in-lieu fee, or on-site or off-site relocation.	LTS
Impact 3.2-3: Light and Glare Effects from New Lighting Sources.	LTS	**Mitigation Measure 3.2-3a: Minimize Over-Lighting (2019 SOIA EIR Mitigation Measure 3.2-3a).** The City of Elk Grove will implement the following specific measures to minimize over-lighting in the SOIA Area, including the multi-sport park complex, consistent with Elk Grove Zoning Code: • Exterior lighting shall be architecturally integrated with the building style, material and colors and be of a human scale. • Design pole heights and light shielding to minimize spillover and skyglow. • Schedule the use of outdoor lights and use an automated lighting control system to turn off unused lights. • The hours of operation for the lighting system for any game or event shall not exceed one (1) hour after the end of the event. • Schedule field use to emphasize using fields at the southern end of the site to increase the distance of night lighting from residential areas. • Prepare and implement an operational plan to meet or exceed field lighting standards for field sports events established by oversight organizations (e.g., California Interscholastic Federation).	LTS

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Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		• Use methods to provide lower intensity light ("dimming") for events that require less lighting and during post-event periods as teams leave the field and spectators move toward the parking lots. • Implement a monitoring plan to ensure that light levels in adjacent residential areas do not exceed thresholds listed in the Elk Grove Design Guidelines. **Mitigation Measure 3.2-3b: Minimize Glare (2019 SOIA EIR Mitigation Measure 3.2-3b).** Consistent with Elk Grove Zoning Code, future development within the SOIA Area shall avoid the use of materials that could cause glare, such as reflective, mirrored, or black glass. Buildings that are allowed to use semi-reflective glass will be oriented to minimize the reflection of sunlight to sensitive receptors. Where the light source from an outdoor light fixture is visible beyond the property line, shielding shall be required to reduce glare so that the light source is not visible from within any residential dwelling unit..	
3.3 Agricultural Resources			
Impact 3.3-1: Direct and Indirect Loss of Agricultural Land, Including Farmland of Statewide Importance.	S	**Mitigation Measure 3.3-1: Preserve Agricultural Land (2019 SOIA EIR Mitigation Measure 3.3-1).** Project applicants shall protect one (1) acre of existing farmland land of equal or higher quality for each acre of Farmland of Statewide Importance that would be developed as a result of the project. 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 substantially impairs or diminishes 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 preservation of farmland may be done at one time, or in increments with the buildout of the Project site.	SU

Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		The total acres of land conserved will be based on the total on-site agriculture acreage converted to urban uses. Conserved agriculture areas may include areas within 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 Project site; however, the preserved farmland shall at a minimum be located inside Sacramento County. Conservation easement content standards shall include, at a minimum: land encumbrance documentation; documentation that the easements are permanent, monitored, and appropriately endowed for administration, monitoring, and enforcement of the easements; prohibition of activity which substantially impairs or diminishes the agricultural productivity of the land; and protection of water rights. The following or equally effective minimum conservation easement content standards are required: a) All owners of the agricultural/wildlife habitat mitigation land shall execute the document encumbering the land. b) The document shall be recordable and contain an accurate legal description of the agricultural/wildlife habitat mitigation land. c) 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. d) 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. e) 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.	

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Table ES-1. Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		f) An agricultural/wildlife habitat mitigation monitoring fee is required to cover the costs of administering, monitoring, and enforcing the document. g) 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. h) 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. City approval is required for the selection of farmland proposed for preservation.	
Impact 3.3-2: Potential Conflict with Existing On-site and Off-site Williamson Act Contracts.	S	**Implement Mitigation Measure 3.3-1 (Preserve Agricultural Land).**	SU
Impact 3.3-3: Conflict with Existing Off-site Agricultural Operations.	PS	**Mitigation Measure 3.3-3: Prepare an Agricultural Land Use Compatibility Plan (2019 SOIA EIR Mitigation Measure 3.3-3)** Prior to the approval of any development project for a site that is adjacent to ongoing agricultural cultivation, the project applicant shall prepare an agricultural land use compatibility plan. The plan shall include establishing a buffer zone; providing additional suitable barriers, such as on-site fencing or walls, between the edge of development and the adjacent agricultural operations; or other measures, as directed by the City of Elk Grove. The City of Elk Grove would verify that the agricultural land use compatibility plan, as prepared, will reduce conflicts between ongoing agricultural operations and adjacent urban uses before issuance of grading permits for future development within the SOIA Area, including the multi-sports complex.	LTS
Impact 3.3-4: Conflict with Existing Zoning.	S	No feasible mitigation measures	SU
3.4 Air Quality			
Impact 3.4-1: Generation of temporary, short-term, construction-related emissions of criteria air pollutants and ozone precursors.	PS	**Mitigation Measure 3.4-1a: Implement the SMAQMD Basic Construction Emission Control Practices and Enhanced**	LTS

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Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		Exhaust Control Practices (2019 SOIA EIR Mitigation Measure 3.4-1a) Regardless of the significance determination, all construction projects are required to implement the SMAQMD Basic Construction Emission Control Practices for controlling fugitive dust at construction sites. For projects that would generate maximum daily NO_X emissions in exceedance of the SMAQMD threshold of significance, the SMAQMD recommends implementation of the Enhanced On-site Exhaust Control measures for off-road construction equipment. The SMAQMD requires projects that exceed the PM_{10} and $PM_{2.5}$ emissions thresholds after implementation of the Basic Construction Emission Control Practices to implement all feasible and applicable measures of the Enhanced Fugitive PM Dust Control Practices (SMAQMD 2020a). During construction of off-site improvements, and at the time of submittal of any application for development within the Project site, the City of Elk Grove shall require the implementation of then current SMAQMD Basic Construction Emission Control Practices as a condition of approval. For those projects that exceed the applicable thresholds of significance for emissions of criteria air pollutants or ozone precursors, the City of Elk Grove shall require the implementation of the Enhanced On-site Exhaust Control measures to address exceedances of NO_X emissions thresholds and the implementation of Enhanced Fugitive PM Dust Control Practices to address continued exceedances of PM_{10} and/or $PM_{2.5}$ thresholds of significance. a. Basic Construction Emission Control Practices identified by the SMAQMD as listed below, or as they may be updated in the future: – Control of fugitive dust is required by District Rule 403 and enforced by District staff. – 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.	

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Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		– Cover or maintain at least 2 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 track out mud or dirt onto adjacent public roads at least once a day. Use of dry powered 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 be 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) and 2485]. Provide clear signage that posts this requirement for workers at the entrances to the site. – Provide current certificate(s) of compliance for ARB's In-Use Off-Road Diesel-Fueled Fleets Regulation [California Code of Regulations, Title 13, sections 2449 and 2449.1]. – Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determine to be running in proper condition before it is operated. b. If, after application of the Basic Construction Emission Control Practices, emissions would still exceed SMAQMD threshold of significance for NO_X, implement the SMAQMD Enhanced On-site Exhaust Control Practices as listed below, or as they may be updated in the future: – Provide a plan, for approval by SMAQMD, demonstrating that the heavy-duty (50 horsepower [hp] or more) off-road vehicles, including owned, leased, and subcontractor vehicles, to be used 8 hours or more during the construction project will achieve a project wide fleet-	

Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		average 10 percent NO_X reduction compared to the most current California Air Resources Board (ARB) fleet average that exists at the time of construction. The plan shall have two components: an initial report submitted before construction and a final report submitted at the completion. ▪ Submit the initial report at least four (4) business days prior to construction activity. ▪ Provide project information and construction company information. ▪ Include equipment type, horsepower rating, engine model year, projected hours of use, and the ARB equipment identification number for each piece of equipment in the plan. Incorporate all owned, leased and subcontracted equipment to be used. ▪ Submit the final report at the end of the job, phase, or calendar year, as pre-arranged with SMAQMD staff and documented in the approval letter, to demonstrate continued project compliance. – SMAQMD staff and/or other officials may conduct periodic site inspections to determine compliance. Nothing in the mitigation shall supersede other air district, state or federal rules or regulations. – The mitigation is applicable until full implementation of ARB In-Use Off-Road Regulation is in place, expected January 1, 2028. c. If, after application of the Basic Construction Emission Control Practices, emissions would still exceed SMAQMD threshold of significance for PM_{10} and/or $PM_{2.5}$, implement the SMAQMD Enhanced Fugitive PM Dust Control Practices as listed below, or as they may be updated in the future: – 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 miles per hour.	

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Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		– 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. – Install wheel washers for all existing 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 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.	
		Mitigation Measure 3.4-1b: Use Off-Site Mitigation Fee for NOx Emissions Generated by Construction (2019 SOIA EIR Mitigation Measure 3.4-1b) As projects are proposed, the City will assess the effectiveness of Basic Construction Emission Control Practices and Enhanced On-site Exhaust Control Practices for addressing NO_X emissions relative to SMAQMD threshold of significance. If, after development of project details and scheduling, any project within the Project site would result in NO_X emissions that exceed the SMAQMD threshold of significance, even after implementation of the Basic Construction Emission Control Practices and Enhanced On-site Exhaust Control Practices, the subject project will participate in SMAQMD's off-site mitigation fee program. The mitigation fee will be set at a level that would bring NO_X emissions to a less-than-significant level (i.e., less than the SMAQMD Thresholds of Significance at that time). Whether the fee is needed, and if it is needed, determining the fee amount shall be calculated when the daily construction emissions can be more accurately determined (based on actual equipment use and scheduling). Calculation of fees shall occur in consultation with SMAQMD staff before the approval of grading plans by the City.	

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Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Impact 3.4-2: Generation of long-term operational emissions of criteria air pollutants and ozone precursors.	S	**Mitigation Measure 3.4-2: Implement Strategies to Reduce Potential Operational Emissions (2019 SOIA EIR Mitigation Measure 3.4-2)** For future development projects that may result in operational emissions exceeding the SMAQMD thresholds of significance, the City of Elk Grove shall require the implementation of strategies to reduce operational ozone precursors. This can be in the form of an Air Quality Mitigation Plan or another enforceable mechanism. This would be submitted to SMAQMD for review and approval prior to the issuance of a building permit. The performance standard is to achieve a reduction in, or offset of operational ozone precursor emissions by at least 35 percent of the total mobile-source emissions or by 15 percent for areas that have a land use designation under the City's General Plan that is consistent with the Metropolitan Transportation Plan/Sustainable Communities Strategy and applicable State Implementation Plan, as well as all feasible PM reduction measures for future development that would exceed the SMAQMD thresholds of significance. Reduction strategies can include policies and emissions reduction measures demonstrating compliance with the City of Elk Grove's General Plan, including policies MOB-1-1, MOB-3-1, MOB-3-2, MOB-3-7, MOB-3-15, MOB-3-16, MOB-4-1, MOB-4-5, NR-4-1, NR-4-4, NR-6-5, and NR-6-7 (or equivalent measures as may be amended), in addition to reduction measures recommended by the SMAQMD, which may include the use of offsets once all other feasible measures have been exhausted. If the performance standard cannot be fulfilled with an Air Quality Mitigation Plan, the City of Elk Grove will consult with the SMAQMD regarding the use of an off-site mitigation fee. Any fee will be subject to consultation between SMAQMD and the City of Elk Grove.	SU
Impact 3.4-3: Exposure of sensitive receptors to substantial pollutant concentrations			
Exposure of sensitive receptors to localized concentrations of carbon monoxide (CO).	LTS	No mitigation measures are required.	LTS

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Table ES-1. Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Exposure of sensitive receptors to toxic air contaminant emissions during construction.	PS	**Mitigation Measure 3.4-3a: Implement Mitigation Measure 3.4-1a**	LTS
Exposure of sensitive receptors to toxic air contaminant emissions during operations.	PS	**Mitigation Measure 3.4-3b: Implement Guidelines in the California Air Resources Board's Air Quality and Land Use Handbook: A Community Health Perspective (2019 SOIA EIR Mitigation Measure 3.4-5)** The City of Elk Grove shall require, as a part of proposed development projects, the implementation of strategies to avoid exposure of sensitive receptors to substantial toxic air contaminant pollutant concentrations. Projects that would result in substantial TAC emissions directly or indirectly (e.g., industrial sources), that would expose sensitive receptors to substantial TAC concentrations (e.g., residential land uses located near existing TAC sources), the City of Elk Grove will implement ARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook) guidance concerning land use compatibility with regard to sources of TAC emissions, or ARB guidance as it may be updated in the future. If these guidelines are infeasible, and a project would have the potential to generate substantial TAC emissions or expose sensitive receptors to substantial TAC pollutant concentrations, the City will require project-level analysis and appropriate mitigation, as necessary, to ensure that sensitive receptors are not exposed to substantial pollutant concentrations. In communication with the SMAQMD, the City will require, if necessary, a site-specific analysis for operational activities to determine whether health risks would exceed applicable health risk thresholds of significance. Site-specific analysis may include screen level analysis, dispersion modeling, and/or a health risk assessment, consistent with applicable guidance from the SMAQMD. Analyses shall take into account regulatory requirements for proposed uses. If the results of analysis determine that the performance standard for this mitigation would be exceeded, actions shall be taken to reduce potential operational impacts which may include, but not necessarily limited to:	LTS

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Table ES-1. Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		• locating air intakes and designing windows to reduce particulate matter exposure by, for example, not allowing windows facing the source to open; • providing electrification hook-ups for TRUs to avoid diesel-fueled TRUs continuing to operate at loading docks during loading and unloading operations; • requiring the TAC-generating activity (e.g., loading docks) be located away from sensitive receptors; • incorporating exhaust emission controls on mobile and/or stationary sources (e.g., filters, oxidizers); • develop and implement a dock management system at the time of occupancy to minimize on-site idling below regulatory limits; • require all on-site user owned and operated trucks with transportation refrigeration units to be capable of plugging into power at loading docks and require plug-in when at the loading dock; • utilize on-site cargo and material handling equipment that is the lowest emitting equipment available at the time of occupancy; • evaluate the potential to electrify a portion of entirety of an on-site user-owned and operated truck fleet; • evaluate the potential to consolidate delivery or haul truck trips to increase the load and decrease vehicle trips; • provide building air filtration units with a Minimum Efficiency Reporting Value (MERV) that is adequate to address adjacent sensitive land uses according to performance standards of this mitigation measure; • Ensure adequate distance between existing and planned sensitive receptors and gasoline dispensing facilities, based on the proposed size and design of any gasoline-dispensing facilities. • The City will require the project applicant(s) to identify and implement feasible mitigation measures to reduce any potentially significant effect and communicate with SMAQMD to identify measures to reduce exposure of	

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Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		sensitive receptors to substantial pollutant concentrations to levels consistent with thresholds recommended by the SMAQMD applicable at the time the project is proposed. Agreed upon feasible mitigation actions shall be documented as a project condition of approval.	
Exposure of sensitive receptors to long-term emissions of criteria air pollutants and precursors.	LTS	No mitigation measures are required.	LTS
Impact 3.4-4: Result in Other Emissions (such as those leading to odors) Adversely Affecting a Substantial Number of People.	PS	**Mitigation Measure 3.4-6: Reduce Exposure of Sensitive Receptors to Odorous Emissions (2019 SOIA EIR Mitigation Measure 3.4-6).** Projects that propose uses that could expose sensitive receptors to objectionable odors shall implement strategies to avoid exposure of sensitive receptors to objectionable odors. • Project applicant(s) for residential development in areas adjacent to ongoing agricultural operations shall include a disclosure clause advising buyers and tenants of the potential adverse odor impacts in the deeds to all residential properties. Residential subdivisions shall provide notification to buyers in writing of odors associated with existing dairies, agricultural burning, and decay of agricultural waste. • For existing odor-producing sources, sensitive receptors shall be sited as far away as possible from the existing sources. • For new project-generated odor-producing sources, sensitive receptors shall be sited as far away as possible from the new sources. • Apply SMAQMD-Recommended Odor Screening Distances in the siting of land uses.	LTS
3.5 Biological Resources			
Impact 3.5-1: Loss of Habitat for Special-Status Plant Species.	PS	**Mitigation Measure 3.5-1a: Minimize the Temporary Off-Site Construction Impact Footprint.** • During final project design and siting, minimize the temporary project footprint to the areas necessary for construction, and select locations that are already disturbed or developed to the greatest extent feasible.	LTS

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Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		• Avoid known occurrences of all special-status species, wetlands, riparian habitat, and sensitive natural communities to the greatest extent feasible. • Minimize grading to the greatest extent feasible to avoid clearing of trees and shrubs.	
		Mitigation Measure 3.5-1b: Conduct Special-status Plant Surveys; Implement Compensatory Mitigation for Special-status Plants (2019 SOIA EIR Mitigation Measure 3.5-1). Before any vegetation removal or ground-disturbing activities, both on- and off-site, the following measures shall be implemented to mitigate the potential loss of special-status plants: • Participate in the South Sacramento Habitat Conservation Plan through payment of the appropriate SSHCP Fee and/or dedication of land meeting SSCHP criteria and compliance with relevant Avoidance and Minimization Measures as detailed in the City's Memorandum of Agreement with the South Sacramento Conservation Agency for Becoming a Participating Special Entity in the South Sacramento Habitat Conservation Plan; OR • Retain a qualified botanist to conduct protocol-level preconstruction special-status plant surveys for potentially occurring species following the CDFW rare plant survey protocols (CDFW 2018) (or the most recent CDFW rare plant survey protocols). All plant species encountered shall be identified to the taxonomic level necessary to determine species status. The surveys shall be conducted no more than 5 years prior and no later than the blooming period immediately preceding the approval of a grading or improvement plan or any ground disturbing activities, including grubbing or clearing. • Notify CDFW, as required by the California Native Plant Protection Act, if any special-status plants are found. Notify USFWS if any plant species listed under the ESA are found. • Develop a mitigation and monitoring plan to compensate for the loss of special-status plant species found during preconstruction surveys, if any. The mitigation and	

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Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		monitoring plan shall be submitted to CDFW or USFWS, as appropriate depending on species status, for review and comment. The City shall consult with these entities, as appropriate, depending on species status, before approval of the plan to determine the appropriate mitigation measures for impacts on any special-status plant population. Mitigation measures may include preserving and enhancing existing on-site populations, creation of off-site populations on project mitigation sites through seed collection or transplantation, and/or preserving occupied habitat off-site in sufficient quantities to offset loss of occupied habitat or individuals. • If transplantation is part of the mitigation plan, include the following elements in the plan: a description and map of mitigation sites; details on the methods to be used, including collection, storage, propagation, receptor site preparation, installation, long-term protection and management, and monitoring and reporting requirements; remedial action responsibilities should the initial effort fail to meet long-term monitoring requirements; and sources of funding to purchase, manage, and preserve the sites. The following performance standards shall be applied: – The extent of occupied area and the flower density in compensatory reestablished populations shall be equal to or greater than the affected occupied habitat and shall be self-producing. – Reestablished populations shall be considered self-producing when: ▪ plants reestablish annually for a minimum of 5 years with no human intervention, such as supplemental seeding; and ▪ reestablished habitats contain an occupied area and flower density comparable to existing occupied habitat areas in similar habitat types. If off-site mitigation includes dedication of conservation easements, purchase of mitigation credits, or other off-site conservation measures, the details of these measures shall be included in the mitigation plan, including information on	

Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		responsible parties for long-term management, conservation easement holders, long-term management requirements, and other details, as appropriate, to target the preservation of long-term, viable populations.	
		Mitigation Measure 3.5-1c: Implement an Off-Site Revegetation and Weed Control Plan. To control invasive/noxious weeds, particularly in the off-site improvement areas, implement the following actions to avoid and minimize the spread or introduction of invasive plant species: • Clean construction equipment and vehicles in a designated wash area prior to entering and exiting the construction site. • Educate construction supervisors and managers about invasive plant identification and the importance of controlling and preventing the spread of invasive plant infestations. • Treat small, isolated infestations with eradication methods that have been approved by or developed in conjunction with CDFW and USFWS to prevent or destroy viable plant parts or seeds. • Minimize surface disturbance to the greatest extent feasible to complete the work. • Use native, noninvasive species or nonpersistent hybrids in erosion-control plantings to stabilize site conditions and prevent invasive plant species from colonizing. • Use weed-free imported erosion-control materials (or rice straw) in upland areas. • One year after construction, conduct a monitoring visit to each active or previously active (within 1 year) improvement footprint to ensure that no new occurrences of invasive plant species have become established. Reclaim all areas disturbed by project construction, including temporary disturbance areas around construction sites, laydown/staging areas, and temporary access roads, using a locally sourced native and naturalized seed mix in ruderal and natural areas; or reclaim to the pre-existing agricultural condition, if temporary impacts occur in agricultural lands. A	

Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		qualified biologist with demonstrated experience with the habitat to be restored shall have oversight for the selection of reclamation species.	
		Implement Mitigation Measure 3.4 1a (Implement the SMAQMD Basic Construction Emission Control Practices and Enhanced Exhaust Control Practices).	
Impact 3.5-2: Adverse Effects on Valley Elderberry Longhorn Beetle Habitat.	PS	**Implement Mitigation Measure 3.5-1a (Minimize the Temporary Off-Site Construction Impact Footprint).**	LTS
		Mitigation Measure 3.5-2a: Conduct VELB Surveys (2019 SOIA EIR Mitigation Measure 3.5-2a). Before any vegetation removal or ground-disturbing activities for construction both on- and off-site, the following measure shall be implemented to mitigate the potential for impacts on VELB: A qualified biologist shall survey for the presence of elderberry shrubs with stems measuring than 1-inch diameter at ground level. Surveys shall be conducted in accordance with USFWS' Conservation Guidelines for the Valley Elderberry Longhorn Beetle (USFWS 1999). If no elderberry shrubs with one or more stems measuring 1 inch or greater in diameter at ground level are documented, no further mitigation is required.	
		Mitigation Measure 3.5-2b: Establish a Construction Buffer and Initiate Consultation with USFWS (2019 SOIA EIR Mitigation Measure 3.5-2b). If elderberry shrubs are detected with stems greater than 1 inch in diameter and with evidence of VELB occupancy in the project site or the off-site improvement areas, the following measures shall be implemented to avoid, minimize, or mitigate effects on VELB, in accordance with USFWS' *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (USFWS 1999): • Fence and flag all areas to be avoided during construction activities. In areas where encroachment on the 100-foot buffer has been approved by the Service, provide a minimum setback of at least 20 feet from the dripline of each elderberry plant.	

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Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		• Brief contractors and work crews about the status of the beetle and the need to avoid damaging the elderberry plants and the possible penalties for not complying with these requirements. • Erect signs every 50 feet along the edge of the avoidance area with the following information: "This area is habitat of the VELB, a threatened species, and must not be disturbed. This species is protected by the ESA, as amended. Violators are subject to prosecution, fines, and imprisonment." The signs should be clearly readable from a distance of 20 feet, and must be maintained for the duration of construction. If avoidance of an elderberry shrub and establishment of a 100-foot buffer is not practicable, initiate consultation with USFWS to determine if Incidental Take authorization need to be obtained from the USFWS, and if compensatory mitigation is required according to the guidelines identified in USFWS' Conservation Guidelines for the Valley Elderberry Longhorn Beetle (USFWS 1999). This may include, but is not limited to, establishment of a conservation area to be maintained in perpetuity, transplanting elderberry shrubs that cannot be avoided, planting elderberry seedlings, planting associated native vegetation, and monitoring and maintenance of the conservation area. With USFWS approval, payment to a mitigation bank or payment into an in-lieu fee fund may be used to satisfy this measure.	
Impact 3.5-3: Loss of Nesting and Foraging Habitat for Special-Status and Other Protected Raptors	PS	**Implement Mitigation Measure 3.5-1a (Minimize the Temporary Off-Site Construction Impact Footprint).**	LTS SU (for Swainson's hawk only)
		Mitigation Measure 3.5-3a: Avoid Direct Loss of Swainson's Hawk and Other Raptors (2019 SOIA EIR Mitigation Measure 3.5-3a). Before the start of construction activities both on- and off-site, the following measures shall be implemented to mitigate the potential loss of nesting Swainson's hawks and other nesting raptors: • Tree and vegetation removal shall be completed during the nonbreeding season for raptors (September 1–February 15).	

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Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		• To avoid, minimize, and mitigate potential impacts on Swainson's hawk and other raptors (not including burrowing owl) nesting on or adjacent to the project site or off-site improvement areas, retain a qualified biologist to conduct preconstruction surveys and identify active nests on and within 0.5 mile of the project site for construction activities conducted during the breeding season (March 1–September 15). The surveys shall be conducted before the approval of grading and/or improvement plans (as applicable) and no less than 14 days and no more than 30 days before the beginning of construction. Guidelines provided in the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in the Central Valley* (Swainson's Hawk Technical Advisory Committee 2000) or future applicable updates to this guidance shall be followed for surveys for Swainson's hawk. If no nests are found, no further mitigation will be required. • Impacts on nesting Swainson's hawks and other raptors shall be avoided by establishing appropriate buffers around active nest sites identified during preconstruction raptor surveys. No project activity shall commence within the buffer areas until a qualified biologist has determined, in consultation with CDFW, the young have fledged, the nest is no longer active, or reducing the buffer would not result in nest abandonment. The buffer distance for Swainson's hawk nests shall be determined by a qualified biologist and the City, in consultation with CDFW, based on the distance required to avoid adversely affecting the nest(s). • The appropriate no-disturbance buffer for other raptor nests (i.e., species other than Swainson's hawk) shall be determined by a qualified biologist based on site-specific conditions, the species of nesting bird, nature of the project activity, visibility of the disturbance from the nest site, and other relevant circumstances. Monitoring of all active raptor nests by a qualified biologist during construction activities will be required if the activity has potential to adversely affect the nest. If construction activities cause the nesting bird to vocalize, make defensive flights at	

Table ES-1. Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		intruders, get up from a brooding position, or fly off the nest, then the no-disturbance buffer shall be increased until the agitated behavior ceases. The qualified biologist will have the authority to shut down construction activities within a portion or all of a construction site if necessary to avoid nest abandonment or take of individuals. The exclusionary buffer will remain in place until the chicks have fledged or as otherwise determined appropriate by a qualified biologist.	
		Mitigation Measure 3.5-3b: Avoid Loss of Burrowing Owl (2019 SOIA EIR Mitigation Measure 3.5-3b). Before the start of construction activities both on- and off-site, the following measures shall be implemented to mitigate the potential loss of burrowing owl: • To avoid, minimize, and mitigate potential impacts on burrowing owl, retain a qualified biologist to conduct focused breeding and nonbreeding season surveys for burrowing owls in areas of suitable habitat on and within 1,500 feet of the project site. Surveys will be conducted before the start of construction activities and in accordance with Appendix F of CDFW's *Staff Report on Burrowing Owl Mitigation* (DFG 2012) or the most recent CDFW protocols. • If no occupied burrows are found, a letter report documenting the survey methods and results will be submitted to the City and CDFW and no further mitigation will be required. • If an active burrow is found during the nonbreeding season (September 1 through January 31), owls will be relocated to suitable habitat outside of the project area using passive or active methodologies developed, in consultation with CDFW, and may include active relocation to preserve areas if approved by CDFW and the preserve managers. No burrowing owls will be excluded from occupied burrows until a burrowing owl exclusion and relocation plan is developed and approved by CDFW. • If an active burrow is found during the breeding season (February 1 through August 31), occupied burrows will not be disturbed and will be provided with a 150- to 1,500-foot protective buffer unless a qualified biologist verifies through	

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Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		noninvasive means that either: (1) the birds have not begun egg laying, or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. The size of the buffer will depend on the time of year and level of disturbance, as outlined in the CDFW Staff Report (DFG 2012:9) or the most recent CDFW protocols. Once the fledglings are capable of independent survival, the owls will be relocated to suitable habitat outside the project area, in accordance with a burrowing owl exclusion and relocation plan developed in consultation with CDFW and the burrow will be destroyed to prevent owls from reoccupying it. No burrowing owls will be excluded from occupied burrows until a burrowing owl exclusion and relocation plan is approved by CDFW. Following owl exclusion and burrow demolition, the site shall be monitored by a qualified biologist to ensure burrowing owls do not recolonize the site before construction. • If active burrowing owl nests are found on the project site and these nest sites are lost as a result of implementing the project, the project applicant shall mitigate the loss through preservation of other known nest sites in Sacramento County, at a minimum ratio of 1:1, according to the provisions of a mitigation and monitoring plan for the compensatory mitigation areas. • The mitigation and monitoring plan will include detailed information on the habitats present within the preservation areas, the long-term management and monitoring of these habitats, legal protection for the preservation areas (e.g., conservation easement, declaration of restrictions), and funding mechanism information (e.g., endowment). All burrowing owl mitigation lands shall be preserved in perpetuity and incompatible land uses shall be prohibited in habitat conservation areas. Burrowing owl mitigation land shall be transferred, through either conservation easement or fee title, to a third-party, nonprofit conservation organization (Conservation Operator), with the City and CDFW named as third-party beneficiaries. The Conservation Operator shall be a qualified conservation	

Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		easement land manager that manages land as its primary function. Additionally, the Conservation Operator shall be a tax-exempt nonprofit conservation organization that meets the criteria of Civil Code Section 815.3(a) and shall be selected or approved by the City, after consultation with CDFW. The City, after consultation with CDFW and the Conservation Operator, shall approve the content and form of the conservation easement. The City and the Conservation Operator shall each have the power to enforce the terms of the conservation easement. The Conservation Operator shall monitor the easement in perpetuity to ensure compliance with the terms of the easement.	
		Mitigation Measure 3.5-3c: Implement the City of Elk Grove Swainson's Hawk Foraging Habitat Mitigation Program (2019 SOIA EIR Mitigation Measure 3.5-3c). • Participate in the South Sacramento Habitat Conservation Plan through payment of the appropriate SSHCP Fee and/or dedication of land meeting SSCHP criteria and compliance with relevant Avoidance and Minimization Measures as detailed in the City's Memorandum of Agreement with the South Sacramento Conservation Agency for Becoming a Participating Special Entity in the South Sacramento Habitat Conservation Plan; OR • Before the start of construction activities both on- and off-site, project applicants shall demonstrate compliance with the City's Swainson's Hawk Foraging Habitat Mitigation Program as it exists in Chapter 16.130 of the Municipal Code, or as it may be updated in the future. The City of Elk Grove will consult with the County of Sacramento to seek to develop an approach to mitigation for loss of Swainson's hawk foraging habitat that integrates with the SSHCP Conservation Strategy Biological Goals and Objectives for this species and with the interconnected landscape-level preserve system envisioned in the SSHCP.	
Impact 3.5-4: Loss and Disturbance of Nesting Habitat for Special-Status Birds and Common Nesting Birds.	PS	**Implement Mitigation Measure 3.5-1a (Minimize the Temporary Off-Site Construction Impact Footprint).**	LTS

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		Mitigation Measure 3.5-4: Avoid Loss of Special-Status Birds and Protected Bird Nests (2019 SOIA EIR Mitigation Measures 3.5-4 and 3.5-5). Before the start of construction activities both on- and off-site, the following measures shall be implemented to mitigate the potential loss of special-status birds and protected bird nests: • To the extent feasible, vegetation removal, grading, and other ground-disturbing activities will be carried out during the nonbreeding season for protected bird species in this region (generally September 1–January 31). • For vegetation removal, grading, and other ground-disturbing activities that would occur during the nesting season (February 1–August 31), a qualified biologist shall conduct preconstruction surveys to determine if active special-status bird nests are present within an on- or off-site project footprint or within 500 feet of a project footprint. The biologist shall conduct preconstruction surveys within 30 days and within 3 days of ground-disturbing activities, and within the proposed project footprint and 500 feet of the proposed project footprint to determine the presence or absence of special-status birds. Preconstruction surveys shall be conducted during the breeding/nesting season. Surveys conducted in February (to meet preconstruction survey requirements for work starting in March) must be conducted within 14 days and 3 days in advance of ground-disturbing activities. • Surveys for least Bell's vireo shall be conducted according to USFWS' *Least Bell's Vireo Survey Guidelines* (USFWS 2001). • If an active nest of a special-status bird species, or common bird species protected by the MBTA or California Fish and Game Code is found, the qualified biologist shall establish a buffer around the nest. No construction activity shall commence within the buffer area until a qualified biologist confirms that the nest is no longer active. The size of the buffer shall be determined in consultation with CDFW. Buffer size is anticipated to range from 50 to 500 feet, depending on the species of bird, nature of the project activity, the extent of existing disturbance in the area, and other relevant	

Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		circumstances, as determined by a qualified biologist, in consultation with CDFW. A qualified biologist shall monitor the nest(s) throughout the nesting season and to determine when the young have fledged. The biologist will be on-site daily while construction-related activities are taking place near the disturbance buffer. Work within the nest disturbance buffer will not be permitted. If the approved biologist determines that birds are exhibiting agitated behavior, construction shall cease until the buffer size is increased to a distance necessary to result in no harm or harassment to the nesting birds. If the biologist determines that bird colonies are at risk, a meeting with CDFW will be held to determine the best course of action to avoid nest abandonment or take of individuals. The biologist will also train construction personnel on the required avoidance procedures, buffer zones, and protocols in the event that a special-status bird flies into an active construction zone (i.e., outside the buffer zone).	
Impact 3.5-5: Potential for Injury to or Mortality of American Badger.	PS	**Implement Mitigation Measure 3.5-1a (Minimize the Temporary Off-Site Construction Impact Footprint).**	LTS
		Mitigation Measure 3.5-5: Avoid Direct Loss of American Badgers (2019 SOIA EIR Mitigation Measure 3.5-6). Before the start of construction activities both on- and off-site, the following measures shall be implemented to mitigate potential impacts on American badgers: • A qualified biologist shall conduct preconstruction surveys for American badger in areas that will be subject to ground-disturbing activities. The survey shall be conducted no more than 2 weeks before initiation of construction activities. If an American badger or active burrow, indicated by the presence of badger sign (i.e. suitable shape and burrow-size, scat) is found within the construction area during preconstruction surveys, CDFW will be consulted to obtain permission for animal relocation. If the qualified biologist determines that potential dens are inactive, the biologist shall excavate these dens by hand with a shovel to prevent badgers from reusing them during construction.	

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		If the qualified biologist determines that potential dens may be active, the entrances of the dens shall be blocked with soil, sticks, and debris for 3–5 days to discourage use of these dens before project disturbance. The den entrances shall be blocked to an incrementally greater degree over the 3- to 5-day period. After the qualified biologist determines that badgers have stopped using active dens within the project boundary, the dens shall be hand-excavated with a shovel to prevent reuse during construction.	
Impact 3.5-6: Potential for Injury to or Mortality of Western Pond Turtle and Giant Garter Snake.	PS	**Implement Mitigation Measure 3.5-1a (Minimize the Temporary Off-Site Construction Impact Footprint).**	LTS
		Mitigation Measure 3.5-6a: Retain a Biological Monitor During Off-Site Construction Activities. • The project applicant shall retain a qualified biologist to monitor construction activity in the off-site improvement areas for compliance with all project permits and the approved mitigation and monitoring program for the proposed project; and to report on monitoring activities as required by project permits. • During construction activities, if an injured or dead special-status species is encountered, the work shall stop in the immediate vicinity. The project applicant shall notify the biological monitor, and the appropriate resource agency (e.g., USFWS or CDFW). Any measures required by these agencies shall be implemented, and proof of implementation shall be submitted to the agencies before construction is allowed to proceed. • At the end of each work day, the biological monitor shall ensure that all potential wildlife pitfalls (trenches, bores, and other excavations) have been backfilled. If backfilling is not feasible, all trenches, bores, and other excavations shall be sloped at a 3:1 ratio at the ends to provide wildlife escape ramps, or covered completely to prevent wildlife access, or fully enclosed with exclusion fencing. If any wildlife species become entrapped, construction shall not occur until the animal has left the trench or been removed by a qualified biological monitor as feasible.	

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		• Employees and contractors shall look under vehicles and equipment for the presence of wildlife before moving vehicles and equipment. If wildlife is observed, no vehicles or equipment would be moved until the animal has left voluntarily or is removed by the biological monitor. No listed species shall be handled without the appropriate permits. • Vehicle speed limits shall not exceed 15 miles per hour during construction and operation of the proposed project. A speed limit sign shall be posted at all project site entry locations.	
		Mitigation Measure 3.5-6b: Avoid Western Pond Turtle and Giant Garter Snake During Off-Site Construction Activities. **Western Pond Turtle** • Where feasible, construction activities involving construction with heavy equipment (e.g., excavation, grading, contouring) in suitable western pond turtle upland habitat will avoid the western pond turtle egg-laying period (generally mid-May to early July). • Prior to the start of construction in western pond turtle habitat (i.e., any undeveloped areas within 1,300 feet of riverine aquatic habitat, ponds, seasonal wetlands), the project applicant will retain a biologist approved by the CDFW to survey and handle western pond turtles and conduct preconstruction surveys. Surveys will be conducted at each habitat area no more than 7 days prior to the initiation of ground disturbance at that location. • If ground-disturbing activities occur during the nesting or overwintering seasons, 1 week before and within 24 hours of beginning work in suitable aquatic habitat, a qualified biologist will conduct surveys for western pond turtle. The surveys will be timed to coincide with the time of day when turtles are most likely to be active (the cooler part of the day between 8:00 a.m. and 12:00 p.m. during spring and summer). Prior to conducting the surveys, the biologist will locate the microhabitats for turtle basking (logs, rocks, brush thickets) and determine a location to quietly observe turtles. Each survey will include a 30-minute wait time after arriving on the site to allow startled turtles to return to open basking areas.	

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Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		The survey will consist of a minimum 15-minute observation time per area where turtles could be observed. If western pond turtles are observed during either survey, a biological monitor will be present during construction activities in the aquatic habitat where the turtle was observed; and capture and relocate, if possible, any entrapped turtle. The biological monitor also will be mindful of suitable nesting and overwintering areas in proximity to suitable aquatic habitat, and periodically inspect these areas for nests and turtles. **Giant Garter Snake** • Where feasible, construction activities involving construction with heavy equipment use (e.g., excavation, grading, contouring) in suitable giant garter snake habitat (i.e., within 200 feet of Deer Creek) will avoid the snake's inactive/dormant period (generally October 2 to April 30). • To the maximum extent possible, all construction activities in giant garter snake habitat will be conducted during the snake's active period (May 1 to October 1). • To reduce the likelihood of snakes entering the active construction areas that include or are adjacent to freshwater wetlands, slow-moving riverine aquatic habitat, marshes, ditches, and canals in the off-site improvement areas during construction activities, the project applicant or the construction contractor will install exclusion fencing along the freshwater marsh, aquatic riverine features, and open water areas outside of the environmental footprint (areas within 200 feet of suitable habitat). The exclusion fencing will be installed and maintained for the duration of construction in or adjacent to these features. The fencing will consist of 3- to 4-foot-tall erosion fencing buried at least 6 to 8 inches below the ground. To ensure that construction equipment and personnel do not affect aquatic habitat for giant garter snake outside the construction corridor, orange barrier fencing will be erected (in addition to the exclusion fencing) to clearly define the aquatic habitat to be avoided. • A qualified biologist will conduct a preconstruction survey in suitable habitat no more than 24 hours before construction. Prior to construction each morning, construction personnel	

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Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		will inspect exclusion and orange barrier fencing to ensure they are in good condition. Observations of snakes in the environmental footprint and access routes will be immediately reported to the biologist, and all activities will cease until appropriate corrective measures have been completed; the snake leaves the construction site under its own volition; or the biologist determines that the snake will not be harmed. The area undergoing construction will be re-inspected and surveyed by the biologist whenever a lapse in construction activity of 2 weeks or more occurs. • Any ground-disturbing activities within 200 feet of giant garter snake habitat that occur after October 1 will be monitored by a USFWS- and a CDFW-approved biologist for the duration of the work. • Vegetation clearing within 200 feet of the banks of potential giant garter snake aquatic habitat will be limited to the minimum area necessary. Giant garter snake habitat outside of—but adjacent to—the construction areas will be flagged, and designated as an environmentally sensitive area to be avoided by all construction personnel. • The movement of heavy equipment within 200 feet of the banks of potential giant garter snake aquatic habitat will be confined to designated access and haul routes to minimize habitat disturbance. • Staging areas will be located at least 200 feet from suitable giant garter snake aquatic habitat.	
Impact 3.5-7: Potential Loss of Western Red Bat.	LTS	**Implement Mitigation Measure 3.5-1a (Minimize the Off-Site Construction Impact Footprint).**	LTS
Impact 3.5-8: Potential Indirect Effects to Vernal Pool Crustacean Habitat.	PS	**Implement Mitigation Measure 3.5-1a (Minimize the Temporary Off-Site Construction Impact Footprint).**	LTS
		Implement Mitigation Measure 3.5-1d (Implement an Off-Site Revegetation and Weed Control Plan).	
		Mitigation Measure 3.5-8: Avoid and Minimize Potentially-Occupied Habitat for Vernal Pool Fairy Shrimp and	

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Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		Conservancy Fairy Shrimp During Off-Site Construction Activities. • A qualified biologist shall monitor for impacts on potentially occupied vernal pool fairy shrimp and Conservancy fairy shrimp habitat during off-site construction activities to ensure that they are identified for avoidance on site plans and preserved and avoided during off-site construction activities. • Vernal pool habitat shall be flagged and orange exclusionary fencing shall be erected prior to the start of off-site construction activities in the vicinity of the southern-most drainage ditch (along the UPRR tracks) and the 8-acre pond. The exclusionary fencing shall establish a 250-foot buffer from the vernal pool boundary. • The project applicant shall obtain a Construction General Stormwater Permit from the Central Valley RWQCB, prepare a stormwater pollution prevention plan, and implement best management practices (BMPs) to reduce water quality effects during construction. • USFWS consultation with USACE would occur during the CWA Section 404 permitting process that is required as mitigation for impacts on wetlands and other waters of the United States (see discussion under Impact 3.5-8, below).	
		Implement Mitigation Measure 3.4-1a (Implement the SMAQMD Basic Construction Emission Control Practices and Enhanced Exhaust Control Practices).	
Impact 3.5-9: Disturbance, Degradation, or Removal of Federally Protected Waters of the United States.	PS	**Implement Mitigation Measure 3.5-1a (Minimize the Temporary Off-Site Construction Impact Footprint).**	LTS
		Implement Mitigation Measure 3.5-1d (Implement an Off-Site Revegetation and Weed Control Plan).	
		Mitigation Measure 3.5-9a: Avoid, Minimize, or Compensate for Loss of Waters of the United States and Waters of the State (2019 SOIA EIR Mitigation Measure 3.5-7). Before the start of construction activities both on- and off-site, the following measures shall be implemented to mitigate the potential loss of waters:	

Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		• Conduct a delineation of waters of the United States according to methods established in the USACE wetlands delineation manual (Environmental Laboratory 1987) and Arid West Supplement (Environmental Laboratory 2008) or applicable guidance manual that is in place at the time of application for proposed development that could adversely affect waters of the State or United States. The delineation shall map and quantify the acreage of all aquatic habitats and shall be submitted to USACE for verification and jurisdictional determination. • Off-site improvements shall be planned and designed to avoid waters of the United States, including wetlands, and waters of the state to the maximum extent technically feasible and appropriate. Avoidance shall be deemed technically feasible and appropriate if the habitat may be preserved while still obtaining the project purpose and objectives and if the preserved aquatic habitat could reasonably be expected to continue to provide the same habitat functions following project implementation. • The function of all wetlands and other waters that would be removed as a result of implementing the project shall be replaced or restored on a "no-net-loss" basis. Wetland habitat will be restored or replaced at an acreage and location and by methods agreeable to USACE and the Central Valley RWQCB, depending on agency jurisdiction, and as determined during the Section 401 and Section 404 permitting processes. • Mitigation methods may consist of establishment of aquatic resources in upland habitats where they did not exist previously, reestablishment (restoration) of natural historic functions to a former aquatic resource, enhancement of an existing aquatic resource to heighten, intensify, or improve aquatic resource functions, or a combination thereof. The compensatory mitigation may be accomplished through purchase of credits from a USACE-approved mitigation bank, payment into a USACE-approved in-lieu fee fund, or through permittee-responsible on-site or off-site establishment,	

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Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		reestablishment, or enhancement, depending on availability of mitigation credits. • If applicable, a USACE Section 404 Individual Permit and Central Valley RWQCB Section 401 water quality certification shall be obtained before any groundbreaking activity within 50 feet of waters of the United States or discharge of fill or dredge material into any water of the United States, or meet waste discharge requirements for impacts to waters of the state. • A qualified biologist shall prepare a wetland mitigation plan to describe how the loss of aquatic functions for each project will be replaced. The mitigation plan will describe compensation ratios for acres filled, and mitigation sites, a monitoring protocol, annual performance standards and final success criteria for created or restored habitats, and corrective measures to be applied if performance standards are not met. • Permittee-responsible mitigation habitat shall be monitored for a minimum of 5 years from completion of mitigation, or human intervention (including recontouring and grading), or until the success criteria identified in the approved mitigation plan have been met, whichever is longer. • Water quality certification pursuant to Section 401 of the CWA, or waste discharge requirements (for waters of the state), will be required before issuance of a Section 404 permit. Before construction in any areas containing aquatic features that are waters of the United States, the project applicant(s) shall obtain water quality certification for the project. Any measures required as part of the issuance of water quality certification and/or waste discharge requirements (for waters of the state), shall be implemented. Project applicant(s) shall obtain a General Construction Stormwater Permit from the Central Valley RWQCB, prepare a stormwater pollution prevention plan, and implement best management practices (BMPs) to reduce water quality effects during construction.	
		Mitigation Measure 3.5-9b: Comply with the Section 1600 Streambed Alteration Agreement.	

Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		• Before construction, the project applicant shall obtain a Section 1600 Streambed Alteration Agreement from CDFW for any activities proposed in or near Deer Creek and/or associated riparian vegetation that could potentially fall under the jurisdiction of CDFW. The project applicant shall implement all conditions in the permit, including any requirements for compensatory mitigation for loss of riparian habitat as part of the Section 1600 Streambed Alteration Agreement. Where feasible, the compensatory mitigation requirement may be combined with those for other mitigation measures such as that required for the USACE CWA Section 404 permit. To comply with Sacramento County General Plan policies related to compensation for the loss of riparian habitats, impacts on riparian habitat shall be mitigated by the preservation riparian habitat at a minimum 1:1 ratio, in perpetuity. • If on-site restoration is selected as compensatory mitigation for impacts on riparian habitat, the project applicant shall prepare and implement Mitigation Measure 3.5-1d "Develop and Implement an Off-Site Revegetation and Weed Control Plan" to include reestablishment of riparian habitat, including riparian vegetation subject to CDFW jurisdiction, and/or enhancement of existing habitat, on a per-acre basis. To offset the temporary loss of riparian habitat during construction, the minimum mitigation ratio shall be no less than 1.5 acres of riparian habitat restored/created/enhanced for each acre of permanent or temporary impact. The revegetation and weed control plan shall include the following provisions for the restoration of affected riparian habitat: • Baseline data collection at reference sites in the project site to establish expected ranges and minimum thresholds for species composition, relative species richness, and vegetative cover (i.e., herbaceous, shrub, and/or woody canopy) for each sensitive habitat that would be affected. • An appropriate species planting palette for each sensitive habitat that would be affected.	

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Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		• Minimum planting densities designed to achieve minimum performance standards for survival cover and density, while maintaining the natural character of the vegetation community being restored/created. • Minimum performance standards for percent survival, species composition, relative species richness, and vegetative cover (i.e., herbaceous, shrub, and/or woody canopy) based on data collected from nearby reference sites and life history traits of the plants being restored (i.e., herbaceous versus woody, fast-growing primary colonizers versus slow-growing successional species). • Compensation for the temporal loss of habitat resulting from the removal of trees. Any trees removed from riparian habitat shall be replaced with the same or similar species at a ratio of 3:1 (three [3] trees planted for every one [1] tree removed). Tree replacement may be carried out concurrently on riparian habitats that are also being restored/created/enhanced on a per-acre compensatory basis.	
		Implement Mitigation Measure 3.4-1a: (Implement the SMAQMD Basic Construction Emission Control Practices and Enhanced Exhaust Control Practices).	
Impact 3.5-10: Interference with Wildlife Nursery Sites or Migratory Corridors.	LTS	No mitigation measures are required.	LTS
Impact 3.5-11: Conflicts with Local Policies and Ordinances Protecting Biological Resources.	PS	**Implement Mitigation Measure 3.5-3c (Implement the City of Elk Grove Swainson's Hawk Foraging Habitat Mitigation Program).** **Implement Mitigation Measure 3.5-9a (Avoid, Minimize, or Compensate for Loss of Waters of the United States and Waters of the State).** **Implement Mitigation Measure 3.5-9b (Comply with the Section 1600 Streambed Alteration Agreement).** **Implement Mitigation Measure 3.2-2 (Prepare and Implement a Tree Mitigation Plan to Reduce Effects on Trees of Local Importance).**	LTS

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Table ES-1. Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Impact 3.5-12: Conflicts with the Provisions of an Adopted Habitat Conservation Plan.	LTS	No mitigation measures are required.	LTS
Impact 3.5-13: Loss of Riparian Habitat and Sensitive Natural Communities	PS	**Implement Mitigation Measure 3.5-1a (Minimize the Temporary Off-Site Construction Impact Footprint).**	LTS
		Implement Mitigation Measure 3.5-1d (Implement an Off-Site Revegetation and Weed Control Plan).	
		Mitigation Measure 3.5-13: Avoid, Minimize, or Compensate for Loss of Riparian Habitat and Sensitive Natural Communities (2019 SOIA EIR Mitigation Measure 3.5-11). • Retain a qualified botanist to identify, map, and quantify riparian habitat and other sensitive natural communities in proposed off-site improvement areas before final project design is completed. Off-site improvements shall be planned and designed to avoid loss or substantial degradation of riparian habitat and other sensitive natural communities, if technically feasible and appropriate. Avoidance shall be deemed technically feasible and appropriate if the features may be preserved while still obtaining the project purpose and objectives and if the preserved habitat/community could reasonably be expected to provide comparable habitat functions following project implementation. The avoidance measures shall include relocating off-site improvement components, as necessary and where practicable alternatives are available, to prevent direct loss of riparian habitats and other sensitive natural communities. • If riparian habitat or other sensitive natural communities present in off-site improvement areas cannot feasibly be avoided, the project applicant shall coordinate with CDFW to determine appropriate mitigation for removal of riparian habitat and sensitive natural communities resulting from project implementation. Mitigation measures may include restoration of affected habitat, habitat restoration, or preservation and enhancement of existing habitat/natural community in other locations. The compensation habitat shall be similar in composition and structure to the habitat/natural community to be removed and shall be at ratios adequate to	

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Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		offset the loss of habitat functions in the affected off-site improvement area. • If required, the project applicant shall obtain a Section 1602 streambed alteration agreement from CDFW and comply with all conditions of the agreement.	
		Implement Mitigation Measure 3.4-1a: (Implement the SMAQMD Basic Construction Emission Control Practices and Enhanced Exhaust Control Practices).	
3.6 Cultural and Tribal Cultural Resources			
Impact 3.6-1: Substantial Adverse Change in the Significance of Known Historical Resources.	NI	No mitigation measures are required.	NI
Impact 3.6-2: Potential to Cause a Substantial Adverse Change in the Significance of an Unknown Historical Resource or Unique Archeological Resource.	PS	**Mitigation Measure 3.6-2a: Conduct a Cultural Resources Inventory for Archaeological and/or Historic Architectural Resources and Tribal Cultural Resources (2019 SOIA EIR Mitigation Measure 3.6-2a).** **Archaeology** • Prior to the approval of development projects and off-site improvements, the City will require that a qualified cultural resources specialist conduct a survey and inventory for archaeological resources that would include field survey, review of updated information from the North Central Information Center and other applicable data repositories. Additional consultation with relevant tribal representatives may be appropriate, depending on the relative level of cultural sensitivity, as identified by traditionally and culturally affiliated California Native American tribes. • Management recommendations may include, but are not limited to additional studies to evaluate identified sites or archaeological monitoring at locations determined by a qualified archaeologist in consultation with culturally affiliated California Native American tribes to be sensitive for subsurface cultural resource deposits related to the off-site improvements areas south and southeast of the Project site. • All identified cultural resources will be recorded using the appropriate California Department of Parks and Recreation	SU (unknown archaeological resources outside the City-owned property) LTS (unknown archaeological resources on the City-owned property) SU (unknown historic resources outside the City-owned property) LTS (unknown historic resources on the City-owned property)

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Table ES-1. Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		(DPR) cultural resources recordation forms. The results of the inventory efforts will be documented in a technical report and submitted to the City. Cultural resources will be evaluated for eligibility for inclusion in the CRHR and the Elk Grove Register of Historic Resources and evaluations will be conducted by individuals who meet the Secretary of the Interior's professional qualification standards in archaeology. If the evaluation is negative (i.e., not historically significant), no further mitigation is required. If the property is found to be an historical resource, the project proponent shall be required to implement mitigation if the proposed project has a substantial adverse change to a historical resource, including physical damage, destruction, relocation, or alteration of the property that materially alters in an adverse manner those physical characteristics of the property that conveys its significant for inclusion in or eligibility for the CRHR or local register. **Historic Architecture** • Prior to the approval of development projects and off-site drainage improvements, the City will require that a qualified cultural resources specialist conduct a survey and inventory for historic-age built environment resources. The inventory will include a field survey, review of updated information from the North Central Information Center and other applicable data repositories, and interested parties outreach. All identified resources will be recorded using the appropriate California Department of Parks and Recreation (DPR) cultural resources recordation forms. The results of the inventory efforts will be documented in a technical report and submitted to the City. Cultural resources will be evaluated for eligibility for inclusion in the CRHR and the Elk Grove Register of Historic Resources and evaluations will be conducted by individuals who meet the Secretary of the Interior's professional qualification standards in history and/or architectural history. If the evaluation is negative (i.e., not historically significant), no further mitigation is required. If the property is found to be an historical resource, the project proponent shall be required to implement mitigation if the proposed project has a substantial adverse change to a	

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Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		historical resource, including physical damage, destruction, relocation, or alteration of the property that materially alters in an adverse manner those physical characteristics of the property that conveys its significant for inclusion in or eligibility for the CRHR or local register.	
		Mitigation Measure 3.6-2b: Avoid Effects on Historical Resources (2019 SOIA EIR Mitigation Measure 3.6-2b). **Archaeology and Historic Architecture** If the survey and evaluation required in Mitigation Measure 3.6-2a determines that a cultural resources site is an historical resource for the purposes of CEQA, the development project(s) will be redesigned to avoid the historical site(s). The historic site(s) will be deeded to a nonprofit agency to be approved by the City for the maintenance of the site(s). If avoidance is determined to be infeasible by the City, the applicant will prepare a treatment plan to minimize adverse effects, relocate resources, if feasible, and conduct all required documentation (in addition to the items above) in accordance with appropriate standards: • The development of a site-specific history and appropriate contextual information regarding the particular resource; in addition to archival research and comparative studies, this task could involve limited oral history collection. • Accurate mapping of the noted resource(s), scaled to indicate size and proportion of the structure(s). • Architectural description of affected buildings and structures. • Photo documentation of the designated resources. • Recordation of measured architectural drawings, in the case of specifically designated buildings of higher architectural merit. • Any historically significant artifacts within buildings and the surrounding area shall be recorded and may be deposited with the appropriate museum or collection with the consent of their owners. • Document the affected historical resource and integrate aspects of the historical resource into an interpretive display panel and/or signage for public exhibition concerning the history of the resource. The display and/or signage can be	

Table ES-1. Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		based on the photographs, measured architectural drawings, salvaged material, and site-specific contextual information.	
		Mitigation Measure 3.6-2c: Stop Work If Any Prehistoric or Historical Subsurface Cultural Resources Are Discovered, Consult a Qualified Archaeologist to Assess the Significance of the Find, and Implement Appropriate Measures, as Required (2019 SOIA EIR Mitigation Measure 3.6-2c). **Archaeology** • If previously unknown archaeological cultural resources (i.e., prehistoric sites, historical sites, and isolated artifacts) are discovered during construction work, work shall be halted immediately within 50 feet of the discovery, the City shall be notified, and a professional archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards shall be retained to determine the significance of the discovery. • If any elements of the on-site development or the off-site drainage improvements will impact an archaeological site, including those determined to be a Tribal Cultural Resource, and avoidance is not a feasible option, a qualified archaeologist, in consultation with traditionally and culturally affiliated California Native American tribes, shall evaluate the eligibility of the site for listing in the California Register of Historical Resources. If the archaeological site is found to be a historical resource as per CEQA Guidelines Section 15064.5 (a)(3), the qualified archaeologist shall recommend further mitigative treatment, which could include preservation in place or data recovery. • If a site to be tested is prehistoric, the City will determine the need for tribal monitoring. • If significant archaeological resources that meet the definition of historical or unique archaeological resources, including those determined by the City to be Tribal Cultural Resources, are identified in the project area, the preferred mitigation of impacts is preservation in place. If impacts cannot be avoided through project design, appropriate and feasible treatment measures are required, which may consist of, but are not	

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Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		limited to actions, such as data recovery excavations. If only part of a site will be impacted by the project or the off-site improvements, data recovery will only be necessary for that portion of the site. Data recovery will not be required if the implementing agency determines prior testing and studies have adequately recovered the scientifically consequential information from the resources. Studies and reports resulting from the data recovery shall be deposited with the North Central Information Center. • The project proponent shall be required to implement any mitigation necessary for the protection of archaeological cultural resources, including Tribal Cultural Resources.	
Impact 3.6-3: Substantial Adverse Change to a Tribal Cultural Resource.	S	**Implement Mitigation Measure 3.6-2a (Conduct a Cultural Resources Inventory for Archaeological and/or Historic Architectural Resources and Tribal Cultural Resources).**	SU
		Implement Mitigation Measure 3.6-2b (Avoid Effects on Historical Resources).	
		Mitigation Measure 3.6-2c (Stop Work If Any Prehistoric or Historical Subsurface Cultural Resources Are Discovered, Consult a Qualified Archaeologist to Assess the Significance of the Find, and Implement Appropriate Measures, as Required).	
Impact 3.6-4: Disturbance of Human Remains.	PS	**Mitigation Measure 3.6-4: Halt Construction if Human Remains are Discovered and Implement Appropriate Actions (2019 SOIA EIR Mitigation Measure 3.6-4).** In accordance with California law described above, if human remains are uncovered during future ground-disturbing activities, the project applicant(s) and/or their contractors would be required to halt potentially damaging excavation in the area of the burial and notify the County Coroner and a professional archaeologist to determine the nature of the remains. The coroner would be required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (California Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she must contact the NAHC by	LTS

Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		phone within 24 hours of making that determination (California Health and Safety Code Section 7050[c]). The responsibilities for acting upon notification of a discovery of Native American human remains are identified in California Public Resources Code Section 5097.9. Following the coroner's findings, the property owner, contractor or project proponent, an archaeologist, and the NAHC-designated Most Likely Descendant will determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. • Upon the discovery of Native American remains, project applicant(s) and/or their contractors would be required to ensure that the immediate vicinity (according to generally accepted cultural or archaeological standards and practices) is not damaged or disturbed by further development activity until consultation with the Most Likely Descendant has taken place. The Most Likely Descendant would have 48 hours to complete a site inspection and make recommendations after being granted access to the site. A range of possible treatments for the remains, including nondestructive removal and analysis, preservation in place, relinquishment of the remains and associated items to the descendants, or other culturally appropriate treatment may be discussed. Public Resources Code Section 5097.9 suggests that the concerned parties may extend discussions beyond the initial 48 hours to allow for the discovery of additional remains. The following is a list of site protection measures that could be employed: 1. record the site with the NAHC and the appropriate Information Center, 2. use an open-space or conservation zoning designation or easement, and 3. record a document with the county in which the property is located. • If the NAHC is unable to identify a Most Likely Descendant or the Most Likely Descendant fails to make a recommendation within 48 hours after being granted access to the site, the Native American human remains and associated grave goods would be reburied with appropriate dignity on the	

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Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		subject property in a location not subject to further subsurface disturbance.	
3.7 Geology, Soils, Minerals, and Paleontological Resources			
Impact 3.7-1: Exposure to Strong Seismic Ground Shaking.	LTS	No mitigation measures are required.	LTS
Impact 3.7-2: Seismic-Related Ground Failure.	LTS	No mitigation measures are required.	LTS
Impact 3.7-3: Unstable Soils.	LTS	No mitigation measures are required.	LTS
Impact 3.7-4: Soil Erosion or Loss of Topsoil.	LTS	No mitigation measures are required.	LTS
Impact 3.7-5: Expansive Soils	LTS	No mitigation measures are required.	LTS
Impact 3.7-6: Damage to Unknown Paleontological Resources	PS	**Mitigation Measure 3.7-6: Avoid Impacts to Unique Paleontological Resources (2019 SOIA EIR Mitigation Measure 3.7-6).** • Prior to the start of on- or off-site earthmoving activities that would disturb 1 acre of land or more within the Riverbank Formation, 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 in the vicinity of the find and notify the City of Elk Grove. • The project 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.	LTS

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Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
3.8 Greenhouse Gas Emissions			
Impact 3.8 1. Generation of Greenhouse Gas Emissions or Conflict with an Applicable Plan, Policy, or Regulation Adopted for the Purpose of Reducing the Emissions of GHGs.	CC	**Mitigation Measure 3.8-1a: Achieve GHG Emissions Rate Consistent with State Guidance (2019 SOIA EIR Mitigation Measure 3.8-1)** Prior to issuance of building permits, Project Building Plans shall demonstrate compliance with the following applicable measures included in the City's Climate Action Plan, to the satisfaction of the City of Elk Grove Planning Division: • BE-4: The Project shall comply with 2016 CalGreen Tier 1 standards, including a 15 percent improvement over minimum Title 24, Part 6, Building Energy Efficiency Standards. If building permits are issued subsequent to January 1, 2020, the Project shall provide a level of efficiency at least that of Tier 1 of the 2016 CalGreen Code, or baseline of the current CalGreen Code, whichever is more efficient. • BE-5: Should any residential portion of the Project (including single-family and multi-family) be constructed after January 1, 2025, these units shall be constructed as Zero Net Energy units. The Project shall achieve a Total Energy Deign Rating (Total EDR) and Energy Efficiency Design Rating (Efficiency EDR) of zero, consistent with the standards in Title 24, Part 6 of the California Code of Regulations, for all units permitted after January 1, 2025. • BE-6: At least 10 percent of all residential units shall include all-electric appliances and HVAC systems, including, but not limited to, (A) a heat pump water heater with a minimum Uniform Energy Factor of 2.87, and (B) an induction cooktop/range for all cooking surfaces in the unit. • TACM-8: A minimum of 25 percent of the off-road construction fleet used during construction of the Project shall include Environmental Protection Agency certified off-road Tier 4 diesel engines (or better). • TACM-9: The Project shall, at a minimum, provide the following minimum electrical vehicle service equipment: – EV-ready for all single-family units;	SU

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Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		– For multi-family units, 2.5 percent of parking stalls with EV charging equipment installed and 2.5 percent of parking stalls EV-ready; and – For retail uses, 3 percent of parking stalls with EV charging equipment installed and 3 percent of parking stalls EV-ready. Should the City adopt a higher standard prior to issuance of any applicable building permit, such higher standards shall apply.	
		Mitigation Measure 3.8-1b: Implement the SMAQMD BMPs, or equivalent on-site or off-site mitigation, as applicable for land use operations The City of Elk Grove shall require, as a part of plans for development within the Project site, the implementation of the following SMAQMD BMPs, or BMPs as they may be revised in the future, or equivalent on-site or off-site mitigation, as applicable. If equivalent on-site or off-site mitigation is used in-lieu of the below measures, it must be demonstrated that the proposed measures would achieve an equivalent or greater reduction in the GHG emissions rate. • All projects must implement Tier 1 BMPs (BPM 1 and 2): – BMP 1 – projects shall be designed and constructed without natural gas infrastructure; – BMP 2 – projects shall meet the current CalGreen Tier 2 standards, except all electric vehicle capable spaces shall instead be electric vehicle ready. • Projects that exceed 1,100 metric tons/year after implementation of Tier 1 BMPs must implement Tier 2 BMPs (BMP 3): – BMP 3 – residential projects shall achieve a 15 percent reduction in vehicle miles traveled per resident and office projects shall achieve a 15 percent reduction in vehicle miles traveled per worker compared to existing average vehicle miles traveled for the county, and retail projects shall achieve a no net increase in total vehicle miles traveled to show consistency with SB 743.	

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Table ES-1. Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
3.9 Hazards, Hazardous Materials, and Wildfire			
Impact 3.9-1: Routine Transport, Use, or Disposal of Hazardous Materials.	LTS	No mitigation measures are required.	LTS
Impact 3.9-2: Potential Human Health Hazards from Exposure to Existing On-Site Hazardous Materials.	LTS	**Mitigation Measure 3.9-2: Hazardous Materials Identification and Remediation (2019 SOIA Mitigation Measure 3.9-2)** For development proposed after 5 years have passed (after 2023), update the review of environmental risk databases for the presence of potential hazardous materials. This evaluation should consider the SOIA Area and any off-site improvement areas and if this assessment or other indicators point to the presence or likely presence of contamination, Phase I environmental site assessments and/or Phase II soil/groundwater testing and remediation shall be required before development. The sampling program developed as a part of the Phase II EA shall be conducted to determine the degree and location of contamination, if any, exists. If contamination is determined to exist, it will be fully remediated, by qualified personnel, in accordance with federal, State, and local regulations and guideline established for the treatment of hazardous substances. The designation of encountered contamination will 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, Department of Toxic Substances Control, and Regional Water Quality Control Board guidelines shall be implemented. Any land disturbance near potential hazardous sites should occur only after the remediation and clean-up of the existing site is complete..	LTS
Impact 3.9-3: Upset and Accident Conditions	LTS	No mitigation measures are required.	LTS
Impact 3.9-4: Interfere with Emergency Response or Evacuation Plans	PS	**Mitigation Measure 3.9-4: Implement Traffic Control Plans (2019 SOIA EIR Mitigation Measure 3.9-4).** Implement traffic control plans for construction activities that may affect road rights-of-way during Project construction. The traffic control plans shall be designed to avoid traffic-related hazards and maintain emergency access during construction phases. The traffic control plan will illustrate the location of the	LTS

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Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		proposed work area; provide a diagram showing the location of areas where the public right-of-way would be closed or obstructed and the placement of traffic control devices necessary to perform the work; show the proposed phases of traffic control; and identify the time periods when traffic control would be in effect and the time periods when work would prohibit access to private property from a public right-of-way. The plan may be modified in order to eliminate or avoid traffic conditions that are hazardous to the safety of the public. Traffic control plans should be submitted to the affected agencies, as appropriate, shall be submitted to the City for review and approval before approval of improvement plans, where future construction may cause impacts on traffic.	
Impact 3.9-5: Risks from Wildfires	LTS	No mitigation measures are required.	LTS
3.10 Hydrology and Water Quality			
Impact 3.10-1: Violate Water Quality Standards or Waste Discharge Requirements.	LTS	**Mitigation Measure 3.10 1: Implement Mitigation Measure 3.9 2 (2019 SOIA EIR Mitigation Measure 3.9-2).**	LTS
Impact 3.10-2: Substantially Decrease Groundwater Supplies or Interfere with Groundwater Recharge.	LTS	No mitigation measures are required.	LTS
Impact 3.10-3: Alteration of Drainage Patterns Resulting in Substantially Increased Erosion, Siltation, Downstream Flooding, or Increased Stormwater Runoff Volumes.	LTS	No mitigation measures are required.	LTs
Impact 3.10-4: Impede Flood Flows or Risk Release of Pollutants from Inundation in a Flood Hazard Zone.	PS	**Mitigation Measure 3.10-4a: Ensure Structures are Outside of the 100-Year Floodplain (2019 SOIA EIR Mitigation Measure 3.10-5)** The City of Elk Grove shall verify that no habitable structures or structures that negatively obstruct the flow of water are proposed within the 100-year floodplain. Further, all development shall comply with applicable provisions of Elk Grove Municipal Code Section 16.50 (Flood Damage Prevention).	LTS
		Mitigation Measure 3.10-4b: Prevent Storage of Construction Materials and Equipment in a Flood Zone During the Rainy Season. The City shall note on the construction plans and require as a condition of grading permits that construction materials and	

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Table ES-1. Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		equipment shall not be stored in a 100- or 200-year floodplain between October 1 and April 31 of any year during construction.	
Impact 3.10-5: Conflict with a Water Quality Control Plan or Sustainable Groundwater Management Plan.	LTS	No mitigation measures are required.	LTS
3.11 Land Use, Population, Housing, Employment, Environmental Justice, and Unincorporated Disadvantaged Communities			
Impact 3.11-1: Consistency with Adopted Sacramento County and Elk Grove General Plan Policies and Land Use Designations.	LTS	No mitigation measures are required.	LTS
Impact 3.11-2: Consistency with LAFCo Policies, Standards, and Procedures.	LTS	No mitigation measures are required.	LTS
Impact 3.11-3: Induce Substantial Unplanned Population Growth.	LTS	No mitigation measures are required.	LTS
Impact 3.11-4: Conversion of Open Space.	S	**Mitigation Measure 3.11 4: Implement Mitigation Measure 3.3 1 (Preserve Agricultural Land).**	SU
3.12 Noise and Vibration			
Impact 3.12-1: Temporary, Short-Term Exposure of Sensitive Receptors to Construction Noise.	S	**Mitigation Measure 3.12-1: Implement Noise-Reducing Construction Practices (2019 SOIA EIR Mitigation Measure 3.12-1).** During both on- and off-site Project-related construction, the following measures shall be implemented to reduce construction noise impacts. • Noise-generating construction in areas that could affect noise-sensitive land uses shall be limited to the hours between 7 a.m. and 7 p.m. Monday through Friday, and between 8 a.m. and 6 p.m. on Saturdays and Sundays. • Noisy construction equipment and equipment staging areas shall be located as far as possible 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 manufacturers' recommendations. Equipment-engine shrouds shall be closed during equipment operation.	SU

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Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		• All motorized construction equipment shall be shut down when not in use to prevent idling. • 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). • Noise-reducing enclosures shall be used around stationary noise-generating equipment (e.g., compressors and generators) when noise sensitive receptors are located within 250 feet of construction activities. • Written notification of construction activities shall be provided to all noise-sensitive receptors located within 850 feet of construction activities. The notification shall include anticipated dates and hours during which construction activities are anticipated to occur and contact information, including a daytime telephone number, for the Project representative to be contacted in the event that noise levels are deemed excessive. Recommendations to assist noise-sensitive land uses in reducing interior noise levels (e.g., closing windows and doors) shall also be included in the notification. • To the extent feasible and necessary to reduce construction noise levels consistent with applicable policies, acoustic barriers (e.g., noise curtains, sound barriers) shall be constructed to reduce construction-generated noise levels at affected noise-sensitive land uses. The barriers shall be designed to obstruct the line of sight between the noise-sensitive land use and on-site construction equipment. • When future noise sensitive uses are within close proximity to prolonged construction noise, noise-attenuating buffers such as structures, truck trailers, or soil piles shall be located between noise sources and future residences, as feasible, to shield sensitive receptors from construction noise.	

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Table ES-1. Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Impact 3.12-2: Temporary, Short-Term Exposure of Sensitive Receptors to Increased Traffic Noise Levels from Project Construction.	LTS	No mitigation measures are required.	LTS
Impact 3.12-3: Temporary, Short-Term Exposure of Sensitive Receptors to Potential Groundborne Noise and Vibration from Project Construction.	PS	**Mitigation Measure 3.12-3: Reduce Groundborne Noise and Vibration Levels at Sensitive Receptors and Buildings (2019 SOIA EIR Mitigation Measure 3.12-3).** During construction of on-site and off-site improvements, the following measures shall be implemented to reduce groundborne noise and vibration within 60 feet of existing non-historical structures and within 25 feet of historic, older, or potentially sensitive structures: • Route heavily loaded trucks away from residential streets where residences are within 60 feet of the edge of the roadway. • Operate earthmoving equipment on the construction lot as far away from noise- and vibration-sensitive uses as feasible. • Phase earthmoving and other construction activities that would affect the ground surface so as not to occur in the same time period. • Large bulldozers and other construction equipment that would produce vibration levels at or above 86 VdB shall not be operated within 50 feet of adjacent, occupied residences. Small bulldozers shall be used instead of large bulldozers in these areas, if construction activities are required. For any other equipment types that would produce vibration levels at or above 86 VdB, smaller versions or different types of equipment shall be substituted for construction areas within 50 feet of adjacent, occupied residences. • Construction activities shall not occur on weekends or federal holidays and shall not occur on weekdays between the hours of 7 p.m. of 1 day and 7 a.m. of the following day. In addition, the following measures shall be implemented to reduce groundborne noise and vibration for pile driving within 200 feet of any vibration-sensitive receptor, if required by the City:	SU

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Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		• A disturbance coordinator shall be designated, and this person's contact information shall be posted in a location near the project site that it is clearly visible to the nearby receivers most likely to be disturbed. The director would manage complaints and concerns resulting from activities that cause vibrations. The severity of the vibration concern should be assessed by the disturbance coordinator, and if necessary, evaluated by a professional with construction vibration expertise. • The existing condition of all buildings within a 180-foot radius within the proposed pile driving activities shall be recorded in the form of a preconstruction survey. The preconstruction survey shall determine conditions that exist before construction begins for use in evaluating damage caused by construction activities. • Vibration monitoring shall be conducted before and during pile driving operations. Every attempt shall be made to limit construction generated vibration levels in accordance with Caltrans recommendations during pile driving and impact activities in the vicinity of the historic, older, or potentially sensitive structures. Pile driving required within a 285-foot radius of sensitive receptors or within 180 feet of a historic, older, or potentially sensitive structure should use alternative installation methods, where possible (e.g., pile cushioning, jetting, predrilling, cast-in-place systems, resonance-free vibratory pile drivers).	
Impact 3.12-4: Long-Term Traffic Noise Levels at Existing Noise-Sensitive Receivers.	S	No feasible mitigation measures	SU
Impact 3.12-5: Land Use Compatibility of On-Site Sensitive Receptors with Future Transportation Noise Levels.	PS	**Mitigation Measure 3.12-5: Improve Land Use Compatibility to Reduce Exposure of On-Site Sensitive Receptors to Traffic Noise (2019 SOIA EIR Mitigation Measure 3.12-5).** Consistent with General Plan Noise Policies N-1-1, N-1-2, N-2-1, N-2-2, N-2-3, and N-2-4, or these policies as they may be updated in the future, feasible strategies to improve land use/transportation noise compatibility will be incorporated into the design of projects, including, but not limited to the following strategies, as feasible:	SU

Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		• incorporate site planning strategies to reduce noise levels within compliance of applicable noise standards, such as building orientation, which can take advantage of shielding provided by the intervening building façade at the outdoor activity area; • consider setback distances from the noise source. Increasing the setback distance would achieve a natural attenuation of traffic noise levels due to excess ground attenuation and additional noise propagation over distance; • use of increased noise-attenuation measures for second- and third-story facades in building construction (e.g., dual-pane, sound-rated windows; exterior wall insulation); • install low-noise pavement, such as open-grade asphalt or rubberized asphalt.	
Impact 3.12-6: Land Use Compatibility of On-Site Sensitive Receptors with or Generation of Non-Transportation Noise Levels in Excess of Local Standards.	S	**Mitigation Measure 3.12-6: Implement Measures to Reduce Potential Exposure of Sensitive Receptors to Non-Transportation Source–Generated Noise (2019 SOIA EIR Mitigation Measure 3.12-6).** The City of Elk Grove shall require discretionary projects to reduce potential exposure of on-site sensitive receptors to non-transportation source noise. To reduce potential long-term exposure of on-site sensitive receptors to noise generated by project-related non-transportation noise sources, the City shall evaluate individual facilities, subdivisions, and other project elements for compliance with the City Noise Ordinance and policies contained in the City's General Plan at the time that tentative subdivision maps and improvements plans are submitted. All project elements shall comply with City noise standards. The project applicants for all project phases shall implement the following measures to assure maximum reduction of project interior and exterior noise levels from operational activities. • The proposed land uses shall be designed so that on-site mechanical equipment (e.g., heating, ventilation, and air conditioning [HVAC] units, compressors, and generators) and area-source operations (e.g., loading docks, parking lots, and	SU

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Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		recreational-use areas) are located as far as possible from or shielded from nearby noise-sensitive land uses. • Residential air conditioning units shall be located a minimum of 10 feet from adjacent residential dwellings, including outdoor entertainment and relaxation areas, or shall be shielded to reduce operational noise levels at adjacent dwellings or designed to meet City noise standards. Shielding may include the use of fences or partial equipment enclosures. To provide effectiveness, fences or barriers shall be continuous or solid, with no gaps, and shall block the line of sight to windows of neighboring dwellings. • To the extent feasible, residential land uses located within 500 feet of and within the direct line of sight of major noise-generating commercial uses (e.g., loading docks and equipment/vehicle storage repair facilities,) shall be shielded from the line of sight of these facilities by construction of a noise barrier. To provide effectiveness, noise barriers shall be continuous or solid, with no gaps, and shall block the line of sight to windows of neighboring dwellings. • Dual-pane, noise-rated windows; mechanical air systems; exterior wall insulation; and other noise-reducing building materials shall be used. • Routine testing and preventive maintenance of emergency electrical generators shall be conducted during the less sensitive daytime hours (i.e., 7:00 a.m. to 6:00 p.m.). All electrical generators shall be equipped with noise control (e.g., muffler) devices in accordance with manufacturers' specifications. • Prior to issuance of occupancy permits, project applicants shall provide buyer-renter notification for any noise sensitive uses located within 200 feet on ongoing operations of agricultural equipment at adjacent agricultural land uses. In addition, the City shall seek to reduce potential long-term exposure of sensitive receptors to noise generated by project-related non-transportation noise sources from public activities on school grounds, in neighborhood and community parks, and in open-space areas. Specifically, the City shall encourage the	

Table ES-1. Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		controlling agencies (i.e., schools and park and recreation districts) to implement measures to reduce project-generated interior and exterior noise levels to within acceptable levels, including but not limited to the following: • On-site landscape maintenance equipment shall be equipped with properly operating exhaust mufflers and engine shrouds, in accordance with manufacturers' specifications. • For maintenance areas located within 500 feet of noise-sensitive land uses, the operation of on-site landscape maintenance equipment shall be limited to the least noise-sensitive periods of the day, between the hours of 7 a.m. and 7 p.m. • Outdoor use of amplified sound systems within 500 feet of noise-sensitive land uses shall be permitted only between 7 a.m. and 10 p.m. Sunday through Thursday, and between 7 a.m. and 11 p.m. on Friday and Saturday.	
3.13 Public Services and Recreation			
Impact 3.13-1: Increased Demand for Fire Protection and Emergency Medical Services.	LTS	No mitigation measures are required.	LTS
Impact 3.13-2: Increased Demand for Law Enforcement Services.	LTS	No mitigation measures are required.	LTS
Impact 3.13-3: Increased Demand for Schools.	LTS	No mitigation measures are required.	LTS
Impact 3.13-4: Increased Demand for Parks and Recreation Facilities.	LTS	No mitigation measures are required.	LTS
3.14 Transportation			
Impact 3.14 1. Conflict with an applicable transportation plan, ordinance, policy, or congestion management program.	LTS	No mitigation measures are required.	LTS
Impact 3.14-2. Conflict or inconsistency with CEQA Guidelines section 15064.3, subdivision (b).	LTS	No mitigation measures are required.	LTS
Impact 3.14-3. Hazards due to a design feature.	LTS	No mitigation measures are required.	LTS
Impact 3.11-4. Inadequate emergency access.	LTS	No mitigation measures are required.	LTS

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Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
3.15 Utilities and Public Service			
Impact 3.15-1: Require or Result in the Relocation of or the Construction of New or Expanded Utilities and Service Systems Facilities, the Construction of Which Could Cause Significant Environmental Effects.	LTS	**Mitigation Measure 3.15-1: Prepare Utility Service Plans that Demonstrate Adequate Electrical and Natural Gas Supplies and Infrastructure are Available before the Annexation of Territory within the SOIA (2019 SOIA EIR Mitigation Measure 3.16-2)** The City of Elk Grove shall require 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 within the annexation territory. The utility service plans shall demonstrate that SMUD will have adequate electrical supplies and infrastructure and PG&E will have adequate natural gas supplies and infrastructure available for the amount of future development proposed within the annexation territory. If SMUD or PG&E must construct or expand facilities, environmental impacts associated with such construction or expansion should be avoided or reduced through the imposition of mitigation measures. Such measures should include those necessary to avoid or reduce environmental impacts associated with, but not limited to, air quality, noise, traffic, biological resources, cultural resources, GHG emissions, hydrology and water quality, and others that apply to specific construction or expansion of natural gas and electric facilities projects..	LTS
Impact 3.15-2: Increased Demand for Water Supplies	LTS	No mitigation measures are required.	LTS
Impact 3.15-3: Increased Demand for Wastewater Treatment Facilities.	LTS	No mitigation measures are required.	LTS
Impact 3.15-4: Increased Generation of Solid Waste and Compliance with Solid Waste Statutes and Regulations.	LTS	No mitigation measures are required.	LTS
3.16 Energy			
Impact 3.16-1: Result in the Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources.	S	**Mitigation Measure 3.16-1a: Implement Mitigation Measures 3.4-2, 3.8-1a and 3.8-1b (2019 SOIA EIR Mitigation Measure 3.16-1a)**	SU

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Table ES-1. Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		Mitigation Measure 3.16-1b: Incorporate Energy Conservation Strategies (2019 SOIA EIR Mitigation Measure 3.16-1b) Incorporate strategies for direct energy conservation, as well as strategies that indirectly conserve energy into the design and construction of new development, including, but not limited to: • use recycled building materials that minimize energy-intensive generation and shipping/transport of new materials; • install energy-efficient lighting, including a lighting control system with dimmer switches to minimize the energy expended for unused fields; • install water-efficient landscaping and irrigation systems to minimize the energy consumption associated with water supply systems; • design energy-efficient buildings, including complying with California Energy Commission Title 24 requirements for energy-efficient roofing and insulation; and • conserve existing trees and plant new trees to provide shade and minimize watering requirements.	
Impact 3.16-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	LTS	No mitigation measures are required.	LTS

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1 INTRODUCTION

This Supplemental Environmental Impact Report (SEIR) evaluates the impacts of the Multi-Sport Complex and Southeast Industrial Annexation Area Project (the proposed Project). This SEIR was prepared in compliance with the California Environmental Quality Act (CEQA) of 1970 (Public Resources Code Section 21000 *et seq*.) and the CEQA Guidelines (California Code of Regulations [CCR], Title 14, Section 15000 *et seq*.).

1.1 PROJECT BACKGROUND

The City of Elk Grove (City) is proposing a change in the proposed future land uses for the Project site compared to the array of uses assumed in the Environmental Impact Report (EIR) certified by the Sacramento Local Agency Formation Commission (LAFCo) in May of 2019 for the Project site. The Project site in its entirety was a part of a proposed Sphere of Influence amendment (SOIA), which was approved by LAFCo, along with the EIR certification (2019 SOIA EIR). This SEIR supplements the 2019 SOIA EIR. Further, the City's proposed General Plan land use designations and prezoning are provided to implement the planned future land uses for a portion of the Project area (referred to as the Phase 1 area).

The 2019 SOIA EIR addressed development of a multi-sports park complex on a City-owned property within the SOIA Area, along with a mix of commercial, industrial, and mixed uses in the surrounding area. There are four parts of the revised Project description that are the focus of analysis in this SEIR: (1) a change in the planned future land uses within the Project area; (2) additional information related to infrastructure improvements that will be necessary to serve the Project site; (3) the establishment of General Plan and prezoning for a Phase 1 annexation; and (4) consideration of the annexation application for Phase 1 of the Project

This SEIR considers ultimate buildout of the entire SOIA, including the phased annexation of a core area of just over 375 acres that includes the properties to be pre-zoned for Light Industrial (LI), Heavy Industrial (HI), and Regional Commercial (RC) development, as well as assumed development of an approximately 64-acre Parks and Open Space area and an approximately 118-acre mixed-use area. While the property analyzed for a multi-sport complex in the 2019 SOIA EIR is now analyzed for Light Industrial (LI) development, a multi-sport complex could still be developed through the City's conditional use permit process.[1] This SEIR focuses on additional information needed to address the proposed changes in use and additional information related to the infrastructure that will be required to support the Project site at buildout. See Chapter 2 of this SEIR, "Project Description" for more detail about the Project analyzed in this SEIR, including exhibits illustrating the planned land uses and proposed General Plan and prezoning for the Phase 1 area.

1.2 INTENDED USES AND PURPOSE OF THE SUPPLEMENTAL EIR

The City, as the lead agency, has prepared this SEIR to evaluate the environmental impacts of implementation of the proposed changes to the Multi-Sport Complex and Southeast Industrial Annexation Area Project, including, but not limited to, adoption of General Plan land use designations and prezoning, approval of annexation (by LAFCo), construction of infrastructure to serve future development, and approval of subsequent development within the Project area. The CEQA Guidelines charge public agencies with the responsibility of avoiding or minimizing environmental damage that could result from implementation of a project, where feasible. As part of

1 The 2019 SOIA EIR appropriately addresses the impacts associated with the sports complex use, along with the associated ancillary uses to the sports complex, required infrastructure to support the sports complex, lighting, parking, and other features.

this responsibility, public agencies are required to balance various public objectives, including economic, environmental, and social issues.

The purpose of an EIR is not to recommend approval or denial of a project. An EIR is an informational document used in the planning and decision-making process by the lead agency and responsible and trustee agencies. An EIR describes the significant environmental impacts of a project, identifies potentially feasible measures to mitigate significant impacts, and describes potentially feasible alternatives to the project that can reduce or avoid significant environmental effects. CEQA requires decision-makers to balance the benefits of a project against its environmental effects in deciding whether to carry out a project.

CEQA Guidelines Section 15163 states that a lead agency may choose to prepare a SEIR when only minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation. The SEIR need only contain the information necessary to make the previous EIR adequate for the project, as revised.

This SEIR revisits each resource topic from the 2019 EIR, including cumulative effects, to determine if the proposed Project, as revised, would result in new or substantially more severe significant effects that were not analyzed in the 2019 SOIA EIR. The purpose of the 2019 SOIA EIR was to support consideration of both the SOIA, subsequent General Plan amendment and prezoning by the City, and possible annexation of the Project area to the City by LAFCo. As necessary, this document updates or expands the material presented in the 2019 SOIA EIR to evaluate the changes to the Project and the Project context and describes any changes in impacts attributable to the proposed Project. The 2019 EIR established mitigation measures to reduce potential impacts, as applicable and feasible, to a less than significant level. This SEIR considers and incorporates these mitigation measures and, to the extent that new information is available, or the Project has been revised, the measures have been updated or revised, or augmented with additional measures. All mitigation measures are applicable to the entirety of the Project, including Phases 1 and 2. Appendix H provides a table of the 2019 EIR mitigation measures and illustrates, in track changes, the revisions proposed with this SEIR. Although future conditions related to traffic congestion are not related to any impact under CEQA, mitigation measures related to this topic (Mitigation Measure 3.14-1 and 4.2-1) have been retained for planning purposes.

If significant environmental effects are identified, the City will adopt “findings” indicating whether feasible mitigation measures or alternatives exist that can avoid or reduce those effects. If the environmental impacts are identified as significant and unavoidable, the City may still approve the Project if it determines that social, economic, legal, technological, or other factors override the unavoidable impacts. The City will then be required to prepare a “Statement of Overriding Considerations” that discusses the specific reasons for approving the Project, based on information in the SEIR and other information in the record.

The City Council must certify a Final SEIR before approving the Project. In making its decision whether or not to approve the project, the City will consider “the whole of record,” which includes the information in the SEIR, comments received on the SEIR and responses to those comments, and the 2019 SOIA EIR and the administrative record supporting the previous EIR.

1.3 LEAD, RESPONSIBLE, AND TRUSTEE AGENCIES

In accordance with the CEQA Guidelines Section 15051(b)(1), the City of Elk Grove is the lead agency with primary authority for approval of the Project. Approvals for the Project include, but are not limited to:

- certification of the SEIR prepared for the Project,

- adoption of a General Plan amendment to designate properties within Phase 1 portion of the Project area on the City's General Plan Land Use Diagram and otherwise update Chapters 3 (Planning Framework) and 4 (Urban and Rural Development) of the General Plan to incorporate the Project,

- prezoning of properties within the Phase 1 annexation area consistent with the General Plan amendment.

The ultimate buildout of uses anticipated on the Project site will require additional entitlements from the City, including, but not limited to, the following:

- site development plans, including conditional or minor use permits and major or minor design review
- tentative and final parcel and subdivision maps
- grading and building permits

Other agencies that may require permission or approvals may include, but are not limited to:

- Sacramento Local Agency Formation Commission
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- California Department of Fish and Wildlife
- Central Valley Regional Water Quality Control Board
- Sacramento Metropolitan Air Quality Management District
- Sacramento County
- Sacramento County Water Agency
- Sacramento Area Sewer District
- Sacramento Regional County Sanitation District
- South Sacramento Conservation Agency

These additional agencies with potential permit or approval authority over the project, or elements thereof, will have the opportunity to review this document during the public review period, and will use this information in consideration and issuance of any permits required for the Project.

The Sacramento Local Agency Formation Commission (LAFCo) has authority over annexation applications and will use their independent judgement in reviewing and certifying this SEIR. It is anticipated that LAFCo will rely on the original 2019 SOIA EIR and this SEIR as it considers changes in public agency organization, including phased annexation of the Project site into the City of Elk Grove, and detachments from CSA No. 1 (Street Lighting) and CSA No. 11 (Supplemental Police), along with annexation into Sacramento Area Sewer District (SASD) and Sacramento County Regional Sanitation District. This SEIR specifically addresses the annexation of the Phase 1 area as described in Chapter 2, Project Description. Further CEQA review may be necessary prior to adoption of General Plan land use designations and prezoning and annexation of the Phase 2 areas depending upon the ultimate land uses.

1.4 PUBLIC INVOLVEMENT PROCESS

1.4.1 SCOPING COMMENT PERIOD

To initiate preparation of this SEIR, in accordance with the CEQA Guidelines (14 CCR 15082[a], 15103, and 15375), the City circulated a Notice of Preparation (NOP) of a Supplemental EIR (SEIR) for the proposed Project (provided as Appendix A). The NOP was circulated to the public; State Clearinghouse; responsible, trustee, and other relevant local, State, and Federal agencies; and to the Sacramento County Clerk. The scoping period began on July 20, 2020 and ended on August 19, 2020.

CEQA provides for a lead agency to facilitate one or more scoping meetings, which provide opportunity for determining the scope and content of the EIR. Traditionally, the City hosts one scoping meeting for the general public during the NOP comment period. In accordance with State and local health orders limiting in-person public meetings, the City provided an alternative method for the scoping meeting. A video presentation by staff, introducing the Project and outlining the CEQA process was provided for review on the City's website, along with instructions for providing responses to the NOP. This video and comment opportunity was available throughout the NOP comment period.

The NOP and scoping meeting provided opportunity for comment from public agencies, stakeholders, organizations, and interested individuals on the scope of the environmental analysis addressing the potential effects of the proposed Project. The City reviewed and considered all public comments in preparing this SEIR.

1.4.2 DRAFT SUPPLEMENTAL EIR COMMENT PERIOD

The City is circulating this Draft SEIR for a 45-day public review and comment period to provide agencies and interested individuals with the opportunity to comment on the content of the Draft SEIR.

WRITTEN COMMENTS

Written comments or questions concerning this Draft SEIR must be submitted within the 45-day review period. When submitting a comment, please include the name of a contact person in your agency or organization. All comments must be directed to the name and address listed below, either via postal mail or email:

City of Elk Grove Office of Strategic Planning and Innovation
c/o Christopher Jordan
8401 Laguna Palms Way
Elk Grove, CA 95758
cjordan@elkgrovecity.org

A copy of the Draft SEIR is also available for review on the City's website at the following address:

http://www.elkgrovecity.org/sportscomplex

1.5 ISSUES TO BE RESOLVED AND AREAS OF CONTROVERSY

CEQA Guidelines Section 15123 suggests that an EIR include a summary of "areas of controversy known to the Lead Agency" and "[i]ssues to be resolved." Topics addressed in responses to the City's NOP represent the most comprehensive list of issues of interest for the proposed Project and include:

- Cultural and Tribal Cultural Resources (Section 3.6, Cultural and Tribal Cultural Resources)
- Drainage improvements and avoiding mosquito breeding potential (Section 3.10, Hydrology and Water Quality)
- Water supply, including groundwater (Section 3.15, Utilities and Service Systems)
- Conversion of agricultural land to urban uses (Section 3.3, Agricultural Resources)
- Special-status species and sensitive habitats (Section 3.5, Biological Resources)
- Utility service (Section 3.15, Utilities and Service Systems)
- Energy efficiency and demand (3.16, Energy)
- Climate change (Section 3.8, Greenhouse Gas Emissions)

1.6 ORGANIZATION OF THE SUPPLEMENTAL EIR

This SEIR is organized as follows:

- **Chapter ES, "Executive Summary,"** provides an overview of the findings, conclusions, and any recommended mitigation measures in the SEIR.

- **Chapter 1, "Introduction,"** describes the Project background; intended uses and purposes of this SEIR; lead, responsible, and trustee agencies; public involvement process; issues to be resolved and areas of controversy; and SEIR organization.

- **Chapter 2, "Project Description,"** describes the Project location, Project components, supporting infrastructure, Project schedule, required approvals and entitlements, and Project objectives.

- **Chapter 3, "Environmental Impact Analysis,"** evaluates the environmental effects of the revised Project and identifies mitigation for potentially significant and significant effects.

- **Chapter 4, "Cumulative Impacts,"** describes the impacts of implementing the revised Project in combination with the impacts of related past, present, and reasonably foreseeable future projects.

- **Chapter 5, "Alternatives,"** provides a comparative analysis between the Project and alternatives to the Project. The Alternatives chapter provides a summary of the relative environmental impacts of the Project alternatives, including the No Project Alternative. This chapter also identifies the "environmentally superior" alternative.

- **Chapter 6, "Other CEQA Considerations** discusses the Project's growth inducement potential, any significant irreversible environmental changes associated with the revised Project, and any significant and unavoidable effects of the revised Project.

- **Chapter 7, "List of Preparers,"** lists the individuals who contributed to preparation of the SEIR.

- **Chapter 8, "References,"** lists the sources of information cited throughout the SEIR.
- **Appendices** provide background and technical information.

2 PROJECT DESCRIPTION

2.1 PROJECT LOCATION AND SURROUNDING LAND USES

2.1.1 PROJECT LOCATION

The Project site consists of approximately 571 acres located southeast of Grant Line Road (near its intersection with Waterman Road) and east of the Union Pacific Railroad (UPRR) tracks and State Route (SR) 99. The Project site extends eastward past the intersection of Grant Line Road and Mosher Road, and extends southward to the Sacramento County Urban Services Boundary (USB), approximately following the 100-year floodplain (see Exhibit 2-1). The Project area is made up of five properties (as defined by ownership), which are listed in Table 2-1 and illustrated in Exhibit 2-2.

2.1.2 EXISTING AND SURROUNDING LAND USES

Most of the Project site is currently undeveloped. Existing uses consist primarily of agricultural land (i.e., row crops and pasture). The Project site also includes three existing home sites, five residences, and multiple barns and sheds.

Grant Line Road borders the Project site to the north, and the UPRR tracks border the site to the west. Industrial uses are present on the northern and western sides of the Project site, opposite Grant Line Road and the UPRR. Agricultural land (row crops) is present east of the Project site. The Deer Creek/Cosumnes River floodplain, which also includes row crops, is present to the south.

2.1.3 ADOPTED SPHERE OF INFLUENCE AMENDMENT

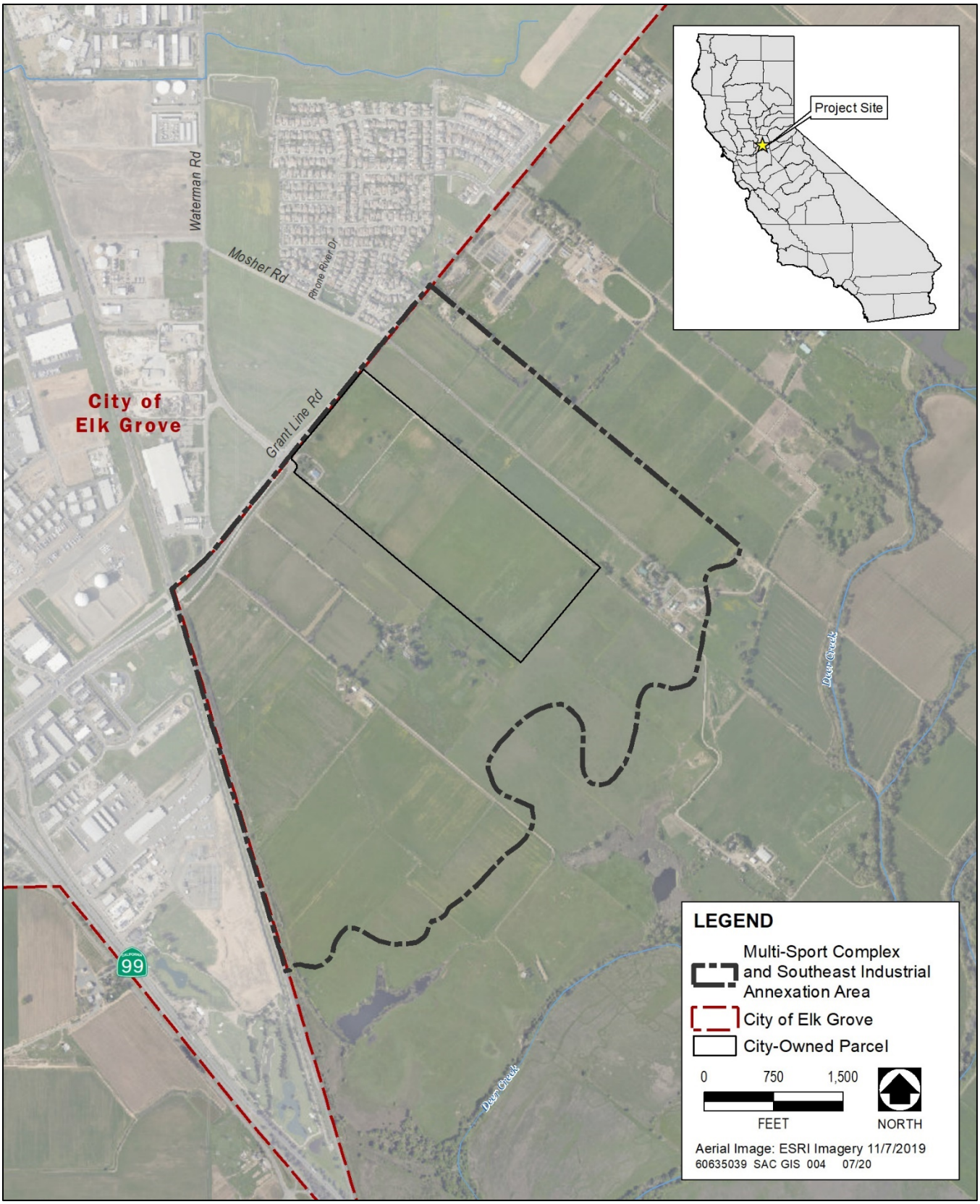
The Sacramento Local Agency Formation Commission (LAFCo) approved a Sphere of Influence amendment (SOIA) for the Project site, to add this area to the City of Elk Grove's Sphere of Influence in May of 2019. LAFCo certified an EIR for this SOIA at the same hearing. The area that was included in the approved SOIA will not change as a result of the revised land use designations now proposed by the City.

LAFCo approval of the SOIA was conditioned on certain actions that the City must complete prior to annexation. These actions included, but were not limited to, the following:

- Establishment of General Plan designation(s) and prezoning for the area proposed to be annexed.
- Preparation of master plans for infrastructure, including storm drainage, water, wastewater, and transportation.

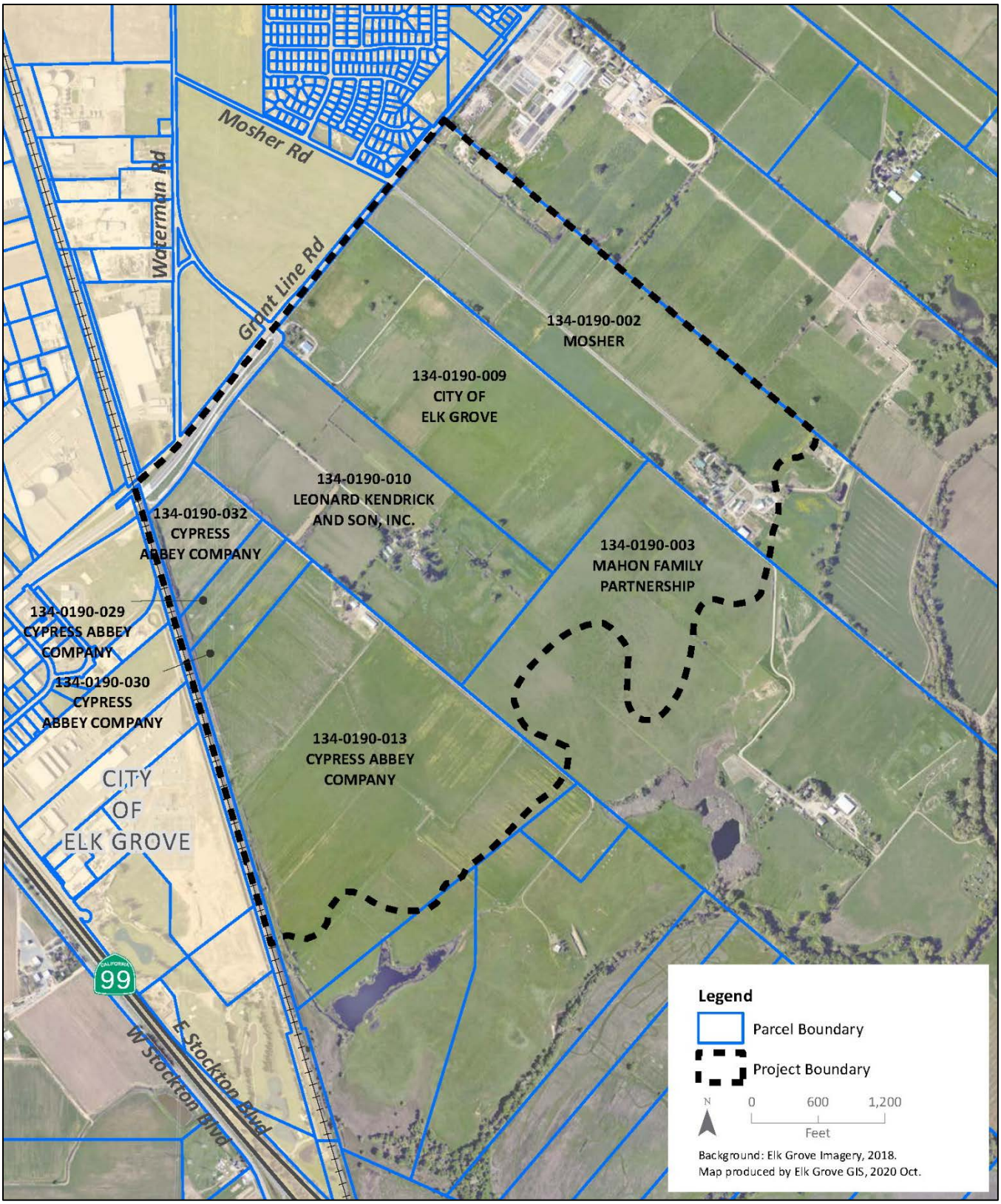
2.2 PROPOSED PROJECT COMPONENTS

The 2019 SOIA EIR addressed development of a multi-sports park complex, along with a mix of commercial, industrial, and mixed uses in the surrounding area. There are four parts of the revised Project description that are the focus of analysis in this SEIR: (1) a change in the planned future land uses within the Project area; (2)



Source: City of Elk Grove 2020

Exhibit 2-1. Project Site and Vicinity



Source: City of Elk Grove 2020

Exhibit 2-2. Parcels in the Project Area

additional information related to infrastructure improvements that will be necessary to serve the Project site; (3) the establishment of General Plan and prezoning for a Phase 1 annexation; and (4) consideration of the annexation application for Phase 1 of the Project (described below).

This SEIR considers the annexation and buildout of the Project area pursuant to the planned land uses described in section 2.2.1, as well as the infrastructure necessary to serve these uses as described in section 2.2.4. Annexation and development is planned to occur in three phases as follows:

- Phase 1 includes the City's property, as well as the adjoining properties to the west (Kendrick and Cypress Abbey). Discussion of proposed General Plan land use designations and prezoning are included in section 2.2.2.
- Phase 2A includes the Mosher property, east of the City property.
- Phase 2B includes the Mahon property, south of the City property.

It is possible that Phases 2A and 2B may be combined into a single Phase 2, depending upon the nature and timing of development and desires of the property owners. Phase 1 of the annexation is planned to occur in 2021. The timing of Phases 2A and 2B are not specifically known but is assumed to occur within the next 20 years. Further CEQA review may be necessary prior to adoption of General Plan land use designations and prezoning and annexation of the Phase 2 areas depending upon the ultimate land uses.

The Project also includes a reorganization for the Sacramento Area Sewer District and the Sacramento Regional County Sanitation District to align their service boundaries to include the Project area.

The Project area will also be detached from CSA No. 1 (Street Lighting) and CSA No. 11 (Supplemental Police).

Table 2-1 Parcels in the Project Area by Ownership

Situs	Owner	Assessor's Parcel Numbers (APNs)
10251 Grant Line Road	City of Elk Grove	134-0190-009
10313 Grant Line Road	Leonard Kendrick and Son, Inc.	134-0190-010
No address on file	Cypress Abbey Company	134-0190-032
		134-0190-029
		134-0190-030
		134-0190-013*
10171 Grant Line Road	Mahon Family Partnership	134-0190-003*
10161 Grant Line Road	Mosher	134-0190-002*

Source: GIS shapefiles for proposed Project from the City of Elk Grove 2020.

* Only a portion is included in the Project area.

It should be noted that as of October 2020, the lands of Cypress Abbey were preparing a Boundary Line Adjustment (BLA) through Sacramento County such that APN 134-0190-013's southern property line conformed to the approved SOIA. The BLA application includes all lands owned by Cypress Abbey within and adjoining the Project area and, as such, upon approval the properties will be issued new APNs. The BLA approval will occur prior to consideration of the annexation application by LAFCo.

2.2.1 PLANNED FUTURE LAND USES

The City is proposing a change in the proposed future land use designations for the Project site compared to the array of uses assumed in the EIR certified by the Sacramento LAFCo in May of 2019 for the Project site. The 2019 SOIA EIR included detailed analysis related to the development and operation of a multi-sport complex on

the approximately 100-acre City-owned parcel, as well as the development of adjoining properties to the south, east, and west with a collection of industrial, commercial/retail, parks/open space, and mixed uses. This Supplemental EIR focuses on additional information needed to address the proposed changes in use. The proposed changes, which are described in Table 2-1 and illustrated in Exhibit 2-3, would involve the following:

- The approximately 100-acre City-owned parcel in the center of the Project site would be designated for Light Industrial uses. It was formerly designated as Public Open Space/Recreation. A multi-sport complex could still be developed through the City's conditional use permit process.

- The land uses for the Kendrick property were formerly designated as approximately 60 acres of retail commercial, with the balance as Light Industrial. This would be changed to approximately 20 acres of retail commercial with the balance as Light Industrial.

Table 2-2 2019 SOIA EIR Land Use and Revised SEIR Project Land Use

Land Use	2019 SOIA EIR (acres)	Proposed Project (acres)	Net Change (acres)
Parks and Open Space (P/OS)	171+/-	64+/-	(107)
Mixed Use (MU)	118+/-	118+/-	0
Light Industrial (LI) and Heavy Industrial (HI)	211+/- (undifferentiated)	212+/- (Light Industrial) 143+/- (Heavy Industrial)	144
General Commercial/Commercial Office (GC)	61	0	(61)
Regional Commercial (RC)	0	20+/-	20
Existing City Right-of-Way	10+/-	14+/-	4
Total	**571**	**571**	**0**

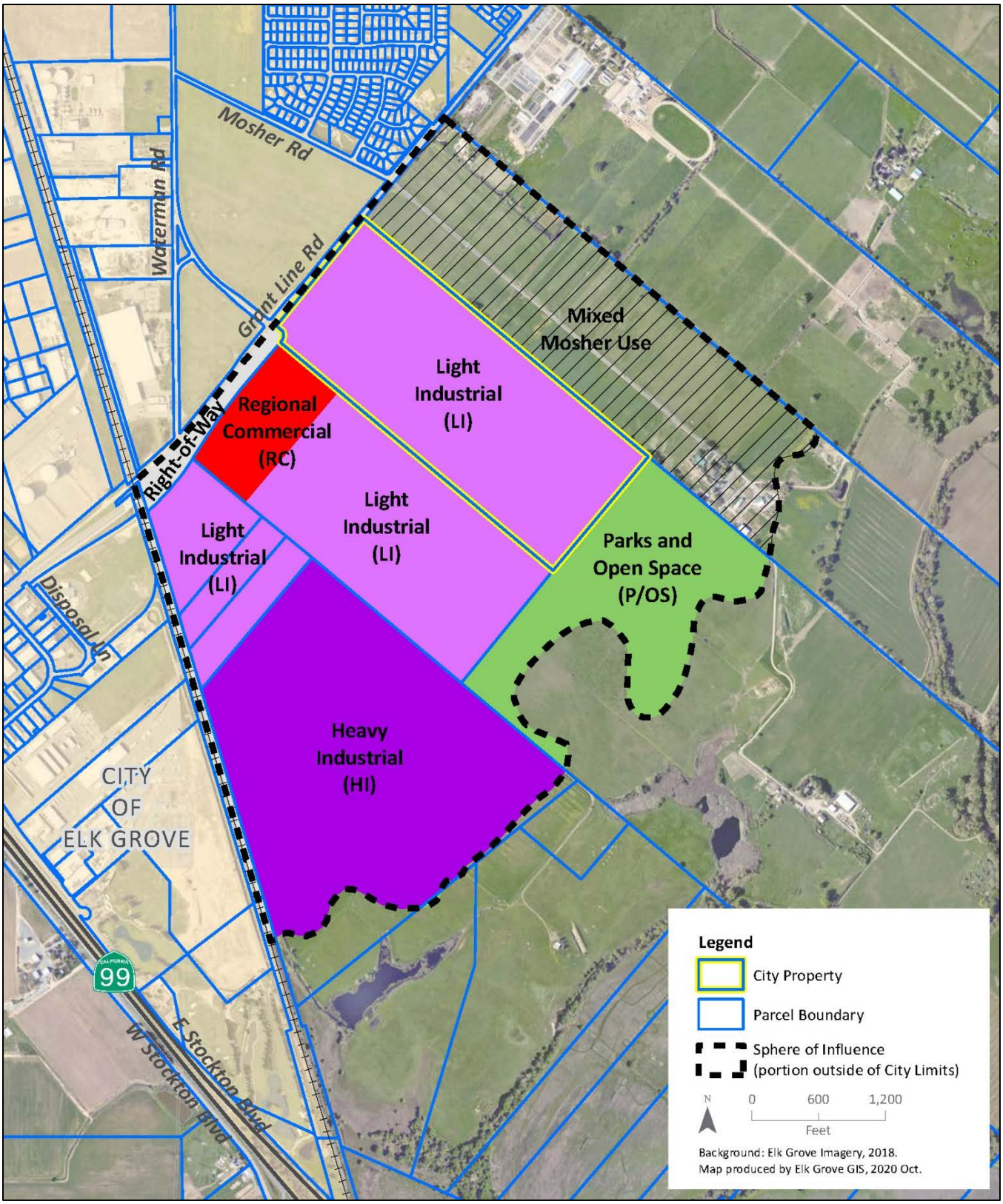
Source: GIS shapefiles for proposed Project from the City of Elk Grove 2020.

Note: The acreage total for the 2019 SOIA EIR did not include the existing City rights-of-way, and so the total had shown as approximately 561, rather than 571 acres.

2.2.2 GENERAL PLAN AMENDMENT, PREZONING, AND SPECIFIC PLAN

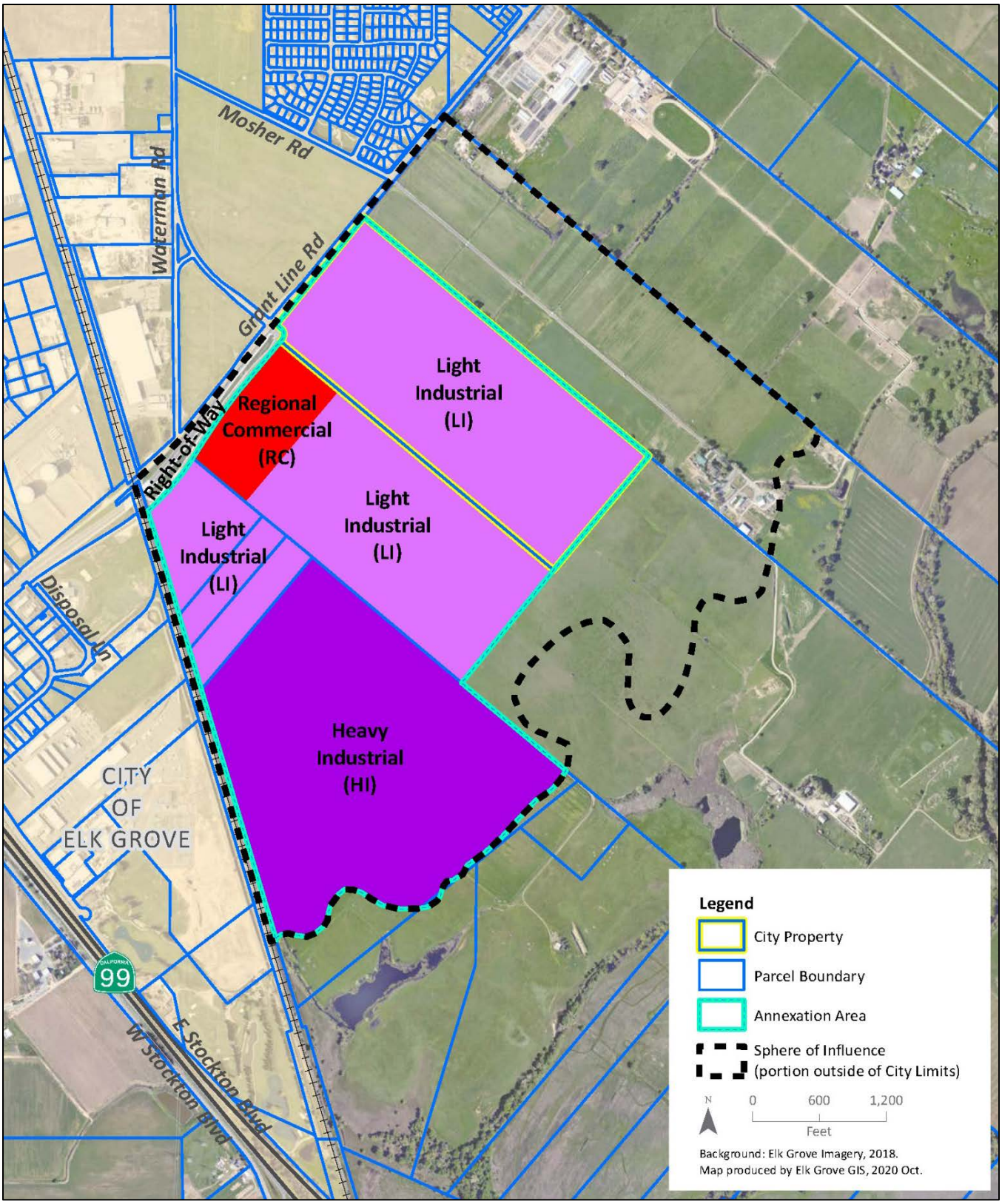
To implement the Project, the City proposes to amend its General Plan to include the planned land uses, as well as adopt prezoning, for the Phase 1 annexation area. Table 2-3 and Exhibits 2-4 and 2-5 illustrate the proposed designations for the subject properties. General Plan designations and prezoning are not proposed for the Mahon and Mosher properties as they are not included in the Phase 1 annexation.

Further, in keeping with City General Plan policy LU-3-28, the City has prepared and would adopt a Specific Plan for the Project area. The Specific Plan would apply to the entirety of the Project area (in keeping with the intent of the LAFCo conditions on the SOIA to consider the entirety of the Project area), but would only be effective on the territory approved for annexation. The Specific Plan establishes a framework for future development of the Project area, including further discussion on the land plan and how it is implemented through zoning, and the infrastructure and public services necessary to serve future development infrastructure (descried further in section 2.2.4 of this SEIR). The Specific Plan also incorporates information from the Plan for Services and Public Facilities Financing Plan.



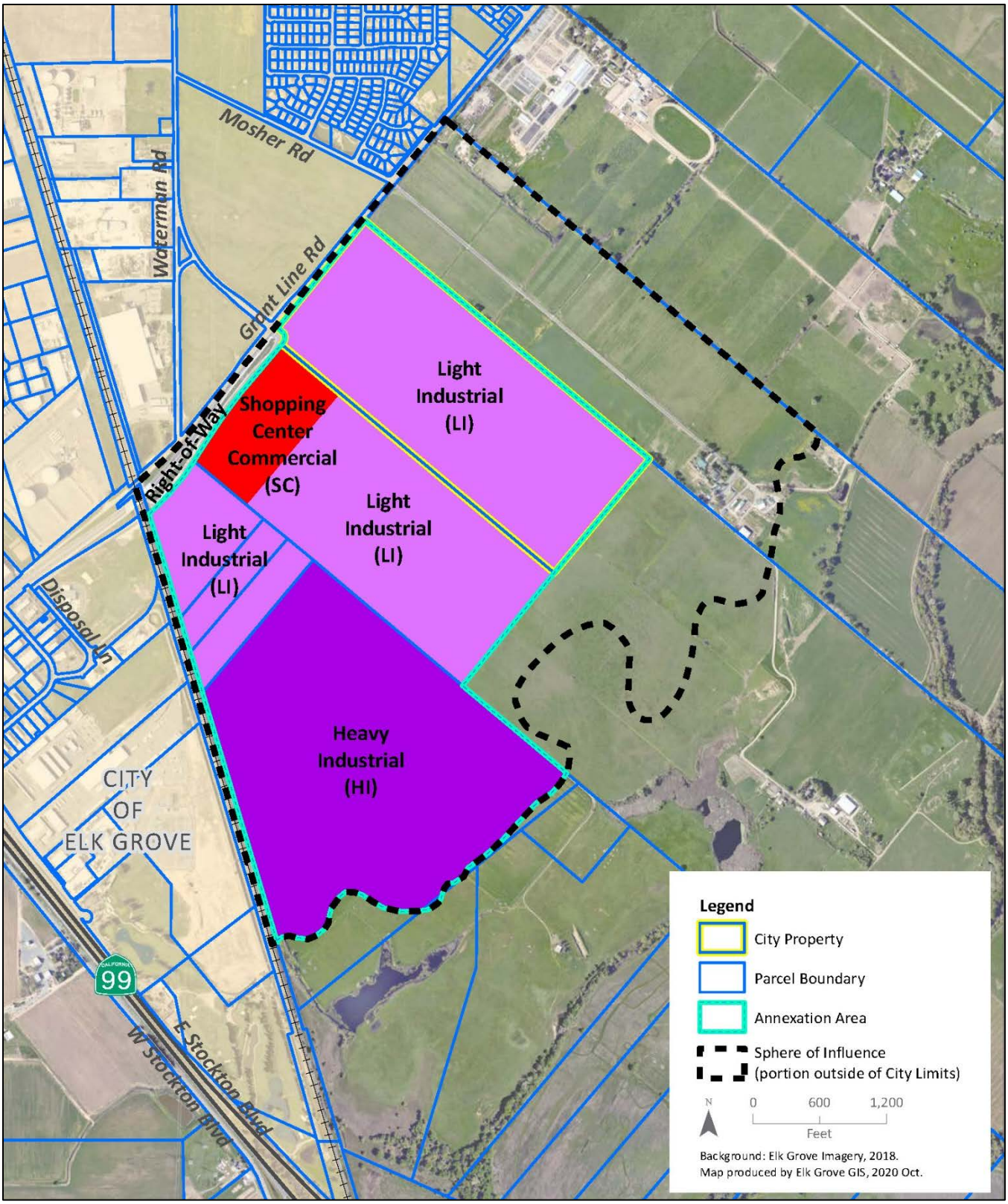
Source: City of Elk Grove 2020

Exhibit 2-3. Proposed Land Use Plan



Source: City of Elk Grove 2020

Exhibit 2-4. Proposed General Plan Land Use Designations for the Phase 1 Annexation



Source: City of Elk Grove 2020

Exhibit 2-5. Proposed Prezoning for the Phase 1 Project Area

Table 2-3 Proposed General Plan Land Use Designations and Prezoning for Phase 1			
		Proposed	
APN	Owner	General Plan Land Use Designation	Proposed Prezoning
134-0190-009	City of Elk Grove	Light Industrial (LI)	Light Industrial (LI)
134-0190-010	Leonard Kendrick and Son, Inc.	Regional Commercial (RC) Light Industrial (LI)	Shopping Center (SC) Light Industrial (LI)
134-0190-032	Cypress Abbey Company	Light Industrial (LI)	Light Industrial (LI)
134-0190-029		Light Industrial (LI)	Light Industrial (LI)
134-0190-030		Light Industrial (LI)	Light Industrial (LI)
134-0190-013*		Heavy Industrial (HI)	Heavy Industrial (HI)
Source: GIS shapefiles for proposed Project from the City of Elk Grove 2020. * Only a portion is included in the Project area.			

2.2.3 ANNEXATION

This SEIR , in combination with the prior EIR, will be used by LAFCo to consider approval of the annexation for Phase 1 of the Project area. As described in section 2.2, to the extent additional CEQA review is not required, this SEIR could also be used to consider Phase 2 annexation.

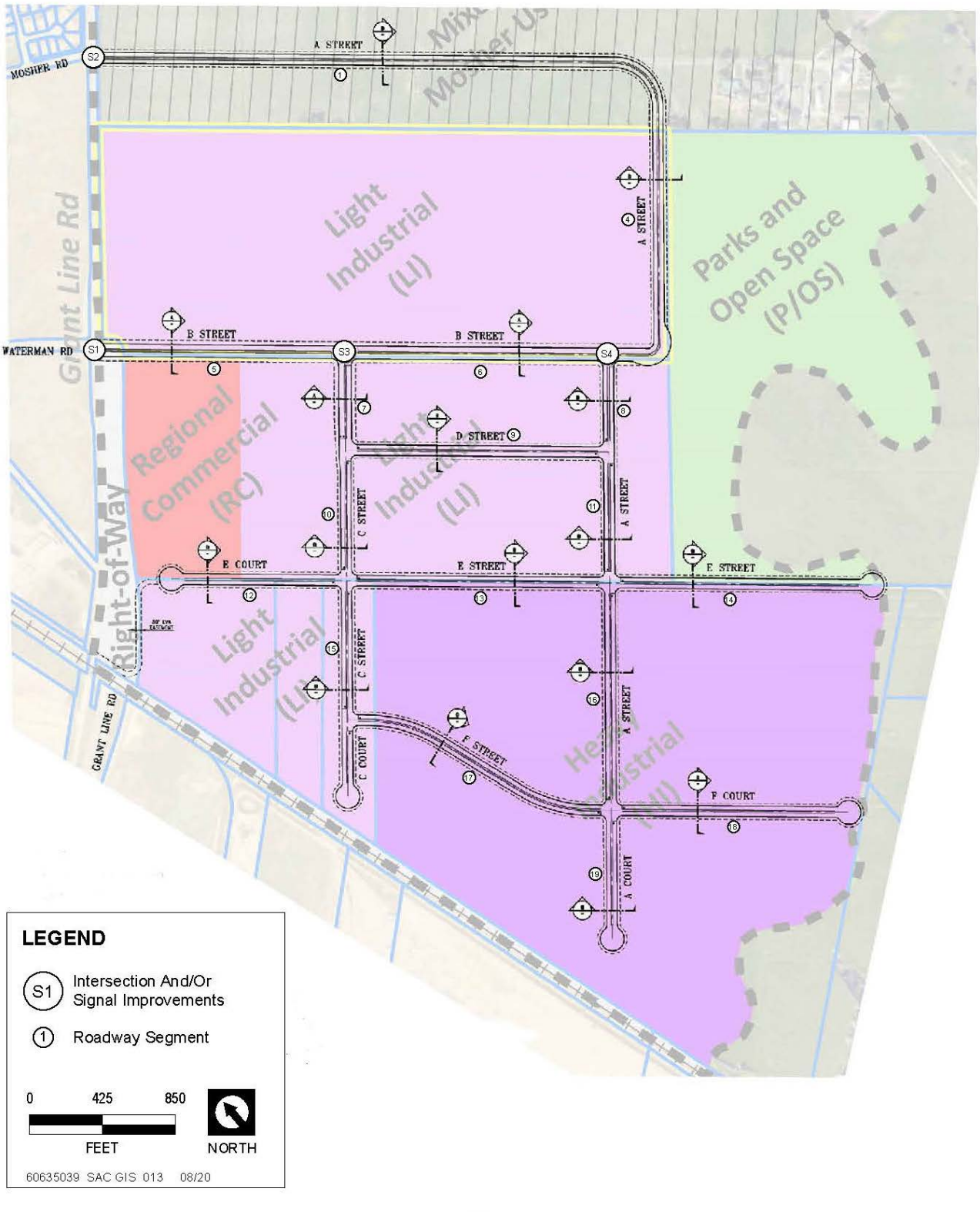
2.2.4 SUPPORTING INFRASTRUCTURE

The on-site infrastructure needs at the Project site were evaluated in the 2019 SOIA EIR. However, since the 2019 SOIA EIR was approved, and in response to LAFCo's conditions of approval on the SOIA, additional detailed studies have been conducted relative to the infrastructure that would be required to serve the Project site. Additional information related to on-site and off-site infrastructure needs is summarized below. In keeping with the intent of the conditions of approval, infrastructure master planning has been completed for the entire Project area.

ON-SITE INFRASTRUCTURE

Access, Circulation, and Parking

The proposed Project includes two access points from Grant Line Road. The main entrance is proposed at Waterman Road, and the secondary entrance would be located at Mosher Road. The Project site entrances and internal circulation network are shown on Exhibit 2-6. The Waterman Road arterial street would be 74 feet wide with a 25-foot-wide landscape corridor on each side. Sidewalks would be included within the landscape corridors. A 12-foot-wide landscape median would be installed in the center of the street. The other internal collector streets would be 62 feet wide, and would include a parking lane, Class II bicycle lane, and a sidewalk on each side. The proposed circulation system is described in the Elk Grove Multi-Sport Complex & Grant Line Industrial Annexation Area Transportation Master Plan (Appendix G). Note that the ultimate alignment of internal streets A, C, D, E, and F will be determined by the City during review of subsequent development applications; the extension of Waterman Road (B Street) and the point of connection of A Street at Grant Line/Mosher Road are fixed conditions.



Source: Wood Rogers 2020

Exhibit 2-6. Circulation Network

The setbacks on both sides of the internal collector streets would be planted with landscape trees. In addition, the Project includes a proposed trail connection to the northwest that would use the existing Grant Line Road overcrossing at the UPRR tracks to allow pedestrians and bicyclists to pass below Grant Line Road and provide connections to areas north of Grant Line Road.

Intersection improvements are required at the Project entrances proposed for Waterman and Mosher Roads. The City is currently working on the Grant Line Road Widening Project that would include construction of most of the necessary improvements for the Project (such as some of the necessary turn lanes and roadway widening) (Appendix G, Transportation Master Plan). Further phased widening of Grant Line Road to an eight-lane facility will provide for ultimate planned capacity and intersection configuration (see Appendix G, Transportation Master Plan).

\Water Supply and Distribution

Currently, there are no public water supply facilities within the Project site. The majority of the Project site is located within the "overlap service area" of the Omochumne-Hartnell Water District (OHWD) and the Sacramento County Water Agency (SCWA), with the exception of 17 acre and 48 acres that are located exclusively in the OHWD and SCWA service areas, respectively (Brown & Caldwell 2020) (see Exhibit 2-7). Domestic water supplies are currently provided by private groundwater wells, and most agricultural water supplies are provided by OHWD's irrigation wells. As discussed further in the Project's Municipal Service Review, OHWD does not provide municipal and industrial water in the Project area. OHWD focuses on groundwater recharge and operates four flashboard dams that increase the wetted perimeter of the Cosumnes River to affect greater groundwater recharge. These dams are located outside of the Project area. As anticipated in the 2019 SOIA EIR, water supply for the Project site would be provided by the SCWA's Zone 40. Zone 40 implements a conjunctive-use water system, which includes groundwater (pumped from the South American Sub-basin of the Sacramento Valley Groundwater Basin, which is identified locally as the Central Basin), surface water, and recycled water. Exhibit 2-8 illustrates the boundaries of the South American Sub-Basin, Zone 40, and the location of the Project. SCWA's conjunctive use program implements a coordinated approach to manage surface water and groundwater supplies to maximize the yield of available water resources.

An amendment to the SCWA Water Supply Master Plan has been prepared to include service for the proposed Project. (Appendix B).

Water will be delivered to the Project site through existing 24-inch and 16-inch transmission pipelines located in Grant Line Road. The 24-inch transmission main originates west of the Project site, and extends easterly within Grant Line Road to the intersection of Waterman Road. From Waterman Road, the transmission main continues easterly as a 16-inch-diameter transmission main. There are two proposed points of connection to the existing transmission main in Grant Line Road: one at the intersection of Waterman Road, and one at the intersection of Mosher Road.

Exhibit 2-9 shows the proposed on-site water conveyance facilities, and the proposed points of connection with existing off-site SCWA facilities. The on-site domestic water backbone infrastructure layout has been designed to comply with SCWA requirements and aligns with the planned on-site roadway system; should the internal roadway system be modified through subsequent development applications, corresponding changes to the water infrastructure layout would also be made.

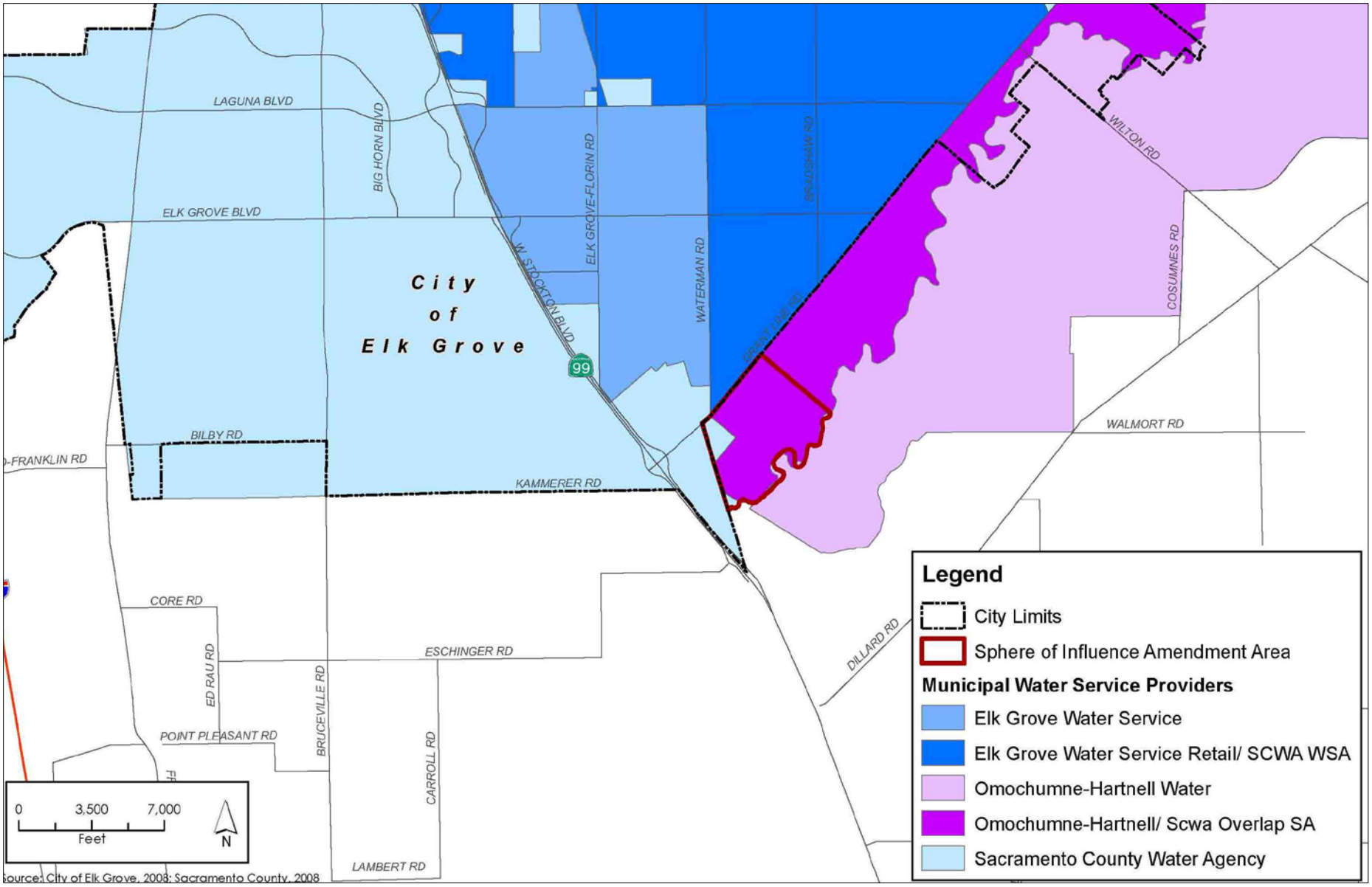
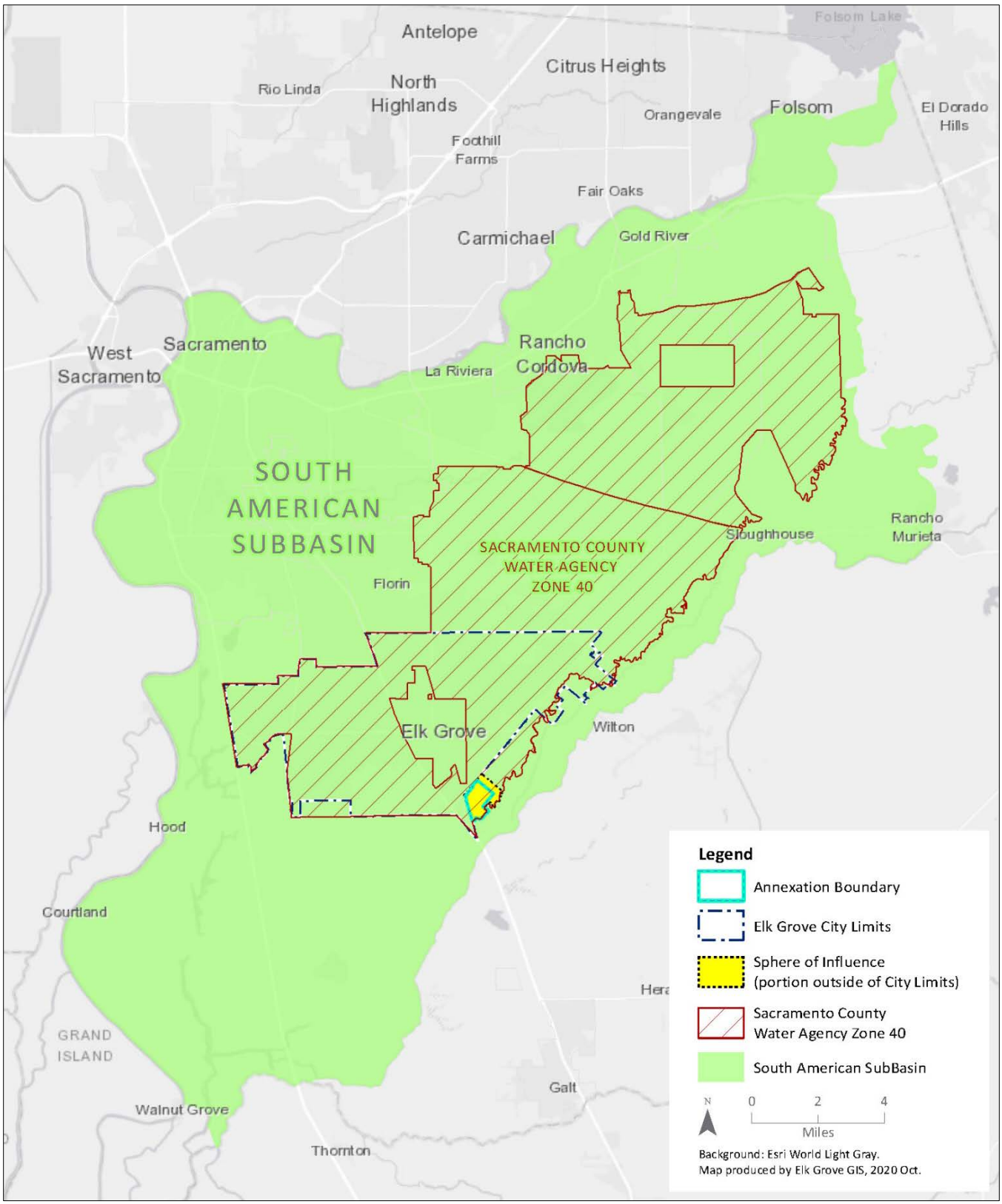
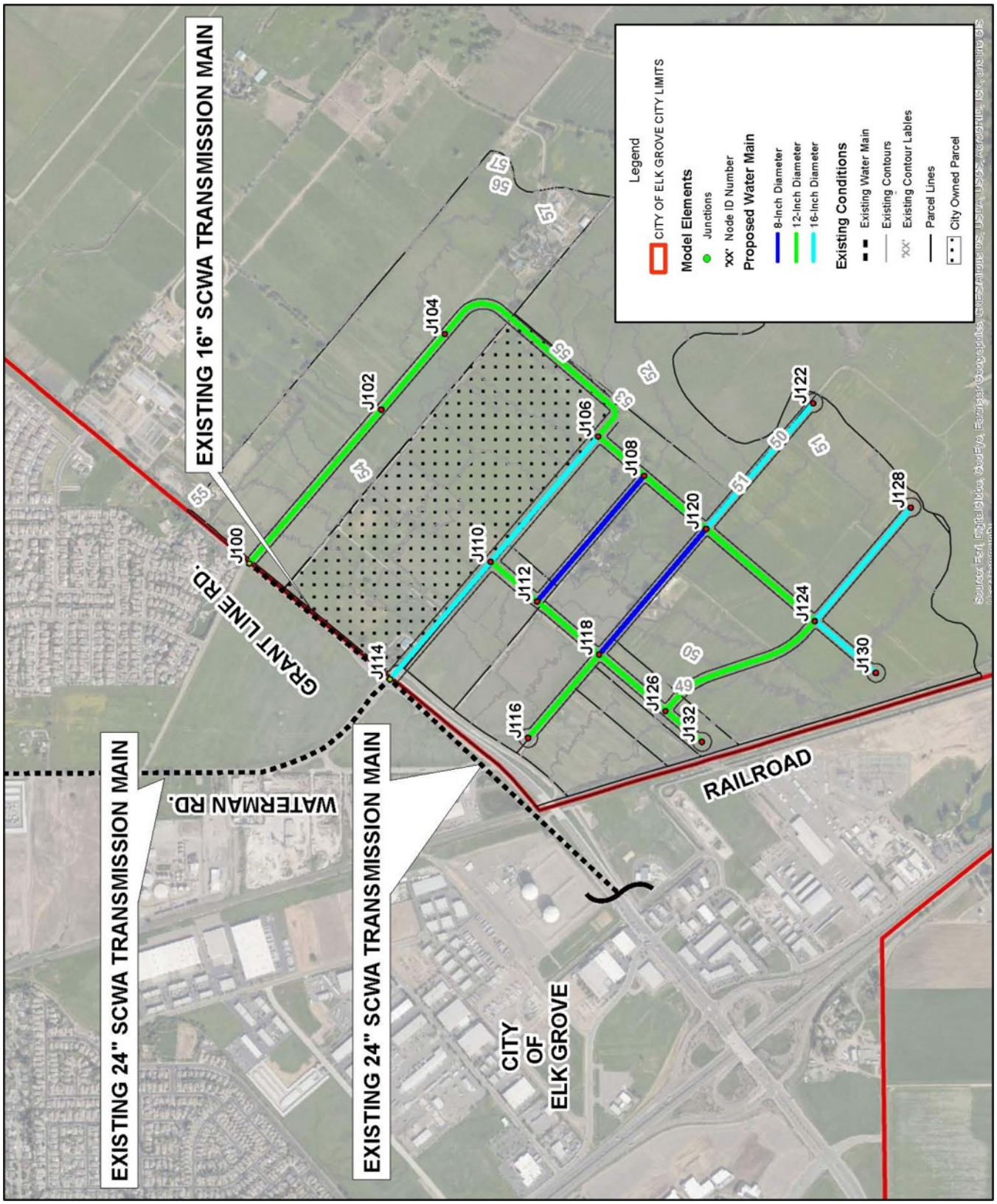


Exhibit 2-7. Water Service Providers



Source: City of Elk Grove 2020

Exhibit 2-8. South American Subbasin



Source: Wood Rogers 2020

Exhibit 2-9. Proposed Water System

Wastewater Collection and Treatment

The Project site is not currently served by a municipal wastewater service provider. Rather, wastewater service is currently provided by on-site septic systems.

As anticipated in the 2019 SOIA EIR, wastewater collection for the Project site will be provided by the Sacramento Area Sewer District (SASD). A sewer study (known as a "Level II Sewer Study") has been prepared for the Project site (Wood Rodgers 2020) (Appendix C). The study assumes sewage conveyance for an estimated total of 3,429 Equivalent Single-Family Dwelling Units (ESDs), based on the SASD standard assumption of 6 ESDs per acre. The Level II Sewer Study conservatively includes gross acreages and does not deduct for areas that would be in future public road rights-of-way. At full build-out, the Project site would generate approximately 1.05 million gallons per day (MGD) during average dry weather flow (ADWF) and 2.74 MGD during peak wet weather flow (PWWF).

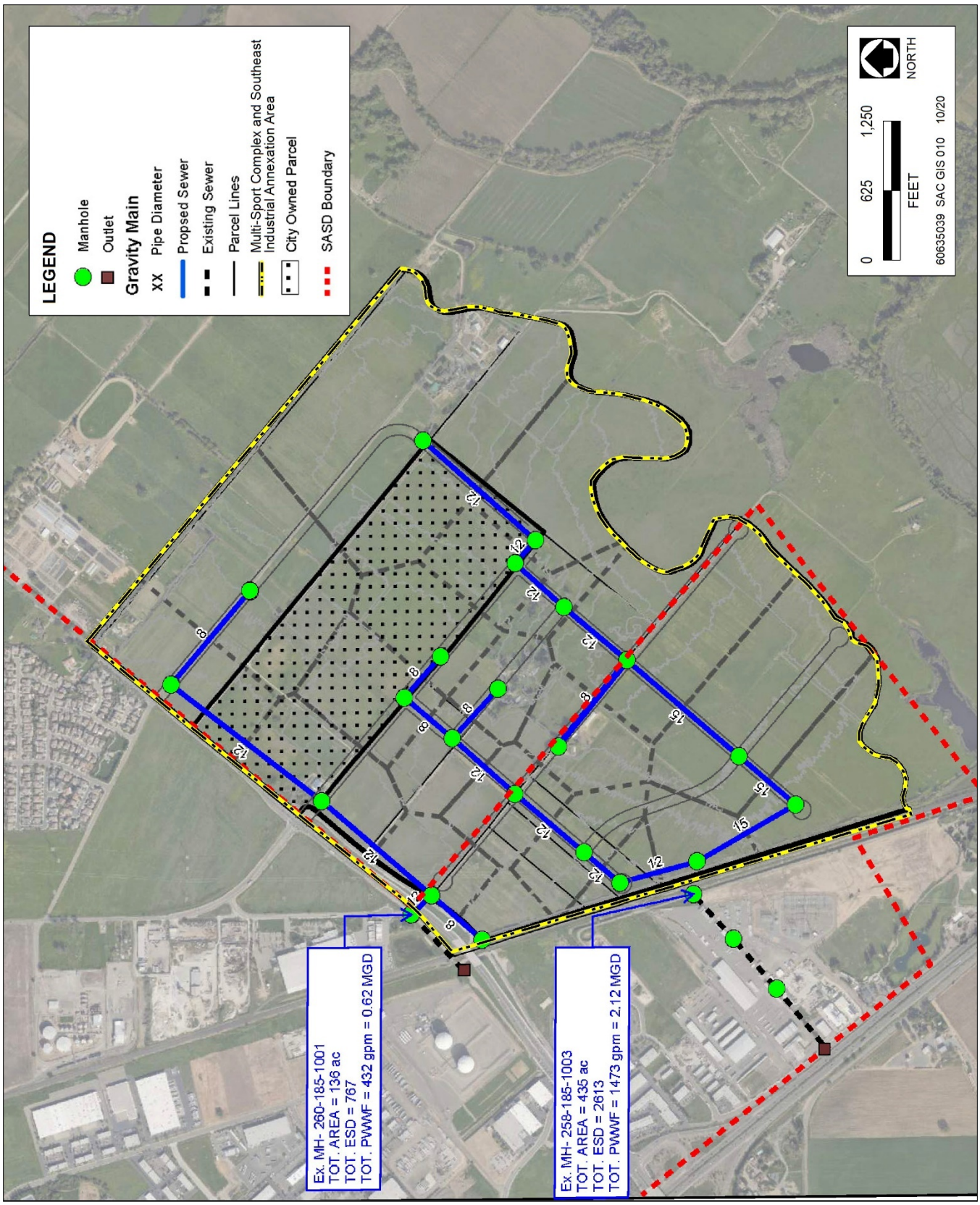
There are two existing points of connection to the existing SASD system immediately adjacent to, or within the Project site: a 12-inch pipeline on the north side of Grant Line Road near the end of Waterman Court, and an 18-inch pipeline stubbed just east of the UPRR along the western border of the Project site (see Exhibit 2-10). The Level II Sewer Study for the Project site shows points of connection along with the on-site backbone sewer collection system, which has been designed to comply with SASD's minimum design standards and aligns with the planned on-site roadway system; should the internal roadway system be modified through subsequent development applications, corresponding changes to the sewer infrastructure layout would also be made. SASD conducted an analysis and confirmed that the existing off-site conveyance system has adequate capacity to accommodate the PWWF generated by the Project site at full build-out (Wood Rodgers 2020). See Appendix C for a detailed discussion of proposed wastewater collection and conveyance improvements.

From the SASD sewer pipelines, wastewater would be conveyed through larger sewer interceptors owned and operated by the Sacramento Regional County Sanitation District (SRCSD) to the Sacramento Regional Wastewater Treatment Plant located northwest of Elk Grove. No improvements are necessary to the interceptor system or the Regional Wastewater Treatment Plan in order to accommodate the Project.

Stormwater Drainage

Stormwater drainage at the Project site currently consists of various small agricultural ditches and channels. Some of the stormwater discharges off-site to an existing canal along the northeastern portion of the Project site, which then flows southeast into an approximately 0.5-acre pond, and then into Deer Creek. Most of the Project site stormwater discharges to an existing ditch along Grant Line Road, which runs westward into another larger canal that flows south along the east side of the UPRR and discharges into an approximately 8-acre pond. A short channel conveys water from this pond to Deer Creek.

West Yost Associates (2020) has prepared a Drainage Master Plan for the Project site (Appendix D). The Drainage Master Plan includes, and this SEIR provides analysis of full buildout of the Project site with the completed drainage improvements. Interim drainage improvements will be constructed to serve phased development of the Project site, as determined by the City and consistent with the overall Drainage Master Plan.



Source: Wood Rogers 2020

Exhibit 2-10. Proposed Wastewater System

In order to accommodate stormwater generated by anticipated development, an underground network of drainage pipelines would be installed throughout the Project site. The underground pipelines, as well as overland stormwater flow, are designed to drain into one of seven detention basins that would be developed throughout the Project site (see Exhibit 2-11). Furthermore, the planned 48-inch-diameter underground drainage pipeline that would be located along the south-southeast border of the City-owned parcel would be upsized to a 60-inch-diameter drainage pipeline in order to carry a portion of the Project site's stormwater flow. In addition to drainage needs for the Project site, this upsized drainage pipeline would serve drainage needs for a proposed project known as "Waterman 75," located north of Grant Line Road and within the existing City limits.

As an alternative, it is possible that stormwater flows from the City, Kendrick, and Cypress Abbey properties (along with flows from Grant Line Road itself and from the adjoining Waterman 75 development north of the Project in the City) may continue to drain into the existing ditch along Grant Line Road and the east of the UPRR. Such a solution would require an engineering study and approval by the City that demonstrates the solution shall not create a statistically significant increase in flows from those assumed in the West Yost report and illustrated in Exhibit 2-12. This solution would eliminate the 60-inch diameter drainage pipeline.

Electric and Natural Gas Services

Electricity would be provided by the Sacramento Municipal Utility District (SMUD). Electricity could be served from the 69-kilovolt (kV) line on Grant Line Road. SMUD's power line would be connected to a utility transformer and metering/distribution equipment in the site's service yard and the City would connect service feeders that would extend throughout the site. SMUD would require 12.5-foot overhead/underground public utility easements along all streets and a 25-foot easement along Grant Line Road for the existing 69kV line. There is an existing 12kV overhead line along Waterman Road and Grant Line Road; an existing and proposed 12kV line along Mosher Road; a proposed second 69kV circuit along Grant Line Road on an existing pole line; and proposed 12kV underground lines along Grant Line Road and Waterman Road.

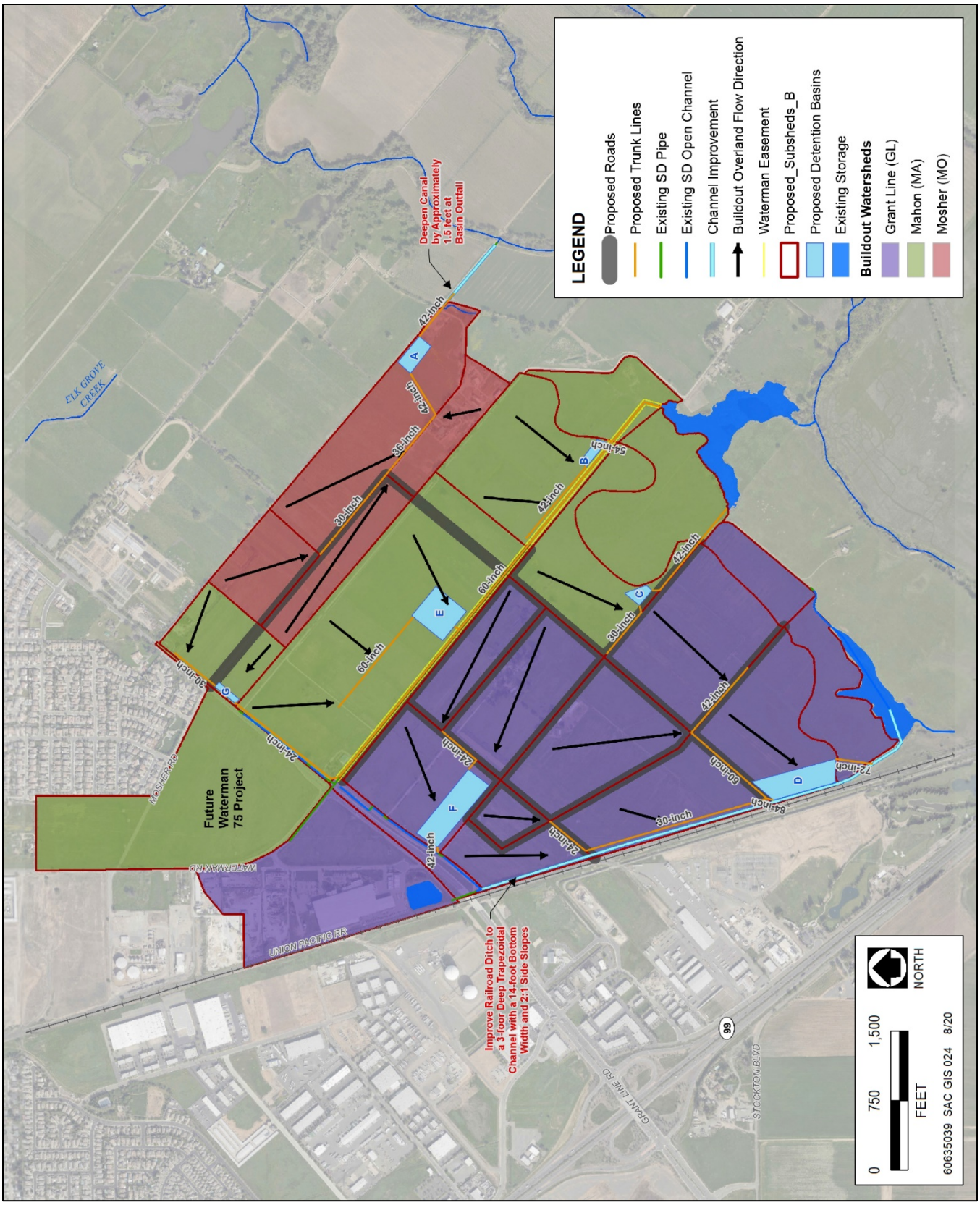
Natural gas service would be provided by Pacific Gas and Electric Company (PG&E). However, natural gas lines do not currently serve the Project site according to the Gas Transmission Pipeline Systems Map. The existing grid network of gas lines would have to be extended to serve the increased demand for natural gas generated by development on the Project site.

On-site electrical transmission infrastructure and natural gas lines would be installed underground and would generally follow the alignment of the internal roadway network.

OFF-SITE IMPROVEMENT AREAS

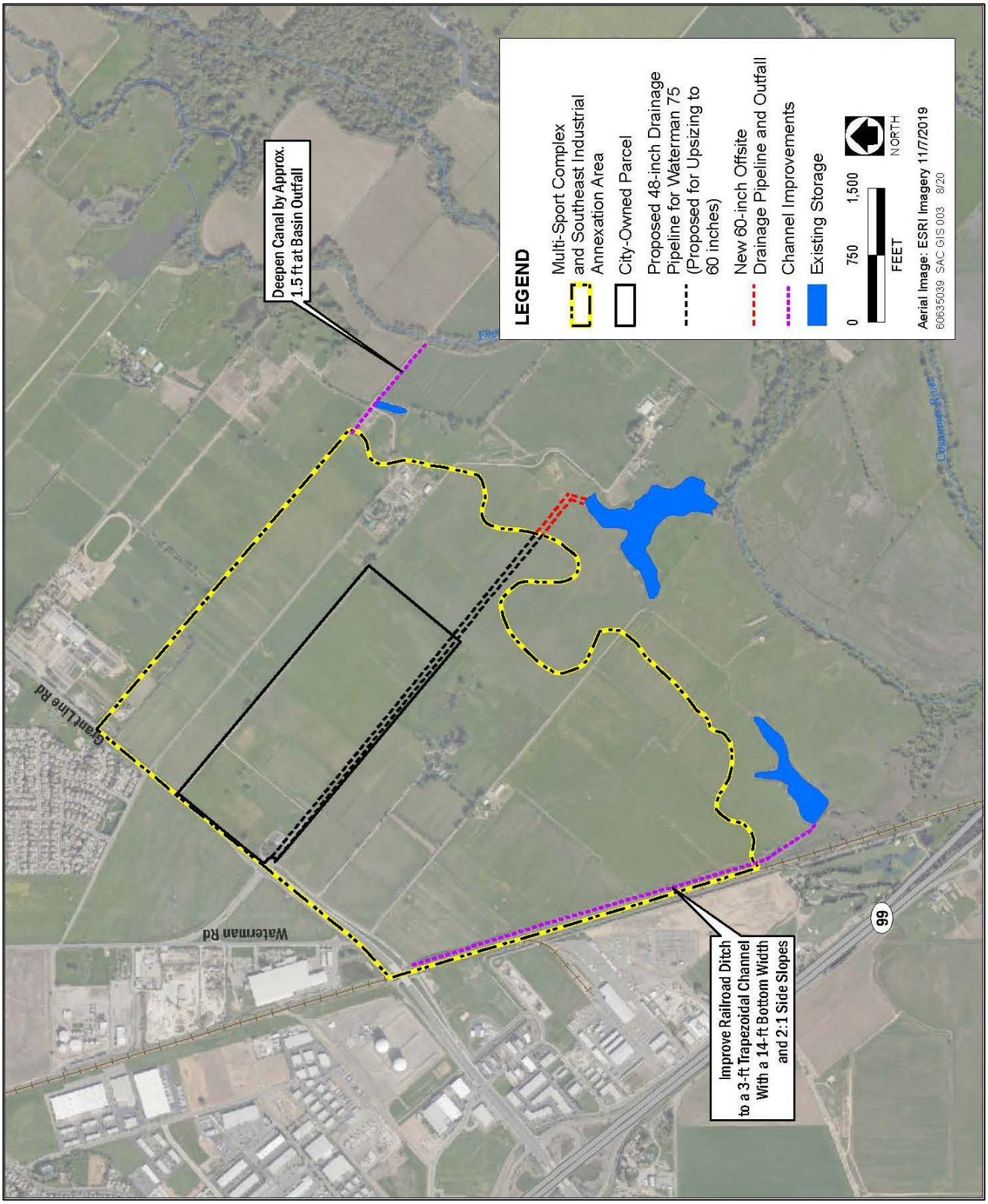
The results of additional detailed studies performed since the 2019 SOIA EIR was certified have determined that three off-site facilities (described below) would be required, which were not previously evaluated in the 2019 SOIA EIR. Specific off-site improvements include connection to the SCWA and SASD systems, as described above, and improvements to Grant Line Road. Additionally, off-site stormwater drainage improvements are required as described below.[1]

[1] Impacts associated with additional off-site improvements were analyzed in the 2019 SOIA EIR.



Source: West Yost 2020

Exhibit 2-11. Proposed On-Site Drainage Network



Source: City of Elk Grove 2020

Exhibit 2-12. Proposed Off-Site Drainage Improvements

Stormwater Drainage

A portion of the Project site's flows would be conveyed through the planned 60-inch-diameter pipeline off-site to an existing 15-acre pond that discharges through an existing outfall into Deer Creek (see Exhibit 2-11). Because this off-site pond also provides agricultural water storage for the landowner, the pond would need to be deepened in order to accommodate the Project site runoff in addition to the existing needs for agricultural water storage. The existing inflow area at the northeastern end of the pond would also need to be improved, along with the existing outflow at the southeastern end of the pond. Water from the pond is discharged in a short channel, which in turn discharges to Deer Creek. The channel to Deer Creek may need to be widened. It is possible that these channel improvements could extend to Deer Creek. It appears that Deer Creek is deep enough to accept even a lowered ditch if that is required, but it is possible that that transition improvements or grading may be required at Deer Creek. These improvements would not be required if the alternative solution described above is selected, which relies solely on the existing ditch along the UPRR.

In addition, an existing drainage canal that runs northwest-southeast along the eastern portion of the Project site boundary would be deepened by approximately 1.5 feet both on-site and off-site to the southeast where the canal discharges to an existing 0.5-acre pond, and then to Deer Creek. No improvements to the 0.5-acre pond or the existing outfall at Deer Creek are proposed.

Finally, an existing drainage ditch that runs north-south along the east side of the UPRR tracks would be enlarged to a 3-foot trapezoidal channel with a 14-foot bottom width and 2:1 side slopes, both on-site and off-site to the south where the channel discharges into an existing 8-acre pond. A short channel conveys water from the pond to the south to Deer Creek. No improvements to the 8-acre pond or the conveyance channel or the outfall at Deer Creek are proposed

2.3 PROJECT SCHEDULE

Development of the Project site is assumed to start as soon as 2021 and continue for approximately 20 years. The specific timing of construction and operation of any individual use within the Project site is unknown, and subject to market conditions and other factors outside the control of the City.

2.4 REQUIRED APPROVALS

Proposed construction would require demolition and disposal of existing structures, grading and excavation, construction of building foundations, trenching and installation of utilities, paving of parking lots and internal roadways, lighting, and construction of commercial and industrial buildings subject to review under the City's zoning regulations and design guidelines. Project site development would require various permits and other types of approvals from agencies with a purview over air quality, biological resources, water quality, public services and utilities, and other topics.

The Project includes a General Plan amendment to establish land use designations for the Project site, as well as prezoning. It also includes the adoption of a Specific Plan that establishes a framework for future development of the Project area, including further discussion on the land plan and how it is implemented through zoning, and the infrastructure and public services necessary to serve future development. The Specific Plan also incorporates information from the Plan for Services and Public Facilities Financing Plan.

The ultimate buildout of uses anticipated for the Project site may require additional entitlements from the City of Elk Grove including, but not limited to, the following:

- Site development plans
- Tentative subdivision maps
- Grading and building permits
- Encroachment permits

Other agencies that may require permission or approvals may include, but are not limited to:

- Sacramento Local Agency Formation Commission (LAFCo)
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- California Department of Fish and Wildlife
- Central Valley Regional Water Quality Control Board
- Sacramento Metropolitan Air Quality Management District
- Sacramento County
- Sacramento County Water Agency
- Sacramento Area Sewer District
- Sacramento Regional County Sanitation District
- South Sacramento Conservation Agency

The Sacramento Local Agency Formation Commission (LAFCo) will rely on the original 2019 SOIA EIR and this SEIR as it considers changes in public agency organization, including phased annexation of the Project site into the City of Elk Grove, and detachments from CSA No. 1 (Street Lighting) and CSA No. 11 (Supplemental Police), along with annexation into Sacramento Area Sewer District (SASD) and Sacramento County Regional Sanitation District.

2.5 PROJECT OBJECTIVES

The Project objectives are as follows:

- Provide for development consistent with the General Plan Study Area Organizing Principles and the East Study Area Land Use District Program Standards.

- Create a mix of employment activities in the southwestern portion of the East Study Area that transitions to residential neighborhoods toward the northeast.

- Focus employment uses within the East Study Area on industrial, office, and regional retail uses.

- Designate open space as needed to meet resource conservation standards and to provide an adequate floodplain buffer.

- Facilitate development that would create a better balance between the types of local jobs available and the skills and interests of the local labor force.

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3 ENVIRONMENTAL IMPACT ANALYSIS

3.1 APPROACH TO THE ANALYSIS

3.1.1 INTRODUCTION

This chapter of the SEIR provides an analysis of the impacts of the proposed Project on the environment. The contents of this section are primarily focused on the changes to environmental impacts of the revised Project compared to that addressed in the 2019 SOIA EIR.

Topic area analyses in Sections 3.2 through 3.16 are organized in the following format:

1. The **Environmental Setting** subsection provides an overview of the baseline physical environmental conditions (i.e., the environmental baseline), in accordance with the CEQA Guidelines (14 CCR Section 15125[a][1]). The environmental setting is focused on presenting current (2020) conditions that have changed since the 2019 SOIA EIR was prepared.

2. The **Regulatory Framework** subsection identifies the plans, policies, laws, regulations, and ordinances that are relevant to each topical section based on current (2020) conditions. This subsection identifies those regulatory concerns that have changed since the 2019 SOIA EIR was prepared, or are new (i.e., have been enacted or adopted since the 2019 SOIA EIR).

3. The **Environmental Impacts and Mitigation Measures** subsection identifies the impacts of the land use changes associated with the proposed Project on the existing natural environment, in accordance with the CEQA Guidelines (CCR Sections 15125 and 15143). This subsection is organized as follows:

    - The **Thresholds of Significance** provide criteria established by the City to define at what level an impact would be considered significant in accordance with CEQA. Thresholds may be quantitative or qualitative; they may be based on examples found in CEQA regulations or the CEQA Guidelines; scientific and factual data relative to the City's jurisdiction; legislative or regulatory performance standards of federal, state, regional, or local agencies relevant to the impact analysis; City goals, objectives, and policies (e.g., the City's General Plan or implementing guidance); or other factors. Generally, however, the thresholds of significance used are derived from Appendix G of the CEQA Guidelines, as amended; factual or scientific information and data; and regulatory standards of federal, state, regional, and local agencies, including the City and its General Plan. The thresholds in this SEIR have been revised from the 2019 SOIA EIR to reflect the current (2020) Appendix G Checklist contained in the CEQA Guidelines.

    - The **Impact Analysis** describes potential adverse physical environmental effects associated with implementation of the proposed Project, as revised. The analysis focuses on impacts that are different for the revised Project, as compared with the assessment presented in the 2019 SOIA EIR. This assessment specifies why impacts are found to be significant and unavoidable, significant or potentially significant, or less than significant, or why there is no environmental impact, based on the identified thresholds of significance. The impacts are listed numerically and sequentially throughout each section, and follow the same numbering used in the 2019 SOIA EIR.

- **Mitigation Measures** to avoid, minimize, rectify, reduce, or compensate for significant and potentially significant impacts of the proposed Project, in accordance with the CEQA Guidelines (14 CCR Sections 15370, 15002[a][3], 15021[a][2], and 15091[a][1]), where feasible, are recommended for each significant impact. Each mitigation measure is identified numerically to correspond with the number of the impact being reduced by the measure. For example, Impact 3.3-1 would be mitigated by Mitigation Measure 3.3-1. If implementation of feasible mitigation measures is not sufficient to reduce an impact to a "less-than-significant" level, or no feasible mitigation measures are available, the impacts are described as "significant and unavoidable."

3.2 AESTHETICS

Comments received on the Notice of Preparation (NOP) were reviewed during preparation of this SEIR. However, no comments related to aesthetics were received.

3.2.1 ENVIRONMENTAL SETTING

The visual character of the Project site and the surrounding area have not changed since the 2019 SOIA EIR was prepared. The Project site consists of farmland (i.e., row crops). Several rural residences and associated outbuildings are also present on the Project site, but only one building is visible from Grant Line Road. The off-site improvement areas also consist of farmland (cultivated with row crops), and an approximately 15-acre and 8-acre pond, respectively, surrounded by trees and shrubs. The surrounding area generally consists of buildings and parking areas associated with industrial development to the north and west, and row crops to the east and south.

As discussed in the 2019 SOIA EIR, a very low level of nighttime lighting associated with rural residences is present. Nighttime skyglow is present in the area from the existing developed properties to the north and west.

3.2.2 REGULATORY FRAMEWORK

CITY OF ELK GROVE GENERAL PLAN

The City's General Plan (City of Elk Grove 2019) includes the following policies related to aesthetics that are applicable to the proposed Project.

Urban and Rural Development Element

"Urban design" generally refers to the design of public and private buildings and spaces. Good urban design is essential in creating attractive, appealing, and livable districts and neighborhoods. The City recognizes that the public's interest is served by ensuring that new development in Elk Grove is of a high level of design and quality.

- **Policy LU-5-1:** Ensure that new development reflects the City's desire to create a high-quality, attractive, functional, and efficient built environment.
- **Policy LU-5-2:** Provide and implement regulations that encourage high-quality signage, ensure that businesses and organizations can effectively communicate through sign displays, promote wayfinding, achieve visually vibrant streetscapes, and control excessive visual clutter.
- **Policy LU-5-3:** Reduce the unsightly appearance of overhead and aboveground utilities by requiring the undergrounding of appropriate services within the urban areas of the City.
    - **Standard LU-5-3.a:** New utility facilities should be located underground to the extent possible. Facilities to be placed underground should include electrical transformers (where consistent with the guidelines of the electrical utility), water backflow preventers, and similar items.
    - **Standard LU-5-3.b:** Require that existing overhead utility facilities be undergrounded as a condition of project approval. This shall include electrical service lines under 69kV. Electrical service lines of 69kV and higher are encouraged to be undergrounded.

- **Policy LU-5-4:** Require high standards of architectural and site design, and apply strong design controls for all development projects, both public and private, for the enhancement and development of community character and for the proper transition between areas with different types of land uses. Design standards shall address new construction and the reuse and remodeling of existing buildings.

    - **Standard LU-5-4.a:** Nonglare glass shall be used in all nonresidential buildings to minimize and reduce impacts from glare. Buildings that are allowed to use semi-reflective glass must be oriented so that the reflection of sunlight is minimized. This requirement shall be included in subsequent development applications.

- **Policy LU-5-5:** Improve the visual appearance of business areas and districts by applying high standards for architectural design, landscaping, and signs for new development and the reuse or remodeling of existing buildings.

- **Policy LU-5-6:** When resources are available, seek to enliven the public right-of-way with attractive landscaping, public art, lighting, civic landmarks, sidewalk cafés, gateways, water features, interpretive/wayfinding signage, farmers markets, festivals, outdoor entertainment, pocket parks, street furniture, plazas, squares, or other amenities in spaces for public use.

- **Policy LU-5-7:** Encourage incorporation of publicly accessible spaces, such as plazas or squares, into new commercial and mixed-use developments.

- **Policy LU-5-8:** Require developers to provide pedestrian amenities, such as trees, lighting, recycling and refuse containers, seating, awnings, and/or art, in pedestrian areas along project frontages. Where appropriate, install pedestrian amenities in public rights-of-way.

- **Policy LU-5-9:** Emphasize placemaking design principles in new development projects.

    - **Standard LU-5-9.a:** Prioritize the pedestrian by implementing the following measures:

        - Minimize parking areas and curb cuts along commercial street frontages.
        - Encourage a vertical and horizontal mix of land uses.
        - Provide urban plazas and gathering spaces in commercial and multifamily development.
        - Provide pedestrian amenities such as lighting, landscaping, and benches.

    - **Standard LU-5-9.b:** Encourage public art in all new large-scale development projects equal to or greater than 100,000 square feet.

Mobility Element

- **Policy MOB-3-7:** Develop a complete and connected network of sidewalks, crossings, paths, and bike lanes that are convenient and attractive, with a variety of routes in pedestrian-oriented areas.

- **Policy MOB-3-8:** Provide a thorough and well-designed wayfinding signage system to help users of all modes of travel navigate the City in an efficient manner.

Community and Resource Protection Element

- **Policy NR-2-1:** Preserve large native oak and other native tree species as well as large nonnative tree species that are an important part of the City's historic and aesthetic character. When reviewing native or non-native trees for preservation, consider the following criteria:

    - Health of the tree
    - Safety hazards posed by the tree
    - Suitability for preservation in place
    - Biological value
    - Aesthetic value
    - Shade benefits
    - Water quality benefits
    - Runoff reduction benefits
    - Air quality benefits (pollutant reduction)

- **Policy NR-2-4:** Preserve and plant trees in appropriate densities and locations to maximize energy conservation and air quality benefits.

- **Policy NR-2-6:** Promote the planting of drought-resistant shade trees with substantial canopies as part of private development projects and require, where feasible, site design that uses trees to shade rooftops, parking facilities, streets, and other facilities.

3.2.3 Environmental Impacts and Mitigation Measures

Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact related to visual resources if it would:

- 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;

- except as provided in Public Resources Code Section 21099, substantially degrade the existing visual character or quality of public views of the site and its surroundings (public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality; or

- create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Issues Not Discussed Further

The following issues were dismissed from further detailed analysis in the 2019 SOIA EIR because it was determined that no impact would occur; for the reasons explained below, these issues would also result in no impact for the proposed Project as evaluated in this SEIR.

Substantial Adverse Effect on a Scenic Vista—A scenic vista is a public viewpoint that provides expansive views of highly valued scenery or landscapes. The City has not designated any scenic vistas in the Project area. Therefore, no impact would occur, and this issue is not evaluated further in this SEIR.

Damage Scenic Resources within a State Scenic Highway—The proposed Project would not affect features, including trees, rock outcroppings, or historic buildings, within a state scenic highway. The closest designated scenic highway segment is a portion of State Route (SR) 160, from Freeport south to the County line (California Department of Transportation 2017). SR 160 is approximately 9 miles to the west, and due to the flat topography and intervening vegetation, the Project area is not visible from SR 160. Therefore, no impact would occur, and this issue is not evaluated further in this SEIR.

IMPACT ANALYSIS

Impact 3.2-1: Substantial Degradation of Existing Visual Character.

The Project site and off-site improvement areas are more than two miles south/southwest from areas designated Rural Residential by the City, and the Elk Grove Triangle Policy Area is located between the Project site and most of the areas designated for Rural Residential development by the City.

The areas that would be prezoned for regional commercial and light and heavy industrial development currently support agricultural uses (i.e., row crops) that are consistent with the visual character of undeveloped areas on the south side of Grant Line Road. The Project site's rural character is visible to motorists on Grant Line Road, with views of agricultural areas and distant views of trees along the Cosumnes River floodplain. The Project site provides agricultural views that are typical of the region.

Buildings and related signage, landscaping, electrical substations, and other above ground supportive infrastructure associated with proposed development would alter the existing visual character of the Project site, as well as views of the Project site from public viewing locations. Public views from Grant Line Road and from the intersections of Grant Line Road and Mosher and Waterman Roads would change substantially compared to existing conditions. Views of development at the Project site would be prominent as motorists and nearby residents cross the UPRR tracks and approach the intersection of Grant Line Road with Waterman Road and drive northeast. Adding commercial uses, urban landscaping, and frontage improvements along Grant Line Road would change the site's visual character, consistent with relevant City policies, design guidelines, and code requirements.

The off-site drainage pipeline improvements to the existing 15-acre pond would be installed underground. Public views of improvements to the existing drainage channel on the east side of the UPRR tracks that discharges to the existing 8-acre pond, from the Emerald Lakes Golf Course, are blocked by tall trees and the elevated railroad track embankment. Views of this channel to the south for motorists traveling on Grant Line Road would be fleeting in nature for a few seconds from the UPRR overpass and would not change substantially from existing conditions. The presence of construction equipment would be temporary. The portion of the existing off-site drainage channel that would be improved near the northeastern Project site boundary (which discharges to Deer Creek) is not visible from any public location.

Temporary fencing would be used at the Project site and along pipeline alignments needed to extend utilities. Construction equipment and personnel, excavated soils, and parked vehicles and trailers would temporarily alter visual conditions; however, these conditions would be temporary and intermittent as construction progresses.

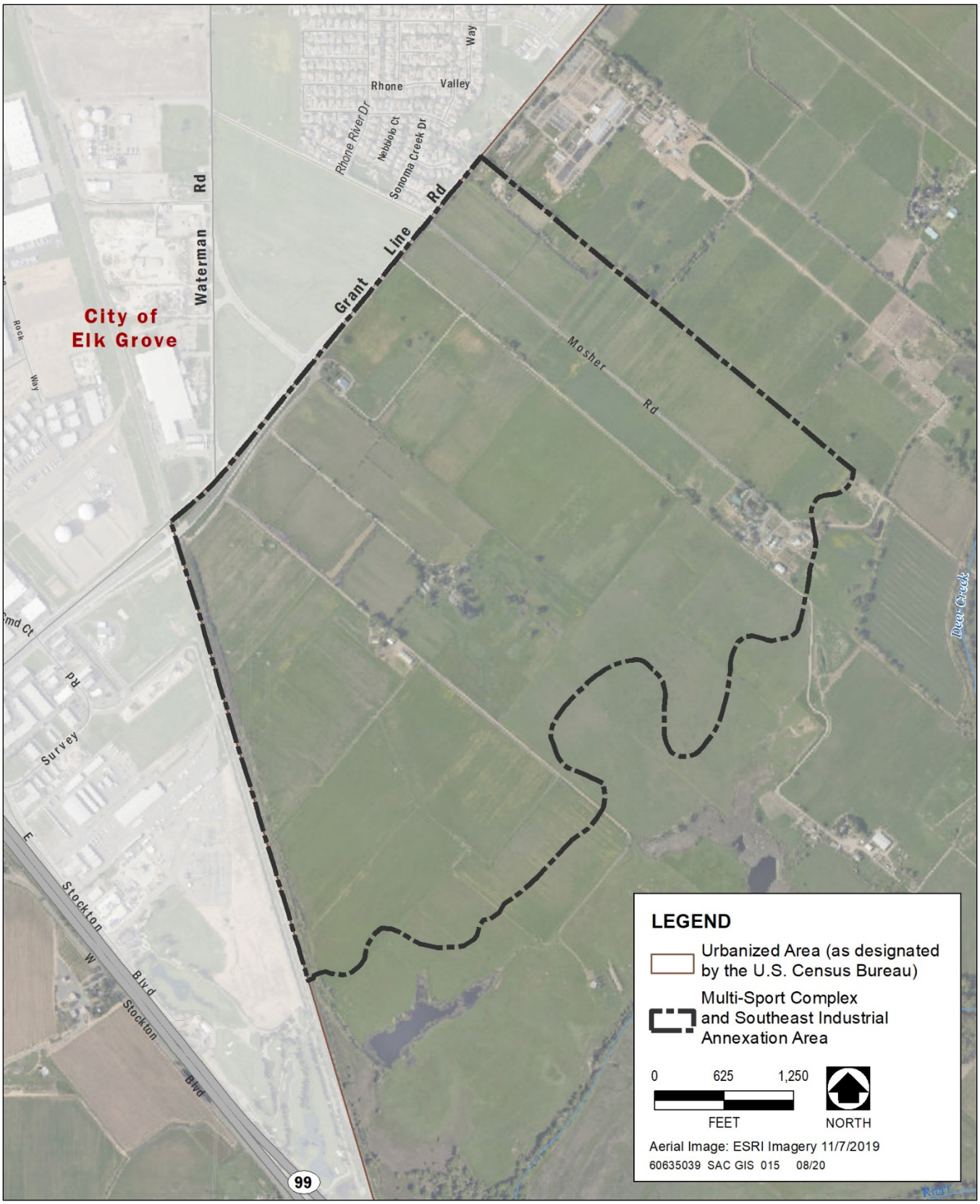
As applications for development within the Project site are processed by the City, they would be subject to applicable City General Plan policies, zoning regulations, and design guidelines, which are designed to reduce adverse visual impacts associated with new development. The City's Design Review regulations (Elk Grove Municipal Code Section 23.16.080) and the Elk Grove Design Guidelines (City of Elk Grove 2007) contain measures specifically for commercial and industrial development proposals, including building design and landscaping measures, which are intended to reduce visual effects. Specifically, for light industrial areas and business parks, the Design Guidelines have measures to protect adjoining uses from objectionable views. For example, service areas would likely be located at the rear of buildings and the City would emphasize review of the building entryways and landscaping. The General Plan policies and action items ensure the protection of certain trees, that the use of reflective materials would be reduced, and indicate that utilities should be located underground to the extent possible. The Elk Grove Municipal Code Title 23 also has additional restrictions related to landscaping, lighting, building siting and design, and other aesthetic characteristics. The Design Guidelines encourage incorporating natural features, setting back parking areas away from the front of the site to minimize visual impacts, planting landscaping to provide visual screening, and shielding lighting. Consistent with the Design Guidelines, City Design Guidelines require that parking is set back from Grant Line Road and would use street trees and on-site landscaping to shield views of future buildings.

Aesthetics impacts are inherently subjective. With adherence to City policies, Design Guidelines, and Code requirements, some viewers may consider changes to the visual character attributable to the proposed Project to be an improvement. However, the impact of proposed development within the Project site and the off-site improvements on the views of agricultural lands is conservatively determined to be **significant** because it would change the existing visual character of the Project site and as shown in Exhibit 3.2-1 the Project site is considered non-urbanized. Other than the implementation of City policies, design guidelines, and Code requirements that are designed to minimize visual impacts and promote high-quality design, there are no feasible mitigation measures to avoid or reduce this impact to a less-than-significant level. Therefore, as with the 2019 SOIA EIR, this impact would be **significant and unavoidable**.

Impact 3.2-2: Potential Loss of Trees of Local Importance.

The Project site contains scattered native trees, including valley oaks, that would be considered trees of local importance under Section 19.12.040 of the City Municipal Code. The off-site drainage improvement area in the vicinity of the 15-acre pond also contains trees, which may qualify as trees of local importance. In addition, nonnative trees are also scattered throughout the Project site in the form of urban landscaping around existing rural residences. Through Elk Grove's design review and tree regulations, the City would evaluate site planning to determine whether existing trees can be preserved. If preservation is not feasible, individual development projects would be subject to compensation requirements for tree removal consistent with the City's tree regulations.

As with the 2019 SOIA EIR, removal of trees of local importance, including native oak trees, at the Project site and the off-site improvement areas is considered a **potentially significant** impact.



Source: U.S. Census Bureau 2010

Exhibit 3.2-1. Urbanized Areas

Mitigation Measure 3.2-2: Prepare and Implement a Tree Mitigation Plan to Reduce Effects on Trees of Local Importance (2019 SOIA EIR Mitigation Measure 3.2-2).

Mitigation for the removal of trees of local importance shall be provided according to the Elk Grove Municipal Code, Title 19, "Trees," Chapter 19.12, "Tree Preservation and Protection." Mitigation will provide 1 new inch diameter at breast height (dbh) of tree for each inch dbh lost (1:1 ratio) through on-site or off-site replacement, payment of an in-lieu fee, or on-site or off-site relocation.

Significance after Mitigation

Development at the Project site and off-site improvements would be subject to the City's Municipal Code, which regulates preservation of, and compensation for, the loss of trees of local importance. As with the 2019 SOIA EIR, implementation of Mitigation Measure 3.2-2, which would require replacement of trees, would reduce this impact to a **less-than-significant** level.

Impact 3.2-3: Light and Glare Effects from New Lighting Sources.

Skyglow is artificial lighting from urbanized uses that alters the rural landscape and, in sufficient quantity, lights up the nighttime sky, and thus reducing the darkness of the night sky and the visibility of the stars. The Project site currently supports agricultural uses and has few sources of ambient light other than the existing rural residences, lighting of Grant Line Road, and adjacent land uses in Elk Grove. Development would introduce street, parking lot, and building lighting, which would result in substantial new sources of light and glare.

To minimize lighting effects, the City would impose the requirements of Title 23 of the Elk Grove Municipal Code, which contains standards for lighting that address shielding of light fixtures, photometric calculations to determine the allowed level of illumination, and fixture height. Furthermore, the City's Design Guidelines encourage shielded and downward-pointing lighting. The Citywide Design Guidelines include provisions for outdoor light fixtures to be directed/shielded downward. Development would be required to limit outdoor lighting, which would be directed downward and shielded to minimize light spillover and skyglow. Further, the City would impose conditions of approval that minimize the use of reflective materials in building design. Compliance with City General Plan policies, zoning regulations, and Design Guidelines would minimize lighting and glare for development within the Project site. The off-site improvement areas would not require installation of lighting or structures that could create glare.

As with the 2019 SOIA EIR, compliance with the City's Municipal Code and Design Guidelines will ensure that this impact is **less than significant.**

It should be noted that, the prior 2019 EIR included the following Mitigation Measures 3.2-3a and 3.2-3b. These mitigation measures remain applicable to the Project.

Mitigation Measure 3.2-3a: Minimize Over-Lighting (2019 SOIA EIR Mitigation Measure 3.2-3a).

The City of Elk Grove will implement the following specific measures to minimize over-lighting in the SOIA Area, including the multi-sport park complex, consistent with Elk Grove Zoning Code:

- Exterior lighting shall be architecturally integrated with the building style, material and colors and be of a human scale.

- Design pole heights and light shielding to minimize spillover and skyglow.
- Schedule the use of outdoor lights and use an automated lighting control system to turn off unused lights.
- The hours of operation for the lighting system for any game or event shall not exceed one (1) hour after the end of the event.
- Schedule field use to emphasize using fields at the southern end of the site to increase the distance of night lighting from residential areas.
- Prepare and implement an operational plan to meet or exceed field lighting standards for field sports events established by oversight organizations (e.g., California Interscholastic Federation).
- Use methods to provide lower intensity light ("dimming") for events that require less lighting and during post-event periods as teams leave the field and spectators move toward the parking lots.
- Implement a monitoring plan to ensure that light levels in adjacent residential areas do not exceed thresholds listed in the Elk Grove Design Guidelines.

Mitigation Measure 3.2-3b: Minimize Glare (2019 SOIA EIR Mitigation Measure 3.2-3b).

Consistent with Elk Grove Zoning Code, future development within the SOIA Area shall avoid the use of materials that could cause glare, such as reflective, mirrored, or black glass. Buildings that are allowed to use semi-reflective glass will be oriented to minimize the reflection of sunlight to sensitive receptors. Where the light source from an outdoor light fixture is visible beyond the property line, shielding shall be required to reduce glare so that the light source is not visible from within any residential dwelling unit.

3.3 AGRICULTURAL RESOURCES

Comments received on the Notice of Preparation (NOP) were reviewed during preparation of this SEIR. A comment letter was submitted by the Sacramento County Farm Bureau expressing concern related to the conversion of on-site agricultural land to urban uses. In addition, a comment letter was submitted by the Sacramento Local Agency Formation Commission (LAFCo) expressing concern regarding Project effects on agricultural resources. The City reviewed and considered this information during preparation of this section.

3.3.1 ENVIRONMENTAL SETTING

The Project site is located within unincorporated Sacramento County and supports a range of agricultural uses, including oats and grass for hay crops, seasonal row crops, and irrigated pasture.

FARMLAND CLASSIFICATIONS

Based on a review of the Sacramento County Important Farmland map, published by the California Department of Conservation's (DOC) Farmland Mapping and Monitoring Program (FMMP), most of the Project site is designated as Farmland of Statewide Importance (409 acres), with several smaller areas of Farmland of Local Importance (including the City-owned parcel) (134 acres). An area designated as Other Land, which has been developed with several rural residences and associated outbuildings, is located in the southeastern corner of the Project site. The 0.5-acre off-site storage pond is designated as Other Land. The 8-acre and 15-acre off-site water storage ponds and surrounding areas are designated as Grazing Land. The three off-site drainage pipeline and channel improvement areas have been assigned a mixture of the same designations listed above (DOC 2018).

WILLIAMSON ACT

As reported in the 2019 SOIA EIR, the majority of the Project area is not held under Williamson Act contracts. Two properties, APNs 134-0190-002 and 134-0190-003, which are east and southeast of the City property, respectively, are in active contracts (Sacramento County 2020a). See Exhibit 2-2 for location of these parcels within the Project area.

AGRICULTURAL ZONING

The Project site is located in an unincorporated area of Sacramento County. As noted in the 2019 SOIA EIR, most of the Project site is zoned AG-80 (Agricultural, 80-acre minimum) with the exception of a parcel in the northwestern corner zoned M-2 (Heavy Industrial) and two smaller parcels adjacent to the south zoned AR-2 (Agricultural Residential, 2 acres) (Sacramento County 2020b). All three off-site improvement areas assessed as a part of this SEIR are also zoned AG-80 by the County.

CORTESE-KNOX-HERTZBERG LOCAL GOVERNMENT REORGANIZATION ACT

Government Code Section 56064, created by the Cortese-Knox-Hertzberg Local Government Reorganization Act, defines "prime agricultural land." "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 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 United States Department of Agriculture in the National Range and Pasture Handbook, Revision 1, December 2003.

(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.

3.3.2 REGULATORY FRAMEWORK

CITY OF ELK GROVE GENERAL PLAN

The City General Plan (City of Elk Grove 2019), contains the following policies related to agricultural resources that are applicable to the proposed Project.

- **Policy AG-1-3:** Recognize the right of existing agricultural uses to continue as long as individual owners/farmers desire. As appropriate for the neighborhood, allow for buffers or feathering of lot sizes where appropriate between farmland and urban uses. Additionally, continue implementing the City's Right to Farm regulations and property title disclosures to notify prospective buyers of agricultural activities in the area.
- **Policy AG-1-5:** Protect agricultural lands from future risk of conversion by requiring mitigation of the loss of qualified agricultural land at a 1:1 ratio.
- **Policy AG-1-6:** Limit the siting of projects with land uses that might result in conflicts near existing agriculture due to noise, air quality, or odors.

3.3.3 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact related to agricultural resources if it would:

- convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to nonagricultural use;
- conflict with existing zoning for agricultural use or a Williamson Act contract;

- conflict with existing zoning for, or cause rezoning of, forestland (as defined by 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 forestland or conversion of forestland to nonforest use; or
- involve other changes in the existing environment that, because of their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to nonforest use.

In addition, the proposed Project would have a significant impact related to prime agriculture resources if it would convert prime agricultural land as defined by Government Code Section 56064 of the Cortese-Knox-Hertzberg Local Government Reorganization Act.

ISSUES NOT DISCUSSED FURTHER

The following issues were dismissed from further detailed analysis in the 2019 SOIA EIR because it was determined that no impact would occur; for the reasons explained below, these issues would also result in no impact for the proposed Project as evaluated in this SEIR.

Conversion of Prime Farmland—Neither the Project site nor the off-site improvement areas are classified as Prime Farmland (DOC 2018), and the Project site does not contain prime agricultural land as defined by Government Code Section 56064 of the Cortese-Knox-Hertzberg Local Government Reorganization Act. As detailed in the 2019 SOIA EIR:

- None of the Project site is designated as Prime Farmland.
- The Project site is rated class III and class IV in the NRCS land use capability classification for irrigation and has a rating of 11-79 on the Storie Index (NRCS 2018).
- 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 2018). The U.S. Department of Agriculture's 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 does not contain fruit or nut-bearing trees, vines, or bushes.
- There is no land that has returned from the production of unprocessed agricultural plant products an annual gross value of not less than $400 per acre (Jensen, pers. comm. 2018). Thus, there would be no impact, and this issue is not evaluated further in this SEIR.

Conflict with Existing Zoning for, or Cause Rezoning of, Forest Land, Timberland, or Timberland Zoned Timberland Production—The Project site is not zoned as forest land, timberland, or a Timberland Production Zone. Thus, the proposed Project would not conflict with existing zoning for, or cause rezoning of, forestry resources and this issue is not evaluated further in this SEIR.

Result in the Loss of Forest Land or Conversion of Forest Land to Nonforest Use—The Project site does not contain timberland as defined by Public Resources Code Section 4526 or contain 10 percent native tree cover that

would be classified as forest land under Public Resources Code Section 12220(g). Thus, the proposed Project would not result in conversion of forest land to nonforest use. Therefore, this issue is not evaluated further in this SEIR.

IMPACT ANALYSIS

Impact 3.3-1: Direct and Indirect Loss of Agricultural Land, Including Farmland of Statewide Importance.

Based on analysis of farmland mapping provided under the FMMP (DOC 2018), approximately 409 acres of the Project site is designated as Farmland of Statewide Importance, and would be converted to nonagricultural uses. In addition, active agricultural fields adjacent to the Project site are designated as Farmland of Statewide Importance.

Proposed development could indirectly result in conversion of surrounding agricultural land to urban use. Three parcels (APNs 134-0190-002, 134-0190-003, and 134-0190-013) are only partially within the Project site and these parcels are actively farmed and designated as Farmland of Statewide Importance. The portions of these parcels outside of the Project site boundary would be encroached upon such that the parcels would become fragmented, reduced in size, and irregularly shaped to such a degree that continuing agricultural land uses could be less profitable or otherwise less feasible. Therefore, future development could indirectly result in other changes in the physical environment that could result in the conversion of agricultural land, including agricultural land designated as Farmland of Statewide Importance, to nonagricultural uses. The three new off-site improvement areas assessed as a part of this SEIR are not currently actively used for agricultural production, as they are existing channels that would be widened or deepened, or areas where drainage pipelines would be installed and where disturbance related to drainage improvements would be temporary.

Because the proposed Project would result in the conversion of Farmland of Statewide Importance and active agricultural lands within the Project site, this impact is considered **significant**.

> Mitigation Measure 3.3-1: Preserve Agricultural Land (2019 SOIA EIR Mitigation Measure 3.3-1).
>
> Project applicants shall protect one (1) acre of existing farmland land of equal or higher quality for each acre of Farmland of Statewide Importance that would be developed as a result of the project. 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 substantially impairs or diminishes 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 preservation of farmland may be done at one time, or in increments with the buildout of the Project site.
>
> The total acres of land conserved will be based on the total on-site agriculture acreage converted to urban uses. Conserved agriculture areas may include areas within 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 Project site; however, the preserved farmland shall at a minimum be located inside Sacramento County. Conservation easement content standards shall include, at a minimum: land encumbrance documentation;

documentation that the easements are permanent, monitored, and appropriately endowed for administration, monitoring, and enforcement of the easements; prohibition of activity which substantially impairs or diminishes the agricultural productivity of the land; and protection of water rights.

The following or equally effective minimum conservation easement content standards are required:

a) All owners of the agricultural/wildlife habitat mitigation land shall execute the document encumbering the land.

b) The document shall be recordable and contain an accurate legal description of the agricultural/wildlife habitat mitigation land.

c) 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.

d) 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.

e) 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.

f) An agricultural/wildlife habitat mitigation monitoring fee is required to cover the costs of administering, monitoring, and enforcing the document.

g) 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.

h) 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.

City approval is required for the selection of farmland proposed for preservation.

Significance after Mitigation

While conservation easements for the same area and quality of farmland placed elsewhere in the region would offset the direct conversion of agricultural land, including Farmland of Statewide Importance, attributable to development of the Project site, this approach would not create new farmland to replace farmland that would be lost. There is no additional feasible mitigation. Therefore, as with the 2019 SOIA EIR, the impact is **significant and unavoidable**.

Impact 3.3-2: Potential Conflict with Existing On-site and Off-site Williamson Act Contracts.

The area identified for development of mixed uses would occur on Williamson Act-contracted land, as well as a portion of the area identified for public/open space uses (APNs 134-0190-003 and 134-0190-002). These areas total approximately 179 acres of the Project site. Cancellation before their expiration date or nonrenewal of these Williamson Act contracts would be required before development could occur.

Contract cancellation requests would be submitted as development applications are received and in conjunction with tentative map approval or other entitlement actions. The project applicant(s) for contracted parcels would apply to the City for contract cancellation; as a result, the actual determination of consistency with the statutory consistency requirements would be made by the Elk Grove City Council, as Sacramento County would succeed to the contracts upon annexation of the relevant parcel. The City would be required to make findings pursuant to Section 51282 of the California Government Code by determining whether the cancellation is consistent with the California Land Conservation Act or in the public interest.

Lands north and east of the Project site are under Williamson Act contracts and are currently under cultivation. These areas are located in unincorporated Sacramento County and portions of these properties are outside of the County's Urban Service Boundary, while all of these properties are outside the County's Urban Policy Area. These sites are also outside of the City's Planning Area. The proposed parks and open spaces uses in the southern portion of the Project site would provide a buffer between the site and agricultural uses to the southeast within the 100-year floodplain (see Exhibit 2-3). Therefore, it is not anticipated that future development would result in cancellations of Williamson Act contracts on adjacent lands.

However, development of the proposed mixed uses and a portion of the parks/open space area would directly result in cancellation of Williamson Act contracts. Therefore, this impact is considered **significant**.

Implement Mitigation Measure 3.3-1 (Preserve Agricultural Land).

Significance after Mitigation

Implementation of Mitigation Measure 3.3-1 would reduce the conversion of farmland, including Williamson Act contract land, by conserving lands in permanent conservation easements. However, this approach would not prevent the permanent loss of Williamson Act contract land or create new farmland to replace farmland that would be lost. There is no additional feasible mitigation. Therefore, as with the 2019 SOIA EIR, the impact is **significant and unavoidable**.

Impact 3.3-3: Conflict with Existing Off-site Agricultural Operations.

The proposed public/open space uses would not result in conflicts with off-site agricultural operations to the east/southeast of the Project site. The 64-acre area identified for parks and open space uses would be designated as Parks and Open Space (P/OS), which allows public and private parks, public plazas, trails, paseos, and similar features that provide off-street connectivity, oriented toward active uses, and potentially including commercial recreation facilities principally oriented toward outdoor use. These types of uses are not generally considered sensitive to ongoing agricultural operations. However, since the specific uses and design are not known at this time, it is assumed that there could be a potential impact, and the mitigation provided below would apply to annexation of the area identified for parks and open space uses.

The proposed Heavy Industrial (HI) land use designation for the Project site could abut ongoing agricultural operations so the south and southeast. However, industrial land uses are generally not considered sensitive to agricultural operations and do not result in conflicts with agricultural uses that would create pressure for such agricultural uses to convert to a different use. Properties proposed for Light Industrial (LI) and Regional Commercial (RC) are not adjacent to off-site areas in agricultural production. To the extent that the portion of the Project site identified for parks and open space could have ongoing agricultural operations, uses allowed under the Light Industrial (LI) land use designation are not considered sensitive to agricultural operations and not known to produce pressure to prematurely convert to another use.

Development of residential uses could occur in the Project site within the parcel designated for mixed uses (APN 134-0190-002), which could abut ongoing agricultural operations to the northeast. Residential uses are sensitive to agricultural operations and conflicts with on-going agricultural operations north and northeast of the Project site could occur. Agricultural-urban interfaces have the potential for conflicts between agricultural practices and adjacent landowners. Agricultural operations may create risks and nuisances for urban residences and businesses. Health risks and nuisances potentially created by agricultural operations include, but are not limited to exposure to pesticide applications; exposure to dust (from soil preparation); exposure to noise (from machinery and trucks); odors from existing dairies, agricultural burning, and decaying rice stubble; and exposure to mosquitoes breeding in flooded fields. Conversely, urban land uses and the associated population create operational difficulties for agriculture. Increased restrictions on agriculture processes and other aspects of encroachment on agricultural areas can lower productivity, increase costs, and otherwise impair agricultural operations. Urban activities can result in vandalism and the introduction of domestic animals that may disturb certain agricultural activities.

Policy CAQ-4 of the City's General Plan states that the City does not require buffers between farmland and urban uses to address the impacts of farming on urban uses; rather, the City relies instead on implementing the City's "Right to Farm" ordinance (i.e., City of Elk Grove Municipal Code Chapter 14.05) (General Plan Policy CAQ-4-Action 1). As required by the City's Agricultural Activities Ordinance (General Plan Policy CAQ-4-Action 2), prospective buyers of property adjacent to agricultural land would be notified through the property title report that they could be subject to inconvenience or discomfort resulting from accepted farming activities. In addition, City of Elk Grove Municipal Code Chapter 14.05 ensures buyers are notified that agricultural operations that 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 agricultural uses will not be favorably received by the City.

However, implementing these General Plan actions does not preclude the possibility that if future urban development of the Project site occurs adjacent to existing off-site agricultural lands, this could result in land use compatibility conflicts, which could impair agricultural activities and could contribute to the conversion of agricultural land, including Important Farmland. Thus, this indirect impact is conservatively considered **potentially significant**.

> Mitigation Measure 3.3-3: Prepare an Agricultural Land Use Compatibility Plan (2019 SOIA EIR Mitigation Measure 3.3-3)
>
> Prior to the approval of any development project for a site that is adjacent to ongoing agricultural cultivation, the project applicant shall prepare an agricultural land use compatibility plan. The plan shall

include establishing a buffer zone; providing additional suitable barriers, such as on-site fencing or walls, between the edge of development and the adjacent agricultural operations; or other measures, as directed by the City of Elk Grove. The City of Elk Grove would verify that the agricultural land use compatibility plan, as prepared, will reduce conflicts between ongoing agricultural operations and adjacent urban uses before issuance of grading permits for future development within the SOIA Area, including the multi-sports complex.

Significance after Mitigation

As with the 2019 SOIA EIR, implementation of Mitigation Measure 3.3-3 would reduce impacts associated with conflicts between urban land uses adjacent to existing agricultural lands to a **less-than-significant** level by ensuring that buffer zones are provide a suitable barrier between ongoing agricultural operations and urban land uses, as determined by the City of Elk Grove. The City has prepared a draft Agricultural Land Use Compatibility Plan, which is included in the draft Specific Plan. The Compatibility Plan includes the following specific components:

- Descriptions of the levels of compatibility between urban and agricultural uses.
- Development guidelines to address potential compatibility conflicts, including:
  - Site design provisions, which include providing buffers and increased building setbacks along the boundary between urban and agricultural development. Specifically, buffers should be proportional to the intensity/density of the urban development and its potential level of conflict, such as 30 to 50 feet for industrial and commercial development, and 50 to 100 feet for residential.
  - Limiting urban stormwater runoff to agricultural lands through collection strategies that may include bioswales and specific grading designs.
  - Development consultation between proposed urban uses and existing agricultural operators.
  - Opportunities to consider changes to agricultural operations at the option of the agricultural operation.

In addition, the City of Elk Grove Municipal Code Chapter 14.05, which protects the rights of agricultural property owners and farmers to continue agricultural operations on their land, requires that property sellers disclose to purchasers and residents of nearby agricultural operations of the potential inconveniences that those agricultural operations may present to residences and that agricultural operations that are operated in a manner consistent with proper and accepted customs and standards are allowed to continue.

Impact 3.3-4: Conflict with Existing Zoning.

The proposed Project would include prezoning portions of the site to zoning designations that would permit urban land uses (such as Regional Commercial, Light Industrial, and Heavy Industrial). As with the 2019 SOIA EIR, this SEIR assumes that, with approval of the proposed Project and prezoning, the Project would not conflict with zoning for agricultural use for the properties that would be prezoned as a part of this Project (see Section 3.11, "Land Use and Planning and Population, Housing, and Employment," for further discussion). Thus, there would be no impact.

The 64-acre area identified for parks and open space uses would be designated as Parks and Open Space (P/OS), which allows public and private parks, public plazas, trails, paseos, and similar features that provide off-street connectivity, oriented toward active uses, and potentially including commercial recreation facilities principally oriented toward outdoor use. The area designated as a part of this Project for Parks and Open Space (P/OS) is currently zoned AG-80 (Agricultural, 80-acre minimum) by Sacramento County. The AG-80 zoning designation is used to eliminate the encroachment of land uses incompatible with the long-term agricultural use of land, to preserve the maximum amount of the limited supply of agricultural land in order to conserve the County's economic resources that are vital for a healthy agricultural economy, to discourage the premature and unnecessary conversion of agricultural land to urban uses, and to encourage the retention of sufficiently large agricultural lots to ensure maintenance of viable agricultural units (Sacramento County 2015). Depending on the use of the Parks and Open Space (P/OS) area, this could potentially conflict with the County's zoning. There is no impact associated with this conflict that is distinct, however, from the analysis under Impact 3.3-1 or 3.3-3. As discussed under Impact 3.1-1, mitigation for agricultural resources would not create new farmland to replace farmland that would be lost and therefore the loss of agricultural resources, as well as the conflict with agricultural zoning is **significant and unavoidable**.

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3.4 AIR QUALITY

Comments received on the Notice of Preparation (NOP) were reviewed during preparation of this SEIR. A comment letter was submitted by the Sacramento Metropolitan Air Quality Management District (SMAQMD) related to mitigation to reduce the Project's emissions of operational ozone precursors. The City reviewed and considered this information during preparation of this section.

3.4.1 ENVIRONMENTAL SETTING

The environmental setting for the proposed Project as it relates to air quality has not changed since the 2019 SOIA EIR was prepared.

Adjacent to the western boundary of the Project site are the Union Pacific Railroad tracks with commercial and industrial uses beyond. Commercial and industrial developments are to the northwest past Grant Line Road; residential development is to the northeast of the Project site east of Mosher Road. Areas to the east are primarily rural residential, with commercial and industrial uses fronting on Grant Line Road and the now-closed Sunset Skyranch Airport grounds beyond. The area to the south is agricultural.

The Project site is within the Sacramento Valley Air Basin (SVAB). The 2019 SOIA EIR describes the most recent criteria air pollutant National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS), as well as air monitoring data for monitoring stations in proximity to the Project site for the years 2014 through 2016. Sacramento County's attainment status for the NAAQS and CAAQS has not changed since the 2019 SOIA EIR was prepared. Sacramento County currently meets NAAQS for all criteria air pollutants except ozone and the 24-hour particulate matter with an aerodynamic diameter less than 2.5 microns ($PM_{2.5}$) standard. Sacramento County meets the CAAQS for all criteria air pollutants except ozone and particulate matter with an aerodynamic diameter less than 10 microns (PM_{10}). The NAAQS and CAAQS are set, and reevaluated on a regular basis, to ensure, with a margin of safety, that ambient air pollutant concentrations are protective of public health.

The following provides a brief description of these criteria air pollutants, including their source types and health effects, along with the most current attainment designations for area surrounding the Project site.

Ozone

Ozone is the primary component of urban smog. It is not emitted directly into the air, but is formed through a series of reactions involving reactive organic gases (ROG) and nitrogen oxides (NO_X) in the presence of sunlight. ROG emissions result primarily from incomplete combustion and the evaporation of chemical solvents and fuels. NO_X includes various combinations of nitrogen and oxygen, including nitric oxide, nitrogen dioxide (NO_2), and others, typically resulting from the combustion of fuels.

Emissions of both ROG and NO_X are considered critical to ozone formation. Therefore, either ROG or NO_X can limit the rate of ozone production. When the production rate of NO_X is lower, indicating that NO_X is scarce, the rate of ozone production is NO_X-limited. Under these circumstances, ozone levels could be most effectively reduced by lowering current and future NO_X emissions (from fuel combustion), rather than by lowering ROG emissions. Rural areas tend to be NO_X-limited, while areas with urban populations tend to be ROG-limited. Both ROG and NO_X reductions provide ozone benefits in the region, but the Sacramento Federal Nonattainment Area,

which includes Sacramento County, exhibits a NO_X-limited regime; therefore, NO_X reductions (such as those available through reducing mobile source emissions) are more effective than ROG reductions on a tonnage basis (SMAQMD et al. 2017).

Ozone concentrations reflect an interplay of emissions of ozone precursors, transport, meteorology, and atmospheric chemistry. Meteorology and terrain play a major role in ozone formation. Generally, low wind speeds or stagnant air, coupled with warm temperatures and clear skies provide the optimum conditions for formation. As a result, summer is generally the peak ozone season. Because of the reaction time involved, peak ozone concentrations often occur far downwind of the precursor emissions. Therefore, ozone is a regional pollutant that often affects large areas.

Individuals exercising outdoors, children, and people with lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible subgroups for ozone effects. Short-term ozone exposure (lasting for a few hours) can result in changes in breathing patterns, reductions in breathing capacity, increased susceptibility to infections, inflammation of lung tissue, and some immunological changes. In recent years, a correlation has also been reported between elevated ambient ozone levels and increases in daily hospital admission rates and mortality (EPA 2020a). An increased risk of asthma has been found in children who participate in multiple sports and live in communities with high ozone levels.

Emissions of the ozone precursors ROG and NO_X have decreased in the past several years. According to the most recently published edition of ARB's *California Almanac of Emissions and Air Quality*, NO_X and ROG emissions levels in the Sacramento metropolitan area are projected to continue to decrease through 2035, largely because of more stringent motor vehicle standards and cleaner burning fuels, as well as rules for controlling ROG emissions from industrial coating and solvent operations (ARB 2013).

Carbon Monoxide

Carbon monoxide (CO) is produced primarily by the incomplete burning of carbon in fuels, primarily from mobile (transportation) sources. Other emissions sources include fires (both wildfires and prescribed fires), releases from vegetation and soil, wood-burning stoves, incinerators, and industrial sources. Relatively high concentrations are typically found near crowded intersections and along high-volume roadways carrying slow-moving traffic. Even under the most severe meteorological and traffic conditions, high concentrations of CO are limited to locations within a relatively short distance (300–600 feet) of high-volume roadways. Vehicular traffic emissions can cause localized CO impacts, and severe vehicle congestion at major signalized intersections can generate elevated CO levels, called "hot spots," which can be hazardous to human receptors adjacent to the intersections. Overall, CO emissions are decreasing, in part because the Federal Motor Vehicle Control Program has mandated increasingly lower emission levels for vehicles manufactured since 1973.

CO enters the bloodstream through the lungs by combining with hemoglobin, which normally supplies oxygen to the cells. However, CO combines with hemoglobin much more readily than oxygen does, drastically reducing the amount of oxygen available to the cells. Adverse health effects from exposure to high CO concentrations, which typically can occur only indoors or within similarly enclosed spaces, include dizziness, headaches, and fatigue. CO exposure is especially harmful to individuals who suffer from cardiovascular and respiratory diseases (EPA 2020b).

Nitrogen Dioxide

NO_2 is one of a group of highly reactive gases known as oxides of nitrogen, or NO_X. NO_2 is formed when ozone reacts with nitric oxide (i.e., NO) in the atmosphere and is listed as a criteria pollutant because NO_2 is more toxic than nitric oxide. The major human-made sources of NO_2 are combustion devices, such as boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines. The combined emissions of nitric oxide and NO_2 are referred to as NO_X and reported as equivalent NO_2. Because NO_2 is formed and depleted by reactions associated with ozone, the NO_2 concentration in a geographical area may not be representative of local NO_X emission sources. NO_X also reacts with water, oxygen, and other chemicals to form nitric acids, contributing to the formation of acid rain.

Inhalation is the most common route of exposure to NO_2. Breathing air with a high concentration of NO_2 can lead to respiratory illness. Short-term exposure can aggravate respiratory diseases, particularly asthma, resulting in respiratory symptoms (such as coughing, wheezing, or difficulty breathing), hospital admissions, and visits to emergency rooms. Longer exposures to elevated concentrations of NO_2 may contribute to the development of asthma and potentially increase susceptibility to respiratory infections. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these subgroups (EPA 2016).

Sulfur Dioxide

Sulfur dioxide (SO_2) is one component of the larger group of gaseous oxides of sulfur (SO_X). SO_2 is used as the indicator for the larger group of SO_X, as it is the component of greatest concern and found in the atmosphere at much higher concentrations than other gaseous SO_X. SO_2 is typically produced by such stationary sources as coal and oil combustion facilities, steel mills, refineries, and pulp and paper mills. The major adverse health effects associated with SO_2 exposure pertain to the upper respiratory tract. On contact with the moist mucous membranes, SO_2 produces sulfurous acid, a direct irritant. Concentration rather than duration of exposure is an important determinant of respiratory effects. Children, the elderly, and those who suffer from asthma are particularly sensitive to effects of SO_2 (EPA 2019).

SO_2 also reacts with water, oxygen, and other chemicals to form sulfuric acids, contributing to the formation of acid rain. SO_2 emissions that lead to high concentrations of SO_2 in the air generally also lead to the formation of other SO_X, which can react with other compounds in the atmosphere to form small particles, contributing to particulate matter pollution, which can have health effects of its own.

Particulate Matter

Particulate matter (PM) is a complex mixture of extremely small particles and liquid droplets made up of several components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. Natural sources of particulates include windblown dust and ocean spray. The major areawide sources of $PM_{2.5}$ and PM_{10} are fugitive dust, especially from roadways, agricultural operations, and construction and demolition. Other sources of PM_{10} include crushing or grinding operations. $PM_{2.5}$ sources also include all types of combustion, including motor vehicles, power plants, residential wood burning, forest fires, agricultural burning, and some industrial processes. Exhaust emissions from mobile sources contribute only a very small portion of directly emitted $PM_{2.5}$ and PM_{10} emissions. However, they are a major source of ROG and NO_X, which undergo reactions

in the atmosphere to form PM, known as secondary particles. These secondary particles make up the majority of PM pollution.

The size of PM is directly linked to its potential for causing health problems. EPA is concerned about particles that are 10 micrometers in diameter or smaller, because these particles generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects, even death. The adverse health effects of PM_{10} depend on the specific composition of the particulate matter. For example, health effects may be associated with metals, polycyclic aromatic hydrocarbons, and other toxic substances adsorbed onto fine PM (referred to as the "piggybacking effect"), or with fine dust particles of silica or asbestos. Effects from short- and long-term exposure to elevated concentrations of PM_{10} include respiratory symptoms, aggravation of respiratory and cardiovascular diseases, a weakened immune system, and cancer (WHO 2018). $PM_{2.5}$ poses an increased health risk because these very small particles can be inhaled deep in the lungs and may contain substances that are particularly harmful to human health.

Direct emissions of $PM_{2.5}$ in the Sacramento metropolitan area decreased between 2000 and 2010, but are projected to increase very slightly through 2035. Similarly, emissions of diesel PM (DPM) decreased from 2000 through 2010 because of reduced exhaust emissions from diesel mobile sources. These emissions are anticipated to continue to decline through 2035 (ARB 2013).

Lead

Lead is a highly toxic metal that may cause a range of human health effects. Lead is found naturally in the environment and is used in manufactured products. Previously, the lead used in gasoline anti-knock additives represented a major source of lead emissions to the atmosphere. Soon after its inception, EPA began working to reduce lead emissions, issuing the first reduction standards in 1973. Lead emissions have decreased substantially as a result of the near elimination of leaded gasoline use. Metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers. Although the ambient lead standards are no longer violated, lead emissions from stationary sources still pose "hot spot" problems in some areas. As a result, ARB has identified lead as a toxic air contaminant (TAC).

Fetuses, infants, and children are more sensitive than others to the adverse effects of lead exposure. Exposure to low levels of lead can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotients. In adults, increased lead levels are associated with increased blood pressure. Lead poisoning can cause anemia, lethargy, seizures, and death, although it appears that lead does not directly affect the respiratory system.

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. Children, pregnant women, the elderly, those with existing health conditions, and athletes or others who engage in frequent exercise are especially vulnerable to the effects of air pollution. Accordingly, land uses that are typically considered sensitive receptors include schools, daycare centers, parks and playgrounds, and medical facilities.

Residential areas are considered sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to the pollutants present. Recreational land uses are considered moderately sensitive to air pollution. Exercise places a high demand on respiratory functions, which can be impaired by air pollution, even though exposure periods during exercise are generally short. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial and commercial areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, as most of the workers tend to stay indoors most of the time.

The nearest sensitive receptors outside the Project site are residences to the northeast that are approximately 100 feet from the northern border of the Project site. There are three existing homes on large parcels within the Project site. The proposed Project could also include development of sensitive receptors within the "mixed use" area in the eastern portion of the Project site that assumes the potential for a wide range of land uses, including residential development.

3.4.2 REGULATORY FRAMEWORK

Air quality is regulated at the federal level by the EPA and at the state level by the California Air Resources Board (ARB). At the local level, the Sacramento Metropolitan Air Quality Management District (SMAQMD) develops rules, regulations, policies, and/or goals to comply with applicable federal and State legislation. Although EPA regulations may not be superseded, in general, both State and local regulations may be more stringent.

The regulatory framework surrounding criteria air pollutants, toxic air contaminants (TACs), and odor emissions, as it pertains to the proposed Project, is described in the 2019 SOIA EIR. The following highlights relevant changes in the regulatory framework since the preparation of the 2019 SOIA EIR.

FEDERAL

Corporate Average Fuel Economy (CAFE) Standards and the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule

U.S. Environmental Protection Agency (EPA) and the National Highway Traffic Safety Administration set CAFE standards for passenger cars and for light trucks (collectively, light-duty vehicles), and separately sets fuel efficiency standards for passenger cars and light trucks (collectively, light-duty vehicles) for model years 2012 through 2025.

The Safer Affordable Fuel Efficient (SAFE) Vehicles Rule, proposed by the United States Department of Transportation and EPA in 2018, would amend the existing CAFE standards and establish new standards for model years 2021 through 2026. The proposed rule would retain the model year 2020 standards through model year 2026.

In response to the proposed SAFE Vehicles Rule, on July 25, 2019, automobile manufactures Ford, Volkswagen, Honda, and BMW entered into a voluntary framework agreement with ARB to set fuel economy and carbon dioxide limits at levels between the existing federal standards and the standards proposed by the SAFE Vehicles Rule. Under this framework, the auto companies' party to the voluntary agreement would only sell cars in the United States that meet these levels.

On September 27, 2019, the EPA and the National Highway Traffic Safety Administration published the "SAFE Vehicles Rule Part One: One National Program" (84 Fed. Reg. 51310). The Part One Rule revokes California's authority to set its own greenhouse gas (GHG) emissions standards and set zero-emission vehicle mandates in California. Part 2 of the regulations, which, if implemented, would address fuel efficiency standards for light-duty vehicles model years 2021 through 2026, have not been drafted as of the writing of this document.

STATE

All relevant State plans, policies, regulations, and laws are summarized in the 2019 SOIA EIR.

LOCAL

City of Elk Grove General Plan

The *Elk Grove General Plan* (City of Elk Grove 2019), which was adopted after the drafting of the 2019 SOIA EIR, contains the following policies related to air quality that are applicable to the Project.

- **Policy LU-1-4:** Land uses in the vicinity of areas designated as Heavy Industry should include transitions in intensity, buffers, or other methods to reduce potential impacts on residential uses. Buffers may include land designated for other uses, such as light industry, commercial, or open spaces.

- **Policy LU-1-6:** Support the development of neighborhood-serving commercial uses adjacent to residential areas that provide quality, convenient, and community-serving retail choices in a manner that does not impact neighborhood character.

- **Policy LU-1-7:** Encourage disclosure of potential land use compatibility issues including but not limited to noise, dust, and odors, in order to provide potential purchasers with complete information to make informed decisions about purchasing property.

- **Policy LU-1-9:** Encourage employee-intensive commercial and industrial uses to locate within walking distance of fixed transit stops. Encourage regional public transit providers to provide or increase coordinated services to areas with high concentrations of residents, workers, or visitors.

- **Policy MOB-1-1:** Achieve State-mandated reductions in VMT by requiring land use and transportation projects to comply with the following metrics and limits. These metrics and limits shall be used as thresholds of significance in evaluating projects subject to CEQA. Projects that do not achieve the daily VMT limits outlined below shall be subject to all feasible mitigation measures necessary to reduce the VMT for, or induced by, the project to the applicable limits. If the VMT for or induced by the project cannot be reduced consistent with the performance metrics outlined below [provided in the 2019 City of Elk Grove General Plan], the City may consider approval of the project, subject to a statement of overriding considerations and mitigation of transportation impacts to the extent feasible, provided some other stated form of public objective including specific economic, legal, social, technological or other considerations is achieved by the project.

- **Policy MOB-3-1:** Implement a balanced transportation system using a layered network approach to building complete streets that ensure the safety and mobility of all users, including pedestrians, cyclists, motorists, children, seniors, and people with disabilities.

- **Policy MOB-3-2:** Support strategies that reduce reliance on single occupancy private vehicles and promote the viability of alternative modes of transport.

    - **Standard MOB-**3-2-a: Require new development to install conduits for future installation of electric vehicle charging equipment.

- **Policy MOB-3-7:** Develop a complete and connected network of sidewalks, crossings, paths, and bike lanes that are convenient and attractive, with a variety of routes in pedestrian-oriented areas.

- **Policy MOB-3-15:** Utilize reduced parking requirements when and where appropriate to promote walkable neighborhoods and districts and to increase the use of transit and bicycles.

- **Policy MOB-3-16:** Ensure new multifamily and commercial developments provide bicycle parking and other bicycle support facilities appropriate for the users of the development.

- **Policy MOB-4-1:** Ensure that community and area plans, specific plans, and development projects promote context-sensitive pedestrian and bicycle movement via direct, safe, and pleasant routes that connect destinations inside and outside the plan or project area. This may include convenient pedestrian and bicycle connections to public transportation.

- **Policy MOB-4-5:** Encourage employers to offer incentives to reduce the use of vehicles for commuting to work and increase commuting by active transportation modes. Incentives may include a cash allowance in lieu of a parking space and on-site facilities and amenities for employees such as bicycle storage, shower rooms, lockers, trees, and shaded seating areas.

- **Policy MOB-5-5:** Promote strong corridor connections to and between activity centers that are safe and attractive for all modes.

- **Policy NR-4-1:** Require all new development projects which have the potential to result in substantial air quality impacts to incorporate design, and/or operational features that result in a reduction in emissions equal to 15 percent compared to an "unmitigated baseline project." An unmitigated baseline project is a development project which is built and/or operated without the implementation of trip reduction, energy conservation, or similar features, including any such features which may be required by the Zoning Code or other applicable codes.

    - **Standard NR-4-1a:** As part of the environmental review of projects that are not exempt, the City shall identify the air quality impacts of development proposals to avoid significant adverse impacts and require appropriate mitigation measures to the extent feasible and appropriate, potentially including—in the case of projects which may conflict with applicable air quality plans—emission reductions in addition to those required by Policy NR-4-1.

- **Policy NR-4-3:** Implement and support programs that reduce mobile source emissions.

- **Policy NR-4-4:** Promote pedestrian/bicycle access and circulation to encourage residents to use alternative modes of transportation in order to minimize direct and indirect emissions of air contaminants.

- **Policy NR-4-5:** Emphasize demand management strategies that seek to reduce single-occupant vehicle use in order to achieve State and federal air quality plan objectives.

- **Policy NR-4-8:** Require that development projects incorporate best management practices during construction activities to reduce emissions of criteria pollutants.

    - **Standard NR-4-8a:** Require all future projects with construction emissions to incorporate the Sacramento Metropolitan Air Quality Management District's (SMAQMD) Basic Construction Emission Control Practices as identified in the most current version of the SMAQMD CEQA Guide in effect at the time of construction.

    - **Standard NR-4-8b:** All projects with construction emissions exceeding the SMAQMD ozone precursors thresholds shall implement enhanced exhaust control practices as identified in the most current version of the SMAQMD CEQA Guide in effect at the time of construction.

        - **Standard NR-4-8c:** All projects with construction emissions exceeding the SMAQMD fugitive particulate matter (PM) thresholds shall implement enhanced fugitive PM dust control practices as identified in the most current version of the SMAQMD CEQA Guide in effect at the time of construction.

    - **Standard NR-4-8d:** For projects exceeding the SMAQMD NO_X and PM construction emissions thresholds that cannot be mitigated to less than significant with implementation of Standards NR-4-8.a, NR- 4-8.b, and NR-4-8.c, the project shall pay a mitigation fee into the SMAQMD's off-site mitigation program.

- **Policy NR-4-9:** Prohibit the future siting of sensitive land uses, such as hospitals, schools, day care facilities, elderly housing, convalescent facilities, and all residential facilities within the distances recommended by the California Air Resources Board and applicable guidance from SMAQMD for air pollutant emission sources, unless adequate mitigation measures are adopted and implemented.

- **Policy NR-4-10:** Require new air pollution point sources, such as industrial, manufacturing, and processing facilities, to be located an adequate distance from residential and other sensitive land uses.

    - **Standard NR-4-10a:** Require the provision of buffers between sensitive land uses and sources of odor and toxic air contaminants. The City shall implement this policy when siting future sensitive land uses within the proximity of existing odor and toxic air contaminant sources or when siting new odor-producing or toxic air contaminant generating land uses within the proximity of existing sensitive land uses.

- **Policy NR-4-12:** Coordinate with the Sacramento Metropolitan Air Quality Management District on the review of proposed development projects, specifically projects that could conflict with any applicable air quality plans and/or the State Implementation Plan.

- **Policy NR-4-13:** Minimize exposure of sensitive land uses to objectionable odors.

    - **Standard NR-4-13a:** Future sensitive land uses, such as hospitals, schools, day care facilities, elderly housing, convalescent facilities, and all residential uses shall not be sited within the distance from odor

sources recommended in the SMAQMD's most current CEQA Guide - Recommended Odor Screening Distance Table unless documentation is provided that the proposed site would not expose a substantial number of people to objectionable odors.

- **Policy NR-6-5:** Promote energy conservation measures in new development to reduce on-site emissions and 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 NR-6-7:** Encourage the use of solar energy systems in homes, commercial businesses, and City facilities as a form of renewable energy.

Sacramento Area Council of Governments

The Sacramento Area Council of Governments (SACOG) serves as the Metropolitan Planning Organization for the Sacramento region, maintaining the regional Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) in coordination with each of the local 28 member cities and counties, including Sacramento County. SACOG plays a central role in transportation infrastructure planning for the region, while also serving as a forum for the study, planning, and resolution of other planning issues facing the local member governments. The most recent MTP/SCS for the SACOG region was adopted in November 2019, after the drafting of the 2019 SOIA EIR. The 2020 MTP/SCS lays out a plan that links land use, air quality, greenhouse gas emissions, and transportation needs.

3.4.3 Environmental Impacts and Mitigation Measures

Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, the proposed Project could have a significant impact on air quality if it would:

- conflict with or obstruct implementation of the applicable air quality plan;

- violate any air quality standard or contribute substantially to an existing or projected air quality violation,

- result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable NAAQS or CAAQS (including releasing emissions that exceed quantitative thresholds for ozone precursors);

- expose sensitive receptors to substantial pollutant concentrations; or

- result in other emissions (such as those leading to odors) adversely affecting a substantial number or people.

As stated in Appendix G of the CEQA Guidelines, the significance criteria established by the applicable air quality management district may be relied on to make the above determinations. SMAQMD has established criteria air pollutant and precursor mass emissions thresholds for land use development projects. These thresholds are considered to be the allowable amount of emissions each project can generate without conflicting with or obstructing implementation of the applicable air quality plans developed to maintain and attain the NAAQS and CAAQS for each pollutant. The NAAQS and CAAQS, and therefore the SMAQMD thresholds of significance,

identify levels of air quality necessary to protect the public health with an adequate margin of safety. Thus, pursuant to the SMAQMD-recommended thresholds (SMAQMD 2020a) for evaluating project-related air quality impacts, the proposed project would result in a significant impact if it would:

- generate construction-related criteria air pollutant or ozone precursor emissions that exceed 85 pounds per day for NO_X, or, after implementation of best management practices (BMPs), 80 pounds per day or 14.6 tons per year of PM_{10} and 82 pounds per day or 15 tons per year of $PM_{2.5}$;
- generate long-term regional criteria air pollutant or ozone precursor emissions that 65 pounds per day of ROG or NO_X, 80 pounds per day or 14.6 tons per year of PM_{10} and 82 pounds per day or 15 tons per year of $PM_{2.5}$;
- generate emissions of toxic air contaminants that would cause an excess cancer risk level of more than 10 in in one million or exceed a noncarcinogenic Hazard Index of 1; or
- result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Since there is considerable overlap between the threshold questions, this section has been organized to address the following:

- Short-term, construction-related emissions
- Long-term, operational emissions
- Exposure of sensitive receptors to substantial pollutant concentrations; and
- Exposure to other emissions (such as those leading to odors).

Two of the Appendix G checklist questions address conflicts with an air quality plan and contribution to an air quality violation. The criteria air pollutant significance thresholds serve as a proxy for these impacts, and therefore, the evaluation of potential conflicts with air quality plans and air quality violations is consolidated.

For cumulative impacts, SMAQMD states that, as a result of the District's approach to thresholds of significance, if a project's emissions are not anticipated to exceed the SMAQMD-recommended thresholds, as listed above, the project would not be expected to result in a cumulatively considerable contribution to a significant impact on a cumulative level (SMAQMD 2020a). Chapter 4 of this EIR addresses cumulative impacts in detail.

METHODOLOGY

The proposed Project would result in air pollutant emissions from short-term construction and long-term operational activities. Potential air quality impacts associated with short-term construction and long-term operations were evaluated according to guidance and methods from ARB and SMAQMD. A summary of the data inputs, emissions factors, and calculation methodologies used are provided below for both construction and operational elements of the proposed Project. Detailed project inputs, calculations, and modeling outputs are provided in Appendix E, *Quantification of Criteria Air Pollutant and Greenhouse Gas Emissions, and Energy Use.*

Construction

Future development is assumed to occur over approximately 20 years, but the specific timing of construction activities each year is subject to market conditions and unknown at the time of preparing this analysis. In

accordance with SMAQMD-recommended methodology, it is conservatively assumed that 25 percent of land uses within the Project site could be constructed within a single year, assumed to be 2021 as the first possible year of construction; off-site improvements were assumed to be constructed in their entirety in this same initial year. Not only is this level of construction in a single year a conservative assumption, but modeling all emissions for the year 2021 also results in a conservative estimate of construction-related emissions over the construction period. any construction in future years would more realistically result in fewer emissions for the same level of activity due to fleet turnover over time, in which older equipment and vehicles are replaced by those with new engines meeting more recent and more stringent emission standards

Emissions associated with construction were modeled using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2, which is the most current version of the SMAQMD-recommended model for estimating emissions from land use development projects. CalEEMod includes default assumptions for construction parameters, such as construction equipment, haul trucks, and worker trips, which were used to model the proposed Project's construction-related emissions. Likewise, CalEEMod also allows the user to input project-specific parameters. In this case, Project-specific construction inputs included site acreage for proposed land uses, assumed building square footage, and construction schedule. Where Project-specific information was not available, default parameters provided by the model were used. Default assumptions provided by the model are typically conservative to avoid underestimating emissions. Although it is unlikely that the most intensive days of construction would occur concurrently, to conservatively estimate maximum potential daily emissions, it is assumed that the all construction phases could occur concurrently throughout the Project site for the duration of the year of maximum-potential development. Construction of off-site roadway improvements, as described in the traffic analysis (Section 3.14, "Transportation"), were modeled using the SMAQMD-developed Road Construction Emissions Model, Version 9.0.0, and assumed to occur in 2021.

Operations

Future operational emissions would be generated by area-, energy-, and mobile-sources, as well as potential stationary sources. Operational area- and energy-source air pollutant emissions were modeled in CalEEMod based on the assumed land use acreages and building square footage. In order to account for 2019 Title 24, Part 6 standards, the Title 24 energy intensity factors in CalEEMod were adjusted to account for an estimated 7-percent energy reduction in new-construction nonresidential buildings and 53-percent energy reduction in new-construction residential buildings compared to the 2016 Title 24, Part 6 standards that were in place at the time of the CalEEMod Version 2016.3.2 model release (CEC 2020).

Mobile-source emissions were estimated using the CalEEMod default ITE trip generation rates for each land use category. The CalEEMod default vehicle trip distances and fleet mix were used for the residential and regional commercial land uses, but were adjusted for industrial land uses to reflect the potential for a higher percentage of heavy trucks to serve these land uses and longer trips between the project site and regional ports and distribution areas. All operational emissions were modeled based on a 2022 operational year; this is a conservative estimate because development would occur over an estimated 20-year horizon and emissions per unit of activity would presumably decrease in future years as building energy standards continue to become more stringent, energy sources become more dependent upon renewable sources and vehicle fleets turnover with new vehicles that meet more rigorous emissions control regulations.

IMPACT ANALYSIS

Impact 3.4-1: Generation of temporary, short-term, construction-related emissions of criteria air pollutants and ozone precursors.

Construction activities would generate emissions of criteria air pollutants and ozone precursors from a variety of sources, including off-road construction equipment, on-road vehicles, earthmoving activities, off-gas from paving activities and application of architectural coatings. Construction emissions are described as "short-term" or temporary in duration but have the potential to adversely affect air quality.

Estimated maximum daily construction-related emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ are shown in Table 3.4-1. As noted above in the methodology section, construction-related emissions were estimated based upon a maximum development scenario in which 25 percent of on-site land uses and all off-site improvements would be constructed in a single year, using equipment and fleet mixes for the year 2021 to represent a "worst-case" construction year. Emissions estimate inputs and modeling files are provided in Appendix E.

Table 3.4-1 Summary of Maximum Daily Construction-Related Emissions of Criteria Air Pollutants and Ozone Precursors

Portion of Construction Phase	Maximum Daily Emissions (pounds per day)				Maximum Annual Emissions (tons per year)	
	ROG	NO_X	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions [a]	123	303	79	40	8	4
SMAQMD significance threshold [b]	-	85	0	0	0	0
Exceeds Threshold?	-	Yes	Yes	Yes	Yes	Yes

Notes: NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; $PM_{2.5}$ = respirable particulate matter with an aerodynamic diameter of 2.5 micrometers or less; VOC = volatile organic compounds; SMAQMD = Sacramento Metropolitan Air Quality Management District.

[a] Maximum daily and annual emissions account for a maximum construction year scenario in which 25% of proposed land uses are constructed in a single year, and all off-site improvements are constructed in the same year.

[b] Represents SMAQMD Threshold of Significance without the application of Best Management Practices (BMPs) and Best Available Control Technology (BACT).

Source: Modeled by AECOM in 2020; see Appendix E for detailed modeling assumptions, outputs, and results.

As shown in Table 3.4-1, as with the 2019 SOIA EIR, the daily emissions generated by construction activities would exceed the SMAQMD-recommended threshold of significance for NO_X and, without application of BMPs and Best Available Control Technologies (BACT), would generate daily emissions of PM_{10} and $PM_{2.5}$ in excess of the SMAQMD-recommended thresholds of significance during construction. In addition, as the duration and intensity of specific construction activities associated with future development of the Project site are unknown, emissions generated as a result could exceed SMAQMD thresholds of significance and therefore would violate or contribute substantially to an existing or projected air quality violation. Therefore, emissions associated with construction of the proposed Project could result in a **potentially significant** impact.

Mitigation Measures

Mitigation Measure 3.4-1a: Implement the SMAQMD Basic Construction Emission Control Practices and Enhanced Exhaust Control Practices (2019 SOIA EIR Mitigation Measure 3.4-1a)

Regardless of the significance determination, all construction projects are required to implement the SMAQMD Basic Construction Emission Control Practices for controlling fugitive dust at construction sites. For projects that would generate maximum daily NO_X emissions in exceedance of the SMAQMD threshold of significance, the SMAQMD recommends implementation of the Enhanced On-site Exhaust Control measures for off-road construction equipment. The SMAQMD requires projects that exceed the PM_{10} and $PM_{2.5}$ emissions thresholds after implementation of the Basic Construction Emission Control Practices to implement all feasible and applicable measures of the Enhanced Fugitive PM Dust Control Practices (SMAQMD 2020a).

During construction of off-site improvements, and at the time of submittal of any application for development within the Project site, the City of Elk Grove shall require the implementation of then current SMAQMD Basic Construction Emission Control Practices as a condition of approval. For those projects that exceed the applicable thresholds of significance for emissions of criteria air pollutants or ozone precursors, the City of Elk Grove shall require the implementation of the Enhanced On-site Exhaust Control measures to address exceedances of NO_X emissions thresholds and the implementation of Enhanced Fugitive PM Dust Control Practices to address continued exceedances of PM_{10} and/or $PM_{2.5}$ thresholds of significance.

a. Basic Construction Emission Control Practices identified by the SMAQMD as listed below, or as they may be updated in the future:

   - Control of fugitive dust is required by District Rule 403 and enforced by District staff.

   - 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 2 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 track out mud or dirt onto adjacent public roads at least once a day. Use of dry powered 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 be 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)

and 2485]. Provide clear signage that posts this requirement for workers at the entrances to the site.

- Provide current certificate(s) of compliance for ARB's In-Use Off-Road Diesel-Fueled Fleets Regulation [California Code of Regulations, Title 13, sections 2449 and 2449.1].

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

b. If, after application of the Basic Construction Emission Control Practices, emissions would still exceed SMAQMD threshold of significance for NO_X, implement the SMAQMD Enhanced On-site Exhaust Control Practices as listed below, or as they may be updated in the future:

- Provide a plan, for approval by SMAQMD, demonstrating that the heavy-duty (50 horsepower [hp] or more) off-road vehicles, including owned, leased, and subcontractor vehicles, to be used 8 hours or more during the construction project will achieve a project wide fleet-average 10 percent NO_X reduction compared to the most current California Air Resources Board (ARB) fleet average that exists at the time of construction. The plan shall have two components: an initial report submitted before construction and a final report submitted at the completion.

    - Submit the initial report at least four (4) business days prior to construction activity.

    - Provide project information and construction company information.

    - Include equipment type, horsepower rating, engine model year, projected hours of use, and the ARB equipment identification number for each piece of equipment in the plan. Incorporate all owned, leased and subcontracted equipment to be used.

    - Submit the final report at the end of the job, phase, or calendar year, as pre-arranged with SMAQMD staff and documented in the approval letter, to demonstrate continued project compliance.

- SMAQMD staff and/or other officials may conduct periodic site inspections to determine compliance. Nothing in the mitigation shall supersede other air district, state or federal rules or regulations.

- The mitigation is applicable until full implementation of ARB In-Use Off-Road Regulation is in place, expected January 1, 2028.

c. If, after application of the Basic Construction Emission Control Practices, emissions would still exceed SMAQMD threshold of significance for PM_{10} and/or $PM_{2.5}$, implement the SMAQMD Enhanced Fugitive PM Dust Control Practices as listed below, or as they may be updated in the future:

- 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 miles per hour.

- 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.

- Install wheel washers for all existing 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 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.

Mitigation Measure 3.4-1b: Use Off-Site Mitigation Fee for NOx Emissions Generated by Construction (2019 SOIA EIR Mitigation Measure 3.4-1b)

As projects are proposed, the City will assess the effectiveness of Basic Construction Emission Control Practices and Enhanced On-site Exhaust Control Practices for addressing NO_X emissions relative to SMAQMD threshold of significance. If, after development of project details and scheduling, any project within the Project site would result in NO_X emissions that exceed the SMAQMD threshold of significance, even after implementation of the Basic Construction Emission Control Practices and Enhanced On-site Exhaust Control Practices, the subject project will participate in SMAQMD's off-site mitigation fee program. The mitigation fee will be set at a level that would bring NO_X emissions to a less-than-significant level (i.e., less than the SMAQMD Thresholds of Significance at that time). Whether the fee is needed, and if it is needed, determining the fee amount shall be calculated when the daily construction emissions can be more accurately determined (based on actual equipment use and scheduling). Calculation of fees shall occur in consultation with SMAQMD staff before the approval of grading plans by the City.

Significance after Mitigation

Implementation of Mitigation Measure 3.4-1a, would be considered application of BMPs and BACT and would reduce construction-related emissions of PM_{10}, $PM_{2.5}$, and NO_X to less than the SMAQMD thresholds of significance, as shown in Table 3.4-2. However, due to the unknown duration and intensity of specific construction activities associated with future development of the Project site, the uncertainty with regard to the availability of construction equipment that meet Tier 4 engine emissions standards, and the fact that estimated NO_X emissions are approaching the SMAQMD threshold of 85 pounds per day, in is within the realm of possibility that a given development project within the Project site could exceed the maximum daily emissions threshold for NO_X. In such a case, payment of an off-site mitigation fee to off-set any incremental construction-generated NO_X emissions in exceedance of the SMAQMD threshold of significance, if needed and as required by Mitigation Measure 3.4-1b, would reduce emissions of NO_X associated with future development in the Project

site, to levels that do not exceed SMAQMD's threshold of significance. Implementation of these mitigation measures would also ensure compliance with the City's General Plan Policy NR-4-8 and related standards that require development projects incorporate best management practices during construction activities to reduce emissions of criteria pollutants to levels that do not exceed the SMAQMD thresholds of significance. Thus, as with the 2019 SOIA EIR, this impact would be **less than significant with mitigation**.

Table 3.4-2 Summary of Mitigated Maximum Daily Construction-Related Emissions of Criteria Air Pollutants and Ozone Precursors

Portion of Construction Phase	Maximum Daily Emissions (pounds per day)				Maximum Annual Emissions (tons per year)	
	ROG	NO_X	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions [b]	105	78	43	17	4.4	1.6
SMAQMD significance threshold	-	85	80	82	14.6	15
Exceeds Threshold?	-	No	No	No	No	No

Notes: ROG = Reactive Organic Gases; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; $PM_{2.5}$ = respirable particulate matter with an aerodynamic diameter of 2.5 micrometers or less; VOC = volatile organic compounds; SMAQMD = Sacramento Metropolitan Air Quality Management District.

[a] Mitigation includes use of cleaner engines, represented as equipment that meet Tier 4 Final engine emissions standards; watering exposed areas twice daily; reducing vehicle speed on unpaved roadways to a maximum of 15 miles per hour.

[b] Maximum daily and annual emissions account for a maximum construction year scenario in which 25% of proposed land uses are constructed in a single year, and all off-site improvements are constructed in the same year. Source: Modeled by AECOM in 2020; see Appendix E for detailed modeling assumptions, outputs, and results.

Impact 3.4-2: Generation of long-term operational emissions of criteria air pollutants and ozone precursors.

Development within the Project site would include new buildings, structures, paved areas, roadways, utilities, and other improvements. Land uses that would be developed throughout the Project site would include parks and open spaces, light and heavy industrial uses, regional commercial, and mixed uses that is assumed to include up to 707 single-family residential units. Daily activities associated with the operation of these land uses would generate criteria air pollutant and ozone precursor emissions from mobile, energy, and area sources, as well as potential stationary sources. Mobile sources would involve vehicle trips for residential (e.g., work, shopping, and other trips) and non-residential (e.g., customers, employees, and material delivery trips) activities associated with the future land uses within the Project site. Area sources include, but are not limited to, natural gas combustion for water and space heating, landscape maintenance equipment, and periodic architectural coatings (such as paints). While construction emissions are considered short-term and temporary, operational emissions are considered long-term and occur for the lifetime of the development. Therefore, operational emissions have greater potential to affect the attainment status of an air basin, particularly as a result of increased traffic and energy demands from additional development.

Table 3.4-3 summarizes the maximum daily emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ that would be generated by long-term operations. As explained above in the methodology section, operational emissions were conservatively estimated with the assumption that all proposed uses would be operational in the year 2022. This is a conservative estimate as development is assumed over a 20-year horizon and emissions per unit of activity would decrease in future years as building energy standards continue to become more stringent, energy sources become more dependent upon renewable sources and vehicle fleets turnover with new vehicles that meet more rigorous

emissions control regulations. As shown in Table 3.4-3, the total operational emissions would exceed SMAQMD thresholds for ROG and NO_X, PM_{10}, and $PM_{2.5}$. Refer to Appendix E for emissions estimating inputs and model output files.

Table 3.4-3 Summary of Long-Term Operational Emissions of Criteria Air Pollutants and Precursors[1]

Emissions Source	Daily Emissions (pounds per day)				Annual Emissions (tons per year)	
	VOC	NO_X	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$
Area	240	0.7	0.3	0.3	0.04	0.04
Energy	5	46	3	3	0.64	0.64
Mobile	119	1170	658	185	92.56	26.03
Total Operational Emissions2	**363**	**1216**	**662**	**189**	**93**	**27**
SMAQMD Thresholds of Significance	**65**	**65**	**80**	**82**	**14.6**	**15**
Exceeds Thresholds?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

Notes: ROG = reactive organic gases; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter; SMAQMD = Sacramento Metropolitan Air Quality Management District

[1] Operational emissions were modeled for the year 2022, as the earliest year of construction would occur in 2021, although the majority of construction and therefor the start of additional operations would likely occur in later years.

[2] Total emissions may not add correctly due to rounding.

Source: Modeled by AECOM in 2020; see Appendix E for detailed modeling assumptions, outputs, and results.

In addition to typical emission sources (e.g., mobile, energy, area), future land uses could also involve new stationary sources that generate long-term operational emissions above the emissions shown in Table 3.4-3. These sources could include, but are not limited to, diesel engine or gas turbine generators for emergency power generation; central heating boilers for commercial or large residential buildings; process equipment for light industrial uses; service station equipment; and dry-cleaning equipment. These stationary sources would be required to obtain permits from SMAQMD, which are issued with the intent of reducing air pollution and attaining (or maintaining) the ambient air quality standards. Permitted stationary-source facilities are required to implement BACT, which may include the installation of emissions control equipment or implementation of administrative practices to reduce emissions. Stationary-source facilities may also be required to offset their emissions of criteria air pollutants in order to be permitted. Information on stationary sources that could operate in support of future development is not available at this time. The emissions from these sources would be in addition to the estimated operational emissions described above.

The SMAQMD thresholds of significance are considered the allowable amount of emissions each project can generate without conflicting with or obstructing implementation of the applicable air quality plans, which are developed to maintain and attain ambient air quality standards. Consequently, because operations of future uses within the Project site could generate long-term operational emissions that exceed the SMAQMD thresholds, it could also conflict with or obstruct implementation of the applicable air quality plan. This impact would be **significant**.

Mitigation Measures

Mitigation Measure 3.4-2: Implement Strategies to Reduce Potential Operational Emissions (2019 SOIA EIR Mitigation Measure 3.4-2)

For future developments proposed within the Project site, the City of Elk Grove shall require the implementation of strategies to reduce operational ozone precursors presented in an Air Quality Mitigation Plan, which shall be submitted to SMAQMD for review and approval. The performance standard for the AQMP is to achieve a reduction in, or offset of operational ozone precursor emissions. Reduction strategies can include policies and emissions reduction measures demonstrating compliance with the City of Elk Grove's General Plan, including policies MOB-1-1, MOB-3-1, MOB-3-2, MOB-3-7, MOB-3-15, MOB-3-16, MOB-4-1, MOB-4-5, NR-4-1, NR-4-4, NR-6-5, and NR-6-7 (or equivalent measures as may be amended), in addition to reduction measures recommended by the SMAQMD, which may include the use of offsets once all other feasible measures have been exhausted. Future projects shall demonstrate compliance with the AQMP reduction strategies or equivalent strategies prior to issuance of a building permit.

Significance after Mitigation

Mitigation Measure 3.4-2 would assist in reducing operational air pollutant emissions and is similar to the City's General Plan Policy NR-4-1, which requires an emissions reduction of 15 percent or greater for new development projects.

Several of the Mobility Element policies of the General Plan aim to reduce reliance on single use vehicles and promote alternative forms of transportation to reduce VMT, which oftentimes provides a co-benefit of reducing mobile-source emissions of criteria air pollutants and ozone precursors. For example, Policy MOB-1-1 requires new development to demonstrate conformance with the VMT limit of the relevant General Plan land use designation, which was established to ensure that the total VMT generated by operations throughout the City would achieve State-mandated reductions in VMT. Policy MOB-3-2 and associated standard requires new development to install conduits for future installation of electric vehicle charging equipment. Policy MOB-3-16 requires new multifamily and commercial development provide bicycle parking and other bicycle support facilities. In addition, the planned land uses and siting have been developed with consideration of the regional location to generate an appropriate mix of residential and employment-generating land uses in order to reduce commute distances.

Table 3.4-4 presents the estimated emissions reductions that would be required to attain a reduction in, or offset of operational ozone precursor emissions by at least 15 percent of the total mobile-source emissions. Table 3.4-5 presents estimated mitigated operational emissions with implementation of VMT reduction measures consistent with General Plan land use planning and transportation policies such that the proposed Project would achieve the VMT limits for the respective land uses, consistent with limits established in General Plan Policy MOB-1-1.

Table 3.4-4 Air Quality Management Plans Ozone Precursor Emissions Reduction Requirements		
	Annual Emissions (tons per year)	
	ROG	NO_X
Unmitigated Mobile Emissions	14.87	165.54
15% Reduction	2.23	24.83

Notes: ROG = reactive organic gases; NO_X = oxides of nitrogen

Source: Modeled by AECOM in 2020; see Appendix E for detailed modeling assumptions, outputs, and results.

Table 3.4-5 Summary of Long-Term Mitigated Operational Emissions of Criteria Air Pollutants and Precursors with VMT Reductions Consistent with General Policy MOB-1-1. [1]

Emissions Source	Daily Emissions (pounds per day)				Annual Emissions (tons per year)	
	VOC	NO_X	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$
Area	240	0.7	0.3	0.3	0.04	0.04
Energy	5	46	3	3	0.64	0.64
Mobile	57.63	547.72	211.28	59.15	37.19	10.45
Total Maximum Daily Operational Emissions with VMT Reduction Measures 2	**302**	**594**	**215**	**63**	**-**	**-**
Total Annual Operational Emissions with VMT Reduction Measures (tons per year)	**57**	**107**	**38**	**11**	**38**	**11**
Mass Reduction from Unmitigated Emissions (tons per year)	**2.84**	**67.26**	**55.33**	**15.55**	**55.33**	**15.55**
Meet Target Reduction of 15%?	**Yes**	**Yes**	**-**	**-**	**-**	**-**

Notes: ROG = reactive organic gases; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter; SMAQMD = Sacramento Metropolitan Air Quality Management District

[1] Operational emissions were modeled for the year 2022, as the earliest year of construction would occur in 2021, although the majority of construction and therefor the start of additional operations would likely occur in later years.

[2] Total emissions may not add correctly due to rounding.

Source: Modeled by AECOM in 2020; see Appendix E for detailed modeling assumptions, outputs, and results.

As shown in Table 3.4-4, reducing mobile emissions as a result of achieving the VMT limits would help to substantially reduce future operational emissions, and operational ozone precursor emissions would be reduced by more than 15 percent of the total mobile-source emissions, exceeding Air Quality Management Plans (AQMP) reduction requirement. However, because the details of future development projects are not currently known, it is not possible to demonstrate at this time that future development within the Project site would be able to meet the performance standard for ozone precursor emissions. Operations of future development could result in air pollutant emissions that still exceed the SMAQMD thresholds. There is no additional feasible mitigation available that would avoid this impact. As with the 2019 SOIA EIR, the impact is **significant and unavoidable**.

Impact 3.4-3: Exposure of sensitive receptors to substantial pollutant concentrations

Certain air pollutants have been recognized to cause notable health problems and consequential damage to the environment either directly or in reaction with other pollutants, due to their presence in elevated concentrations in the atmosphere. The potential health effects, as well as the national and State ambient air quality standards

established to be protective of human health, are outlined in Section 3.2, "Environmental Setting," above, as well as outlined in the 2019 SOIA EIR and have not changed since that time. Negative health effects associated with criteria pollutant emissions are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, the number and character of exposed individuals [e.g., age, gender]). Due to the difference in sources, dispersion, and potential health effects, the following analysis discusses the potential for the exposure of sensitive receptors to criteria air pollutants and precursors, carbon monoxide, and toxic air contaminants (TACs) separately.

Exposure of sensitive receptors to localized concentrations of carbon monoxide (CO).

A mobile-source pollutant of localized concern is CO. Continuous engine exhaust may elevate localized CO concentrations, or "hot spots." Prior SMAQMD guidance for the assessment of potential impacts associated with CO emissions included a two-tiered screening approach to determine whether traffic would cause a potential CO hotspot at affected intersections. The June 2020 update of the SMAQMD CEQA Guide no longer includes this specific screening approach. The current guidance does acknowledge that land use development projects do not typically have the potential to result in localized concentrations of criteria air pollutants that expose sensitive receptors to substantial pollutant concentrations, in part, because the predominant source of these pollutants is typically in the form of mobile-source exhaust from vehicle trips that occur throughout a network of roads and are not concentrated in a single location.

Emissions and ambient concentrations of CO have decreased substantially throughout California in the past three decades. The national statewide CO standard is attained statewide in California, and an exceedance of NAAQS or CAAQS in the region was last recorded in 1993. This is primarily attributable to requirements for cleaner vehicle emissions. The Federal Motor Vehicle Control Program has mandated increasingly lower emission levels for vehicles manufactured since 1973. Between 2000 and 2019, national average CO concentrations, as well as regional average CO concentrations in the California and Nevada region, have decreased by approximately 65 percent (EPA 2020c).

Local mobile-source emissions of CO near roadway intersections are a direct function of traffic volume, speed, and delay. CO typically disperses rapidly with distance from the source under normal meteorological conditions. Under specific meteorological conditions, CO concentrations near roadways and/or intersections may reach unhealthy levels for local sensitive land uses such as residential units, hospitals, schools, and childcare facilities. CO hot spots are typically observed at heavily congested roadway intersections where a substantial number of gasoline-powered vehicles idle for prolonged durations throughout the day. Construction sites are less likely to result in localized CO hot spots due to the nature of construction activities, which normally utilize diesel-powered equipment for intermittent or short durations.

While ambient CO concentrations in the region have not exceeded NAAQS or CAAQS in many years, localized CO concentrations could still occur, particularly at intersections of high-volume roadways. Relevant screening metrics that serve as indicators of potential CO hotspots include whether a project would contribute to substantial traffic delays at or along high-volume intersections and roadways or contribute additional traffic to a unique setting in which mixing of air, and therefore pollutant dispersion, would be substantially limited, such as within a tunnel, underpass, urban street canyon, below-grade roadway, or other similar setting. Several air districts, including the surrounding Bay Area Air Quality Management District, San Joaquin Valley Unified Air Pollution Control District, and Placer County Air Pollution Control District provide recommended screening methodologies

as a conservative indication of whether implementation of a proposed project would result in localized CO emissions that would generate a hotspot and potentially significant impact. If all screening criteria are met, a proposed project is considered to result in a less-than-significant impact to air quality with respect to concentrations of local CO; projects that exceed these screening thresholds would be required to further quantify CO emissions and conduct modeling to determine localized CO concentrations with implementation of the proposed project.

The Bay Area Air Quality Management District screening criteria requires the following metrics be met (BAAQMD 2017):

- Project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans;
- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; and
- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

Placer County Air Pollution Control District-recommended criteria identify a project as having a potential CO impact if (PCAPCD 2017):

- The project's CO emissions from vehicle operation would be more than 550 pounds per day (lb/day); ***and***
- Traffic generated by the proposed project would result in deterioration of intersection peak-hour level of service (LOS) from an acceptable peak-hour LOS (e.g., A, B, C, or D) to an unacceptable LOS (e.g., E or F); or
- project would contribute additional traffic that would substantially worsen and already existing unacceptable peak-hour LOS on one or more intersections in the project vicinity. "Substantially worsen" is defined by PCAPCD as a situation where a delay would increase by 10 seconds or more when project-generated traffic is included.

Similarly, the San Joaquin Valley Unified Air Pollution Control District considers a project to have a potentially significant impact if it would reduce the LOS on one or more streets or at one or more intersections in the project vicinity to LOS E or F, or substantially worsen the traffic at a location within the project vicinity already operating at LOS F (SJVAPCD 2015).

Although this screening criteria is no longer a part of the SMAQMD CEQA Guide, it is provided here as a reference for how the above noted indicators have typically been used to determine potential CO hotspot impacts within the project vicinity. The first tier states that the project's CO impact would be less than significant if:

- Traffic generated by the proposed Project would not result in deterioration of intersection LOS to LOS E or F; and

- The Project would not contribute additional traffic to an intersection that already operates at LOS of E or F.

If the first tier of screening criteria is not met, SMAQMD provides a second tier screening step which states that the project's CO impacts would be less than significant if:

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

Under existing plus full development of the Project site, according to the traffic analysis (see Section 3.14 of this EIR, "Transportation"), most of the study intersections would continue to operate acceptably at LOS D or better, except for five identified intersections, which would operate at LOS E or F with future development within the project site. However, the most vehicles per hour that affected intersections would experience would range from approximately 500 vehicles per hour during peak hour at the lowest-volume intersections to 4,800 vehicles per hour during peak hour at the heaviest-traveled intersections (Wood Rodgers 2020). This is substantially less than the historical SMAQMD second-tier screening criterion of 31,600 vehicles per hour, as well as the above noted BAAQMD screening criterion of 44,000 vehicles per hour. In addition, the future development within the project site would not contribute to a tunnel, parking garage, bridge underpass, urban street canyon, below-grade roadway, or other locations where horizontal or vertical mixing of air would be substantially limited, and the mix of vehicle types at the intersections is not anticipated to be substantially different from the County average. Finally, the proposed Project will be required by the City to implement roadway improvements identified in the traffic analysis, in order to ensure that development of the Project site would not result in increased congestion, pursuant to City policies. Therefore, future development of the proposed Project would meet all recommended first tier screening criteria, in addition to tier two screening criteria, and, as with the 2019 SOIA EIR, this impact is **less than significant**.

Mitigation Measures

No mitigation measures are required.

Exposure of sensitive receptors to toxic air contaminant emissions during construction.

Construction of the proposed Project would generate emissions of TACs from a variety of sources, including off-road construction equipment, on-road vehicles, earthmoving activities, architectural coating activities, and paving activities. These activities may expose nearby receptors to TACs, including residences on the north side of Grant Line Road that are approximately 100 feet from the northern border of the Project site, as well as existing and future on-site receptors. The greatest potential for TAC emissions during construction would be related to diesel particulate matter (DPM) emissions associated with operation of diesel-powered heavy-duty construction equipment and trucks.

However, as the Project site is more than 550 acres, the majority of construction activities would take place throughout the entirety of the Project site, not along the Project site boundaries that are closest to off-site sensitive

receptors. Existing off-site residents would only be within close proximity (as near as 100 feet [30 meters]) to construction activities associated with the mixed-use planned land use and off-site roadway improvements at the northeast of the project site.

Generation of diesel PM from construction projects typically occurs in a single area for a short period of time but could also include linear infrastructure projects to support new land uses. Because construction activities and subsequent emissions vary depending on the phase of construction (e.g., grading, building construction), the construction-related emissions to which nearby receptors could be exposed would also vary throughout the duration of construction activities. Concentrations of mobile-source diesel PM emissions are typically reduced by 70 percent at a distance of approximately 500 feet (ARB 2005). Construction would occur throughout the Project site, and even in intensive phases of construction, there would not be substantial pollutant concentrations, with the potential exception of the immediate vicinity of a particular construction site, due the highly dispersive properties of DPM (concentrations lower extremely quickly over distance).

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 in the environment and the extent of exposure a person has with the substance; a longer exposure period to a fixed amount of emissions would result in higher health risks for nearby sensitive receptors. According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments used to determine the exposure of sensitive receptors to TAC emissions should be based on a 30-year exposure period (OEHHA 2015). Duration associated with any given construction activity at a specific location within the project site would be temporary. Existing off-site residents on the north side of Grant Line Road would only be within close proximity to construction activities during the construction activities associated with development in the immediate vicinity of Grant Line Road. Such exposure durations would be temporary and of short duration relative to the total exposure period used for typical health risk calculations (i.e., 30 years).

It is important to note that emissions from construction equipment would be reduced over the approximately 20-year period of development of the Project site. The use of newer off-road equipment is also effective in reducing PM emissions from off-road equipment used during construction; while not required, these vehicles are increasingly in use in construction equipment fleets. In January 2001, EPA promulgated a final rule to reduce emissions standards for heavy-duty diesel engines in 2007 and subsequent model years. These emissions standards represent a 90 percent reduction in NO_X emissions, 72 percent reduction of non-methane hydrocarbon emissions, and 90 percent reduction of PM emissions, in comparison to the emissions standards for the 2004 model year. In December 2004, ARB adopted a fourth phase of emission standards (Tier 4) in the Clean Air Non-road Diesel Rule that are nearly identical to those finalized by EPA on May 11, 2004. Tier 4 emission standards requires engine manufacturers to meet after-treatment-based exhaust standards for NO_X and PM starting in 2011 that are more than 90 percent lower than 2004 levels, putting emissions from off-road engines virtually on par with those from on-road heavy-duty diesel engines. As construction equipment continues to turnover and/or be retrofitted over time, diesel PM emissions associated with construction will continue to decrease.

In addition to generating emissions that could result in the exposure of off-site receptors to TACs, there are three existing homes on large parcels within the project site and the proposed Project could include development of sensitive land uses within the “mixed use” designation that is proposed an assumes the potential for a wide range of land uses, including residential development. Land use planning would occur after further study, zoning, and design review to ensure that the proposed uses are compatible with surrounding lands. Future applications for development in this area may require additional environmental analysis. However, even considering the

information above, because the exact location with respect to sensitive receptors and length of construction activities cannot be determined at the time of this analysis, it is conservatively assumed that certain construction activities could expose sensitive receptors to substantial TAC concentrations. This TAC impact from construction activities is considered **potentially significant.**

Mitigation Measures

Mitigation Measure 3.4-3a: Implement Mitigation Measure 3.4-1a

Significance after Mitigation

Implementation of the Mitigation Measure 3.4-1a would further reduce PM emissions and satisfy the recommendation of SMAQMD. The use of newer off-road equipment is also effective in reducing PM emissions. In January 2001, EPA promulgated a final rule to reduce emissions standards for heavy-duty diesel engines in 2007 and subsequent model years. These emissions standards represent a 90 percent reduction in NO_X emissions, 72 percent reduction of non-methane hydrocarbon emissions, and 90 percent reduction of PM emissions, in comparison to the emissions standards for the 2004 model year. In December 2004, ARB adopted a fourth phase of emission standards (Tier 4) in the Clean Air Non-road Diesel Rule that are nearly identical to those finalized by EPA on May 11, 2004. Tier 4 emission standards requires engine manufacturers to meet after-treatment-based exhaust standards for NO_X and PM starting in 2011 that are more than 90 percent lower than current levels, putting emissions from off-road engines virtually on par with those from on-road heavy-duty diesel engines. With the application of mitigation, as with the 2019 SOIA EIR, the impact is considered **less than significant.**

Exposure of sensitive receptors to toxic air contaminant emissions during operations.

Future development of the project site is assumed to include parks and open spaces, mixed-use, commercial, and industrial uses. Residential land uses do not typically generate substantial TAC emissions. Land uses that are more likely to generate substantial TAC emissions include industrial land uses that involve stationary sources and manufacturing processes, some commercial land uses such as dry-cleaning establishments and gasoline-dispensing facilities, as well as any land uses with diesel-fueled backup generators. Such stationary sources and any others that may emit TACs would be subject to SMAQMD Rules and Regulations. Non-stationary sources of TACs also include portable engines, cargo handling equipment that may be used at warehouses or distribution centers, transportation refrigeration units, and idling by commercial vehicles and large haul trucks. While State regulations has been shown to lead to successful implementation of TAC reduction measures, land use planning to consider potential localized TAC impacts on sensitive receptors is critical, particularly as mixed-use development and connectivity between residential uses and employment service land uses (such as commercial and industrial) is one of the primary strategies to reduce vehicle miles travelled and associated criteria and greenhouse gas pollutants.

While not law or adopted policy, ARB published the *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook), providing guidance concerning land use compatibility with regard to sources of TAC emissions (ARB 2005). The handbook offers advisory recommendations for the siting of sensitive receptors near uses associated with TACs, such as freeways and high-traffic roads, commercial distribution centers, rail yards, ports, refineries, dry cleaners, gasoline stations, and industrial facilities. The recommended distances of separation between land uses relevant to the future development of the project site include:

- Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads carrying 100,000 vehicles per day, or rural roads carrying 50,000 vehicles per day.
- Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard.
- Avoid siting new sensitive land uses within 300 feet of a large gasoline station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gasoline dispensing facilities.
- Avoid siting new sensitive land uses within 300 feet of any dry-cleaning operation using perchloroethylene. For operations with two or more machines, provide 500 feet. For operations with three or more machines, consult the local air district. Do not site new sensitive land uses in the same building with dry-cleaning operations that use perchloroethylene.
- Avoid 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 (e.g., residences).

Since the 2005 publication of the Handbook, ARB also published a Technical Advisory as a supplement to the Handbook to provide information on scientifically based strategies to reduce exposure to emissions near high-volume roadways in order to protect public health (ARB 2017). This Technical Advisory demonstrates that reduced exposure to traffic-related pollution can be achieved while pursuing infill development that independently provides public health benefits. The Technical Advisory identifies strategies to reduce air pollution exposure near roadways, including those that reduce vehicular emissions, such as incorporation of roundabouts for speed reduction, traffic signal management, and speed limit reductions on high-speed roadways (those greater than 55 miles per hour); strategies that reduce the concentrations of traffic pollution, such as urban design that promotes air flow, solid barriers to pollution, and vegetation to reduce pollutant concentrations; and strategies that remove pollution from indoor air such as through high efficiency filtration. This Technical Advisory does not negate the ARB Handbook but offers multiple variables for consideration for land use, transportation, and environmental planning and development.

ARB implements several statewide diesel-related programs and strategies designed to reduce diesel PM emissions and subsequent exposure. The following programs reduce and regulate criteria pollutant emissions, as well as diesel PM and TAC emissions, from exhaust:

- **In-Use Mobile Agricultural Equipment Regulation**. Used as a regulation for mobile agricultural equipment that moves California towards meeting ambient air quality standards for the San Joaquin Valley by using the cleanest available technologies. The regulation provides the administrative mechanism for emission reductions resulting from mobile agricultural equipment program projects to be eligible for State Implementation Plan credit.
- **In-Use Off-Road Equipment**. Used as a regulation to reduce diesel particulate matter and oxides of nitrogen emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. Such vehicles are used in construction, mining, and industrial operations.

- **New Off-Road Engines and Equipment.** This category consists of regulations applicable to Off-Road Compression-Ignition Engines (a.k.a. diesel engines), and is primarily for the interest and needs of manufacturers and others that are required to obtain certification from ARB. These engines are found in a wide variety of off-road applications, such as farming, construction, and industrial. Some familiar examples include tractors, excavators, dozers, scrapers, and portable generators.

- **Heavy-Duty In-Use Vehicle Regulation.** This regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet PM filter requirements beginning January 1, 2012. Lighter and older heavier trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent. The regulation applies to nearly all privately and federally owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds.

- **Heavy-Duty Vehicle Inspection Program.** Enforcement program developed to control excessive smoke emissions and tampering from heavy-duty diesel trucks and buses. The Heavy-Duty Vehicle Inspection Program requires heavy-duty trucks and buses to be inspected for excessive smoke and tampering, and engine certification label compliance. Any heavy-duty vehicle traveling in California, including vehicles registered in other states and foreign countries may be tested.

- **Heavy-Duty Diesel Emission Control Label Inspection Program.** Enforcement program developed as a way to reduce emissions of air contaminants through the fair, consistent and comprehensive enforcement of air pollution laws, and by providing training and compliance assistance. Each vehicle operating in California - including those in transit from Mexico, Canada, or any other state - must be equipped with engines that meet California and/or EPA or equivalent emission standards as provided on specified Emission Control Labels (ECLs). The ECL must be legible, maintained at the location originally installed by the engine manufacturer and correspond to the engine serial number stamped on the engine.

- **In-Use Public and Utility Fleets (Heavy-Duty).** Regulation mandating Public Agency and utility vehicle owners reduce diesel PM emissions from their affected vehicles through the application of Best Available Control Technology on these vehicles by specified implementation dates. Implementation is phased-in by engine model year groups with the goal to reduce both criteria pollutant emissions and exposure to toxic air contaminants.

- **In-Use Solid Waste Collection Vehicles (SWCV).** Regulation targeting the reduction of cancer-causing particulate matter and smog-forming nitrogen oxide emissions from diesel-fueled waste collection trucks to reduce the harmful health impacts of exhaust. The regulation requires owners to use ARB-verified control technology that best reduces emissions, following a phased-in schedule from 2004 through 2010.

- **PCAPCD Rule 501 (General Permit Requirements)**. The requirements are intended to provide an orderly procedure for the review of new stationary sources of air pollution and modification and operation of existing sources through the issuance of permits. Stationary Sources that would emit more than 2 pounds of any pollutant in any 24-hour period would be subject to PCAPCD's permit requirements.

ARB has also, and continues to, work to reduce emissions from locomotives. Emission reductions from the rail sector are critical to meet the criteria pollutant standards across the state, particularly as rail activity increases and

is promoted as an alternative to personal automobile transportation. ARB and South Coast AQMD have developed draft concepts to reduce criteria pollutants, toxic air contaminants, and greenhouse gas emissions for locomotives in-use, idling, and maintenance activities, as well as emissions from other equipment at railyards. ARB has submitted the Locomotive Petition to the EPA, requesting EPA to update its emissions standards locomotives and create a new, cleaner Tier 5 emissions standard for locomotives that would take effect for remanufactured locomotives in 2023 and for newly built locomotives in 2025.

Proposed development within the Project site would not result in the siting of sensitive land uses within 500 feet of a freeway, urban roads carrying 100,000 vehicles per day, or rural roads carrying 50,000 vehicles per day or within 1,000 feet of a major service and maintenance rail yard; nor would it result in an increase in daily vehicle trips to this level at affected intersections and roadway segments (see Section 3.14 of this EIR, "Transportation"). The proposed land uses within 1,000 feet of the Union Pacific Railroad that runs adjacent to the western boundary of the project site are industrial and would not be considered to include sensitive receptors. However, mobile sources of TACs could be associated with the operation of on-road heavy-duty diesel trucks used for on-site commercial and industrial activities (e.g., unloading/loading). In addition, operational activities associated with planned land uses could require the use of diesel-fueled vehicles for extended periods, such as commercial trucking facilities or delivery/distribution areas, and thereby generate diesel PM emissions that could expose sensitive receptors to DPM emissions. The diesel exhaust PM emissions generated by these uses could be produced primarily at single locations on a regular basis (e.g., loading dock areas). Idling trucks, including TRUs, would increase DPM levels at these locations. Existing and potential future sensitive land uses could be exposed to DPM emissions on a recurring basis.

It is also possible that future development within the Project site would include stationary sources of TACs, such as dry-cleaners, gasoline-dispensing facilities and diesel-fueled backup generators. These types of stationary sources, in addition to any other stationary sources that may emit TACs, would be subject to SMAQMD rules and regulations, including but not limited to Rule 202, *New Source Review*, Rule 203, *Prevention of Significant Deterioration*, and Rule 801, *New Source Performance Standards*. 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 several 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.

Because the exact location of potential operational sources of TACs cannot be determined at the time of this analysis, it is conservatively assumed that certain long-term operational activities could expose sensitive receptors to substantial TAC concentrations. Therefore, this TAC impact from operational activities is considered **potentially significant**.

Mitigation Measures

Mitigation Measure 3.4-3b: Implement Guidelines in the California Air Resources Board's Air Quality and Land Use Handbook: A Community Health Perspective (2019 SOIA EIR Mitigation Measure 3.4-5)

The City of Elk Grove shall require, as a part of proposed development projects, the implementation of strategies to avoid exposure of sensitive receptors to substantial toxic air contaminant pollutant concentrations. Projects that would result in substantial TAC emissions directly or indirectly (e.g., industrial sources), that would expose sensitive receptors to substantial TAC concentrations (e.g.,

residential land uses located near existing TAC sources), the City of Elk Grove will implement ARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook) guidance concerning land use compatibility with regard to sources of TAC emissions, or ARB guidance as it may be updated in the future. If these guidelines are infeasible, and a project would have the potential to generate substantial TAC emissions or expose sensitive receptors to substantial TAC pollutant concentrations, the City will require project-level analysis and appropriate mitigation, as necessary, to ensure that sensitive receptors are not exposed to substantial pollutant concentrations. In communication with the SMAQMD, the City will require, if necessary, a site-specific analysis for operational activities to determine whether health risks would exceed applicable health risk thresholds of significance. Site-specific analysis may include screen level analysis, dispersion modeling, and/or a health risk assessment, consistent with applicable guidance from the SMAQMD. Analyses shall take into account regulatory requirements for proposed uses.

If the results of analysis determine that the performance standard for this mitigation would be exceeded, actions shall be taken to reduce potential operational impacts which may include, but not necessarily limited to:

- locating air intakes and designing windows to reduce particulate matter exposure by, for example, not allowing windows facing the source to open;
- providing electrification hook-ups for TRUs to avoid diesel-fueled TRUs continuing to operate at loading docks during loading and unloading operations;
- requiring the TAC-generating activity (e.g., loading docks) be located away from sensitive receptors;
- incorporating exhaust emission controls on mobile and/or stationary sources (e.g., filters, oxidizers);
- develop and implement a dock management system at the time of occupancy to minimize on-site idling below regulatory limits;
- require all on-site user owned and operated trucks with transportation refrigeration units to be capable of plugging into power at loading docks and require plug-in when at the loading dock;
- utilize on-site cargo and material handling equipment that is the lowest emitting equipment available at the time of occupancy;
- evaluate the potential to electrify a portion of entirety of an on-site user-owned and operated truck fleet;
- evaluate the potential to consolidate delivery or haul truck trips to increase the load and decrease vehicle trips;
- provide building air filtration units with a Minimum Efficiency Reporting Value (MERV) that is adequate to address adjacent sensitive land uses according to performance standards of this mitigation measure;

- Ensure adequate distance between existing and planned sensitive receptors and gasoline dispensing facilities, based on the proposed size and design of any gasoline-dispensing facilities.

The City will require the project applicant(s) to identify and implement feasible mitigation measures to reduce any potentially significant effect and communicate with SMAQMD to identify measures to reduce exposure of sensitive receptors to substantial pollutant concentrations to levels consistent with thresholds recommended by the SMAQMD applicable at the time the project is proposed. Agreed upon feasible mitigation actions shall be documented as a project condition of approval.

Significance after Mitigation

Implementation of Mitigation Measure 3.4-3b would ensure that all uses that could generate TAC emissions will evaluate and mitigate TAC emissions to ensure that sensitive receptors are not exposed to substantial pollutant concentrations. With the feasible actions outlined that have been demonstrated to substantially reduce exposure to TAC emissions and the clear performance standards included in this mitigation, with implementation of mitigation, as with the 2019 SOIA EIR, this impact would be reduced to a **less-than-significant** level.

Exposure of sensitive receptors to long-term emissions of criteria air pollutants and precursors.

As described above in the Environmental Setting, criteria air pollutants and their precursors can contribute to a variety of health effects in sensitive receptors, which vary depending on the pollutant, the ambient air concentrations of each given pollutant, the duration of exposure, and any other underlying health conditions that a receptor may have. Recent rulings from California Supreme Court, in the case of *Sierra Club v. County of Fresno* (2018) 6 Cal. 5th 502, determined that the subject EIR should relate the expected adverse air quality impacts to likely health consequences or explain in meaningful detail why it is not feasible at the time of drafting to provide such an analysis.

The analysis of potential health impacts resulting from criteria pollutant emissions has long been focused on a regional or air basin wide level because criteria air pollutants typically act on a large, regional scale, whereas TACs and CO act on a more localized level. In many cases, the concern regarding health risks from criteria pollutants is not related to the specific pollutant itself, such as ROG or NO_X, but the potential for the pollutant to undergo reactions within the atmosphere and form secondary pollutants, such as ozone. In such cases, the secondarily formed ozone is the pollutant of concern. The formation of PM can similarly be dependent on regional atmospheric chemistry, geography, weather, and climate. The complex reactions and conditions that lead to the formation of ozone and PM in the atmosphere can also result in the transport of pollutants over wide areas, meaning that the emissions of ozone precursor pollutants and PM, from a single project does not necessarily translate directly into a specific concentration of ozone, or a specific level of health risk, in the project vicinity.

Since the time of adoption of the 2019 SOIA EIR, SMAQMD published *Guidance to Address the Friant Ranch Ruling for CEQA Projects in the Sac Metro Air District* (SMAQMD 2020b), which provides a screening level analysis estimating the health effects of criteria ai pollutants and their precursors, ROG, NO_X, CO, ozone, SO_2, PM_{10}, and $PM_{2.5}$, as well as provides guidance for conducting a health effects analysis of a project that satisfies the requirements of the Friant Ranch court decision. The Guidance was prepared by conducting regional photochemical modeling and relies on the EPA's Benefits Mapping and Analysis Program to assess health impacts from ozone and PM2.5. Analysis was conducted to estimate the level of health effects for a proposed project that has emissions at the maximum SMAQMD-recommended thresholds of significance using 41

hypothetical project locations, as well as a screening model conducted to estimate potential health effects for strategic areas where growth is anticipated to exceed thresholds of significance. The results were used to develop two screening tools intended to support individual projects in analyzing health risks from criteria pollutants: the Minor Project Health screening Tool for projects with criteria pollutant emissions below SMAQMD's adopted thresholds of significance, and the Strategic Area Project Health Screening Tool for projects with emissions between two and six times the SMAQMD threshold levels.

The modeling results support a conclusion that any one proposed project in the Five-Air-District Region with emissions at or below the maximum SMAQMD threshold of significance levels for criteria air pollutants does not on its own lead to sizeable health effects. The findings of the SMAQMD screening modeling indicate that the mean health incidence for a project emitting at the threshold of significance levels at all 41 representative locations within the air district was less than 3 per year for mortality and less than 1.5 per year for other health outcomes evaluated. At the strategic area locations, as expected, mean health incidences are higher than the Minor Projects Health Effects Screening Tool. The maximum reported mortality rate is 22 incidences per year and all other health outcomes evaluated are under 9 per year from a project emitting 656 pounds/day of NOx, ROG, and PM at the downtown Sacramento location.

As shown in Table 3.4-3, modeled emissions for future operations of the proposed Project would exceed SMAQMD's maximum emissions levels used in the strategic area locations screening analysis. However, table 3.4-3 is intended to demonstrate a conservative estimate of the maximum potential daily emissions that could result from the proposed Project, and not the realistic average annual or average daily emissions. Table 3.4-3 presents emissions assuming full operations in the year 2022, while development is realistically anticipated to occur over a 20-year duration, with increasingly stringent emissions regulations in place over the duration of development. Because mobile emissions are the primary source of NO_X emissions, and there is existing regulation in place that will result in continued reductions in mobile-source emissions over time, taking into account the realistic nature of development of the proposed Project for the purposes of analyzing the potential health risks is appropriate. In addition, the emissions in Table 3.4-3 are inclusive of all anticipated vehicle miles travelled, a substantial portion of which would occur outside of the Project site itself, particularly for commercial and industrial land uses that would incur truck to and from the Project site from outside of the City to serve daily operations. Finally, the proposed Project would be subject to the City's General Plan policies, and land use planning and design of the Project site will be required to take into consideration the City's required VMT limits.

As shown in Table 3.4-4, modeled emissions for operations of the proposed Project with implementation of VMT reduction measures to meet the VMT limits per General Plan Policy MOB-1-1, yet still assuming full operations in the year 2022 and the less strict emissions standards associated with the fleet mix in 2022, would be approximately 302 lb/day for ROG, 594 lb/day for NO_X and 63 lb/day for $PM_{2.5}$. These emissions are still inclusive of vehicle activity serving land uses of the proposed Project that would not necessarily all occur within the boundaries of the Project site.

In order to present a realistic but still conservative analysis of potential health impacts of the Project's emissions, with reduced VMT but operations occurring in 2022, the emissions shown in Table 3.4-5 were applied to the SMAQMD Strategic Area Project Health Screening Tool. The screening tool estimates that a project at the strategic growth area location of Ranch Cordova, emitting 302 lb/day for ROG, 594 lb/day for NO_X and 63 lb/day for $PM_{2.5}$, would result in 5.3 premature deaths per year or a 0.011 percent increase from background health incidences across the modeling domain due to the increase in PM concentrations, and 0.33 premature deaths per

year or a 0.00091 percent increase from background health incidences across the modeling domain due to the increase in ozone.

As discussed above, the nature of criteria pollutants is such that the emissions from an individual project cannot be directly identified as responsible for health impacts within any specific geographic location. As a result, attributing health risks at any specific geographic location to a single proposed project is not feasible. Nonetheless, the results of the Strategic Area Project Health Screening Tool have been presented for informational purposes. The modeling results support a conclusion that the proposed project does not, on its own, lead to sizeable regional health effects from the emissions of criteria air pollutants and precursors (note that the discussion of TAC and CO emissions as they relate to localized health risks is addressed in the sub-section above). It should also be noted that this screening evaluation applied the maximum daily emissions to simulate a full year of exposure, thereby assuming that the maximum daily emissions would in fact be the average daily emissions over each operational year. As a result, the actual Project-related health effects will be less because the maximum daily emissions are substantially higher than the average daily scenario. In addition, as noted above, any projects that could result in localized health risks would be subject to Mitigation Measures 3.4-3a and 3.4-3b, which would further reduce project-related emissions, particularly those associated with vehicle and off-road equipment, including the ROG, NO_X and PM emissions that were analyzed here on a regional scale. Therefore, criteria air pollutants generated as a result of the proposed Project would not result in the exposure of sensitive receptors to substantial criteria air pollutant concentrations and this impact would be **less than significant.**

Significance after Mitigation

No mitigation measures are required.

Impact 3.4-4: Result in Other Emissions (such as those leading to odors) Adversely Affecting a Substantial Number of People.

Development of the Project site could involve actions that would expose people to objectionable odors. The human response to odors is subjective and sensitivity to odors varies greatly among the public. Two situations increase the potential for odor problems. The first occurs when a new odor source is located near existing sensitive receptors. The second occurs when new sensitive receptors are developed near existing sources of odors.

During construction, the predominant source of power for construction equipment is diesel engines. Odors from these sources would be localized and generally confined to the immediate area surrounding the development area. Exhaust odors from diesel engines, as well as emissions associated with asphalt paving and the application of architectural coatings, may be considered offensive to some individuals. Similarly, diesel-fueled trucks traveling on local roadways would produce associated diesel exhaust fumes. However, odors associated with diesel fumes, asphalt paving, and architectural coatings would be temporary and would disperse rapidly with distance from the source. Projects constructed within the Project site would use typical construction techniques, and the odors would be typical of most construction sites and temporary in nature. In addition, because odors would be temporary and disperse rapidly with distance from the source, construction-generated odors would not result in the frequent exposure of receptors to objectionable odor emissions. Furthermore, the City of Elk Grove is required to comply with SMAQMD Rules 402 (Nuisance) and 442 (Architectural Coatings), which would ensure that odors generated by short-term construction would not affect a substantial number of people. Therefore, this impact would be **less than significant**.

Operationally, industries and/or facilities that are widely considered major sources of odors include wastewater treatment and pumping facilities, chemical manufacturing facilities, sanitary landfills, fiberglass manufacturing facilities, transfer stations, painting/coating operations (e.g., auto body shops), composting facilities, food processing facilities, confined animal facilities, asphalt batch plants, rendering plants, metal smelting plants, and coffee roasters. This list is meant not to be entirely inclusive, but to act as general guidance. In the context of land use planning, one of the most important factors influencing the potential for an odor impact to occur is the distance between the odor source and receptors, or a "buffer zone." SMQMD has published a its *Recommended Odor Screening* Distances table, which provides suggested buffer distances between sensitive receptors and a variety of odor-generating sources. These recommended buffer distances are listed below in Table 3.4-6.

Table 3.4-6 Odor Screening Distances for Consideration in Land Use Planning

Land Use / Type of Operation	Suggested Buffer Screening Distance
Wastewater Treatment Plant	2 miles
Wastewater Pumping Facilities	1 mile
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	2 miles
Petroleum Refinery	2 miles
Asphalt Batch Plant	2 miles
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting / Coating Operations	1 mile
Rendering Plant	4 miles
Coffee Roaster	1 mile
Food Processing Facility	1 mile
Feed lot / Dairy	1 mile
Green Waste and Recycling Operations	2 miles
Metal Smelting Plants	1 mile
Source: SMAQMD 2009	

Future development of the Project site would include multiple land use types. Surrounding land uses include both agricultural and industrial land uses, which are likely to generate odors that are detectable on and in the vicinity of the Project site. Future development within the Project site could result in the siting of sensitive receptors that would be exposed to these odor sources. However, land use proposed on the west side of the Project site, in proximity to the existing industrial uses and railway include heavy industrial and light industrial land uses. Proposed mixed-use designated land uses, which could include the siting of sensitive receptors, are more than one-half mile east of the existing railway and other industrial land uses.

The City of Elk Grove and SMAQMD work in cooperation with industrial facilities and agricultural producers to limit the odor emissions associated with manufacturing processes and agricultural burning. Other smaller and dispersed odor sources include residential and commercial dumpsters, which can be in proximity of sensitive receptors. However, with proper disposal containers and regular trash collection services, odors from residential and commercial dumpsters are typically minimized. SMAQMD Rule 402 provides that air contaminants emitted

by any person shall not cause annoyances, and SMAQMD provides an on-line complaint website and phone number if any resident experiences odor concerns.

It cannot be known at this time what specific development would be implemented and if any development would generate objectionable odors. However, future land uses could result in the operation of new land use that generates objectionable odors or the siting of sensitive receptors in proximity to then-existing odor-generating land uses within the Project site. Therefore, future development of the Project site could result in the exposure of receptors to objectionable odor emissions. This impact is considered to be **potentially significant**.

Mitigation Measures

Mitigation Measure 3.4-6: Reduce Exposure of Sensitive Receptors to Odorous Emissions (2019 SOIA EIR Mitigation Measure 3.4-6).

Projects that propose uses that could expose sensitive receptors to objectionable odors shall implement strategies to avoid exposure of sensitive receptors to objectionable odors.

- Project applicant(s) for residential development in areas adjacent to ongoing agricultural operations shall include a disclosure clause advising buyers and tenants of the potential adverse odor impacts in the deeds to all residential properties. Residential subdivisions shall provide notification to buyers in writing of odors associated with existing dairies, agricultural burning, and decay of agricultural waste.
- For existing odor-producing sources, sensitive receptors shall be sited as far away as possible from the existing sources.
- For new project-generated odor-producing sources, sensitive receptors shall be sited as far away as possible from the new sources.
- Apply SMAQMD-Recommended Odor Screening Distances in the siting of land uses.

Significance after Mitigation

Implementation of Mitigation Measure 3.4-6 would reduce odor emissions because siting measures imposed would avoid conflicts between odor emissions and sensitive receptors. With implementation of mitigation, as with the 2019 SOIA EIR, this impact would be reduced to a **less-than-significant** level.

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3.5 BIOLOGICAL RESOURCES

Comments received on the Notice of Preparation (NOP) were reviewed during preparation of this SEIR. The U.S. Army Corps of Engineers (USACE) provided a comment letter indicating concurrence with the wetland delineation that was performed for the City-owned parcel, finding that the on-site pond and on-site agricultural ditch are not Waters of the U.S. that would be regulated by USACE under Section 404 of the Clean Water Act (CWA). In addition, a comment letter was submitted by the Sacramento Local Agency Formation Commission (LAFCo), stating that LAFCo maintains an interest in the Project's impacts on biological resources.

A comment letter was also submitted by the California Department of Fish and Wildlife (CDFW) suggesting that the SEIR should evaluate "the whole of the action" (i.e., including off-site improvements); incorporate a range of alternatives that would avoid or minimize impacts to biological resources; perform habitat assessments; implement detection surveys; evaluate project impacts on special-status species; and include a complete analysis of endangered, threatened, candidate, and locally unique species. CDFW also noted the protections afforded by the Migratory Bird Treaty Act, and urged the City to consider participation in the South Sacramento County Habitat Conservation Plan. Finally, CDFW suggests that future landscaping plans consider incorporation of the California Native Plant Society's "Homegrown Habitat Plant List." A search of the California Native Plant Society's website does not yield any information about the Homegrown Habitat Plant List, although some general information under the heading, "Homegrown Habitat" on native plants is available on the website of the Sacramento Valley Chapter of the California Native Plant Society.

The City reviewed and considered the information provided in these comments during preparation of this section.

3.5.1 ENVIRONMENTAL SETTING

The biological resources setting for the Project site itself has not changed since the 2019 SOIA EIR was prepared. However, since that time, the City has identified the need for several off-site improvements associated with the proposed drainage plan. This section focuses on new biological resources information associated with the off-site drainage improvement areas. (For a detailed discussion of biological resources within the Project site, refer to Section 3.5, "Biological Resources," in the 2019 SOIA EIR.)

An AECOM biologist performed a site visit to the off-site improvement areas in August 2020. AECOM also performed an updated search of the CDFW's California Natural Diversity Database (CNDDB), and the California Native Plant Society (CNPS) Inventory, the results of which are presented in this section.

The Project site and off-site improvement areas are located in southern Sacramento County within the Great Central Valley Region of the California Floristic Province. The Cosumnes River is approximately 0.5 miles to the east and its tributary, Deer Creek, is immediately adjacent to two of the off-site improvement areas. The Sacramento-San Joaquin Delta (Delta) begins approximately 9 miles southwest of the Project site.

Surface water in the Project site and in the off-site improvement areas flows into a network of agricultural drainage ditches. Most of the water in the ditches is pumped groundwater. The network of ditches is interconnected through a variety of culverts. One on-site ditch within the City-owned parcel overflows into an agricultural pond that is located on-site. The USACE has determined that this on-site pond and ditch do not constitute jurisdictional Waters of the U.S. under the CWA Section 404 (USACE 2020). The other ditches within the Project site eventually converge and flow into an east/west roadside ditch along Grant Line Road, which in

turn flows into a larger north/south ditch along the UPRR; this ditch, which is proposed for widening, discharges southward off the Project site into an approximately 8-acre pond. A short stretch of existing channel conveys flows from the pond to Deer Creek.

An existing ditch (a portion of which is proposed for widening) is also located along the northeastern property boundary; this ditch flows southward off the Project site into an approximately 0.5-acre pond, and then discharges through an existing ditch to an outfall into Deer Creek.

Finally, agricultural return water is stored in an existing off-site 15-acre stock pond, where a variety of Project-related improvements are proposed including a new 60-inch underground drainage pipeline, deepening the existing pond, improving the pond's existing inflow and outfall, and improving the existing conveyance channel from the pond to the existing outfall at Deer Creek. In addition, transition improvements from this channel to Deer Creek may be required, which may include some grading at its connection to Deer Creek.

HABITAT TYPES

The Project site is characterized by four habitat types: urban/disturbed, cropland (including oats and grass for hay crops, and seasonal row crops), irrigated pasture, and aquatic features (an on-site agricultural pond and on-site agricultural ditch) (see Figure 6, Appendix C to the 2019 SOIA EIR).

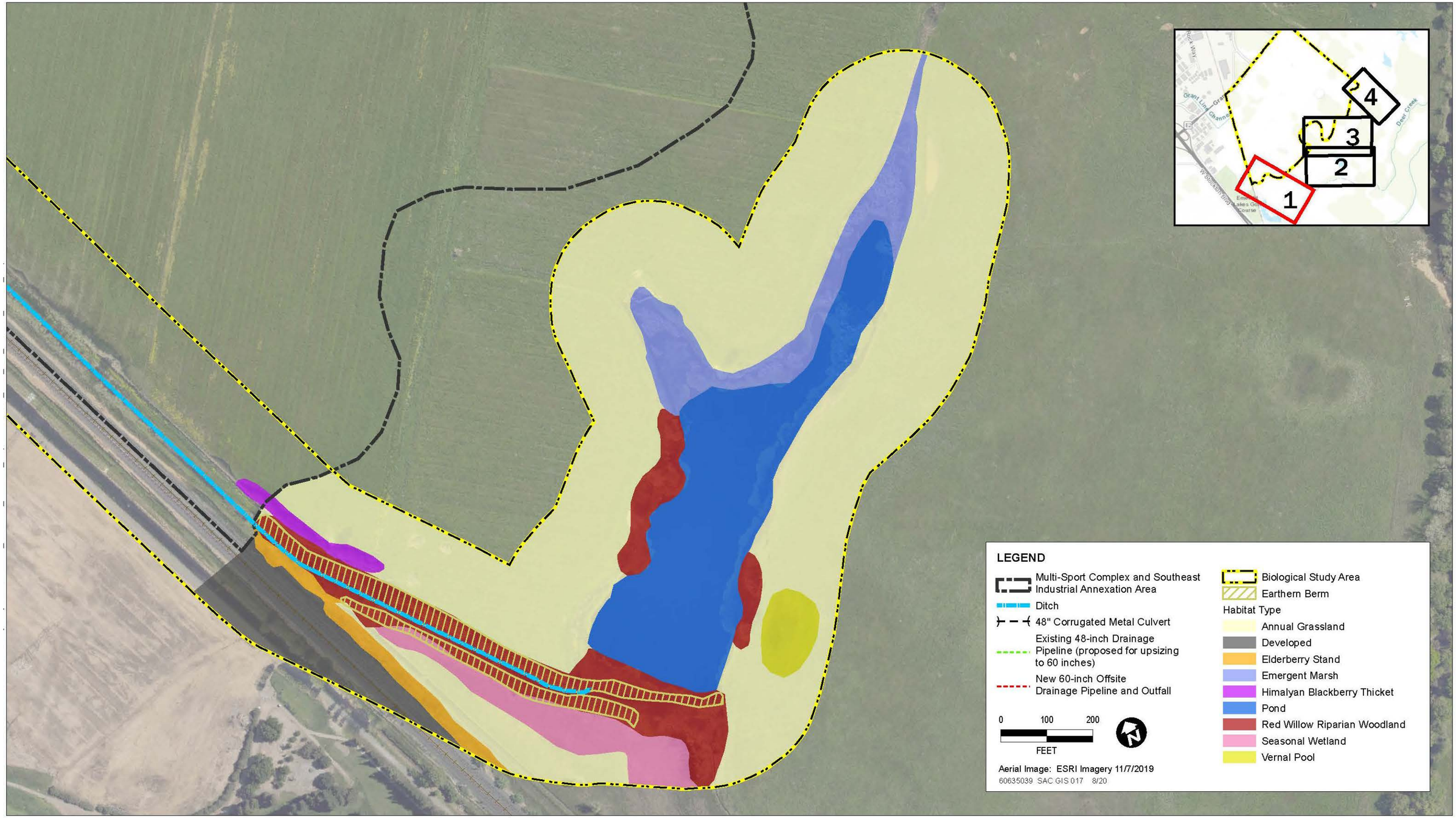
The off-site drainage improvement areas are composed of a variety of habitat types, as shown in Exhibits 3.5-1a through 3.5-1d. These habitat types include urban/disturbed (developed), cropland, irrigated pasture, elderberry stand and Himalayan blackberry thicket (along the southern-most drainage ditch), red willow riparian woodland, Valley oak woodland, and aquatic features. Each of these habitat types are described in further detail below.

Developed (Urban/Disturbed)

Developed areas associated with urban communities are classified as areas that have been heavily modified by humans, including roadways, existing buildings, and structures, as well as recreation fields, lawns, and landscaped vegetation found in residential yards. Because of the high degree of disturbance in these areas, they generally have low habitat value for wildlife; however, migratory birds may find limited nesting and foraging opportunities in trees and shrubs scattered throughout urban areas.

Typically, the species composition in urban areas consists of a mix of native and nonnative trees, shrubs, flowers, and turf grass. Common landscape trees in the project area include valley oak (*Quercus lobata*), redwoods (*Sequoia sempervirens*), eucalyptus (*Eucalyptus* spp.), various pines (*Pinus* spp.), and ornamentals. Wildlife adapted to living in heavily urbanized areas includes common raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), black rat (*Rattus rattus*), American crow (*Corvus brachyrhyncos*), mourning dove (*Zenaida macroura*), house finch (*Carpodacus mexicanus*), cliff swallow (*Hirundo pyrrhonota*), northern mockingbird (*Mimus polyglottus*), and common ground dove (*Columbina passerina*).

Developed areas are present in all of the off-site improvement areas, including the UPRR tracks, adjacent to the 15-acre pond, and surrounding the northern-most agricultural ditch.



Source: AECOM 2020

Exhibit 3.5-1a. Habitat Types in the Off-**site Improvement** Areas (Map 1 of 4)

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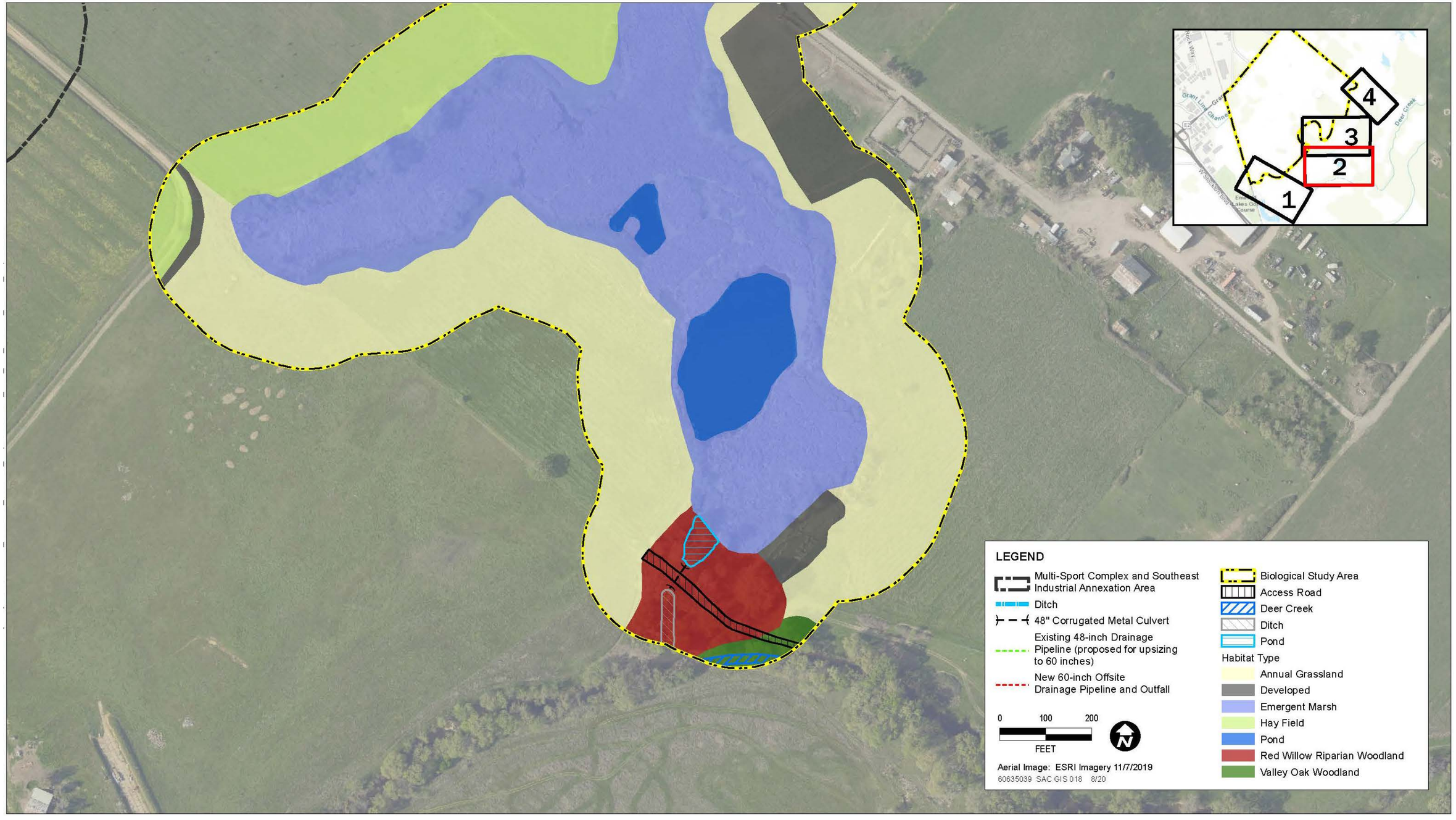

Source: AECOM 2020

Exhibit 3.5-1b. Habitat Types in the Off-site Improvement Areas (Map 2 of 4)

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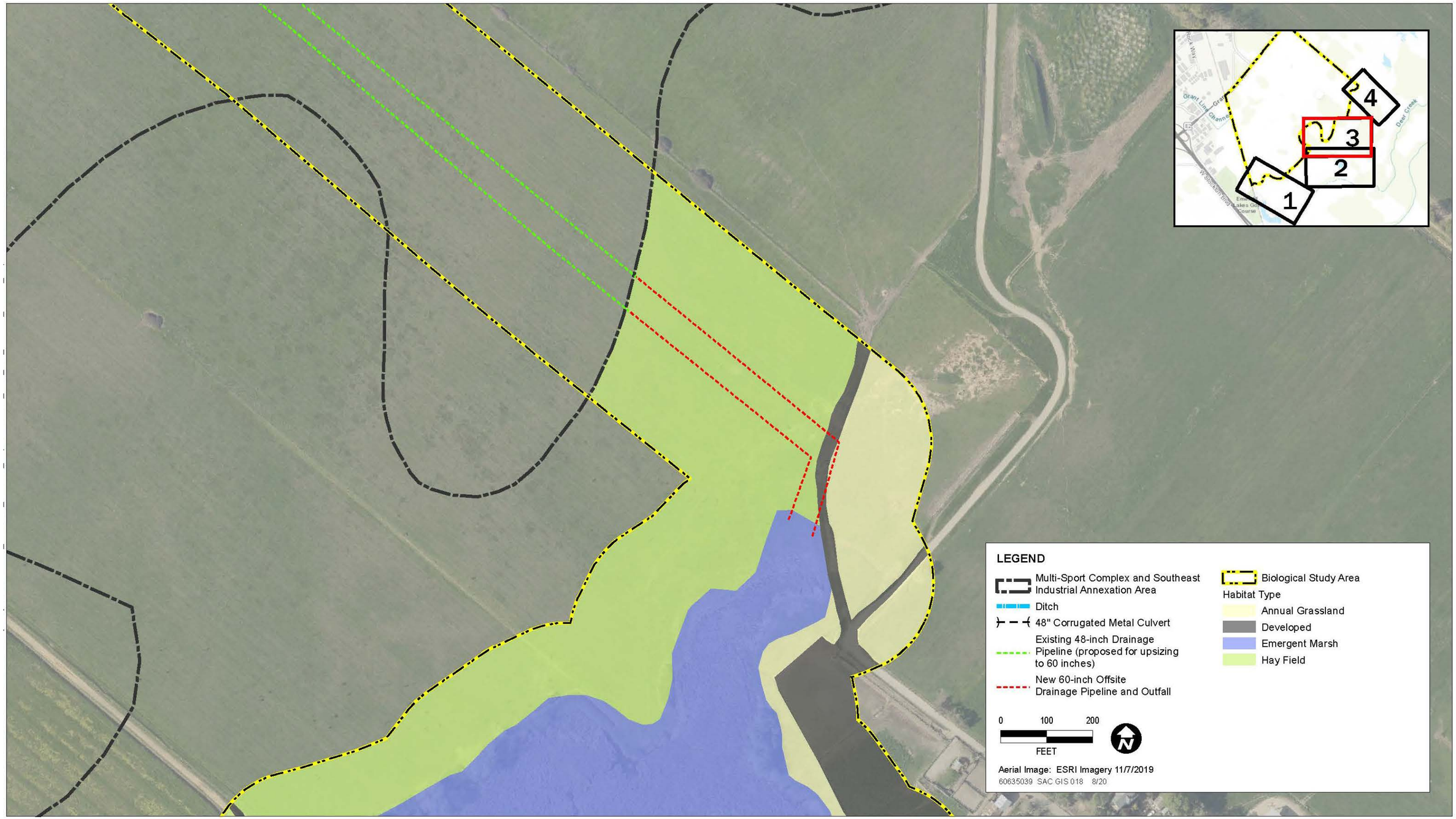

Source: AECOM 2020

Exhibit 3.5-1c. Habitat Types in the Off-**site Improvement** Areas (Map 3 of 4)

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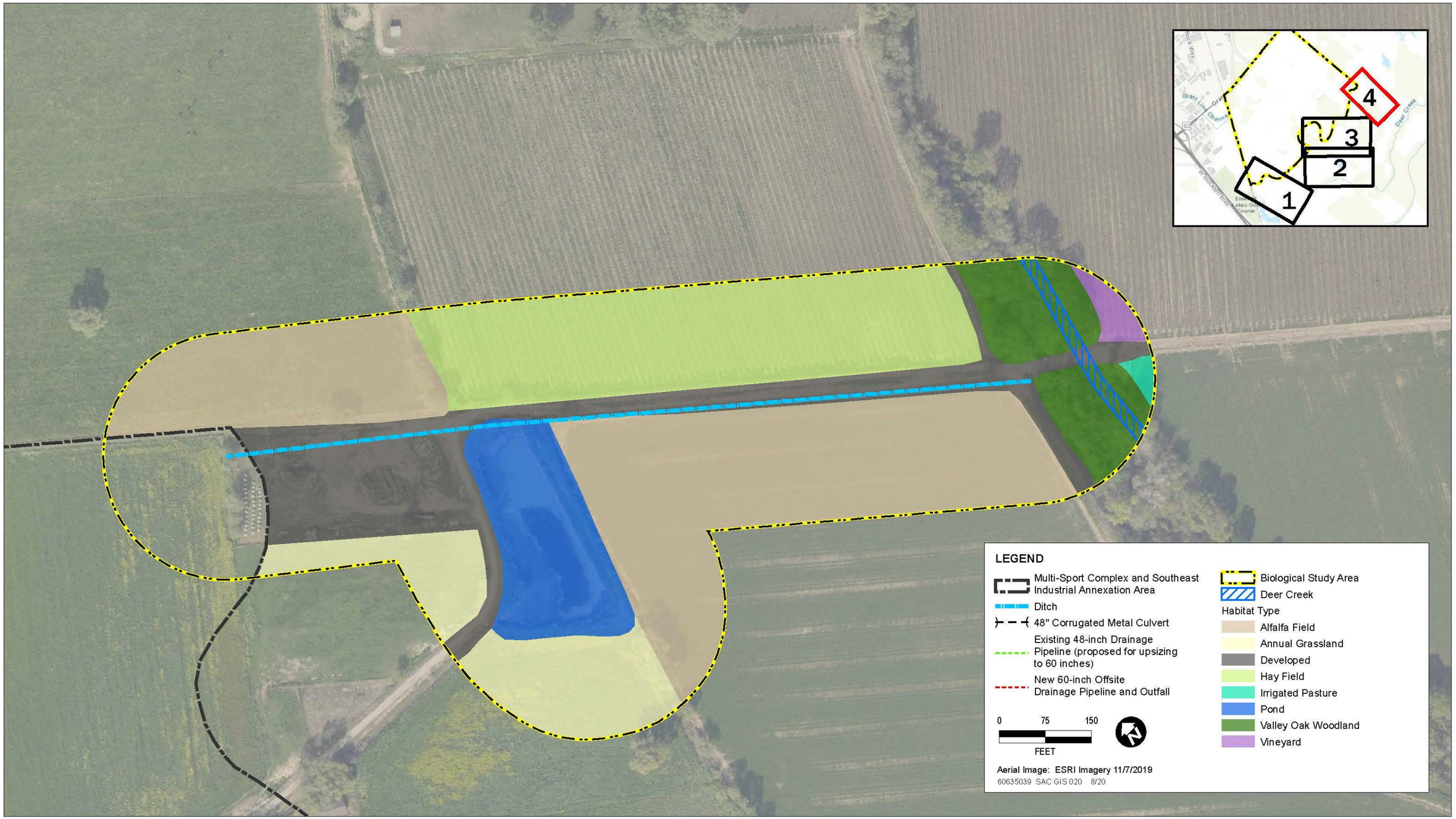

Source: AECOM 2020

Exhibit 3.5-1d. Habitat Types in the Off-**site Improvement** Areas (Map 4 of 4)

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Cropland

Croplands are generally located on flat to gently rolling terrain. Soil characteristics often dictate the crops grown. Croplands occur in association with orchard-vineyard, pasture, residential-park, and wildlife habitats such as riparian, chaparral, wetlands, desert, and herbaceous types. Croplands have greatly reduced wildlife richness and diversity in California. However, many species of rodents and birds have adapted to croplands. This landcover can provide foraging opportunities for many avian species including greater sandhill crane, Swainson's hawk, white-tailed kites, and various passerines.

Cropland, in the form of hay and alfalfa, is present on the northwest side of the 15-acre pond and surrounding the northern-most agricultural ditch.

Annual Grassland

Within the annual grassland habitat, dominant species consist of nonnative annual grasses including slender wild oat (*Avena barbata*), common wild oat (*Avena fatua*), bromegrass (*Bromus diandrus*), soft chess brome (*Bromus hordeaceus*), and false barley (*Hordeum murinum*). This habitat type occurs in foothills, waste places, rangelands, and openings in woodlands.

Annual grassland is present around all of the off-site improvement areas. Swainson's hawk, red-tailed hawk (*Buteo jamaicensis*), American kestral (*Falco sparverius*), and Northern harrier (*Circus hudsonius*) were observed either foraging or flying over the off-site improvement areas during the AECOM site visit in 2020.

Irrigated Pasture

Pasture vegetation is a mix of perennial grasses and legumes that normally provide 100 percent canopy cover. The height of the pasture vegetation varies from a few inches to 2 or more feet. Height and density of vegetation in irrigated pastures depends of cultural and grazing management practices. The type of livestock, stocking rates, and duration of grazing directly impact the composition, density, and height of irrigated pasture vegetation. Irrigated pastures are often a permanent agricultural habitat, established on soils not suitable for other crops and where an ample water supply is available. Pastures are used by a variety of wildlife depending on geographic area and types of adjacent habitats. Ground nesting birds nest in pastures if adequate residual vegetation is present at the beginning of the nesting season. This landcover can provide foraging opportunities for many avian species, including greater sandhill crane (*Grus canadensis*), Swainson's hawk (*Buteo swainsoni*), white-tailed kites (*Elanus leucurus*), and various passerines.

The irrigated pasture habitat type is only present on the south side of Deer Creek.

Blue Elderberry Stands

Blue elderberry (*Sambucus nigra*) is dominant in the shrub canopy within stream terraces and in bottomlands, as well as localized areas in upland settings. Soils are typically gravelly alluvium and are intermittently flooded. The shrub canopy of blue elderberry stands generally includes species such as California sagebrush (*Artemisia californica*), ceonothus, currants (*Ribes* spp.), willow (*Salix* spp.), and California wild grape (*Vitis californica*), among others.

This habitat type forms a narrow row of densely growing, large elderberry shrubs along the base of railroad ballast along the south side of the off-site ditch that runs along the UPRR tracks. In this area, blue elderberry is intermixed with Oregon ash (*Fraxinus latifolia*), box elder (*Acer negundo*), small valley oak trees (*Quercus lobata*), Himalayan blackberry (*Rubus armeniacus*), coyotebrush (*Baccharis pilularis*), and fennel (*Foeniculum vulgare*).

In addition, two small elderberry shrubs (less than 1-inch diameter) are present southeast of the existing outfall to Deer Creek, where the existing hand-dug ditch conveys water from the 15-acre pond.

Red Willow Riparian Woodland

Red willow (*Salix gooddingii* and/or *Salix laevigata*) is dominant or co-dominant in the tree or shrub canopy. This habitat type is found on terraces along large rivers, canyons, along floodplains of streams, seeps, springs, ditches, floodplains, lake edges, low-gradient depositions. The tree canopy in this habitat type also commonly includes species such box elder, California buckeye (*Aesculus californica*), white alder (*Alnus rhombifolia*), and incense cedar (*Calocedrus decurrens*), among others. The shrub canopy commonly incudes mule fat (*Baccharis salicifolia*), red osier dogwood (*Cornus sericea*), and Himalayan blackberry.

At the off-site improvement areas (along the UPRR ditch and the 8-acre pond, and the south end of the 15-acre pond), red willow is intermixed with valley oak, black walnut (*Juglans nigra*), black willow (*Salix nigra*), arroyo willow (*Salix lasiolepsis*), and an understory of stinging nettle (*Urtica dioica*), California wild grape, Himalayan blackberry, poison oak (*Toxicodendron diversilobum*), coyotebrush, and mugwort (*Artemisia* spp.).

Valley Oak Woodland

Valley oak (*Quercus lobata*) is co-dominant with 35 percent relative cover in the tree canopy along with box elder, white alder, Oregon ash, Fremont's cottonwood (*Populus fremontii*), or western sycamore (*Platanus racemosa*). This habitat type is found on valley bottoms, lower slopes, and summit valleys. Soils are alluvial or residual.

At the off-site improvement areas, this habitat type is found along Deer Creek, and is dominated by valley oak, Fremont cottonwood, Oregon ash, and box elder trees. The understory is dense with California wild grape, sandbar willow (*Salix exigua*), small Oregon ash seedlings, poison oak, and Himalayan blackberry. At the time of the survey, some shallow, turbid, flowing water was observed in Deer Creek.

Aquatic Features

The City-owned parcel includes an on-site agricultural pond and agricultural ditch (discussed in the 2019 SOIA EIR). Agriculture pond features are characterized by man-made depressions in the ground that hold ponded water. Agriculture ditches carry agricultural runoff water along with flashy, ephemeral flows of stormwater runoff from roads and adjacent uplands. The USACE has determined that this on-site pond and ditch do not constitute jurisdictional Waters of the U.S. under the CWA Section 404 (USACE 2020).

The northernmost off-site earthen agricultural ditch was dry at the time of the AECOM site visit, but saturated soils indicated recent irrigation. This ditch is approximately 6 feet deep and appears to be highly maintained; at the time of the site visit, it was almost completely devoid of vegetation except for a few clumps of Harding grass (*Phalaris aquatica*). The adjacent 0.5-acre pond consists primarily of open water, with some floating water

primrose (*Ludwigia* spp.) and duckweed (*Lemna* spp.); the edges of pond are rimmed with narrow patches of cattails (*Typha* spp.). The pond appears to be approximately 6 to 8 feet deep. Small clumps of valley oak trees and sandbar willows are scattered along the banks of this pond. A great egret (*Ardea alba*) was observed foraging in the pond. South of the pond, the drainage ditch discharges into Deer Creek at an existing outfall. At this location, Deer Creek flows underneath an access road, through a box culvert. The outfall on the west side of the box culvert appears to receive regular maintenance (i.e., mucking out).

The approximately 15-acre off-site pond provides emergent wetland habitat. The wetland area where the proposed 60-inch pipeline would connect consists of a large freshwater emergent marsh dominated by cattail and bulrush (*Shoenoplectus* sp.); vegetation on the north end is dominated by knotweed (*Persicaria* spp.), sedges (*Cyperus* spp.), and orchardgrass (*Dactylis glomerata*). The National Wetlands Inventory includes two "riverine" features that historically fed into the marsh from the north and east, but these features do not exist today. The pond functions as a stock pond for cattle and horses, and a permit to excavate fine material from the pond was issued by CDFW in 2010. Water from the south end of the pond travels through a 48-inch box culvert underneath a dirt access road, into a hand-dug ditch (circa 1900) that discharges to Deer Creek. Beaver activity (i.e., damming) was observed at the culvert inlet.

A deep, perennial, drainage ditch runs south along the southern Project site boundary, and extends off the Project site to the southeast. This ditch is approximately 3 to 5 feet deep with man-made earthen berms. Water in the off-site portion of the ditch is covered in pondweed (*Potamogeton* spp.). The edges of the ditch have patches of wetland vegetation including soft rush (*Juncus effusus*), deergrass (*Muhlenbergia rigens*), bulrush, Harding grass, nutsedge (*Cyperus eragrostis*), Dallis grass (*Paspalum dilatatum*), and cattails. Seasonal wetland is present on the south side of the berm along the ditch. The seasonal wetland is dominated by perennial pepperweed (*Lepidium latifolium*), Italian ryegrass (*Lolium multiflorum*), curly dock (*Rumex crispus*), knotweed, English plantain (*Plantago lanceolata*), and yellow star thistle (*Centaurea solstitialis*). Other species intermixed are narrowleaf milkweed (*Asclepias fascicularis*), field bindweed (*Convolvulus arvensis*), chicory (*Cichorium intybus*), and prickly lettuce (*Lactuca serriola*). Emergent trees associated with the seasonal wetland are isolated and scattered and include red willow, black willow, arroyo willow, and box elder. The drainage ditch discharges into an approximately 8-acre pond, which consists of open water. The eastern fingers of the pond consist of emergent marsh that are dominated by cattails.

SENSITIVE BIOLOGICAL RESOURCES

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

An updated list of special-status species that could potentially occur at the Project site or the off-site improvement areas (provided suitable habitat conditions were present), was developed in 2020 for this SEIR through review of available background reports; previous studies conducted in or near the Project site; an official list obtained from the USFWS Information, Planning, and Conservation System; and CNDDB and CNPS Inventory records of previously documented occurrences of special-status species in the Elk Grove, Florin, Bruceville, Sloughhouse, Clay, Galt, Buffalo Creek, Sacramento East, Carmichael, Thornton, Lodi North, and Lockeford U.S. Geological Survey 7.5-minute quadrangles.

Special-Status Species

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

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

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

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

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

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

Exhibit 3.5-2 depicts CNDDB occurrence data within 3 miles of the Project site and the off-site improvement areas. Information regarding the status and potential to occur for special-status plants, invertebrates, fish, amphibians, reptiles, birds, and mammals in the Project area is presented in Table 3.5-1.

Sensitive Habitats

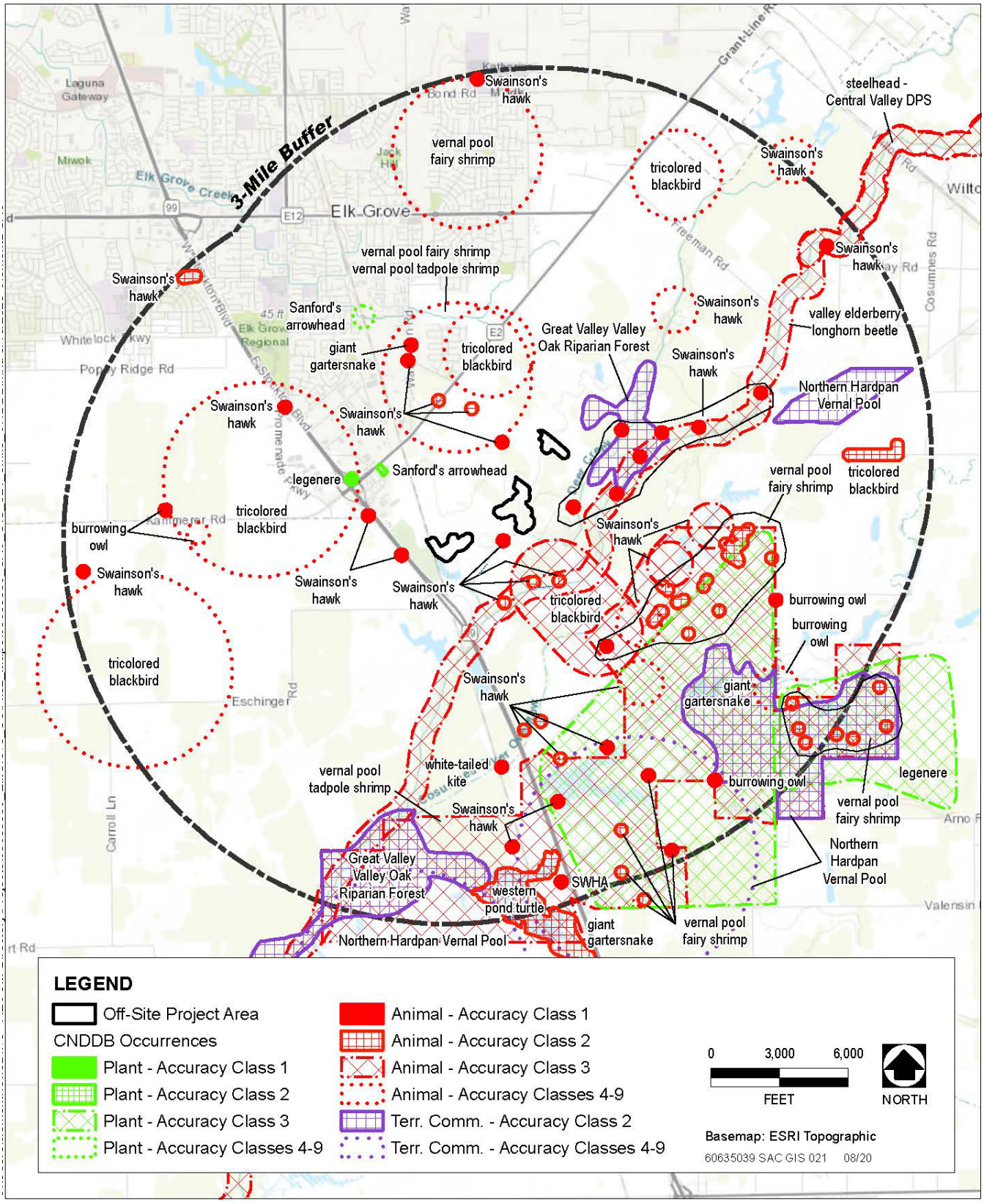
Sensitive habitats include areas of special concern to resource agencies, areas protected under CEQA, areas designated as sensitive natural communities by the CDFW, areas outlined in Section 1600 of the California Fish and Game Code, areas regulated under Section 404 of the federal CWA, and areas protected under local regulations and policies.

The irrigated pasture and croplands provide suitable foraging habitat for the State-threatened Swainson's hawk. Elk Grove Municipal Code Chapter 16.130, Swainson's Hawk Impact Mitigation Fees, provides a pathway for mitigation of impacts to Swainson's hawk habitat. This chapter of the Municipal Code requires mitigation for the loss of Swainson's hawk habitat at a 1:1 ratio. Mitigation can be achieved through the payment of a fee, which is used to fund the City's Swainson's hawk habitat restoration program. Other options for achieving mitigation through the code include the direct transfer to the City of a Swainson's hawk habitat conservation easement, along with an easement monitoring endowment or the purchase of credits at a CDFW-approved conservation bank. The site must be surveyed to determine whether it is suitable Swainson's hawk foraging habitat. The South Sacramento Habitat Conservation Plan also provides a process for mitigating for these impacts.

A vernal pool is present within 0.25 mile of the southern end of the ditch proposed for widening along the UPRR tracks and the 8-acre pond. Vernal pools are a type of seasonal wetland that form in shallow depressions underlain by an impervious or restrictive soil layer near the surface that hinders the percolation of water. These wetland types support low-growing, herbaceous plant communities dominated by annual plants, and are typically characterized by a high percentage of native plant species, many of which may be endemic (restricted) to vernal pools.

The approximately 15-acre off-site pond provides emergent wetland habitat. The wetland area where the proposed 60-inch pipeline would connect consists of a large freshwater emergent marsh. Freshwater emergent wetland is also present within the channel that conveys water from the pond to the outfall in Deer Creek. Emergent marsh is also present along the eastern fingers of the 8-acre pond. A freshwater emergent marsh is a marsh wetland that contains fresh water, and is continuously or frequently flooded. Freshwater emergent marshes primarily consist of emergent plants, which have soft stems and are highly adapted to live in saturated soils. In the off-site improvement areas, the dominant emergent plant is cattails.

Finally, seasonal wetland habitat is present on the southwest side of the irrigation ditch adjacent to the UPRR tracks that is proposed for widening and deepening. Seasonal wetlands support annual and perennial native and nonnative wetland plant species. This habitat type typically resembles a wetland community during the wet season and for a few weeks following the end of the wet season, drying up rapidly with the onset of summer. Seasonal wetlands form in seasonally flooded or saturated soils in depressions in ruderal or grassland areas, at the edges of creeks and ponds, and in ditches and canals.



Source: CNDDB June 2020

Exhibit 3.5-2. CNDDB Occurrence Data within 1 mile of the Project Site and Off-site Improvement Areas

Table 3.5-1. Special-Status Species in the Project Area						
Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Habitat	Potential to Occur in Off-site Improvement Areas
Plants						
Amsinckia grandiflora	large-flowered fiddleneck	FE	SE	1B.1	Blooming period: (Mar)Apr–May. Inhabits cismontane woodlands and valley and foothill grassland. Elev: 900–1,800 ft.	No potential. Project site is below species' elevation range.
Arctostaphylos myrtifolia	Ione manzanita	FT	—	1B.2	Blooming Period: Nov–Mar. Inhabits acidic, Ione soil, clay or sandy soil. Chaparral, Cismontane woodlands. Elev: 200–1,800 ft.	No potential. Suitable habitat (chaparral, cismontane woodland) not present. Project site is below species' elevation range.
Brasenia schreberi	Watershield	—	—	2B.3	Blooming Period: June–September Freshwater marshes and swamps. Elev: 98–7,218 ft.	Not likely to occur. Project site is below species' elevation range.
Calystegia stebbinsii	Stebbins' morning-glory	FE	SE	1B.1	Blooming Period: Apr–Jul. Inhabits gabbroic or serpentinite soils within chaparral openings and cismontane woodland. Elev: 600–3,200 ft.	No potential. Suitable habitat (chaparral, cismontane woodland) not present. Project site is below species' elevation range.
Carex comosa	Bristly sedge	—	—	2B.1	Blooming Period: May–September Coastal prairies, valley and foothill grasslands, as well as marshes, swamps and lake margins. Elev: 0– 2,051 feet.	Could occur in freshwater marsh habitat in ponds.
Castilleja campestris ssp. *succulenta*	Succulent owl's-clover	FT	SE	1B.1	Blooming Period: April–May Acidic vernal pools. Elev: 80 to 2,500 ft.	Could occur in the off-site improvement areas in vernal pools within 200 feet of off-site drainage area in Cypress Abbey property.
Ceanothus roderickii	Pine Hill Ceanothus	FE	—	1B.1	Blooming Period: Apr–Jun. Inhabits serpentinite or gabbroic soils within chaparral and cismontane woodland. Elev: 750–3,200 ft.	No potential. Suitable habitat (chaparral, cismontane woodland) not present. Project site is below species' elevation range.
Chloropyron molle ssp. *molle*	soft bird's-beak	FE	—	1B.2	Blooming Period: Jun–Nov Marshes and swamps (coastal salt). Elev: 0–10 ft.	Could occur in freshwater marsh habitat in ponds.
Cicuta maculata var.*bolanderi*	Bolander's water-hemlock	—	—	2B.1	Blooming Period: July–September Coastal, fresh, or brackish marshes and swamps. Elev: 0–656 ft.	Could occur in freshwater marsh habitat in ponds.
Cordylanthus palmatus	Palmate-bracted bird's beak	FE	SE	1B.1	Blooming Period: May–Oct. Inhabits alkaline soils within chenopod scrub and valley and foothill grassland. Elev: 15-500 ft.	Could occur, but only if there are alkaline soils in the Project area.

Table 3.5-1. Special-Status Species in the Project Area						
Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Habitat	Potential to Occur in Off-site Improvement Areas
Cuscuta obtusifloravar. glandulosa	Peruvian dodder	—	—	2B.2	Blooming Period: July–October Freshwater marshes and swamps. Elev: 49–919 ft.	Could occur in freshwater marsh habitat in ponds.
Downingia pusilla	Dwarf downingia	—	—	2B.2	Blooming Period: March–May Vernal pools and mesic valley and foothill grasslands. Elev: 3–1,459 ft.	Could occur in the off-site improvement areas in vernal pools within 200 feet of off-site drainage area in Cypress Abbey property.
Eriogonum apricum var. prostratum	Irish Hill buckwheat	FE	SE	1B.1	Blooming period: Jun-Jul Inhabits chaparral openings, Ione soil. Elev: 200–400 ft.	No potential. Suitable habitat (chaparral, Ione soils) not present. Project site is below species' elevation range.
Erysimum capitatum var. *angustatum*	Contra Costa wallflower	FE	SE	1B.1	Blooming Period: Mar-Jul. Inhabits inland dunes, known only in Antioch Dunes. Elev: 10–100 ft.	No potential. Suitable habitat (inland dunes) not present.
Fremontodendron decumbens	Pine Hill flannelbush	FE	—	1B.2	Blooming Period: Apr-Jul Inhabits gabbroic or serpentinite, rocky soils. Chaparral, cismontane woodland. Elev: 1300–2400 ft.	No potential. Suitable habitat (gabbro or serpentine soils) not present. Project site is below species' elevation range.
Galium californicum ssp. *sierrae*	El Dorado bedstraw	FE	—	1B.2	Blooming Period: May-Jun Inhabits gabbroic, chaparral, cismontane woodland, lower montane coniferous forest. Elev: 300–1,800 ft.	No potential. Suitable habitat (gabbro soils) not present. Project site is below species' elevation range.
Gratiola heterosepala	Boggs Lake hedge- hyssop	—	SE	1B.2	Blooming Period: April–August Clay soils in marshes, swamps, lake margins, and vernal pools. Elev: 33–7,792 ft (10–2,375 m).	Could occur, but only if there are clay soils in the Project area.
Hibiscus lasiocarpos var. *occidentalis*	Woolly rose-mallow	—	—	1B.2	Blooming Period: June–September 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 (CDFW 2015c). Elev: 0–394 ft.	No potential. Suitable habitat (sloughs, river banks, riprap levees) not present.
Juncus leiospermus var. *ahartii*	Ahart's dwarf rush	—	—	1B.2	Blooming Period: March–May Mesic valley and foothill grasslands. Vernal pool margins and wet chaparral or woodland. Elev: 98–751 ft.	Could occur in the off-site improvement areas in vernal pools within 200 feet of off-site drainage area in Cypress Abbey property.

Table 3.5-1. Special-Status Species in the Project Area						
Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Habitat	Potential to Occur in Off-site Improvement Areas
Lasthenia conjugens	Contra costa goldfields	FE		1B.1	Blooming period: Mar-Jun. Habitat is often mesic, cismontane woodland, playas (alkaline), valley and foothill grassland, and vernal pools. Elev: 0–1500 ft.	Could occur in the off-site improvement areas in vernal pools within 200 feet of off-site drainage area in Cypress Abbey property.
Lathyrus jepsonii var.*jepsonii*	Delta tule pea	—	—	1B.2	Blooming Period: May–September Usually on marsh and slough edges .Freshwater and brackish marshes and swamps. Elev: 0–13 ft.	Not likely to occur. Project site is above species' range. All CNDDB records occur in marshes and sloughs in the Delta (CDFW 2020).
Legenere limosa	Legenere	—	—	1B.1	Blooming Period: April–June Vernal pools and ditches. Elev: 3–2,887 ft.	Could occur in the off-site improvement areas in vernal pools within 200 feet of off-site drainage area in Cypress Abbey property.
Lepidium latipes var. *heckardii*	Heckard's pepper-grass	—	—	1B.2	Blooming Period: March–May Alkaline flats in valley and foothill grasslands. Elev: 7–656 ft.	No potential to occur. Suitable habitat not present. No alkaline flats or alkali lake beds occur on-site.
Lilaeopsis masonii	Mason's lilaeopsis	—	SR	1B.1	Blooming Period: April– November Tidal zones, in muddy or silty soil formed through river deposition or riverbank erosion. Riparian scrub, and brackish or freshwater marshes and swamps. Elev: 3–30 ft.	Not likely to occur. Project site outside of species' range. All CNDDB records occur in marshes and sloughs in the Delta.
Limosella australis	Delta mudwort	—	—	2B.1	Blooming Period: May–August Usually mud banks in riparian scrub, and freshwater or brackish marshes and swamps. Elev: 0–10 ft.	Could occur in freshwater marsh habitat in ponds.
Neostapfia colusana	Colusa grass	FT	SE	1B.1	Blooming Period: May-August. Found growing in single-species stands in alkaline basins of Sacramento and San Joaquin valleys. Elev: 15–600 ft.	Could occur, but only if there are alkaline soils in the Project area.

Table 3.5-1. Special-Status Species in the Project Area						
Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Habitat	Potential to Occur in Off-site Improvement Areas
Oenothera deltoides ssp. *howellii*	Antioch Dunes evening-primrose	FE	SE	1B.1	Blooming Period: Mar–Sep. Antioch Dunes evening-primrose grows in mostly pure sand, but unlike other species, it will only re-establish in areas that contain new sand. The only naturally-occurring populations of Antioch Dunes evening-primrose are in the Antioch Dunes National Wildlife Refuge, which has been designated as Critical Habitat for Antioch Dunes evening-primrose by the U.S. Fish and Wildlife Service. Elev: 0–75 ft.	No potential. Outside of species' current range. Suitable habitat (pure sand) not present.
Orcuttia tenuis	Slender Orcutt grass	FT	SE	1B.1	Blooming Period: May–October Vernal pools. Elev: 115–5,774 ft.	Not likely to occur. Project area is below elevation range of this species.
Orcuttia viscida	Sacramento Orcutt grass	FE	SE	1B.1	Blooming Period: April–September Vernal pools. Elev: 98–328 ft.	Not likely to occur. Project area is below elevation range of this species.
Senecio layneae	Layne's ragwort	FT	—	1B.2	Blooming period: Apr-Aug. Inhabits serpentinite or gabbroic, rocky soils in chaparral, and cismontane woodlands. Elev: 600–3,200 ft.	Not likely to occur. Project area is below elevation range of this species.
Sagittaria sanfordii	Sanford's arrowhead	—	—	1B.2	Blooming Period: May–October In standing or slow- moving freshwater ponds, marshes, swamps, and ditches (CDFW 2015c [from 2019 SOIA EIR]). Elev: 0–2,133 ft.	Could occur in freshwater marsh and ditch habitats in ponds.
Scutellaria galericulata	Marsh skullcap	—	—	2B.2	Blooming Period: June–September Lower montane coniferous forest, meadows, seeps, marshes, and swamps. Elev: 0–6,890 ft (0–2,100m).	Could occur in freshwater marsh habitats in ponds.
Scutellaria laterifolia	Side-flowering skullcap	—	—	2B.2	Blooming Period: July–September Marshes, swamps, mesic meadows and seeps. Elev: 0–1,640 ft (0–500 m).	Could occur in freshwater marsh habitats in ponds.
Symphyotrichum lentum	Suisun Marsh aster	—	—	1B.2	Blooming Period: May–November Brackish and freshwater marshes and swamps. Elev: 0–10 ft. (0–3 m.)	Could occur in freshwater marsh habitats in ponds.
Trifolium hydrophilum	Saline clover	—	—	1B.2	Blooming Period: April– June Marshes and swamps, valley and foothill grassland (mesic, alkaline), and vernal pools. Elev: 0–984 ft (0–300 m).	Could occur in freshwater marsh habitats in ponds.

Table 3.5-1. Special-Status Species in the Project Area						
Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Habitat	Potential to Occur in Off-site Improvement Areas
Invertebrates						
Apodemia mormo langei	Lange's Metalmark Butterfly	FE	SE		Only occur within Antioch dunes, lay eggs on a subspecies of naked buckwheat.	No potential to occur. Project is outside of species' range.
Branchinecta lynchi	Vernal pool fairy shrimp	FT	—		Found in vernal pools and ephemeral wetlands. Distributed throughout the Central Valley, including Sacramento County (USFWS 2005).	Could occur in the off-site improvement areas in vernal pools within 200 feet of off-site drainage area in Cypress Abbey property.
Branchinecta conservatio	Conservancy fairy shrimp	FE	SE		Inhabits rather large, cool-water vernal pools with moderately turbid water. The pools generally last until June. However, the shrimp are gone long before then. They have been collected from early November to early April.	Could occur in the off-site improvement areas in vernal pools within 200 feet of off-site drainage area in Cypress Abbey property.
Callophrys mossii bayensis	San Bruno Elfin Butterfly	FE	--		Inhabits rocky outcrops and cliffs in coastal scrub on the San Francisco. Host plant is exclusively broadleaf stonecrop.	No potential to occur. Project is outside of species' range.
Desmocerus californicus dimorphus	Valley elderberry longhorn beetle	FT	—		Dependent on hostplant, elderberry (Sambucus sp.), which generally grows in riparian woodlands and upland habitats of the Central Valley.	Could Occur. Several elderberry shrubs in the off-site improvement areas near the Cypress Abbey property at the toe of railroad ballast.
Elaphrus viridis	Delta Green Ground Beetle	FT	--		Associated with vernal pool habitats, seasonally wet pools that accumulate in low areas with poor drainage, which occur throughout the Central Valley.	Not likely to occur. The delta green ground beetle has only been found in the greater Jepson Prairie area in south-central Solano County, California.
Lepidurus packardi	Vernal pool tadpole shrimp	FE	—		Wide variety of ephemeral wetland habitats, including vernal pools. Distributed throughout Central Valley and San Francisco Bay area (USFWS 2005).	Could occur in the off-site improvement areas in vernal pools within 200 feet of off-site drainage area in Cypress Abbey property.
Fish						
Hypomesus transpacificus	Delta smelt	FT	SE		Distribution includes the Sacramento River below Isleton, San Joaquin River below Mossdale, and Suisun Bay. Spawning areas include the Sacramento River below Sacramento, Mokelumne River system, Cache Slough, the delta, and Montezuma Slough.	No potential. Suitable habitat is not present.

Table 3.5-1. Special-Status Species in the Project Area						
Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Habitat	Potential to Occur in Off-site Improvement Areas
Lampetra ayresii	River lamprey	—	SSC		Adults require clean, gravelly riffles in permanent streams for spawning, while the amnocoetes require sandy backwaters or stream edges in which to bury themselves, where water quality is continuously high and temperatures do not exceed 25°C.	No potential. Suitable habitat is not present.
Mylopharodon conocephalus	Hardhead	—	SSC		Small to large streams in a low to mid-elevation environment. May also inhabit lakes or reservoirs. Their preferred stream temperature might easily exceed 20ºC, though these fish do not favor low dissolved oxygen levels. The hardhead minnow is usually found in clear deep streams with a slow but present flow.	No potential. Suitable habitat is not present.
Oncorhynchus mykiss irideus	Central Valley steelhead	FT	—		Spawning habitat = gravel-bottomed, fast-flowing, well-oxygenated rivers and streams. Non- spawning = estuarine, marine waters.	No potential. Suitable habitat is not present.
Oncorhynchus tshawytscha	Central Valley spring- run chinook salmon	FT	ST		Spawning habitat = fast moving, freshwater streams and rivers. Juvenile habitat = brackish estuaries. Non-spawning = marine waters.	No potential. Suitable habitat is not present.
Oncorhynchus tshawytscha	winter-run chinook salmon, Sacramento River	FE	SE			No potential. Suitable habitat is not present.
Pogonichthys macrolepidotus	Sacramento splittail	—	SSC		Prefer slow-moving sections of freshwater rivers and sloughs. Most abundant in Suisun Bay and Marsh region. Largely absent from Sacramento River except during spawning.	No potential. Suitable habitat is not present.
Spirinchus thaleichthys	Longfin smelt	FC	ST/SSC		Adults and juveniles require salt or brackish estuary waters. Spawning takes place in freshwater over sandy-gravel substrates, rocks, and aquatic plants.	No potential. Suitable habitat is not present.
Amphibians						
Ambystoma californiense	California tiger salamander, central population	FT	ST		Occurs in grasslands of the Central Valley and oak savannah communities in the Central Valley, the Sierra Nevada and Coast ranges, and the San Francisco Bay Area. Needs seasonal or semi-permanent wetlands to reproduce, and terrestrial habitat with active ground squirrel or gopher burrows.	Not likely to occur. Project area is north of the Cosumnes River. There are no known occurrences north of the Cosumnes River (CDFW 2020).

Table 3.5-1. Special-Status Species in the Project Area						
Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Habitat	Potential to Occur in Off-site Improvement Areas
Rana boylii	Foothill yellow-legged frog	—	SSC		Frequents rocky streams and rivers with rocky substrate and open, sunny banks, in forests, chaparral, and woodlands. Sometimes found in isolated pools, vegetated backwaters, and deep, shaded, spring- fed pools.	Not likely to occur. Suitable habitat (rocky streams or spring-fed pools) not present.
Rana draytonii	California red-legged frog	FT	SSC		Found mainly near ponds in humid forests, woodlands, grasslands, coastal scrub, and streamsides with plant cover. Most common in lowlands or foothills. Frequently found in woods adjacent to streams. Breeding habitat is in permanent or ephemeral water sources; lakes, ponds, reservoirs, slow streams, marshes, bogs, and swamps. Ephemeral wetland habitats require animal burrows or other moist refuges for estivation when the wetlands are dry. Occurs along the Coast Ranges from Mendocino County south and in portions of the Sierra Nevada and Cascades ranges.	No potential to occur. The Project site is outside the species' range, which is not known to inhabit the Central Valley.
Spea hammondii	Western spadefoot toad	—	SSC		Open areas with sandy/gravelly soils. Variable habitats including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Rainpools which do not contain bullfrogs, fish, or crayfish are necessary for breeding.	Not likely to occur. Nearest records of the species are from eastern Sacramento County.
Reptiles						
Emys marmorata	Western pond turtle	—	SSC		Found in ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches, with abundant vegetation, and either rocky or muddy bottoms, in woodland, forest, and grassland. In streams, prefers pools to shallower areas. Logs, rocks, cattail mats, and exposed banks are required for basking. May enter brackish water and even seawater.	Could occur in ponds.

Table 3.5-1. Special-Status Species in the Project Area						
Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Habitat	Potential to Occur in Off-site Improvement Areas
Thamnophis gigas	Giant garter snake	FT	ST		Marshes, sloughs, ponds, small lakes, low gradient streams, irrigation and drainage canals, rice fields and their associated uplands. Upland habitat should have burrows or other soil crevices suitable for snakes to reside during their dormancy period (November–mid March). Ranges in the Central Valley from Butte County to Buena Vista Lake in Kern County.	Could occur in Deer Creek.
Birds						
Agelaius tricolor	Tricolored blackbird	—	SE		Nests in wetlands or in dense vegetation near open water. Dominant nesting substrates: cattails, bulrushes, blackberry, agricultural silage. Nesting substrate must either be flooded, spinous, or in some way defended against predators (Hamilton 2004).	Could occur. Suitable nesting and foraging habitat is present in blackberry that is located in ditches and agriculture fields.
Aquila chrysaetos	Golden eagle	—	FP		Uncommon resident and migrant throughout California, except center of Central Valley. Habitat typically rolling foothills, mountain areas, sage-juniper flats, desert.	Not likely to occur. Suitable habitat is not present.
Ammodramus savannarum	Grasshopper sparrow	—	SSC		In the foothills and lowlands west of the Cascades/Sierras. Dry, dense grasslands, especially those with a variety of grasses and tall forbs and scattered shrubs for singing perches.	Not likely to occur. Suitable habitat is not present. History of disturbance at the site precludes this species from existing here.
Athene cunicularia	Burrowing owl	—	SSC		Open, flat expanses with short, sparse vegetation and few shrubs, level to gentle topography and well drained soils. Requires underground burrows or cavities for nesting and roosting. Can use rock cavities, debris piles, pipes, and culverts if burrows unavailable. Habitats include grassland, shrub steppe, desert, agricultural land, vacant lots and pastures.	Could occur. Suitable habitat is present. Species not previously documented on-site; however, presence of suitable habitat results in potential for future colonization.
Buteo swainsoni	Swainson's hawk	—	ST		Nests in stands with few trees in riparian areas, juniper-sage flats, and oak savannah in the Central Valley. Forages in adjacent grasslands, agricultural fields and pastures.	Could occur. Suitable foraging and nesting habitat is present.

Table 3.5-1. Special-Status Species in the Project Area						
Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Habitat	Potential to Occur in Off-site Improvement Areas
Charadrius montanus	Mountain plover	—	SSC		Found on short grasslands and plowed fields of the Central Valley from Sutter and Yuba counties southward. Also found in foothill valleys. Avoids high and dense cover. Often roosts in depressions such as ungulate hoof prints and plow furrows.	Could occur. Suitable foraging habitat is present.
Charadrius nivosus	Western snowy plover	FT	ST		Southern Washington to Baja California. Breeds on coastal beaches, dunes, salt spits, lagoons, estuaries, above hightide line.	Not likely to occur. Suitable habitat is not present.
Chaetura vauxi	Vaux's swift	—	SSC		Prefers redwood and Douglas fir habitats with nest sites in large hollow trees and snags, especially tall, burnt-out stubs.	Suitable habitat is not present. There are no Douglas fir or redwood trees or any large stands of trees in the off-site improvement areas.
Circus cyaneus	Northern harrier	—	SSC		Nests on the ground in patches of dense, tall vegetation in undisturbed areas. Breeds and forages in variety of open habitats such as marshes, wet meadows, weedy borders of lakes, rivers and steams, grasslands, pastures, croplands, sagebrush flats and desert sinks. (Shuford and Gardali 2008 [from 2019 SOIA EIR]).	Could occur. Suitable foraging habitat is present. Nesting habitat is not present due to highly disturbed nature of site.
Coccyzus americanus occidentalis	Western yellow-billed cuckoo	FT	SE		Nests in riparian forest along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	Not likely to occur. Project site is outside of the species' current nesting range, which is restricted to larger river systems.
Elanus leucurus	White-tailed kite	—	FP		Typically nest in the upper third of trees that may be 10–160 feet (33– 525 m) tall. These can be open-country trees growing in isolation, or at the edge of or within a forest.	Could occur. Suitable foraging and nesting habitats are present.
Grus canadensis canadensis	Lesser sandhill crane	—	SSC		In summer, occurs in and near wet meadow, shallow lacustrine, and fresh emergent wetland habitats. In winter, frequents moist croplands with rice or corn stubble and open, emergent	Could occur. No roosting habitat is present; however, the off-site improvement areas provides suitable foraging habitat.

Table 3.5-1. Special-Status Species in the Project Area						
Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Habitat	Potential to Occur in Off-site Improvement Areas
Grus canadensis tabida	Greater sandhill crane	—	ST/FP		wetlands. Prefers treeless plains. Nests in remote portions of extensive wetlands or sometimes shortgrass prairies.	Could occur. No roosting habitat is present; however, the off-site improvement areas provides non-high value foraging Habitat as identified in the SSHCP (County of Sacramento et al. 2018). The draft SSHCP identified the average distance from roost site and foraging sites ranges from 0.88 acres to 1.74 acres. Known roost sites are 2 miles from the off-site improvement areas.
Haliaeetus leucocephalus	Bald eagle	D	E		Nests in large, old- growth, or dominant live tree with open branchwork, especially ponderosa pine. Requires large bodies of water or rivers with abundant fish, and adjacent snags.	Not likely to occur. Suitable habitat is not present on-site. There are no large water bodies nearby or suitable nest spots.
Ixobrychus exilis	Least bittern	—	SSC		Large, freshwater wetlands with dense emergent vegetation.	Could occur in large ponds on Mahon Ranch and Cypress Abbey properties with dense emergent vegetation.
Lanius ludovicianus	Loggerhead shrike	—	SSC		Breeds in shrublands or open woodlands with a fair amount of grass cover and areas of bare ground (Shuford and Gardali 2008 [from 2019 SOIA EIR]).	Could occur. Suitable foraging habitat is present. Nesting habitat is not present due to highly disturbed nature of site.
Laterallus jamaicensis coturniculus	California black rail	—	ST/FP		Yearlong resident of saline, brackish, and fresh emergent wetlands in the San Francisco Bay area, Sacramento-San Joaquin Delta, coastal southern California at Morro Bay and a few other locations, the Salton Sea, and lower Colorado River area (CDFW 2020).	Not likely to occur, the project site is outside of the species' known range.
Melospiza melodia	Song sparrow ("Modesto" population)	—	SSC		Breeds and winters in riparian, fresh or saline emergent wetland, and wet meadows. Breeds in riparian thickets of willows, other shrubs, vines, tall herbs, and fresh or saline emergent vegetation.	Could occur in emergent marsh, riparian, or pond habitats.
Progne subis	Purple martin	—	SSC		Numerous suitable nest cavities, open air space above nest sites, and aerial insect prey (Shuford and Gardali 2008 [from 2019 SOIA EIR]).	Not likely to occur; suitable nesting habitat is not present in the off-site improvement areas.

Table 3.5-1. Special-Status Species in the Project Area						
Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Habitat	Potential to Occur in Off-site Improvement Areas
Rallus longirostris obsoletus	California Clapper Rail	FE	SE		Limited to saltwater and brackish marshes bordering the San Francisco bay area. Required dense groundcover, especially pickleweed and cordgrass.	No potential to occur. Suitable habitat not present, project is not within established range.
Riparia riparia	Bank swallow	—	ST		Riparian areas with sandy, vertical bluffs or riverbanks. Also nest in earthen banks and bluffs, as well as sand and gravel pits.	No potential to occur. Suitable habitat is not present. There are no sandy vertical banks present in off-site improvement areas.
Setophaga occidentalis	Yellow warbler	—	SSC		Riparian vegetation along streams and in wet meadows. Willow cover and Oregon ash important predictors of abundance in northern California pits.	Could occur in riparian vegetation in the off-site improvement areas.
Sternula antillarum browni	California least tern	FE	SE/FP		Nests and roosts in colonies on open beaches, forage near shore ocean waters and in shallow estuaries and lagoons.	Not likely to occur. Suitable habitat is not present. The off-site improvement areas are not near estuary or ocean waters.
Vireo bellii pusillus	Least bell's vireo	FE	SE		Central valley, southern California and Northern Mexico. Lowland riparian habitat.	Could occur in riparian habitat in the off-site improvement areas.
Xanthocephalus xanthocephalus	Yellow-headed blackbird	—	SSC		Nest in marshes with tall, emergent vegetation (e.g., tules and cattails) adjacent to deepwater (Shuford and Gardali 2008 [from 2019 SOIA EIR]).	Could occur in ponds and deep ditches with emergent vegetation in the off-site improvement areas.
Mammals						
Lasiurus blossevillii	Western red bat	—	SSC		Roosting habitat includes forests and woodlands, often in edge habitats adjacent to streams, fields, or urban areas.	Could occur. Suitable foraging habitat is present. Potential roosting habitat is present in large valley oaks present in off-site improvement areas.
Reithrodontomys raviventris	Salt Marsh Harvest Mouse	FE	SE		Limited to saltwater and brackish marshes bordering the San Francisco bay area. Required dense groundcover, especially pickleweed.	No potential to occur. Suitable habitat not present. Project site is outside species known range.
Sylvilagus bachmani riparius	Riparian bush rabbit	FE	SE		Inhabit riparian oak forests with a dense understory of wild roses, grapes and blackberries. Only two populations occur, one at Caswell State Park and one at the Faith Ranch (USFWS 2017a).	No potential to occur. The Project site is outside the species' range (USFWS 2017a).

Table 3.5-1. Special-Status Species in the Project Area

Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Habitat	Potential to Occur in Off-site Improvement Areas
Taxidea taxus	American badger	—	SSC		Open shrub, forest and herbaceous habitats with friable soils. Associated with treeless regions, prairies, park lands and cold desert areas. Range includes most of California, except the North Coast.	Could occur. Suitable habitat is present.

Notes: USFWS = United States Fish and Wildlife Service; CDFW = California Department of Fish and Wildlife; CRPR = California Rare Plant Rank; CNDDB = California Natural Diversity Database; ESA = federal Endangered Species Act; CESA = California Endangered Species Act; I-5 = Interstate 5

Legal Status Definitions

USFWS:
- E = Endangered
- T = Threatened
- D = Delisted

CDFW:
- E = Endangered
- T = Threatened
- CE = Candidate Endangered
- P = Protected
- SSC = State Species of Special Concern

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

CRPR Extensions:
- .1 Seriously endangered in California (>80% of occurrences are threatened and/or high degree and immediacy of threat)
- .2 Fairly endangered in California (20 to 80% of occurrences are threatened)

Potential for Occurrence Definitions:

Unlikely to occur: Species is unlikely to be present due to poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.

Could occur: Suitable habitat is available in the Project site or off-site improvement areas; however, there are little to no other indicators that the species might be present.

Known to occur: The species, or evidence of its presence, was observed in the Project site or off-site improvement areas during reconnaissance surveys, or was reported by others.

Sources: CNDDB 2020, CNPS 2020

Waters of the United States and Waters of the State

Jurisdictional waters of the United States and isolated wetlands provide a variety of functions for plants and wildlife. Wetlands and other water features provide habitat, foraging, cover, migration, and movement corridors for both special-status and common species. In addition to habitat functions, these features provide physical conveyance of surface water flows capable of handling large stormwater events. Large storms can produce extreme flows that cause bank cutting and sedimentation of open waters and streams. Jurisdictional waters can slow these flows and lessen the effects of these large storm events, protecting habitat and other resources.

As discussed in the 2019 SOIA EIR, a wetland delineation was conducted for the City-owned parcel, and it was determined that the approximately 1.19 acres of pond and agricultural ditch were not jurisdictional since the water therein is sustained only through groundwater pumping. The USACE has determined that this on-site pond and ditch do not constitute jurisdictional Waters of the U.S. under the CWA Section 404 (USACE 2020).

The off-site improvement areas consist of several agricultural ditches, along with three ponds. All of these features are associated with active, ongoing agricultural operations including crop irrigation and stock watering. The water in these features is obtained from groundwater pumping. However, a wetland delineation has not been performed, and one or more of these features could be found to be a jurisdictional wetland. Furthermore, the off-site 8-acre and 15-acre ponds support freshwater emergent marsh and vernal pools. Deer Creek is a jurisdictional water of the United States.

3.5.2 REGULATORY FRAMEWORK

CITY OF ELK GROVE GENERAL PLAN

The City General Plan (City of Elk Grove 2019), contains the following policies related to biological resources that are applicable to the proposed Project.

Natural Resources Element

- **Policy NR-1-2:** Preserve and enhance natural areas that serve, or may potentially serve, as habitat for special-status species. Where preservation is not possible, require that appropriate mitigation be included in the project.
    - **NR-1-2a.** Require a biological resources evaluation for private and public development projects in areas identified to contain or possibly contain special-status plant and animal species.
    - **NR-1-2b.** Develop a Noxious Weed Ordinance that includes regulatory standards for construction activities that occur adjacent to natural areas to inhibit the establishment of noxious weeds through accidental seed import.
    - **NR-1-2c.** Require development projects to retain movement corridor(s) adequate (both in size and in habitat quality) to allow for the continued wildlife use based on the species anticipated in the corridor.
- **Policy NR-1-3:** Support 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.

- **Policy NR-1-4:** Avoid impacts to wetlands, vernal pools, marshland, and riparian (streamside) areas unless shown to be technically infeasible. Ensure that no net loss of wetland areas occurs, which may be accomplished by avoidance, revegetation, restoration on-site or through creation of riparian habitat corridors, or purchase of credits from a qualified mitigation bank.

- **Policy NR-1-5:** Recognize the value of naturally vegetated stream corridors, commensurate with flood control and public desire for open space, to assist in removal of pollutants, provide native and endangered species habitat, and provide community amenities.

- **Policy NR-1-6:** Encourage the retention of natural stream corridors, and the creation of natural stream channels where improvements to drainage capacity are required.

- **Policy NR-1-7:** Consider the adoption of habitat conservation plans for rare, threatened, or endangered species.

- **Policy NR-2-1:** Preserve large native oak and other native tree species as well as large nonnative tree species that are an important part of the City's historic and aesthetic character.

- **Policy NR-2-2:** Maximize and maintain tree coverage on public lands and in open spaces.

- **Policy NR-2-3:** Ensure that trees that function as an important part of the City's or a neighborhood's aesthetic character or as natural habitat on public and private land are retained or replaced 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.

Land Use Element

- **Policy LU-3-22:** Identify a mitigation program for critical habitat for special status species known to occur within the Study Areas. A proposed project determined to have a significant impact to habitat for special-status species shall implement all feasible mitigation measures established in the program, including but not limited to land dedication (which may be located either inside or outside the corresponding Study Area) or fee payment, or both.

3.5.3 Environmental Impacts and Mitigation Measures

Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact related to biological resources if it would:

- have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;

- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW;
- have a substantial adverse effect on federally protected waters of the United States, including wetlands, as defined by Section 404 of the CWA through direct removal, filling, hydrological interruption, or other means;
- interfere substantially with the movement of any native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan; or
- substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or substantially reduce the number or restrict the range of an endangered, rare, or threatened species.

IMPACT ANALYSIS

Impact 3.5-1: Loss of Habitat for Special-Status Plant Species.

As presented in Table 3.5-1, the off-site drainage improvements areas contain habitat that is suitable for 17 different species of special-status plants. Furthermore, as discussed in the 2019 SOIA EIR, surveys of the City-owned parcel found marginal habitat for Sanford's arrowhead in the on-site agricultural pond and ditches. Therefore, a variety of special-status plant species may be adversely affected by Project-related activities both on- and off-site. Loss of special-status plants is considered a **potentially significant** impact.

Mitigation Measure 3.5-1a: Minimize the Temporary Off-Site Construction Impact Footprint.

- During final project design and siting, minimize the temporary project footprint to the areas necessary for construction, and select locations that are already disturbed or developed to the greatest extent feasible.
- Avoid known occurrences of all special-status species, wetlands, riparian habitat, and sensitive natural communities to the greatest extent feasible.
- Minimize grading to the greatest extent feasible to avoid clearing of trees and shrubs.

Mitigation Measure 3.5-1b: Conduct Special-status Plant Surveys; Implement Compensatory Mitigation for Special-status Plants (2019 SOIA EIR Mitigation Measure 3.5-1).

Before any vegetation removal or ground-disturbing activities, both on- and off-site, the following measures shall be implemented to mitigate the potential loss of special-status plants:

- Participate in the South Sacramento Habitat Conservation Plan through payment of the appropriate SSHCP Fee and/or dedication of land meeting SSCHP criteria and compliance with relevant

Avoidance and Minimization Measures as detailed in the City's Memorandum of Agreement with the South Sacramento Conservation Agency for Becoming a Participating Special Entity in the South Sacramento Habitat Conservation Plan; OR

- Retain a qualified botanist to conduct protocol-level preconstruction special-status plant surveys for potentially occurring species following the CDFW rare plant survey protocols (CDFW 2018) (or the most recent CDFW rare plant survey protocols). All plant species encountered shall be identified to the taxonomic level necessary to determine species status. The surveys shall be conducted no more than 5 years prior and no later than the blooming period immediately preceding the approval of a grading or improvement plan or any ground disturbing activities, including grubbing or clearing.

- Notify CDFW, as required by the California Native Plant Protection Act, if any special-status plants are found. Notify USFWS if any plant species listed under the ESA are found.

- Develop a mitigation and monitoring plan to compensate for the loss of special-status plant species found during preconstruction surveys, if any. The mitigation and monitoring plan shall be submitted to CDFW or USFWS, as appropriate depending on species status, for review and comment. The City shall consult with these entities, as appropriate, depending on species status, before approval of the plan to determine the appropriate mitigation measures for impacts on any special-status plant population. Mitigation measures may include preserving and enhancing existing on-site populations, creation of off-site populations on project mitigation sites through seed collection or transplantation, and/or preserving occupied habitat off-site in sufficient quantities to offset loss of occupied habitat or individuals.

- If transplantation is part of the mitigation plan, include the following elements in the plan: a description and map of mitigation sites; details on the methods to be used, including collection, storage, propagation, receptor site preparation, installation, long-term protection and management, and monitoring and reporting requirements; remedial action responsibilities should the initial effort fail to meet long-term monitoring requirements; and sources of funding to purchase, manage, and preserve the sites. The following performance standards shall be applied:

  - The extent of occupied area and the flower density in compensatory reestablished populations shall be equal to or greater than the affected occupied habitat and shall be self-producing.

  - Reestablished populations shall be considered self-producing when:

    - plants reestablish annually for a minimum of 5 years with no human intervention, such as supplemental seeding; and

    - reestablished habitats contain an occupied area and flower density comparable to existing occupied habitat areas in similar habitat types.

- If off-site mitigation includes dedication of conservation easements, purchase of mitigation credits, or other off-site conservation measures, the details of these measures shall be included in the mitigation plan, including information on responsible parties for long-term management, conservation easement

holders, long-term management requirements, and other details, as appropriate, to target the preservation of long-term, viable populations.

Mitigation Measure 3.5-1c: Implement an Off-Site Revegetation and Weed Control Plan.

To control invasive/noxious weeds, particularly in the off-site improvement areas, implement the following actions to avoid and minimize the spread or introduction of invasive plant species:

- Clean construction equipment and vehicles in a designated wash area prior to entering and exiting the construction site.
- Educate construction supervisors and managers about invasive plant identification and the importance of controlling and preventing the spread of invasive plant infestations.
- Treat small, isolated infestations with eradication methods that have been approved by or developed in conjunction with CDFW and USFWS to prevent or destroy viable plant parts or seeds.
- Minimize surface disturbance to the greatest extent feasible to complete the work.
- Use native, noninvasive species or nonpersistent hybrids in erosion-control plantings to stabilize site conditions and prevent invasive plant species from colonizing.
- Use weed-free imported erosion-control materials (or rice straw) in upland areas.
- One year after construction, conduct a monitoring visit to each active or previously active (within 1 year) improvement footprint to ensure that no new occurrences of invasive plant species have become established.

Reclaim all areas disturbed by project construction, including temporary disturbance areas around construction sites, laydown/staging areas, and temporary access roads, using a locally sourced native and naturalized seed mix in ruderal and natural areas; or reclaim to the pre-existing agricultural condition, if temporary impacts occur in agricultural lands. A qualified biologist with demonstrated experience with the habitat to be restored shall have oversight for the selection of reclamation species.

Implement Mitigation Measure 3.4 1a (Implement the SMAQMD Basic Construction Emission Control Practices and Enhanced Exhaust Control Practices).

Significance after Mitigation

The drainage ditches that require improvement would be maintained by the City under a dedicated easement. Implementation of Mitigation Measures 3.5-1a through 3.5-1c, and 3.4-1a would reduce impacts on potentially-occurring special-status plant species because project applicants would be required to minimize the off-site disturbance areas; identify special-status plants through site-specific protocol-level surveys; implement appropriate avoidance, minimization, and mitigation measures; implement a revegetation and weed control plan; and implement fugitive dust controls. Therefore, as with the 2019 SOIA EIR, this impact would be **less than significant with mitigation**.

Impact 3.5-2: Adverse Effects on Valley Elderberry Longhorn Beetle Habitat.

The valley elderberry longhorn beetle (VELB) is an insect endemic to the Central Valley of California that inhabits riparian and associated upland habitats where elderberry (*Sambucus mexicana* or *Sambucus racemosa* var. *microbotrys*), its host plant, grows. VELB habitat consists of riparian forests whose dominant plant species include cottonwood, sycamore, valley oak, and willow, with an understory of elderberry shrubs (USFWS 1999). Blue elderberry shrubs in the Central Valley with basal stem diameters larger than 1 inch are considered by the USFWS as potential VELB habitat.

There are several records of VELB within a 3-mile radius of the off-site improvement areas, as shown on Exhibit 3.5-2 (CNDDB 2020). Blue elderberry shrub habitat forms a narrow row of densely growing, large elderberry shrubs along the base of railroad ballast along the south side of the off-site ditch (proposed for widening) that runs along the UPRR tracks. In addition, two small elderberry shrubs (less than 1-inch diameter) are present southeast of the existing outfall to Deer Creek, where the existing hand-dug ditch conveys water from the 15-acre pond. Furthermore, as described in the 2019 SOIA EIR, one elderberry shrub with three stems approximately 1 inch in diameter was observed in the City-owned parcel.

Elderberry plants without stems measuring 1.0 inch or greater in diameter at ground level are unlikely to provide habitat for VELB because of their small size and/or immaturity (USFWS 1999). However, if construction does not occur for several years, existing elderberry bushes would increase in size and additional elderberry bushes could establish that could support VELB. VELB has been recorded in the nearby Cosumnes River/Deer Creek riparian corridor.

Because of the potential for loss of elderberry shrubs during on- and off-site construction activities, the impact to VELB is considered **potentially significant.**

Implement Mitigation Measure 3.5-1a (Minimize the Temporary Off-Site Construction Impact Footprint).

Mitigation Measure 3.5-2a: Conduct VELB Surveys (2019 SOIA EIR Mitigation Measure 3.5-2a).

Before any vegetation removal or ground-disturbing activities for construction both on- and off-site, the following measure shall be implemented to mitigate the potential for impacts on VELB:

- A qualified biologist shall survey for the presence of elderberry shrubs with stems measuring than 1-inch diameter at ground level. Surveys shall be conducted in accordance with USFWS' Conservation Guidelines for the Valley Elderberry Longhorn Beetle (USFWS 1999). If no elderberry shrubs with one or more stems measuring 1 inch or greater in diameter at ground level are documented, no further mitigation is required.

Mitigation Measure 3.5-2b: Establish a Construction Buffer and Initiate Consultation with USFWS (2019 SOIA EIR Mitigation Measure 3.5-2b).

If elderberry shrubs are detected with stems greater than 1 inch in diameter and with evidence of VELB occupancy in the project site or the off-site improvement areas, the following measures shall be implemented to avoid, minimize, or mitigate effects on VELB, in accordance with USFWS' *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (USFWS 1999):

- Fence and flag all areas to be avoided during construction activities. In areas where encroachment on the 100-foot buffer has been approved by the Service, provide a minimum setback of at least 20 feet from the dripline of each elderberry plant.

- Brief contractors and work crews about the status of the beetle and the need to avoid damaging the elderberry plants and the possible penalties for not complying with these requirements.

- Erect signs every 50 feet along the edge of the avoidance area with the following information: "This area is habitat of the VELB, a threatened species, and must not be disturbed. This species is protected by the ESA, as amended. Violators are subject to prosecution, fines, and imprisonment." The signs should be clearly readable from a distance of 20 feet, and must be maintained for the duration of construction.

- If avoidance of an elderberry shrub and establishment of a 100-foot buffer is not practicable, initiate consultation with USFWS to determine if Incidental Take authorization need to be obtained from the USFWS, and if compensatory mitigation is required according to the guidelines identified in USFWS' Conservation Guidelines for the Valley Elderberry Longhorn Beetle (USFWS 1999). This may include, but is not limited to, establishment of a conservation area to be maintained in perpetuity, transplanting elderberry shrubs that cannot be avoided, planting elderberry seedlings, planting associated native vegetation, and monitoring and maintenance of the conservation area. With USFWS approval, payment to a mitigation bank or payment into an in-lieu fee fund may be used to satisfy this measure.

Significance after Mitigation

With implementation of Mitigation Measures 3.5-1a, 3.5-2a, and 3.5-2b, impacts would be reduced because these measures would minimize the off-site construction footprint, and elderberry shrubs in the Project site and the off-site improvement areas that could support VELB would be identified, avoided, and protected before construction activities occur, or potential loss of elderberry shrubs would be mitigated in accordance with USFWS guidelines. The drainage ditches that require improvement would be maintained by the City under a dedicated easement. With enforcement of the above mitigation and General Plan policies, future development would be designed to minimize potential impacts. Therefore, as with the 2019 SOIA EIR, the impact would be reduced to a **less-than-significant** level with mitigation.

Impact 3.5-3: Loss of Nesting and Foraging Habitat for Special-Status and Other Protected Raptors.

Swainson's hawk is listed as threatened under CESA, white-tailed kite is a fully protected species, and northern harrier and burrowing owl are California species of special concern. All raptors and their active nests, including common species, are protected under Section 3503.5 of the California Fish and Game Code.

Land surrounding the off-site drainage improvements areas would continue to be used for agricultural and open space purposes. The agricultural ditches and ponds would continue to provide foraging habitat after the proposed improvements (i.e., widening and/or deepening) were completed. Therefore, direct loss of foraging habitat would not occur from the off-site improvements. However, the off-site drainage improvements could result in the direct loss of nesting habitat through tree removal, or indirect disturbance of nesting behavior due to noise generated during off-site construction.

Furthermore, as described in the 2019 SOIA EIR, converting land in the Project site from agricultural to urban land uses would result in removal of cropland that provides suitable foraging habitat for Swainson's hawk, white-tailed kite, northern harrier, and burrowing owl. Following the ultimate conversion of the Project site to urban uses, the Project site would retain zero foraging habitat value for all of these special-status raptor species.

Exhibit 3.5-2 shows Swainson's hawk, white-tailed kite, and burrowing owl occurrences in relation to the proposed off-site improvement areas (CNDDB 2020). In addition, Swainson's hawk, red-tailed hawk, American kestrel, and Northern harrier were observed either foraging or flying over the off-site improvement areas and the adjacent cropland/annual grassland habitat during the AECOM 2020 site visit. At the conclusion of the short-term temporary construction activities associated with widening and/or deepening of the off-site agricultural ditches and ponds, foraging habitat would continue to be available for all of these special-status raptor species.

Conversion of 84 acres of cropland resulting from urban development on the City-owned parcel, and potential loss of up to 412 acres (408 acres of irrigated pasture and 6 acres of cropland) in the remainder of the Project site would remove high-value foraging habitat that is important to the local Swainson's hawk population. This loss could affect nesting success, survival rates, and availability of prey for the local Swainson's hawk population, or result in displacement of nesting pairs of Swainson's hawk, white-tailed kite, and northern harrier. Therefore, the loss of foraging habitat resulting from development of the Project site is considered a **potentially significant** impact on Swainson's hawk, special-status raptors and other nesting raptors.

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

Burrowing owls need burrows at all times to survive, and displacing individuals from their burrows can result in indirect impacts such as predation, increased energetic costs, increased stress, and risks associated with having to find and compete for burrows, all of which can lead to take or reduced reproduction. Although burrowing owls are found within the agricultural landscape of Sacramento County and the species is known to inhabit agricultural field borders and forage in cultivated fields, the Project site is not modeled in the South Sacramento Habitat Conservation Plan (SSHCP) as either wintering or nesting habitat for western burrowing owl. However, burrowing owls may be present both on the Project site and adjacent to the off-site improvement areas.

Future development in the Project site and the off-site drainage improvements areas could result in direct destruction of an active Swainson's hawk, white-tailed kite, northern harrier, burrowing owl, or common raptor nests or disturb nesting raptors, resulting in nest abandonment by adult birds and abandonment of chicks and eggs, causing mortality. Therefore, direct and indirect impacts on active raptor nests or burrows are considered **potentially significant**.

Implement Mitigation Measure 3.5-1a (Minimize the Temporary Off-Site Construction Impact Footprint).

Mitigation Measure 3.5-3a: Avoid Direct Loss of Swainson's Hawk and Other Raptors (2019 SOIA EIR Mitigation Measure 3.5-3a).

Before the start of construction activities both on- and off-site, the following measures shall be implemented to mitigate the potential loss of nesting Swainson's hawks and other nesting raptors:

- Tree and vegetation removal shall be completed during the nonbreeding season for raptors (September 1–February 15).

- To avoid, minimize, and mitigate potential impacts on Swainson's hawk and other raptors (not including burrowing owl) nesting on or adjacent to the project site or off-site improvement areas, retain a qualified biologist to conduct preconstruction surveys and identify active nests on and within 0.5 mile of the project site for construction activities conducted during the breeding season (March 1–September 15). The surveys shall be conducted before the approval of grading and/or improvement plans (as applicable) and no less than 14 days and no more than 30 days before the beginning of construction. Guidelines provided in the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in the Central Valley* (Swainson's Hawk Technical Advisory Committee 2000) or future applicable updates to this guidance shall be followed for surveys for Swainson's hawk. If no nests are found, no further mitigation will be required.

- Impacts on nesting Swainson's hawks and other raptors shall be avoided by establishing appropriate buffers around active nest sites identified during preconstruction raptor surveys. No project activity shall commence within the buffer areas until a qualified biologist has determined, in consultation with CDFW, the young have fledged, the nest is no longer active, or reducing the buffer would not result in nest abandonment. The buffer distance for Swainson's hawk nests shall be determined by a qualified biologist and the City, in consultation with CDFW, based on the distance required to avoid adversely affecting the nest(s).

- The appropriate no-disturbance buffer for other raptor nests (i.e., species other than Swainson's hawk) shall be determined by a qualified biologist based on site-specific conditions, the species of nesting bird, nature of the project activity, visibility of the disturbance from the nest site, and other relevant circumstances.

- Monitoring of all active raptor nests by a qualified biologist during construction activities will be required if the activity has potential to adversely affect the nest. If construction activities cause the nesting bird to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the no-disturbance buffer shall be increased until the agitated behavior ceases. The qualified biologist will have the authority to shut down construction activities within a portion or all of a construction site if necessary to avoid nest abandonment or take of individuals. The exclusionary buffer will remain in place until the chicks have fledged or as otherwise determined appropriate by a qualified biologist.

Mitigation Measure 3.5-3b: Avoid Loss of Burrowing Owl (2019 SOIA EIR Mitigation Measure 3.5-3b).

Before the start of construction activities both on- and off-site, the following measures shall be implemented to mitigate the potential loss of burrowing owl:

- To avoid, minimize, and mitigate potential impacts on burrowing owl, retain a qualified biologist to conduct focused breeding and nonbreeding season surveys for burrowing owls in areas of suitable habitat on and within 1,500 feet of the project site. Surveys will be conducted before the start of construction activities and in accordance with Appendix F of CDFW's *Staff Report on Burrowing Owl Mitigation* (DFG 2012) or the most recent CDFW protocols.

- If no occupied burrows are found, a letter report documenting the survey methods and results will be submitted to the City and CDFW and no further mitigation will be required.

- If an active burrow is found during the nonbreeding season (September 1 through January 31), owls will be relocated to suitable habitat outside of the project area using passive or active methodologies developed, in consultation with CDFW, and may include active relocation to preserve areas if approved by CDFW and the preserve managers. No burrowing owls will be excluded from occupied burrows until a burrowing owl exclusion and relocation plan is developed and approved by CDFW.

- If an active burrow is found during the breeding season (February 1 through August 31), occupied burrows will not be disturbed and will be provided with a 150- to 1,500-foot protective buffer unless a qualified biologist verifies through noninvasive means that either: (1) the birds have not begun egg laying, or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. The size of the buffer will depend on the time of year and level of disturbance, as outlined in the CDFW Staff Report (DFG 2012:9) or the most recent CDFW protocols. Once the fledglings are capable of independent survival, the owls will be relocated to suitable habitat outside the project area, in accordance with a burrowing owl exclusion and relocation plan developed in consultation with CDFW and the burrow will be destroyed to prevent owls from reoccupying it. No burrowing owls will be excluded from occupied burrows until a burrowing owl exclusion and relocation plan is approved by CDFW. Following owl exclusion and burrow demolition, the site shall be monitored by a qualified biologist to ensure burrowing owls do not recolonize the site before construction.

- If active burrowing owl nests are found on the project site and these nest sites are lost as a result of implementing the project, the project applicant shall mitigate the loss through preservation of other known nest sites in Sacramento County, at a minimum ratio of 1:1, according to the provisions of a mitigation and monitoring plan for the compensatory mitigation areas.

- The mitigation and monitoring plan will include detailed information on the habitats present within the preservation areas, the long-term management and monitoring of these habitats, legal protection for the preservation areas (e.g., conservation easement, declaration of restrictions), and funding mechanism information (e.g., endowment). All burrowing owl mitigation lands shall be preserved in perpetuity and incompatible land uses shall be prohibited in habitat conservation areas.

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

Mitigation Measure 3.5-3c: Implement the City of Elk Grove Swainson's Hawk Foraging Habitat Mitigation Program (2019 SOIA EIR Mitigation Measure 3.5-3c).

- Participate in the South Sacramento Habitat Conservation Plan through payment of the appropriate SSHCP Fee and/or dedication of land meeting SSCHP criteria and compliance with relevant Avoidance and Minimization Measures as detailed in the City's Memorandum of Agreement with the South Sacramento Conservation Agency for Becoming a Participating Special Entity in the South Sacramento Habitat Conservation Plan; OR

- Before the start of construction activities both on- and off-site, project applicants shall demonstrate compliance with the City's Swainson's Hawk Foraging Habitat Mitigation Program as it exists in Chapter 16.130 of the Municipal Code, or as it may be updated in the future. The City of Elk Grove will consult with the County of Sacramento to seek to develop an approach to mitigation for loss of Swainson's hawk foraging habitat that integrates with the SSHCP Conservation Strategy Biological Goals and Objectives for this species and with the interconnected landscape-level preserve system envisioned in the SSHCP.

Significance after Mitigation

Implementing Mitigation Measures 3.5-1a, 3.5-3a, 3.5-3b, and 3.5-3c would reduce potentially significant impacts on white-tailed kite, northern harrier, burrowing owl, and other raptors because it would minimize the off-site construction footprint, and ensure that these species are not disturbed during nesting so that construction would not result in nest abandonment and loss of eggs or young. These measures would also ensure that Swainson's hawk foraging habitat and burrowing owl habitat would be preserved at a 1:1 ratio of habitat lost. Preservation of Swainson's hawk foraging habitat would also benefit white-tailed kite, northern harrier, and other raptors, and would reduce the potential indirect effect of foraging habitat loss on these species.

Implementation of the City's Municipal Code Chapter 16.130 ensures purchase and preservation of replacement foraging habitat before the approval of grading and improvement plans or before any ground-disturbing activities by requiring project applicants to acquire conservation easements or other instruments to preserve suitable foraging habitat for the Swainson's hawk, as determined by CDFW. Municipal Code Chapter 16.130 requires 1:1 mitigation, and the location of mitigation parcels as well as the conservation instruments protecting them must be acceptable to the City. In deciding whether to approve the land proposed for preservation by the project applicant, the City must consider the benefits of preserving lands in proximity to other protected lands. The preservation of

land must be done prior to any site disturbance, such as clearing or grubbing, or the issuance of any permits for grading, building, or other site improvements, whichever occurs first. In addition, the City's Code requires:

- The land to be preserved shall be deemed suitable Swainson's hawk foraging habitat.
- All owners of the mitigation land shall execute the document encumbering the land.
- The document shall be recordable and contain an accurate legal description of the mitigation land.
- The document shall prohibit any activity which substantially impairs or diminishes the land's capacity as suitable Swainson's hawk foraging habitat.
- If the land's suitability as foraging habitat is related to existing agricultural uses on the land, the document shall protect any existing water rights necessary to maintain such agricultural uses on the land covered by the document, and retain such water rights for ongoing use on the mitigation land.
- The applicant shall pay to the City a mitigation monitoring fee to cover the costs of administering, monitoring and enforcing the document in an amount determined by the receiving entity, not to exceed ten (10%) percent of the easement price paid by the applicant, or a different amount approved by the City Council, not to exceed fifteen (15%) percent of the easement price paid by the applicant.
- Interests in mitigation land shall be held in trust by an entity acceptable to the City in perpetuity. The entity shall not sell, lease, or convey any interest in mitigation land which it shall acquire without the prior written approval of the City.
- The City shall be named a beneficiary under any document conveying the interest in the mitigation land to an entity acceptable to the City.

Even with implementation of Mitigation Measures 3.5-1a, 3.5-3a, 3.5-3b, and 3.5-3c, the impact on loss of high-value Swainson's hawk foraging habitat may not be reduced to less-than-significant levels. Only a finite amount of suitable mitigation land is available within the foraging range of the local Swainson's hawk nesting population, and even with preservation of foraging habitat to compensate for losses that would occur, an overall net loss of foraging habitat available to the local nesting Swainson's hawk population would still occur. This conclusion is based on an assessment of the widespread loss of foraging habitat for this species in the region, the status of this local area as supporting a high breeding concentrations of Swainson's hawks, and on the challenges of securing sufficient foraging habitat mitigation lands in areas that would support the local nesting population. This net loss would undoubtedly result in reduced reproductive success and displacement of nesting pairs, thereby contributing to the decline of Swainson's hawk populations. There is no additional feasible mitigation available that would avoid this impact. As with the 2019 SOIA EIR, the impact on Swainson's hawk would remain **significant and unavoidable**.

As with the 2019 SOIA EIR, with implementation of Mitigation Measures 3.5-1a, 3.5-3a, 3.5-3b, and 3.5-3c, future development in the Project site and the off-site improvement areas would be designed to minimize potential impacts. With regard to the other species addressed in the mitigation above (burrowing owl, white-tailed kite, northern harrier, and other raptors), the impact is considered **less than significant with mitigation**.

Impact 3.5-4: Loss and Disturbance of Nesting Habitat for Special-Status Birds and Common Nesting Birds.

As presented in Table 3.5-1, construction of the off-site improvements has the potential to affect 10 species of special-status (non-raptor) bird species. As shown in Exhibit 3.5-2, there are numerous documented occurrences of tricolored blackbird, which is a State-listed endangered species, within 3 miles of the off-site improvement areas.

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

Land surrounding the off-site drainage improvement areas would continue to be used for agricultural and open space purposes. The off-site agricultural ditches and ponds would continue to provide foraging habitat after the proposed improvements (i.e., widening and/or deepening) were completed. Therefore, direct loss of foraging habitat would not occur from the off-site improvements. However, the off-site drainage improvements could result in the direct loss of nesting habitat through habitat removal along the ditches or in the ponds, or indirect disturbance of nesting behavior due to noise generated during off-site project construction.

Furthermore, as discussed in the 2019 SOIA EIR, the Project site includes cropland and irrigated pasture. Both cropland and irrigated pasture provides suitable foraging habitat for special-status bird species, as well as other migratory species. Therefore, in addition to the off-site improvement areas, conversion of the on-site agricultural land to urban development would result in the loss of foraging habit and could result in the loss of nesting habitat. Therefore, this impact is considered **potentially significant.**

Implement Mitigation Measure 3.5-1a (Minimize the Temporary Off-Site Construction Impact Footprint).

Mitigation Measure 3.5-4: Avoid Loss of Special-Status Birds and Protected Bird Nests (2019 SOIA EIR Mitigation Measures 3.5-4 and 3.5-5).

Before the start of construction activities both on- and off-site, the following measures shall be implemented to mitigate the potential loss of special-status birds and protected bird nests:

- To the extent feasible, vegetation removal, grading, and other ground-disturbing activities will be carried out during the nonbreeding season for protected bird species in this region (generally September 1–January 31).

- For vegetation removal, grading, and other ground-disturbing activities that would occur during the nesting season (February 1–August 31), a qualified biologist shall conduct preconstruction surveys to determine if active special-status bird nests are present within an on- or off-site project footprint or within 500 feet of a project footprint. The biologist shall conduct preconstruction surveys within 30 days and within 3 days of ground-disturbing activities, and within the proposed project footprint and 500 feet of the proposed project footprint to determine the presence or absence of special-status birds. Preconstruction surveys shall be conducted during the breeding/nesting season. Surveys conducted in

February (to meet preconstruction survey requirements for work starting in March) must be conducted within 14 days and 3 days in advance of ground-disturbing activities.

- Surveys for least Bell's vireo shall be conducted according to USFWS' *Least Bell's Vireo Survey Guidelines* (USFWS 2001).

- If an active nest of a special-status bird species, or common bird species protected by the MBTA or California Fish and Game Code is found, the qualified biologist shall establish a buffer around the nest. No construction activity shall commence within the buffer area until a qualified biologist confirms that the nest is no longer active. The size of the buffer shall be determined in consultation with CDFW. Buffer size is anticipated to range from 50 to 500 feet, depending on the species of bird, nature of the project activity, the extent of existing disturbance in the area, and other relevant circumstances, as determined by a qualified biologist, in consultation with CDFW.

- A qualified biologist shall monitor the nest(s) throughout the nesting season and to determine when the young have fledged. The biologist will be on-site daily while construction-related activities are taking place near the disturbance buffer. Work within the nest disturbance buffer will not be permitted. If the approved biologist determines that birds are exhibiting agitated behavior, construction shall cease until the buffer size is increased to a distance necessary to result in no harm or harassment to the nesting birds. If the biologist determines that bird colonies are at risk, a meeting with CDFW will be held to determine the best course of action to avoid nest abandonment or take of individuals. The biologist will also train construction personnel on the required avoidance procedures, buffer zones, and protocols in the event that a special-status bird flies into an active construction zone (i.e., outside the buffer zone).

Significance after Mitigation

Implementation of Mitigation Measures 3.5-1a and 3.5-4 would reduce potentially significant impacts on special-status (non-raptor) birds and protected bird nests because it would minimize the off-site construction footprint, and ensure these birds are not disturbed during nesting so that project construction would not result in nest abandonment and loss of eggs or young. Therefore, as with the 2019 SOIA EIR, the impact is considered **less than significant with mitigation**.

Impact 3.5-5: Potential for Injury to or Mortality of American Badger.

The American badger is most common in drier open stages of most shrub, forest, and herbaceous habitats with friable soils. Badgers inhabit burrows, which are dug into friable soil for cover. Suitable soil for the construction of burrows and the presence of numerous ground squirrel burrows located throughout the project site suggest that American badgers have the potential to occur within the Project site and the off-site improvement areas.

Project-related construction activities could crush American badger burrows and kill or injure badgers occupying burrows. Although very little empirical data are available about American badger population status and trends in California, badger populations in the middle Central Valley have declined (County of Sacramento et al. 2018). Project-related injury or death to an American badger, particularly if a natal den was destroyed, is considered a **potentially significant** impact.

Implement Mitigation Measure 3.5-1a (Minimize the Temporary Off-Site Construction Impact Footprint).

Mitigation Measure 3.5-5: Avoid Direct Loss of American Badgers (2019 SOIA EIR Mitigation Measure 3.5-6).

Before the start of construction activities both on- and off-site, the following measures shall be implemented to mitigate potential impacts on American badgers:

- A qualified biologist shall conduct preconstruction surveys for American badger in areas that will be subject to ground-disturbing activities. The survey shall be conducted no more than 2 weeks before initiation of construction activities. If an American badger or active burrow, indicated by the presence of badger sign (i.e. suitable shape and burrow-size, scat) is found within the construction area during preconstruction surveys, CDFW will be consulted to obtain permission for animal relocation. If the qualified biologist determines that potential dens are inactive, the biologist shall excavate these dens by hand with a shovel to prevent badgers from reusing them during construction.

- If the qualified biologist determines that potential dens may be active, the entrances of the dens shall be blocked with soil, sticks, and debris for 3–5 days to discourage use of these dens before project disturbance. The den entrances shall be blocked to an incrementally greater degree over the 3- to 5-day period. After the qualified biologist determines that badgers have stopped using active dens within the project boundary, the dens shall be hand-excavated with a shovel to prevent reuse during construction.

Significance after Mitigation

Implementation of Mitigation Measures 3.5-1a and 3.5-5 would reduce impacts on badgers by minimizing the off-site construction footprint, identifying any badger dens that might occur in impact areas, and implementing measures to avoid impacts. With implementation of Mitigation Measure 3.5-5, construction would be designed to minimize potential impacts. Therefore, as with the 2019 SOIA EIR, the impact is considered **less than significant with mitigation**.

Impact 3.5-6: Potential for Injury to or Mortality of Western Pond Turtle and Giant Garter Snake.

Western pond turtles are found in rivers, streams, creeks, ponds, marshes, irrigation ditches, damp woodland and forest, and grassland. The turtles require logs, rocks, vegetation mats, or exposed banks to bask in the sun. Females lay their eggs between April and August in upland habitat, usually along stream or pond margins. Their diet consists of aquatic plants, invertebrates, worms, frog and salamander eggs and larvae, crayfish, carrion, and occasionally frogs and fish. Giant garter snake is found primarily in marshes, sloughs, drainage canals, and irrigation ditches, especially around rice fields, and occasionally in slow-moving creeks. During the spring and summer, giant garter snake can be found in vegetated upland areas within 200 feet of suitable aquatic habitat. The giant garter snake uses upland habitat for basking, cover, and mammal burrows, and crevices in the soil to escape predation and during ecdysis (shedding of skin). In the fall (October) giant garter snakes move underground into mammal burrows, crevices, or other voids in the ground to avoid potentially lethal cool autumn and winter temperatures.

Although there are no records of western pond turtle or giant garter snake occurrences within the Project site or the off-site improvement areas, the CNDDB (2020) database indicates that western pond turtle and giant garter snake occurrences have been documented approximately 2.75 miles southwest and approximately 2 miles

southeast, respectively, of the off-site improvement areas. Suitable habitat for western pond turtle is present in the ponds associated with the off-site drainage improvement areas, and in Deer Creek. Suitable habitat for giant garter snake is present along Deer Creek in the areas where off-site widening of agricultural ditches is proposed. Both western pond turtle and giant garter snake could also occur in upland habitats in the off-site drainage improvements areas adjacent to suitable aquatic habitats. Both western pond turtle and giant garter snake are covered species under the SSHCP (County of Sacramento et al. 2018). Construction activities associated with the off-site improvements, such as vegetation clearing, excavation, and grading, could disturb western pond turtle and giant garter snake habitat. Furthermore, construction of the off-site improvements could result in habitat degradation and injury or mortality of western pond turtle or giant garter snake individuals (e.g., equipment strikes, crushing underground individuals), if present in the off-site project footprint during construction. Therefore, this impact is considered **potentially significant.**

Implement Mitigation Measure 3.5-1a (Minimize the Temporary Off-Site Construction Impact Footprint).

Mitigation Measure 3.5-6a: Retain a Biological Monitor During Off-Site Construction Activities.

- The project applicant shall retain a qualified biologist to monitor construction activity in the off-site improvement areas for compliance with all project permits and the approved mitigation and monitoring program for the proposed project; and to report on monitoring activities as required by project permits.

- During construction activities, if an injured or dead special-status species is encountered, the work shall stop in the immediate vicinity. The project applicant shall notify the biological monitor, and the appropriate resource agency (e.g., USFWS or CDFW). Any measures required by these agencies shall be implemented, and proof of implementation shall be submitted to the agencies before construction is allowed to proceed.

- At the end of each work day, the biological monitor shall ensure that all potential wildlife pitfalls (trenches, bores, and other excavations) have been backfilled. If backfilling is not feasible, all trenches, bores, and other excavations shall be sloped at a 3:1 ratio at the ends to provide wildlife escape ramps, or covered completely to prevent wildlife access, or fully enclosed with exclusion fencing. If any wildlife species become entrapped, construction shall not occur until the animal has left the trench or been removed by a qualified biological monitor as feasible.

- Employees and contractors shall look under vehicles and equipment for the presence of wildlife before moving vehicles and equipment. If wildlife is observed, no vehicles or equipment would be moved until the animal has left voluntarily or is removed by the biological monitor. No listed species shall be handled without the appropriate permits.

- Vehicle speed limits shall not exceed 15 miles per hour during construction and operation of the proposed project. A speed limit sign shall be posted at all project site entry locations.

Mitigation Measure 3.5-6b: Avoid Western Pond Turtle and Giant Garter Snake During Off-Site Construction Activities.

Western Pond Turtle

- Where feasible, construction activities involving construction with heavy equipment (e.g., excavation, grading, contouring) in suitable western pond turtle upland habitat will avoid the western pond turtle egg-laying period (generally mid-May to early July).

- Prior to the start of construction in western pond turtle habitat (i.e., any undeveloped areas within 1,300 feet of riverine aquatic habitat, ponds, seasonal wetlands), the project applicant will retain a biologist approved by the CDFW to survey and handle western pond turtles and conduct preconstruction surveys. Surveys will be conducted at each habitat area no more than 7 days prior to the initiation of ground disturbance at that location.

- If ground-disturbing activities occur during the nesting or overwintering seasons, 1 week before and within 24 hours of beginning work in suitable aquatic habitat, a qualified biologist will conduct surveys for western pond turtle. The surveys will be timed to coincide with the time of day when turtles are most likely to be active (the cooler part of the day between 8:00 a.m. and 12:00 p.m. during spring and summer). Prior to conducting the surveys, the biologist will locate the microhabitats for turtle basking (logs, rocks, brush thickets) and determine a location to quietly observe turtles. Each survey will include a 30-minute wait time after arriving on the site to allow startled turtles to return to open basking areas. The survey will consist of a minimum 15-minute observation time per area where turtles could be observed. If western pond turtles are observed during either survey, a biological monitor will be present during construction activities in the aquatic habitat where the turtle was observed; and capture and relocate, if possible, any entrapped turtle. The biological monitor also will be mindful of suitable nesting and overwintering areas in proximity to suitable aquatic habitat, and periodically inspect these areas for nests and turtles.

Giant Garter Snake

- Where feasible, construction activities involving construction with heavy equipment use (e.g., excavation, grading, contouring) in suitable giant garter snake habitat (i.e., within 200 feet of Deer Creek) will avoid the snake's inactive/dormant period (generally October 2 to April 30).

- To the maximum extent possible, all construction activities in giant garter snake habitat will be conducted during the snake's active period (May 1 to October 1).

- To reduce the likelihood of snakes entering the active construction areas that include or are adjacent to freshwater wetlands, slow-moving riverine aquatic habitat, marshes, ditches, and canals in the off-site improvement areas during construction activities, the project applicant or the construction contractor will install exclusion fencing along the freshwater marsh, aquatic riverine features, and open water areas outside of the environmental footprint (areas within 200 feet of suitable habitat). The exclusion fencing will be installed and maintained for the duration of construction in or adjacent to these features. The fencing will consist of 3- to 4-foot-tall erosion fencing buried at least 6 to 8 inches below the ground. To ensure that construction equipment and personnel do not affect aquatic

habitat for giant garter snake outside the construction corridor, orange barrier fencing will be erected (in addition to the exclusion fencing) to clearly define the aquatic habitat to be avoided.

- A qualified biologist will conduct a preconstruction survey in suitable habitat no more than 24 hours before construction. Prior to construction each morning, construction personnel will inspect exclusion and orange barrier fencing to ensure they are in good condition. Observations of snakes in the environmental footprint and access routes will be immediately reported to the biologist, and all activities will cease until appropriate corrective measures have been completed; the snake leaves the construction site under its own volition; or the biologist determines that the snake will not be harmed. The area undergoing construction will be re-inspected and surveyed by the biologist whenever a lapse in construction activity of 2 weeks or more occurs.

- Any ground-disturbing activities within 200 feet of giant garter snake habitat that occur after October 1 will be monitored by a USFWS- and a CDFW-approved biologist for the duration of the work.

- Vegetation clearing within 200 feet of the banks of potential giant garter snake aquatic habitat will be limited to the minimum area necessary. Giant garter snake habitat outside of—but adjacent to—the construction areas will be flagged, and designated as an environmentally sensitive area to be avoided by all construction personnel.

- The movement of heavy equipment within 200 feet of the banks of potential giant garter snake aquatic habitat will be confined to designated access and haul routes to minimize habitat disturbance.

- Staging areas will be located at least 200 feet from suitable giant garter snake aquatic habitat.

Significance after Mitigation

Implementation of Mitigation Measures 3.5-1a 3.5-6a, and 3.5-6b would reduce impacts on western pond turtle and giant garter snake by requiring avoidance and minimization of impacts on aquatic habitats, and requiring preconstruction surveys, biological monitoring, and avoidance measures for individuals of the species. With implementation of Mitigation Measures 3.5-1a, 3.5-6a, and 3.5-6b, project-related construction would be designed to minimize potential impacts on western pond turtle and giant garter snake. Therefore, the impact is considered **less than significant with mitigation**.

Impact 3.5-7: Potential Loss of Western Red Bat.

No surveys for bat roosts have been conducted in the Project area, but large trees and riparian habitats in the off-site improvement areas offer appropriate features to support individual and maternity bat roosts for western red bats. Western red bats tend to roost in trees in edge habitats near fields or streams. Suitable foraging habitat is present, and potential roosting habitat is present in large valley oaks, in and adjacent to the off-site drainage improvements areas. Western red bat is a Covered Species under the SSHCP (County of Sacramento et al. 2018).

Construction activities that would cause temporary disturbance or permanent removal of an occupied bachelor, migratory, maternity, or solitary bat roost could cause direct and indirect adverse effects on individual bats or groups. Potential adverse effects could include direct mortality during roost removal; dysfunctional allocation of time and energy to vigilance behaviors; increased energy costs for maintenance, growth, and reproduction;

degradation of physiological condition and social order; shifts in habitat use patterns, species distribution, and community structure; and roost abandonment (Caltrans 2016). Roost abandonment may cause pup mortality, expose bats to predation, require them to redirect their limited energy reserves to finding new roosts, and require bats to expend more energy for thermoregulation in suboptimal replacement roosts (Caltrans 2016).

However, western red bats change roosts frequently and mothers can move their young; therefore, they would have the capacity to fly away from disturbance. In addition, bats inhabiting bachelor and migratory roosts would be volant, and would be able to fly away from construction disturbances. None of the indirect adverse effects would be expected to cause mortality in large numbers of bats, and would not be expected to cause a local bat population to drop below self-sustaining levels.

A minor amount of grassland habitat and aquatic features may be lost during construction of the off-site drainage improvements, which could result in the loss of bat foraging habitat. Permanent loss of oak trees (and other large trees) could result in the permanent loss or degradation of nonessential roosts. Because abundant foraging habitat is available in the off-site drainage improvements area (along the Deer Creek corridor), the temporary and permanent loss or degradation of foraging habitat would not be expected to cause indirect mortality to large numbers of bats, or to substantially reduce their habitat. Likewise, nonessential roosts are not critical for sustaining bat populations, and the permanent loss of some nonessential roosts would not be expected to cause indirect mortality to large numbers of bats, reduce their number, or restrict their range. Although these impacts would be **less than significant**, implementation of the mitigation measures listed below would help to further reduce impacts to special-status bats.

Implement Mitigation Measure 3.5-1a (Minimize the Off-Site Construction Impact Footprint).

Implementation of Mitigation Measures 3.5-1a would help to avoid and further minimize **less-than-significant** impacts on special-status bats by minimizing the off-site construction areas (to avoid suitable roost habitats such as trees and riparian habitat) where feasible.

Impact 3.5-8: Potential Indirect Effects to Vernal Pool Crustacean Habitat.

Three special-status crustaceans endemic to vernal pool habitats have the potential to occur in the off-site improvement areas: vernal pool fairy shrimp (*Branchinecta lynchi*), Conservancy fairy shrimp (*Branchinecta conservatio*), and vernal pool tadpole shrimp (*Lepidurus packardi*). Fairy shrimp occur primarily in small, clear-water sandstone-depression vernal pools and grassed swales or basalt-flow depression vernal pools that fill with water during fall and winter rains, and dry up in the spring and summer. They typically hatch when the first rains of the season fill the vernal pools, and mature in about 41 days under typical winter conditions. Adult fairy shrimp live only for a single season, while there is water in the pools; and toward the end of their brief lifetime, females produce thick-shelled eggs or cysts. During the summer, these cysts become buried in the dried bottom mud of the vernal pools, and during the winter, they are frozen for varying lengths of time. These cysts hatch when the rains come again in the fall and winter. The Conservancy fairy shrimp is one of the rarest species of fairy shrimp in California and is known to occur only in several distinct populations, the closest of which is the Yolo Bypass Wildlife Area (USFWS 2017b).

Although there are no records of fairy shrimp occurrences within the project site or the off-site improvement areas, the CNDDB (2020) database indicates that vernal pool fairy shrimp and vernal pool tadpole shrimp are present approximately 1 mile southeast and 2 miles southwest of the off-site improvement areas, respectively.

Suitable habitat for all three shrimp species is present within a vernal pool complex that is approximately 250 feet south of the 8-acre pond in the vicinity of the proposed off-site drainage improvements.

The vernal pool fairy shrimp, Conservancy fairy shrimp, and vernal pool tadpole shrimp are Covered Species under the SSHCP (County of Sacramento et al. 2018), and under the USFWS' *Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon* (USFWS 2005).

No direct impacts (i.e., fill) of the vernal pool complex would occur as a result of the proposed off-site drainage improvements. However, construction of the off-site improvements could result in indirect impacts from generation of fugitive dust, erosion and sedimentation, and/or pollution from accidental spills, as well as introduction of nonnative invasive plants that could reduce habitat quality for vernal pool crustaceans in the nearby vernal pool complex. This impact is considered **potentially significant**.

Implement Mitigation Measure 3.5-1a (Minimize the Temporary Off-Site Construction Impact Footprint).

Implement Mitigation Measure 3.5-1d (Implement an Off-Site Revegetation and Weed Control Plan).

Mitigation Measure 3.5-8: Avoid and Minimize Potentially-Occupied Habitat for Vernal Pool Fairy Shrimp and Conservancy Fairy Shrimp During Off-Site Construction Activities.

- A qualified biologist shall monitor for impacts on potentially occupied vernal pool fairy shrimp and Conservancy fairy shrimp habitat during off-site construction activities to ensure that they are identified for avoidance on site plans and preserved and avoided during off-site construction activities.

- Vernal pool habitat shall be flagged and orange exclusionary fencing shall be erected prior to the start of off-site construction activities in the vicinity of the southern-most drainage ditch (along the UPRR tracks) and the 8-acre pond. The exclusionary fencing shall establish a 250-foot buffer from the vernal pool boundary.

- The project applicant shall obtain a Construction General Stormwater Permit from the Central Valley RWQCB, prepare a stormwater pollution prevention plan, and implement best management practices (BMPs) to reduce water quality effects during construction.

- USFWS consultation with USACE would occur during the CWA Section 404 permitting process that is required as mitigation for impacts on wetlands and other waters of the United States (see discussion under Impact 3.5-8, below).

Implement Mitigation Measure 3.4-1a (Implement the SMAQMD Basic Construction Emission Control Practices and Enhanced Exhaust Control Practices).

Significance after Mitigation

Implementation of Mitigation Measures 3.5-1a, 3.5-1d, 3.5-8, and 3.4-1a would reduce impacts on vernal pool crustaceans by because project applicants would be required to minimize the off-site disturbance areas; implement a revegetation and weed control plan; avoid impacts to vernal pools; and implement fugitive dust controls. With implementation of Mitigation Measures 3.5-1a, 3.5-1d, 3.5-8, and 3.4-1a, project-related construction would be

designed to minimize potential impacts on vernal pool crustaceans. Therefore, the impact is considered **less than significant with mitigation**.

Impact 3.5-9: Disturbance, Degradation, or Removal of Federally Protected Waters of the United States.

As discussed in the 2019 SOIA EIR, a total of ±0.707 acre of agriculture ditches and 0.257 acre of agricultural pond occur in the City-owned parcel. The ditches and pond are presumed to be nonjurisdictional because based on a review of aerial photographs and field investigation, the source of water in the City-owned parcel is a pump. Therefore, although these features drain to a ditch on Grant Line Road and eventually into Deer Creek, which is a jurisdictional waterway, the ditches and pond are primarily agricultural features sustained through groundwater pumping. USACE has determined that these on-site features do not constitute jurisdictional Waters of the U.S. under the CWA Section 404 (USACE).

The off-site improvement areas consist of several agricultural ditches, along with three ponds. All of these features are associated with active, ongoing agricultural operations including crop irrigation and stock watering. The water in these features is obtained from groundwater pumping. However, a wetland delineation has not been performed, and one or more of these features could be found to be a jurisdictional wetland. Furthermore, the off-site 8-acre and 15-acre ponds support freshwater emergent marsh, and a vernal pool complex is present near the 8-acre pond. A jurisdictional wetland delineation of the agricultural ditches and ponds in the off-site improvement areas has not yet been conducted. If aquatic features yet to be delineated are deemed jurisdictional by the USACE, construction activities could result in fill of waters of the United States. Waters that do not meet the criteria to qualify as waters of the U.S. and are disclaimed by the USACE could still be considered waters of the state subject to regulation by the Central Valley Regional Water Quality Control Board (RWQCB) under California's Porter-Cologne Act, because waters of the State are defined more broadly under California Water Code Section 13050(e) compared to waters of the U.S.

Deer Creek is a jurisdictional water of the United States. Channel improvements at the existing outfall from the 15-acre pond to Deer Creek may require grading or other improvements of the bed or bank of Deer Creek at this location, leading to fill of waters of the United States. In addition, increased flows to Deer Creek resulting from improvements to adjacent ponds and ditches would occur as a result of discharges of urban stormwater runoff from the project site once it is developed. Potential indirect effects to downstream waters include reduction in water quality caused by urban runoff, erosion, and siltation, and increased flow volumes/altered hydrology. For the reasons stated above, impacts related to disturbance, degradation, or removal of federally protected waters of the United States in the off-site improvement areas are considered **potentially significant**.

Construction-related direct and indirect impacts on riparian habitat at the proposed channel improvements where an existing outfall connects to Deer Creek south of the 15-acre pond, that would fall under the jurisdiction of Section 1600 of the California Fish and Game Code, would be **potentially significant**.

> *Implement Mitigation Measure 3.5-1a (Minimize the Temporary Off-Site Construction Impact Footprint).*
>
> *Implement Mitigation Measure 3.5-1d (Implement an Off-Site Revegetation and Weed Control Plan).*
>
> *Mitigation Measure 3.5-9a: Avoid, Minimize, or Compensate for Loss of Waters of the United States and Waters of the State (2019 SOIA EIR Mitigation Measure 3.5-7).*

Before the start of construction activities both on- and off-site, the following measures shall be implemented to mitigate the potential loss of waters:

- Conduct a delineation of waters of the United States according to methods established in the USACE wetlands delineation manual (Environmental Laboratory 1987) and Arid West Supplement (Environmental Laboratory 2008) or applicable guidance manual that is in place at the time of application for proposed development that could adversely affect waters of the State or United States. The delineation shall map and quantify the acreage of all aquatic habitats and shall be submitted to USACE for verification and jurisdictional determination.

- Off-site improvements shall be planned and designed to avoid waters of the United States, including wetlands, and waters of the state to the maximum extent technically feasible and appropriate. Avoidance shall be deemed technically feasible and appropriate if the habitat may be preserved while still obtaining the project purpose and objectives and if the preserved aquatic habitat could reasonably be expected to continue to provide the same habitat functions following project implementation.

- The function of all wetlands and other waters that would be removed as a result of implementing the project shall be replaced or restored on a "no-net-loss" basis. Wetland habitat will be restored or replaced at an acreage and location and by methods agreeable to USACE and the Central Valley RWQCB, depending on agency jurisdiction, and as determined during the Section 401 and Section 404 permitting processes.

- Mitigation methods may consist of establishment of aquatic resources in upland habitats where they did not exist previously, reestablishment (restoration) of natural historic functions to a former aquatic resource, enhancement of an existing aquatic resource to heighten, intensify, or improve aquatic resource functions, or a combination thereof. The compensatory mitigation may be accomplished through purchase of credits from a USACE-approved mitigation bank, payment into a USACE-approved in-lieu fee fund, or through permittee-responsible on-site or off-site establishment, reestablishment, or enhancement, depending on availability of mitigation credits.

- If applicable, a USACE Section 404 Individual Permit and Central Valley RWQCB Section 401 water quality certification shall be obtained before any groundbreaking activity within 50 feet of waters of the United States or discharge of fill or dredge material into any water of the United States, or meet waste discharge requirements for impacts to waters of the state.

- A qualified biologist shall prepare a wetland mitigation plan to describe how the loss of aquatic functions for each project will be replaced. The mitigation plan will describe compensation ratios for acres filled, and mitigation sites, a monitoring protocol, annual performance standards and final success criteria for created or restored habitats, and corrective measures to be applied if performance standards are not met.

- Permittee-responsible mitigation habitat shall be monitored for a minimum of 5 years from completion of mitigation, or human intervention (including recontouring and grading), or until the success criteria identified in the approved mitigation plan have been met, whichever is longer.

- Water quality certification pursuant to Section 401 of the CWA, or waste discharge requirements (for waters of the state), will be required before issuance of a Section 404 permit. Before construction in any areas containing aquatic features that are waters of the United States, the project applicant(s) shall obtain water quality certification for the project. Any measures required as part of the issuance of water quality certification and/or waste discharge requirements (for waters of the state), shall be implemented. Project applicant(s) shall obtain a General Construction Stormwater Permit from the Central Valley RWQCB, prepare a stormwater pollution prevention plan, and implement best management practices (BMPs) to reduce water quality effects during construction.

Mitigation Measure 3.5-9b: Comply with the Section 1600 Streambed Alteration Agreement

- Before construction, the project applicant shall obtain a Section 1600 Streambed Alteration Agreement from CDFW for any activities proposed in or near Deer Creek and/or associated riparian vegetation that could potentially fall under the jurisdiction of CDFW. The project applicant shall implement all conditions in the permit, including any requirements for compensatory mitigation for loss of riparian habitat as part of the Section 1600 Streambed Alteration Agreement. Where feasible, the compensatory mitigation requirement may be combined with those for other mitigation measures such as that required for the USACE CWA Section 404 permit. To comply with Sacramento County General Plan policies related to compensation for the loss of riparian habitats, impacts on riparian habitat shall be mitigated by the preservation riparian habitat at a minimum 1:1 ratio, in perpetuity.

- If on-site restoration is selected as compensatory mitigation for impacts on riparian habitat, the project applicant shall prepare and implement Mitigation Measure 3.5-1d "Develop and Implement an Off-Site Revegetation and Weed Control Plan" to include reestablishment of riparian habitat, including riparian vegetation subject to CDFW jurisdiction, and/or enhancement of existing habitat, on a per-acre basis. To offset the temporary loss of riparian habitat during construction, the minimum mitigation ratio shall be no less than 1.5 acres of riparian habitat restored/created/enhanced for each acre of permanent or temporary impact. The revegetation and weed control plan shall include the following provisions for the restoration of affected riparian habitat:

    - Baseline data collection at reference sites in the project site to establish expected ranges and minimum thresholds for species composition, relative species richness, and vegetative cover (i.e., herbaceous, shrub, and/or woody canopy) for each sensitive habitat that would be affected.

    - An appropriate species planting palette for each sensitive habitat that would be affected.

    - Minimum planting densities designed to achieve minimum performance standards for survival cover and density, while maintaining the natural character of the vegetation community being restored/created.

    - Minimum performance standards for percent survival, species composition, relative species richness, and vegetative cover (i.e., herbaceous, shrub, and/or woody canopy) based on data collected from nearby reference sites and life history traits of the plants being restored (i.e., herbaceous versus woody, fast-growing primary colonizers versus slow-growing successional species).

- Compensation for the temporal loss of habitat resulting from the removal of trees. Any trees removed from riparian habitat shall be replaced with the same or similar species at a ratio of 3:1 (three [3] trees planted for every one [1] tree removed). Tree replacement may be carried out concurrently on riparian habitats that are also being restored/created/enhanced on a per-acre compensatory basis.

Implement Mitigation Measure 3.4-1a: (Implement the SMAQMD Basic Construction Emission Control Practices and Enhanced Exhaust Control Practices).

Significance after Mitigation

Implementation of Mitigation Measures 3.5-1a, 3.5-1d, 3.5-9a, 3.5-9b, and 3.4-1a would reduce potentially significant impacts on waters of the United States and waters of the state because they would require minimization of the project footprint, no-net-loss of function of aquatic and riparian habitat, and development and implement a BMP and water quality maintenance plan that conforms to applicable State and local regulations restricting surface water runoff to minimize adverse effects on water quality and indirect effects to downstream waters. With implementation of Mitigation Measures 3.5-1a, 3.5-9a, 3.5-9b, on-site and off-site improvements would be designed to minimize potential impacts. Therefore, as with the 2019 SOIA EIR, the impact is considered **less than significant with mitigation.**

Impact 3.5-10: Interference with Wildlife Nursery Sites or Migratory Corridors.

No native wildlife nursery sites have been identified in the Project site or within the off-site drainage improvements areas. The Project site consists almost entirely of agricultural land cover types that do not provide suitable breeding or nesting habitat for most species. Little natural vegetation and few trees or shrubs are available within the Project site to support nesting bird colonies, rookeries, or fawning areas, and there are no suitable trees or structures to support bat maternity roosts. No established migratory routes have been identified within the Project site and converting land in the Project site from agricultural to urban land uses would not cause any areas of natural habitat to become isolated. According to the California Essential Habitat Connectivity Project, the Project site is not located within a Natural Landscape Block or Essential Habitat Connectivity area (Spencer et al. 2010). The California Essential Habitat Connectivity Project provides a comprehensive, statewide assessment of large, relatively natural habitat blocks that support native biodiversity (Natural Landscape Blocks) and areas essential for ecological connectivity between them (Essential Connectivity Areas).

The off-site improvement areas contain sensitive natural communities including wetlands that could provide breeding and nesting habitat for a variety of special-status species (see Table 3.5-1). However, Mitigation Measures 3.5-1 through 3.5-9 provide the appropriate avoidance, minimization, and mitigation measures necessary to reduce impacts to special-status species and habitats to a less-than-significant level.

The SSHCP (County of Sacramento et al. 2018) describes Laguna Creek and the Cosumnes River/Deer Creek corridor as two key wildlife movement corridors in the SSHCP plan area that should be preserved to maintain movement and resident habitat for wildlife, preserve riparian habitat, and maintain hydrologic connections between preserves. The proposed Project would not remove any habitat within the Deer Creek corridor. At the conclusion of Project-related off-site improvements (i.e., widening and/or deepening) to the agricultural ditches that convey water to the Deer Creek outfalls along the northeastern property boundary and southeast of the 15-acre pond, these features would continue to serve as habitat and maintain hydrologic connections between

cropland/annual grassland and the Deer Creek corridor. Construction activities in the agricultural ditches and at the 15-acre pond would be short-term and temporary, and any work that would affect the bed, bank or channel of Deer Creek and/or associated riparian vegetation will be conducted in accordance with a Streambed Alteration Agreement issued by CDFW (See Mitigation Measure 3.5-9b).

The Project site and the off-site improvement areas are within the Pacific flyway, which is a major north-south route for migratory birds along western North America. As such, large numbers of migrating birds may move through the area seasonally and may congregate and forage in wetlands, grasslands, and agricultural fields during winter or use them as resting grounds during longer migrations from the Arctic to Central or South America. While migrating birds may use agricultural fields in the Project site and the area around the off-site improvement areas as winter resting (stop-over) and foraging habitat, loss of agricultural habitat from urban development of the Project site would not create a barrier to movement of migratory species. Loss of agricultural habitat on the Project site would not alter the character of existing habitat available to migrating birds along the Pacific flyway such that it would no longer function as a migratory corridor because abundant agricultural habitat of equal or better value would be available to migrating birds surrounding the project site. This agricultural habitat, along with the Cosumnes River and Preserve, Stone Lakes Wildlife Refuge, and the Woodbridge Ecological Reserve, would continue to support the needs of migratory birds and provide wildlife movement opportunities for other native resident or migratory wildlife species in the area.

Project development would not interfere substantially with the movement of any native resident or migratory wildlife species because the Project site does not currently provide an important connection between any areas of natural habitat that would otherwise be isolated, and converting land in the project site from agricultural to urban land uses would not cause any areas of natural habitat to become isolated. Furthermore, construction of the off-site improvements would be short-term and temporary, would not alter the Deer Creek migratory corridor, and would continue the existing hydrologic connections between the Deer Creek corridor and the cropland/annual grassland habitats to the west through the off-site agricultural ditches and ponds. Therefore, Project implementation would not have an adverse impact on wildlife movement or nursery sites, and this impact is considered **less than significant**.

Impact 3.5-11: Conflicts with Local Policies and Ordinances Protecting Biological Resources.

The Project site and the off-site improvement areas contain scattered native trees, including valley oaks, that would be considered trees of local importance under Section 19.12.040 of the City Code. In addition, as shown on Exhibits 3.5-1b and 3.5-1d, valley oak woodland habitat is present along Deer Creek where the conveyance channel from the 15-acre pond discharges to the creek, and at the eastern end of the northern-most drainage ditch. Both the conveyance ditch and the drainage ditch are proposed for widening and/or deepening.

Elk Grove General Plan Policy NR-2-1 acknowledges that trees can function as important natural habitat features and thus should be retained, to the extent possible. The large native oaks on- and off-site, as well as other large, nonnative, ornamental species in the eastern portion of the Project site, provide potential nest sites for raptors, including Swainson's hawk. Converting land within the Project site from agricultural to urban land uses, and construction of the off-site drainage improvements, could result in removal of trees protected under Chapter 19.12 of the Elk Grove Municipal Code ("Tree Preservation and Protection") and/or General Plan policy. The City's tree regulations and General Plan policies call for the preservation of large trees to the extent feasible; however, retaining trees on-site would still result in a loss of nesting habitat for Swainson's hawk and white-tailed kite

because these trees would be surrounded by urban land uses following development and would no longer be suitable for nesting by these species.

The off-site improvement areas consist of agricultural ditches and ponds. Removal of wetland or streamside habitat in off-site improvement areas could conflict with General Plan policies that call for the preservation of wetland and streamside habitats and habitat for special-status species (General Plan Policies NR-1-2, NR-1-5, and NR-1-7). In addition, General Plan Policy NR-1-3 recognizes open space lands of all types as important resources, which should be preserved in the region for a variety of uses, including for wildlife habitat. Because the Project site consists of agricultural open space that provides important habitat values for many species of wildlife, including the state-listed Swainson's hawk, loss of this on-site agricultural land to urban uses would conflict with this General Plan policy. In sum, there is a potential for conflict with the City's tree regulations and with General Plan policies through removal of large trees, aquatic habitat (canals and ditches, streamside habitat, and wetlands), and agricultural open space. Therefore, this impact is considered **potentially significant**.

Implement Mitigation Measure 3.5-3c (Implement the City of Elk Grove Swainson's Hawk Foraging Habitat Mitigation Program).

Implement Mitigation Measure 3.5-9a (Avoid, Minimize, or Compensate for Loss of Waters of the United States and Waters of the State).

Implement Mitigation Measure 3.5-9b (Comply with the Section 1600 Streambed Alteration Agreement).

Implement Mitigation Measure 3.2-2 (Prepare and Implement a Tree Mitigation Plan to Reduce Effects on Trees of Local Importance).

Significance after Mitigation

Implementation of Mitigation Measures 3.5-3c, 3.5-9a, 3.5-9b, and 3.2-2 would reduce potentially significant impacts related to conflicts with City ordinances and policies protecting biological resources because they would require avoidance of protected trees and aquatic and riparian habitats if technically feasible and would require compensation for loss of function of aquatic and riparian habitat and loss of agricultural habitat that provides habitat values for special-status species. With implementation of Mitigation Measures 3.5-3a, 3.5-9a, 3.5-9b, and 3.2-2, future development in the Project site and the off-site improvements area would be designed to minimize potential impacts. Therefore, as with the 2019 SOIA EIR, the impact is considered **less than significant with mitigation.**

Impact 3.5-12: Conflicts with the Provisions of an Adopted Habitat Conservation Plan.

The SSHCP, which was adopted in 2018, includes the Project site in its plan area; however, the City of Elk Grove is not a participant in the SSHCP.

As discussed in the 2019 SOIA EIR, the SSHCP identifies 67,618 acres of Urban Development Area (UDA), which corresponds with the County's USB, and 33,499 acres of planned impact within that UDA. The Project site is located within the UDA and therefore habitat loss within the Project site has been included in the SSHCP planned impact calculation. To offset the planned impacts that would occur within the UDA, the SSHCP Conservation Strategy calls for creation of an integrated preserve system that conserves the natural land covers, certain cropland, and irrigated pasture–grassland in the SSHCP plan area. The preserve system will preserve at

least 34,495 acres of existing habitat and reestablish or establish at least 1,787 acres of habitat for a total preserve system of 36,282 acres.

Mitigation Measures 3.5-1 through 3.5-9, including the option of mitigating through the City's Elk Grove Municipal Code Chapter 16.130 for Swainson's hawk impacts, are consistent with the avoidance, minimization, and mitigation measures for covered species described in the SSHCP. Therefore, development in the Project site and construction of the off-site drainage improvements would not conflict with the provisions of the SSHCP. Therefore, this impact is considered **less than significant**.

Impact 3.5-13: Loss of Riparian Habitat and Sensitive Natural Communities.

As shown in Exhibits 3.5-1a through 3.5-1d, riparian habitat and sensitive natural communities are present throughout the off-site improvement areas. Widening and/or deepening of existing off-site agricultural ditches and ponds could result in direct removal of sensitive natural communities or riparian habitats, as well as indirect effects from increased sedimentation and/or accidental spills during construction. Therefore, Project implementation could have a substantial adverse effect on riparian habitat and other sensitive natural communities identified in local or regional plans, policies, regulations, or by CDFW or USFWS. Therefore, this impact is considered **potentially significant**.

Implement Mitigation Measure 3.5-1a (Minimize the Temporary Off-Site Construction Impact Footprint).

Implement Mitigation Measure 3.5-1d (Implement an Off-Site Revegetation and Weed Control Plan).

Mitigation Measure 3.5-13: Avoid, Minimize, or Compensate for Loss of Riparian Habitat and Sensitive Natural Communities (2019 SOIA EIR Mitigation Measure 3.5-11).

- Retain a qualified botanist to identify, map, and quantify riparian habitat and other sensitive natural communities in proposed off-site improvement areas before final project design is completed. Off-site improvements shall be planned and designed to avoid loss or substantial degradation of riparian habitat and other sensitive natural communities, if technically feasible and appropriate. Avoidance shall be deemed technically feasible and appropriate if the features may be preserved while still obtaining the project purpose and objectives and if the preserved habitat/community could reasonably be expected to provide comparable habitat functions following project implementation. The avoidance measures shall include relocating off-site improvement components, as necessary and where practicable alternatives are available, to prevent direct loss of riparian habitats and other sensitive natural communities.

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

Implement Mitigation Measure 3.5-9b: (Comply with the Section 1600 Streambed Alteration Agreement)

Implement Mitigation Measure 3.4-1a: (Implement the SMAQMD Basic Construction Emission Control Practices and Enhanced Exhaust Control Practices).

Significance after Mitigation

Implementation of Mitigation Measures 3.5-1a, 3.5-1d, 3.5-9b, 3.5-13, and 3.4-1a would reduce potentially significant impacts related to riparian habitat and sensitive natural communities because they would require minimizing the off-site construction footprint, construction worker personnel training, implementing a revegetation and weed control plan, avoidance of sensitive riparian habitats if technically feasible, compensation for loss of riparian habitat and sensitive natural communities if they cannot be avoided, and control of fugitive dust during construction activities. With implementation of Mitigation Measures 3.5-1a, 3.5-1d, 3.5-9b, 3.5-13, and 3.4-1a, construction in the off-site improvement areas would be designed to minimize potential impacts. Therefore, as with the 2019 SOIA EIR, this impact is considered **less than significant with mitigation.**

3.6 CULTURAL AND TRIBAL CULTURAL RESOURCES

Comments received on the Notice of Preparation (NOP) were reviewed during preparation of this SEIR. The Native American Heritage Commission (NAHC) provided a comment letter noting the requirements of CEQA related to cultural resources, the requirements of Assembly Bill (AB) 52 related to Tribal Cultural Resources, the tribal consultation requirements of AB 52 and Senate Bill 18, and NAHC recommendations related to tribal consultation and inclusion of mitigation measures (where necessary). The Wilton Rancheria submitted a comment letter requesting maps of the proposed Project (which were provided by the City to the commenter on August 18, 2020). The City reviewed and considered this information during preparation of this chapter.

3.6.1 ENVIRONMENTAL SETTING

The environmental setting related to cultural resources has not changed since the 2019 SOIA EIR was prepared. However, since that time, the City has identified the need for additional off-site drainage improvements immediately adjacent to and extending south of the Project site. The same environmental setting that was presented in the 2019 SOIA EIR also applies to the proposed off-site improvement areas. A brief summary from the 2019 SOIA EIR Section 3.6, "Cultural Resources" and 2019 SOIA EIR Cultural Resources Appendix D, is presented below, along with the results of an updated records search and site visit.

Although the cultural and tribal cultural resources impact topics have areas of overlap and have been combined in order to avoid duplication and reduce page-length of the SEIR, it is important to understand that these are different types of resources. Separate significance thresholds have been used for cultural resources and tribal cultural resources; these thresholds, as listed in the CEQA Appendix G checklist, are presented below in Subsection 3.3, "Environmental Impacts and Mitigation Measures."

Cultural resources include districts, sites, buildings, structures, or objects generally older than 50 years and considered important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. They include prehistoric, historic-era, and Tribal Cultural Resources (the latter as defined by AB 52, Statutes of 2014, in Public Resources Code Section 21074).

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 resources include standing buildings (e.g., houses, barns, outbuildings, cabins), intact structures (e.g., dams, bridges, wells), or other remains of humans' alteration of the environment (foundation pads, remnants of rock walls).

Tribal Cultural Resources were added as a distinct resource subject to review under CEQA, effective January 1, 2015, under AB 52. This is a new category of resources under CEQA and includes site features, places, cultural landscapes, and sacred places or objects, which are of cultural value to a tribe. This new category of resources was added in order to recognize that tribes have unique knowledge and information about sensitive resources important to tribal communities.

PREHISTORIC PERIOD

The Project site and the off-site improvements areas are located in the traditional territory of the Plains Miwok, whose vast region included alluvial plains, Delta marshland, river channels, and upland ridges (Bennyhoff 1977).

Significant contact with European and Euroamerican immigrants occurred in the early 19th century as Spanish, Mexican, and American explorers arrived in the area. Plains Miwok populations were affected greatly by Spanish-era missionization, the rapid spread of diseases associated with large trapping companies, and the intensive settlement of the valley and foothills following the discovery of gold in 1848. Only four tribelets remained in their aboriginal territory by 1850, and, by 1880, the last tribelet that had resettled at what is today Elk Grove had also disappeared (Bennyhoff 1977). The closest recorded Plains Miwok ethnographic villages are Amuchamne and Shalachmushumne, approximately 0.7 mile and 0.8 mile, respectively, southeast of the Project site. These sites are within the Deer Creek/Cosumnes River floodplain, and are near the off-site improvement areas. The City of Elk Grove has previously identified prehistoric and historic Native American sites mostly located along rivers, creeks, and sloughs, and many if not all, have the potential to contain human remains (City of Elk Grove 2003).

Tribal Cultural Resources provide the backdrop to:

- religious understanding;
- traditional stories;
- knowledge of resources, such as varying landscapes, bodies of water, animals and plants; and
- self-identity.

Knowledge of place is central to the continuation and persistence of culture, even if former Native American occupants live removed from their traditional homeland. Consulting tribes view these interconnected sites and places as living entities; their associations and feeling persist and connect with descendant communities.

HISTORIC PERIOD

The Project site and the off-site improvements areas are located outside the Elk Grove City limits, south of Grant Line Road, and west of the Cosumnes River. The Project site itself is within the City's Planning Area. The community of Elk Grove was established by 1850 as a stage stop along the Monterey Trail and developed as an agricultural center after the arrival of the Central Pacific Railroad in the 1870s.

The Project site and the off-site improvements areas are located within the former boundaries of the Rancho Omochumnes Mexican land grant and were historically used for farming and ranching; the area continues to have similar land uses today. Dominant commodities originally included cattle, sheep, wheat, and barley, but later diversified into row crops, hops, fruits, nuts, and grapes. Many of these large ranches maintained their original property boundaries until the mid-20th century when they began to sell off lands for residential development. Page & Turnbull (2012) previously identified the area between Grant Line Road and the Cosumnes River as recommended for additional survey efforts to identify historic ranches and farms to further Elk Grove's historic preservation efforts. A review of maps and historic aerial photographs identified four extant clusters of buildings and structures among the agricultural fields that represent historic-age home sites and ancillary buildings supporting agricultural and ranching operations from the 1860s to the 1950s when agriculture was the pillar of the Elk Grove economy (Page & Turnbull 2012). The following describes the four extant farmsteads on the Project site and the off-site improvements areas, generally from north to south.

The Mosher Ranch at 10161 Grant Line Road (APN 134-0190-002) within the Project site and a portion of the off-site improvement area is one of the original ranches established in the Elk Grove area and is still in operation today. Samuel Hoover established the ranch in the 1860s and the original two-story 1868 brick ranch house remains on the property (Page & Turnbull 2012).

A portion of the Mahon Ranch at 10171 Grant Line Road (APN 134-0190-003) is part of the Project site and the off-site improvement area. John Mahon established the ranch in 1882, and it became one of the largest hops producers in the Elk Grove area. A two-story Stick-style residence constructed in 1891 and a horse barn constructed in 1921 are extant on the property. Mahon Ranch is an Elk Grove heritage ranch and the Elk Grove Historical Society notes that it was the best remaining example of a historic ranch in the Elk Grove area (Page & Turnbull 2012). However, neither the Mosher or Mahon ranch properties have been formerly recorded or evaluated for eligibility to a local, State, or national registry and were not included in the results of the North Central Information Center records search.

The building cluster within the Project site at 10313 Grant Line Road (APN 134-0190-010) is accessed via a long tree-lined driveway and the main house and a barn were built on the site as of 1909, according to historic maps. The two-story house appears to be constructed in the Italianate style, which was popular in the late nineteenth century. Review of historic aerials show the house, several barns, and a silo in place in 1937. Between 1961 and 1971, it appears a second residence and additional outbuildings were constructed on the parcel. A large barn extant on the parcel in 1937 was demolished circa 2013 (University of California, Santa Barbara [UCSB] 2017; NETRonline 2016).

Lastly, in the southern portion of the Project site is a house and barn cluster at 10351 Grant Line Road (APN 134-0190-013). According to historic aerials, the Ranch style house was built between 1937 and 1952 and the barn at the north side of the house was in place before 1961. The large barn east of the house was built between 1981 and 1998 (UCSB 2017; NETRonline 2016).

A former farm complex dating to at least 1937 was previously located at the northwestern end of APN 134-0190-009-0000 near Grant Line Road; however, the farmstead has undergone demolition of its various historic-period components since 2010. The building cluster had included a residence, large barn, and several outbuildings and fenced areas; however, the original house was replaced with a mobile home by 1971 and the large barn and other outbuildings were demolished from 2010 to the present. Today, no built environment is extant, however, the remnant driveway off the east side of Grant Line Road is still visible and a cluster of large oak trees that surrounded the original house location are still present. The area outside of the former house location and remnant trees is under cultivation, but the former house location is not (UCSB 2017; NETRonline 2016).

CULTURAL RESOURCES STUDIES

In addition to the previous studies summarized in the 2019 SOIA EIR, AECOM also requested an updated records search from the California Historical Resources Information System (CHRIS) North Central Information Center (NCIC) in Sacramento in August 2020. No additional resources were identified by the NCIC other than those already presented in the 2019 SOIA EIR and summarized above.

NATIVE AMERICAN CONSULTATION

In addition to the Native American consultation performed for the 2019 SOIA EIR, the Native American Heritage Commission (NAHC) was contacted in August 2020 to obtain a CEQA tribal consultation list and to request a search of the Sacred Lands File related to the off-site improvement areas. In its response dated August 10, 2020, the NAHC stated that the Sacred Lands File did indicate the presence of Native American resources in the vicinity of the off-site improvement areas. The NAHC also listed six Native American organizations and individuals who may have knowledge of cultural resources in the off-site improvement areas: Buena Vista Rancheria of Me-Wuk

Indians, Ione Band of Miwok Indians, Nashville Enterprise Miwok-Maidu-Nishinam Tribe, Shingle Springs Band of Miwok Indians, United Auburn Indian Community of the Auburn Rancheria, and the Wilton Rancheria. The City sent letters to these parties on August 22, 2020 inviting consultation for the Project.

CULTURAL RESOURCE FIELD INVESTIGATIONS

AECOM performed a site visit of the off-site improvement areas in August 2020. During the site visit, one historic (circa 1900, according to the landowner) hand-dug ditch is present that conveys water from the 15-acre pond to the outfall in Deer Creek. In this vicinity, a historic fence was also identified. However, both the ditch and the fence are still in use today as part of active, ongoing off-site agricultural operations by the landowner, and these operations will continue after the Project site is developed.

3.6.2 REGULATORY FRAMEWORK

CITY OF ELK GROVE GENERAL PLAN

The City General Plan (City of Elk Grove 2019), contains the following policies related to cultural resources that are applicable to the proposed Project.

- **Policy HR-1-1:** Encourage the preservation and enhancement of existing historical and archaeological resources in the City.
- **Policy HR-1-2:** Strive to preserve historic buildings and resources through adaptive re-use.
- **Policy HR-2-1:** Protect and preserve prehistoric and historic archaeological resources throughout the City.
- **Policy HR-2-2:** Consult when appropriate with local Native American tribes, the Native American Heritage Commission, and any other appropriate organizations and individuals to minimize potential impacts to cultural and tribal resources.
- **Policy HR-2-3:** Identify and evaluate local archaeological resources for inclusion in the National Register of Historic Places.

3.6.3 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines and Public Resources Code Section 21074, the proposed Project would have a significant impact related to cultural and tribal cultural resources if it would:

- cause a substantial adverse change in the significance of a unique archaeological resource or a historical resource as defined in Section 21083.2 of the Public Resources Code and Section 15064.5 of the CEQA Guidelines, respectively;
- disturb any human remains, including those interred outside formal cemeteries; or
- cause a substantial adverse change in the significance of a tribal cultural resource defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geologically defined in terms of

the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- listed or eligible for listed in the California Register of Historical Resources, or in local register of historical resources as defined in Public Resources Code section 5020.1(k); or

- 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 Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Section 15064.5 of the CEQA Guidelines defines "substantial adverse change" as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the resource would be materially impaired. The significance of a historical resource is materially impaired when a project results in demolition or material alteration in an adverse manner of those physical characteristics of a resource that:

- conveys its historical significance and that justify its inclusion in, or eligibility for inclusion in, the CRHR;

- accounts for its inclusion in a local register of historical resources pursuant to Public Resources Code Section 5020.1(k) or its identification in a historical resources survey meeting the requirements of Public Resources Code Section 5024.1(g), unless the public agency reviewing the effects of the proposed project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

- conveys its historical significance and that justify its eligibility for inclusion in the CRHR, as determined by a lead agency for purposes of CEQA.

IMPACT ANALYSIS

Impact 3.6-1: Substantial Adverse Change in the Significance of Known Historical Resources.

Historical resources include any properties listed in, or found eligible for inclusion in the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), or those included in a local register of historical resources, as well as unique archaeological resources. The fact that a resource is not listed in, or determined to be eligible for listing in the NRHP, the CRHR, or not included in a local register of historical resources shall not preclude a lead agency from determining whether the resource may be an historical resource for purposes of CEQA. In addition to assessing whether historical resources potentially impacted by a proposed project are listed or have been identified in a survey process, lead agencies have a responsibility to evaluate them against the California Register criteria prior to making a finding as to a proposed project's impacts to historical resources (Public Resources Code Section 21084.1, CEQA Guidelines Section 15064.5[3]).

There are no known historical resources or unique archaeological resources that have been identified within the Project site. A historic hand-dug ditch and historic fence were identified during AECOM's 2020 site visit to the off-site improvement areas, in the vicinity of the 15-acre pond. However, both of these features are currently being used as part of active, ongoing off-site agricultural operations by the landowner. Furthermore, use of these features will continue as part of ongoing off-site agricultural operations after the off-site drainage features are

improved. Therefore, Project-related drainage improvements would not have an adverse effect on these two features, and there would be **no impact.**

Impact 3.6-2: Potential to Cause a Substantial Adverse Change in the Significance of an Unknown Historical Resource or Unique Archeological Resource.

The Project site has moderate sensitivity for archaeological resources, which increases to high sensitivity for prehistoric archaeological resources in the vicinity of the off-site drainage improvements areas near Deer Creek, where fluvial processes may have buried archaeological deposits. Although no evidence of prehistoric occupation or land use was identified during the archeological surface survey, the potential exists for the presence of buried soils and associated archaeological deposits. Furthermore, the recorded Plains Miwok ethnographic villages of Amuchamne and Shalachmushumne are located approximately 0.25–0.5 mile southeast of the off-site improvement areas. Therefore, the potential for encountering significant archaeological resources in the Project site and the off-site improvements areas is moderate to high.

As discussed in the 2019 SOIA EIR, because the potential for encountering potentially significant built-environment resources in the Project site is moderate to high, additional studies of built-environment resources will be conducted as part of future site-specific CEQA impact assessments and mitigated according to the parameters defined in this SEIR. The Project site contains four clusters of extant buildings and structures, including the Mosher and Mahon ranches, which were described by Page & Turnbull (2012) as early ranches in the area. The other two agricultural properties in the project site were developed by 1909 and 1952. None of these properties have been evaluated against CRHR or under the City of Elk Grove Historic Preservation Ordinance Landmark Designation Criteria (Chapter 7.00.050) and could potentially be identified as historical resource upon further evaluation. Although no built-environment historical resources are known to exist within the Project site or the off-site improvements areas, it is possible that historical resources—either previously unknown or whose significance was previously unknown—could be affected by Project-related construction. Unless properly evaluated and managed, this could result in a significant impact to one or more historic-age built environment historical resource(s). This impact is considered **potentially significant**.

Mitigation Measure 3.6-2a: Conduct a Cultural Resources Inventory for Archaeological and/or Historic Architectural Resources and Tribal Cultural Resources (2019 SOIA EIR Mitigation Measure 3.6-2a).

Archaeology

- Prior to the approval of development projects and off-site improvements, the City will require that a qualified cultural resources specialist conduct a survey and inventory for archaeological resources that would include field survey, review of updated information from the North Central Information Center and other applicable data repositories. Additional consultation with relevant tribal representatives may be appropriate, depending on the relative level of cultural sensitivity, as identified by traditionally and culturally affiliated California Native American tribes.
- Management recommendations may include, but are not limited to additional studies to evaluate identified sites or archaeological monitoring at locations determined by a qualified archaeologist in consultation with culturally affiliated California Native American tribes to be sensitive for subsurface cultural resource deposits related to the off-site improvements areas south and southeast of the Project site.

- All identified cultural resources will be recorded using the appropriate California Department of Parks and Recreation (DPR) cultural resources recordation forms. The results of the inventory efforts will be documented in a technical report and submitted to the City. Cultural resources will be evaluated for eligibility for inclusion in the CRHR and the Elk Grove Register of Historic Resources and evaluations will be conducted by individuals who meet the Secretary of the Interior's professional qualification standards in archaeology. If the evaluation is negative (i.e., not historically significant), no further mitigation is required. If the property is found to be an historical resource, the project proponent shall be required to implement mitigation if the proposed project has a substantial adverse change to a historical resource, including physical damage, destruction, relocation, or alteration of the property that materially alters in an adverse manner those physical characteristics of the property that conveys its significant for inclusion in or eligibility for the CRHR or local register.

Historic Architecture

- Prior to the approval of development projects and off-site drainage improvements, the City will require that a qualified cultural resources specialist conduct a survey and inventory for historic-age built environment resources. The inventory will include a field survey, review of updated information from the North Central Information Center and other applicable data repositories, and interested parties outreach. All identified resources will be recorded using the appropriate California Department of Parks and Recreation (DPR) cultural resources recordation forms. The results of the inventory efforts will be documented in a technical report and submitted to the City. Cultural resources will be evaluated for eligibility for inclusion in the CRHR and the Elk Grove Register of Historic Resources and evaluations will be conducted by individuals who meet the Secretary of the Interior's professional qualification standards in history and/or architectural history. If the evaluation is negative (i.e., not historically significant), no further mitigation is required. If the property is found to be an historical resource, the project proponent shall be required to implement mitigation if the proposed project has a substantial adverse change to a historical resource, including physical damage, destruction, relocation, or alteration of the property that materially alters in an adverse manner those physical characteristics of the property that conveys its significant for inclusion in or eligibility for the CRHR or local register.

Mitigation Measure 3.6-2b: Avoid Effects on Historical Resources (2019 SOIA EIR Mitigation Measure 3.6-2b).

Archaeology and Historic Architecture

If the survey and evaluation required in Mitigation Measure 3.6-2a determines that a cultural resources site is an historical resource for the purposes of CEQA, the development project(s) will be redesigned to avoid the historical site(s). The historic site(s) will be deeded to a nonprofit agency to be approved by the City for the maintenance of the site(s). If avoidance is determined to be infeasible by the City, the applicant will prepare a treatment plan to minimize adverse effects, relocate resources, if feasible, and conduct all required documentation (in addition to the items above) in accordance with appropriate standards:

- The development of a site-specific history and appropriate contextual information regarding the particular resource; in addition to archival research and comparative studies, this task could involve limited oral history collection.
- Accurate mapping of the noted resource(s), scaled to indicate size and proportion of the structure(s).

- Architectural description of affected buildings and structures.
- Photo documentation of the designated resources.
- Recordation of measured architectural drawings, in the case of specifically designated buildings of higher architectural merit.
- Any historically significant artifacts within buildings and the surrounding area shall be recorded and may be deposited with the appropriate museum or collection with the consent of their owners.
- Document the affected historical resource and integrate aspects of the historical resource into an interpretive display panel and/or signage for public exhibition concerning the history of the resource. The display and/or signage can be based on the photographs, measured architectural drawings, salvaged material, and site-specific contextual information

Mitigation Measure 3.6-2c: Stop Work If Any Prehistoric or Historical Subsurface Cultural Resources Are Discovered, Consult a Qualified Archaeologist to Assess the Significance of the Find, and Implement Appropriate Measures, as Required (2019 SOIA EIR Mitigation Measure 3.6-2c).

Archaeology

- If previously unknown archaeological cultural resources (i.e., prehistoric sites, historical sites, and isolated artifacts) are discovered during construction work, work shall be halted immediately within 50 feet of the discovery, the City shall be notified, and a professional archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards shall be retained to determine the significance of the discovery.
- If any elements of the on-site development or the off-site drainage improvements will impact an archaeological site, including those determined to be a Tribal Cultural Resource, and avoidance is not a feasible option, a qualified archaeologist, in consultation with traditionally and culturally affiliated California Native American tribes, shall evaluate the eligibility of the site for listing in the California Register of Historical Resources. If the archaeological site is found to be a historical resource as per CEQA Guidelines Section 15064.5 (a)(3), the qualified archaeologist shall recommend further mitigative treatment, which could include preservation in place or data recovery.
- If a site to be tested is prehistoric, the City will determine the need for tribal monitoring.
- If significant archaeological resources that meet the definition of historical or unique archaeological resources, including those determined by the City to be Tribal Cultural Resources, are identified in the project area, the preferred mitigation of impacts is preservation in place. If impacts cannot be avoided through project design, appropriate and feasible treatment measures are required, which may consist of, but are not limited to actions, such as data recovery excavations. If only part of a site will be impacted by the project or the off-site improvements, data recovery will only be necessary for that portion of the site. Data recovery will not be required if the implementing agency determines prior testing and studies have adequately recovered the scientifically consequential information from the resources. Studies and reports resulting from the data recovery shall be deposited with the North Central Information Center.
- The project proponent shall be required to implement any mitigation necessary for the protection of archaeological cultural resources, including Tribal Cultural Resources.

Significance after Mitigation

Archaeology

Implementation of Mitigation Measures 3.6-2a, 3.6-2b, and 3.6-2c would reduce the potential impacts on unknown archaeological cultural resources. With implementation of the above mitigation measures, existing cultural resources regulations, and as conditions of approval for development within the Project site, the on- and off-site project development would be designed to identify previously unknown archaeological cultural resources and minimize potential impacts.

However, even with the implementation of Mitigation Measures 3.6-2a, 3.6-2b, and 3.6-2c, it is possible that Project-related construction both on- and off-site could cause substantial adverse change if it would result in the physical demolition, destruction, relocation, or alteration of a historical resource or its immediate surroundings in such a way that it would adversely affect those physical characteristics that conveys its historical significance. Therefore, this impact is considered **significant and unavoidable**.

No archaeological cultural resources were identified in the City-owned parcel as a result of a CHRIS records search, tribal consultation, or field survey. Enforcement of mitigation measures, existing cultural resources regulations, City of Elk Grove policies, and conditions of approval for the City-owned property would reduce the potential impacts on unknown archaeological cultural resources to a **less-than-significant level with mitigation** on the City-owned parcel.

Historic Architecture

No historic-period built environment cultural resources were identified in the City-owned parcel as a result of a CHRIS records search or field survey. Implementation of Mitigation Measures 3.6-2a, 3.6-2b, and 3.6-2c, existing cultural resources regulations, and City of Elk Grove policies, and conditions of approval for development in the City-owned parcel would reduce the potential impacts on historic-period cultural resources to a **less-than-significant level with mitigation**.

Implementation of Mitigation Measures 3.6-2a, 3.6-2b, and 3.6-2c would reduce the potential impacts on unknown historic-age built environment cultural resources. With enforcement of these mitigation measures, existing cultural resources regulations, and City of Elk Grove policies, and as conditions of approval for projects located outside the City-owned parcel would be designed to identify previously unknown historic-age built environment cultural resources and minimize potential impacts.

However, even with the implementation of Mitigation Measures 3.6-2a, 3.6-2b, and 3.6-2c, it is possible that Project-related construction both on- and off-site could cause substantial adverse change if it would result in the physical demolition, destruction, relocation, or alteration of a historical resource or its immediate surroundings in such a way that it would adversely affect those physical characteristics that conveys its historical significance. Therefore, this impact is considered **significant and unavoidable**.

Impact 3.6-3: Substantial Adverse Change to a Tribal Cultural Resource.

As a part of the 2019 SOIA EIR, AECOM requested the NAHC to conduct a Sacred Lands File search to determine the presence of known Tribal Cultural Resources. The Sacred Lands File search failed to indicate the presence of any known Tribal Cultural Resources. During the process of preparing the 2019 SOIA EIR, early

consultation with culturally and traditionally geographically affiliated Native American tribes identified by the NAHC was initiated on November 19, 2015. These groups and individuals were sent letters, emails, and follow-up phone calls inviting consultation and information about any cultural resources in the vicinity of the SOIA Area, including Tribal Cultural Resources. No Tribal Cultural Resources were identified.

As noted previously, the NAHC was contacted in August 2020 to obtain a CEQA tribal consultation list and to request a search of the Sacred Lands File. In its response from August 2020, the NAHC stated that the Sacred Lands File did indicate the presence of Native American resources in the vicinity of the off-site improvement area. The impact is considered **significant**.

Implement Mitigation Measure 3.6-2a (Conduct a Cultural Resources Inventory for Archaeological and/or Historic Architectural Resources and Tribal Cultural Resources).

Implement Mitigation Measure 3.6-2b (Avoid Effects on Historical Resources).

Mitigation Measure 3.6-2c (Stop Work If Any Prehistoric or Historical Subsurface Cultural Resources Are Discovered, Consult a Qualified Archaeologist to Assess the Significance of the Find, and Implement Appropriate Measures, as Required).

Significance after Mitigation

Implementation of Mitigation Measures 3.6-2a, 3.6-2b, and 3.6-2c would help to protect tribal cultural resources, because these measures require preparation of site- specific archaeological surveys, proper treatment of materials encountered during construction activities, incorporation of measures to protect archaeological resources, and preservation/avoidance of archaeological resources as feasible. However, significant impacts to tribal cultural resources may still occur. No other feasible mitigation measures are available. Therefore, the impact of the proposed Project on tribal cultural resources is considered **significant and unavoidable**.

Impact 3.6-4: Disturbance of Human Remains.

While no evidence for prehistoric or early historic interments was found in the Project site or the off-site improvement areas through background research and field surveys, this does not preclude the existence of buried subsurface human remains. Prehistoric archaeological sites including some that contain human remains have been identified in other areas of Sacramento County. The likelihood of inadvertently exposing currently unknown archaeological resources, including those containing human remains during future development in the Project site and the off-site improvement areas, cannot be dismissed. The inadvertent exposure of previously unidentified human remains, including those interred outside of formal cemeteries, would be a **potentially significant** impact.

California law recognizes the need to protect historic-era and Native American human burials, skeletal remains, and items associated with Native American interments from vandalism and inadvertent destruction. The procedures for the treatment of Native American human remains are contained in California Health and Safety Code Section 7050.5 and Section 7052 and California Public Resources Code Section 5097.

Mitigation Measure 3.6-4: Halt Construction if Human Remains are Discovered and Implement Appropriate Actions (2019 SOIA EIR Mitigation Measure 3.6-4).

- In accordance with California law described above, if human remains are uncovered during future ground-disturbing activities, the project applicant(s) and/or their contractors would be required to halt

potentially damaging excavation in the area of the burial and notify the County Coroner and a professional archaeologist to determine the nature of the remains. The coroner would be required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (California Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she must contact the NAHC by phone within 24 hours of making that determination (California Health and Safety Code Section 7050[c]). The responsibilities for acting upon notification of a discovery of Native American human remains are identified in California Public Resources Code Section 5097.9. Following the coroner's findings, the property owner, contractor or project proponent, an archaeologist, and the NAHC-designated Most Likely Descendant will determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed.

- Upon the discovery of Native American remains, project applicant(s) and/or their contractors would be required to ensure that the immediate vicinity (according to generally accepted cultural or archaeological standards and practices) is not damaged or disturbed by further development activity until consultation with the Most Likely Descendant has taken place. The Most Likely Descendant would have 48 hours to complete a site inspection and make recommendations after being granted access to the site. A range of possible treatments for the remains, including nondestructive removal and analysis, preservation in place, relinquishment of the remains and associated items to the descendants, or other culturally appropriate treatment may be discussed. Public Resources Code Section 5097.9 suggests that the concerned parties may extend discussions beyond the initial 48 hours to allow for the discovery of additional remains. The following is a list of site protection measures that could be employed:

    1. record the site with the NAHC and the appropriate Information Center,
    2. use an open-space or conservation zoning designation or easement, and
    3. record a document with the county in which the property is located.

- If the NAHC is unable to identify a Most Likely Descendant or the Most Likely Descendant fails to make a recommendation within 48 hours after being granted access to the site, the Native American human remains and associated grave goods would be reburied with appropriate dignity on the subject property in a location not subject to further subsurface disturbance.

Significance after Mitigation

Compliance with California Health and Safety Code, California Public Resources Code, and the applicable City General Plan policies would reduce potential impacts on previously undiscovered human remains. Prehistoric and historic Native American sites are generally located along rivers, creeks, and sloughs, and many if not all, have the potential to contain human remains (City of Elk Grove 2003). Implementing Mitigation Measure 3.6-4 would ensure that any human remains encountered during construction would be treated in an appropriate manner under CEQA and other applicable laws and regulations. If the discovery could potentially be human remains, compliance with Health and Safety Code Section 7050 et seq. and Public Resources Code Section 5097.9 et seq. would be required. Therefore, this impact would be **less than significant with mitigation.**

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3.7 GEOLOGY, SOILS, MINERALS, AND PALEONTOLOGICAL RESOURCES

Comments received on the Notice of Preparation (NOP) were reviewed during preparation of this SEIR. However, no comments related to geology, soils, minerals, or paleontological resources were received.

3.7.1 ENVIRONMENTAL SETTING

As described in the 2019 SOIA EIR, active faults (i.e., faults that have exhibited evidence of movement during the last 11,700 years) are located approximately 30–40 miles west of the Project site and off-site improvement areas, along the western margin of the Central Valley and in the Coast Ranges (Jennings and Bryant 2010). The Foothills Fault System is approximately 23 miles east of the Project site and the off-site improvement areas, but faults in this system are not classified as active (Jennings and Bryant 2010). Therefore, strong seismic ground shaking is unlikely to occur. Because the Project site and the off-site improvements areas are relatively flat, seismically-induced landslides would not occur.

As shown in Exhibit 3.7-1, in addition to the soil types at the Project site that were identified in the 2019 SOIA EIR, the off-site drainage improvements would also be constructed in the following soil types: San Joaquin Silt Loam leveled 0–1% slopes, San Joaquin silt loam 3–8% slopes, San Joaquin-Durixeralfs complex 0–1% slopes, San Joaquin-Xerarents Complex leveled 0–2% slopes, and the Xerarents-San Joaquin complex 0–1% slopes (U.S. Natural Resources Conservation Service [NRCS] 2019). These soils are rated as very limited for excavation because they have a high clay content, a shallow depth to a cemented hardpan, and are unstable for excavation sidewalls (NRCS 2019).

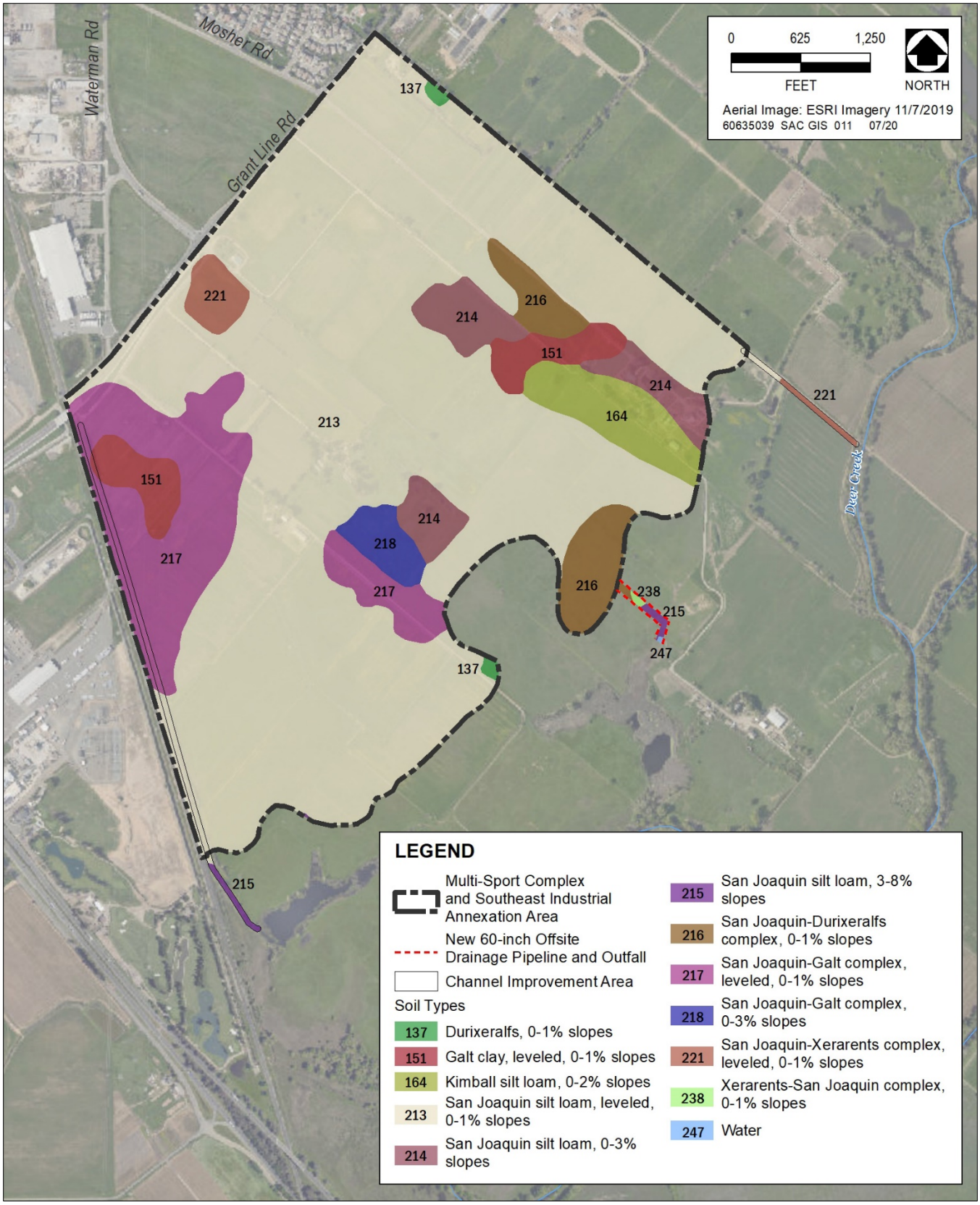
The Project site and the off-site improvements areas are not classified as containing regionally significant deposits of mineral resources (i.e., Mineral Resource Zone [MRZ] 2). Instead, these areas are classified as MRZ 3—areas containing mineral deposits, the significance of which cannot be evaluated from existing data (Dupras 1999:Plate 3). Furthermore, there are no natural gas or oil wells in the vicinity (California Geologic Energy Management Division [CalGEM] 2020).

The Project site and the off-site improvements areas are underlain by the Pleistocene-age Riverbank Formation (Wagner et al. 1981). An updated records search of the U.C. Berkeley Museum of Paleontology (UCMP) was performed by AECOM in July 2020; there are no recorded fossil localities within the Project site or the off-site improvements areas (UCMP 2020). As discussed in the 2019 SOIA EIR, the Riverbank Formation is considered paleontologically sensitive due to the number of vertebrate fossils that have been recovered therein throughout the Central Valley.

3.7.2 REGULATORY FRAMEWORK

CITY OF ELK GROVE CONSTRUCTION SPECIFICATIONS AND IMPROVEMENT STANDARDS MANUALS

The City's *Construction Specifications Manual* provides construction requirements that apply primarily to the provision of public safety and access to sidewalks and roadways during construction, including traffic controls, as well as construction standards related to utilities and trenching (City of Elk Grove 2020a).



Source: NRCS 2020

Exhibit 3.7-1. Soil Types

The City's *Standard Specifications Manual* contains the requirements for improvement plans, and provides direction for design of streets, streetlights, sound barriers, traffic analyses, storm drainage, grading, stormwater quality protection, and traffic signals (City of Elk Grove 2020b).

CITY OF ELK GROVE GENERAL PLAN

The City's General Plan (City of Elk Grove 2019), contains the following policy related to geology and soils that are applicable to the proposed Project. There are no mineral deposits or mineral extraction activities located within the Planning Area; thus, the City General Plan does not contain any policies to address mineral resources (City of Elk Grove 2019:7-25). There are no policies in the City's General Plan related to paleontological resources.

Services, Health, and Safety Element

- **Policy ER-3-2:** Seek to ensure that new structures are protected from damage caused by geologic and/or soil conditions.

3.7.3 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact related to geology, soils, paleontological resources, or minerals if it would:

- directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
    - rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;
    - strong seismic ground shaking;
    - seismic-related ground failure, including liquefaction; or
    - landslides;
- result in substantial soil erosion or the loss of topsoil;
- be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse; or
- be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial risks to life or property;
- have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water;

- directly or indirectly destroy a unique paleontological resource or site or unique geologic feature;
- result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; or
- result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

Paleontological Resources

Based on Appendix G of the CEQA Guidelines, the proposed project would have significant impacts on paleontological resources if it would directly or indirectly destroy a unique paleontological resource or site. A "unique paleontological resource or site" is one that is considered significant under the following professional paleontological standards.

An individual vertebrate fossil specimen may be considered unique or significant if it is identifiable and well preserved, and it meets one of the following criteria:

- a type specimen (i.e., the individual from which a species or subspecies has been described);
- a member of a rare species;
- a species that is part of a diverse assemblage (i.e., a site where more than one fossil has been discovered) wherein other species are also identifiable, and important information regarding life history of individuals can be drawn;
- a skeletal element different from, or a specimen more complete than, those now available for its species; or
- a complete specimen (i.e., all or substantially all of the entire skeleton is present).

The value or importance of different fossil groups varies, depending on several factors: the age and depositional environment of the rock unit that contains the fossils; their rarity; the extent to which they have already been identified and documented; and the ability to recover similar materials under more controlled conditions (such as for a research project). Marine invertebrates generally are common, the fossil record is well developed and well documented, and they would generally not be considered a unique paleontological resource. Identifiable vertebrate marine and terrestrial fossils generally are considered scientifically important because they are relatively rare.

ISSUES NOT DISCUSSED FURTHER

The following issues were dismissed from further detailed analysis in the 2019 SOIA EIR because it was determined that no impact would occur; for the reasons explained below, these issues would also result in no impact for the proposed Project as evaluated in this SEIR.

Expose People or Structures to Hazards from Surface Fault Rupture—The Project site and the off-site improvements are not located within or near an Alquist-Priolo Earthquake Fault Zone (California Geological Survey [CGS] 2020), and the nearest known faults are approximately 23 miles to the east within the Foothills

Fault System. Therefore, no impacts related to loss, injury, or death involving rupture of a known earthquake fault would occur, and this issue is not addressed further in this SEIR.

Expose People or Structures to Landslides—The Project site and the off-site improvements areas are characterized by flat topography. Therefore, landslides would not represent a hazard for the proposed Project and there would be no impact. This issue is not addressed further in this SEIR.

Have Soil Unsuitable for Septic Systems—The use of an on-site wastewater disposal system is not proposed as part of the Project; therefore, no impact related to the ability of soils to support the use of septic systems would occur. This issue is not addressed further in this SEIR.

Loss of Known Regionally or Locally Important Minerals—The Project site and the off-site improvements areas are not located within a regionally-designated area of known important mineral resources. Furthermore, the City's General Plan states there are no mineral deposits or mineral extraction activities located within the Planning Area, and thus does not contain any designated mineral resource recovery areas. Finally, the off-site drainage pipeline would be extended into the unincorporated area of Sacramento County, and the *Sacramento County 2030 General Plan* indicates that the County has not designated any areas of locally important mineral resources in the vicinity of the Project site or off-site improvement areas (Sacramento County 2017:15). Thus, there would be no impact, and this issue is not addressed further in this SEIR.

IMPACT ANALYSIS

Impact 3.7-1: Exposure to Strong Seismic Ground Shaking.

The Sacramento Valley has historically experienced low levels of seismic activity. Known active faults that pose a hazard for strong seismic ground shaking are located along the margin between the western edge of the Central Valley and the Coast Ranges, and within the Coast Ranges themselves. These faults are located 30–40 miles west of Elk Grove. Faults in the Foothills Fault System, approximately 23 miles to the east, are not classified as active. The intensity of ground shaking depends on the distance from the earthquake epicenter to the site, the magnitude of the earthquake, and site soil conditions. Peak horizontal ground acceleration (PGA), which is a measure of the projected intensity of ground shaking from seismic events, can be estimated by probabilistic method using a computer model. The CGS Probabilistic Seismic Hazards Assessment Model (CGS 2008) indicates there is a 1-in-10 probability that an earthquake within 50 years would result in a PGA of approximately 0.189 at the Project site and 0.187 along the off-site drainage pipeline. These estimates indicate that a very low level of seismic shaking would be anticipated for the Project site and the off-site improvements areas.

Future projects within the Project site will be required by law to comply with seismic safety standards of the California Building Standards Code (CBC). The CBC requires an evaluation of seismic design that falls into Categories A through F (where F requires the most earthquake-resistant design) for structures designed for a project site. The CBC philosophy focuses on "collapse prevention," meaning that structures are designed for prevention of collapse for the maximum level of ground shaking that could reasonably be expected to occur at a site. Based on the seismic design category, the CBC requires an analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading, plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also requires that measures to reduce damage from seismic effects be incorporated in structural design. Measures may include ground stabilization, selection of appropriate foundation type and depths, selection of

appropriate structural systems to accommodate anticipated displacements, or any combination of these measures. The City requires that all structures be designed in accordance with the CBC. In addition, roads and underground pipelines must be engineered and constructed according to the City's Construction Specifications, Improvement Standards, and Standard Drawings, which are designed to avoid risk to life and property related to seismic ground sharking. Compliance with existing regulations ensures that this impact would be **less than significant**.

Impact 3.7-2: Seismic-Related Ground Failure.

Seismically-induced liquefaction is a process by which water-saturated materials lose strength and may fail during strong ground shaking, when granular materials are transformed from a solid state into a liquefied state as a result of increased pore-water pressure. Structures on soil that undergoes liquefaction may settle or suffer major structural damage. Factors determining liquefaction potential are soil type, level and duration of ground motions, and depth to groundwater. Liquefaction is most likely to occur in low-lying areas where the substrate consists of poorly consolidated to unconsolidated water-saturated sediments, recent Holocene-age sediments, or deposits of artificial fill.

Active seismic sources are a relatively long distance away, and the Project site and the off-site improvement areas are underlain by the stable, Pleistocene-age Riverbank Formation. Furthermore, the depth to groundwater is approximately 60 feet below the ground surface (California Department of Water Resources 2018). These factors indicate that seismically-induced liquefaction at the Project site and the off-site improvements areas is unlikely. Finally, design and construction of development projects within the Project site would be conducted in accordance with the CBC, which identifies minimum requirements for preparing site-specific, design-level geotechnical reports characterizing the geologic conditions, defining seismic loads, evaluating the response of the foundation systems, and addressing potential seismic hazards, including liquefaction. Therefore, this impact would be **less than significant.**

Impact 3.7-3: Unstable Soils.

In addition to seismic activity, liquefaction can also be triggered by the presence of heavy equipment on unstable soils, particularly adjacent to and within watercourses, and within waterlogged soils away from watercourses that are underlain by a shallow hardpan. Lateral spreading is the horizontal movement or spreading of soil toward an open face, such as a streambank, the open side of fill embankments, or the sides of levees. Soil bearing capacity is the ability of soil to support structures; areas where soil bearing capacity is too low to support structures may experience subsidence and settlement.

A review of NRCS (2019) soil survey data indicates that the Durixeralfs, Galt clay, Kimball silt loam, and San Joaquin–Galt complex soils are rated as very limited for construction of buildings and roads because of low soil bearing strength, which in turn could result in hazards from subsidence and settlement. In addition, the soils in the off-site drainage pipeline area have a shallow depth to a cemented hardpan, which could result in liquefaction during the rainy season from the presence of heavy construction equipment. Lateral spreading could also occur adjacent to the ponds where drainage improvements are proposed. However, compliance with the CBC requirements to prepare geotechnical engineering reports that include specific recommendations for construction in unstable soils, as well as compliance with the City's *Improvement Standards Manual*, would ensure that foundations for buildings and parking lots, as well as underground pipelines, are designed appropriately based on site-specific conditions. Compliance with existing regulations ensures that this impact would be **less than significant**.

Impact 3.7-4: Soil Erosion or Loss of Topsoil.

During the construction process associated with future development and installation of utilities, earth-moving activities would expose soils to potential erosion from wind and water. Earthmoving activities during the winter months would expose soils to rain events, which could mobilize loose soil and result soil erosion. Subsequent soil transport during storm events could result in sedimentation both within and downstream of the Project site and the off-site improvements areas. Furthermore, earthmoving activities during the summer months could result in wind erosion. However, prior to the start of earthmoving activities, applicants must obtain a grading permit from the City, and must demonstrate that all appropriate measures to reduce soil erosion would be implemented.

Furthermore, future project applicants are required by law to comply with the provisions of the State Water Resources Control Board's (SWRCB) *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated With Construction and Land Disturbance Activities* (Order 2009-009-DWQ as amended by Order 2012-0006-DWQ) (Construction General Permit). The Construction General Permit regulates stormwater discharges for construction activities under the Clean Water Act (CWA), and applies to all land-disturbing construction activities that would disturb 1 acre or more. Project applicants must submit a notice of intent to discharge to the Central Valley Regional Water Quality Control Board (RWQCB), and must prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) that includes site-specific Best Management Practices (BMPs) to minimize construction-related soil erosion. Construction techniques that could be implemented to reduce the potential for stormwater runoff and sediment transport may include minimizing site disturbance, controlling water flow over the construction site, stabilizing bare soil, and ensuring proper site cleanup. BMPs that could be implemented to reduce erosion may include silt fences, staked straw bales/wattles, silt/sediment basins and traps, geofabric, trench plugs, terraces, water bars, soil stabilizers and re-seeding and mulching to revegetate disturbed areas. All NPDES permits also have inspection, monitoring, and reporting requirements.

In addition, compliance with the City's *Improvement Standards Manual* requires submittal of grading plans and implementing measures to protect stormwater quality. Compliance with existing regulations ensures that this impact would be **less than significant**.

Impact 3.7-5: Expansive Soils.

Expansive soils are composed largely of clays, which greatly increase in volume when saturated with water and shrink when dried (referred to as "shrink-swell" potential). Soils with a moderate to high expansion potential can result in cracked foundations, structural distortions, and warping of doors and windows. Underground pipelines can also be damaged. The Durixarolfs, Galt clay, and Kimball silt loam soils at the Project site have a high to moderate expansion potential (NRCS 2019). The soils along the off-site drainage pipeline have a low expansion potential (NRCS 2019). Compliance with the CBC requirements to prepare geotechnical engineering reports that include specific recommendations for construction in expansive soil, as well as compliance with the City's *Improvement Standards Manual*, would ensure that foundations for buildings and parking lots, as well as underground pipelines, are designed appropriately based on site-specific conditions. Therefore, this impact would be **less than significant**.

Impact 3.7-6: Damage to Unknown Paleontological Resources.

The Project site and the off-site improvements areas are located in the Riverbank Formation. This formation is considered to be of high paleontological sensitivity, because numerous vertebrate fossil specimens have been recovered from this formation in various locations throughout the greater Sacramento area and the Sacramento and San Joaquin valleys (as described in detail in the 2019 SOIA EIR). Therefore, Project-related construction activities both on- and off-site could result in accidental damage to or destruction of unique paleontological resources, and this impact is considered **potentially significant.**

Mitigation Measure 3.7-6: Avoid Impacts to Unique Paleontological Resources (2019 SOIA EIR Mitigation Measure 3.7-6).

- Prior to the start of on- or off-site earthmoving activities that would disturb 1 acre of land or more within the Riverbank Formation, 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 in the vicinity of the find and notify the City of Elk Grove.

- The project 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.

Significance after Mitigation

Implementation of Mitigation Measure 3.7-6 would reduce Project-related impacts on unique paleontological resources to a **less-than-significant** level because construction workers would be alerted to the possibility of encountering paleontological resources and, in the event that resources were discovered, fossil specimens would be recovered and recorded and would undergo appropriate curation.

3.8 GREENHOUSE GAS EMISSIONS

Comments received on the Notice of Preparation (NOP) were reviewed during preparation of this SEIR. A comment letter was submitted by the Sacramento Metropolitan Air Quality Management District (SMAQMD) related to mitigation strategies to reduce the project's emissions of greenhouse gases. The City reviewed and considered this information during preparation of this chapter.

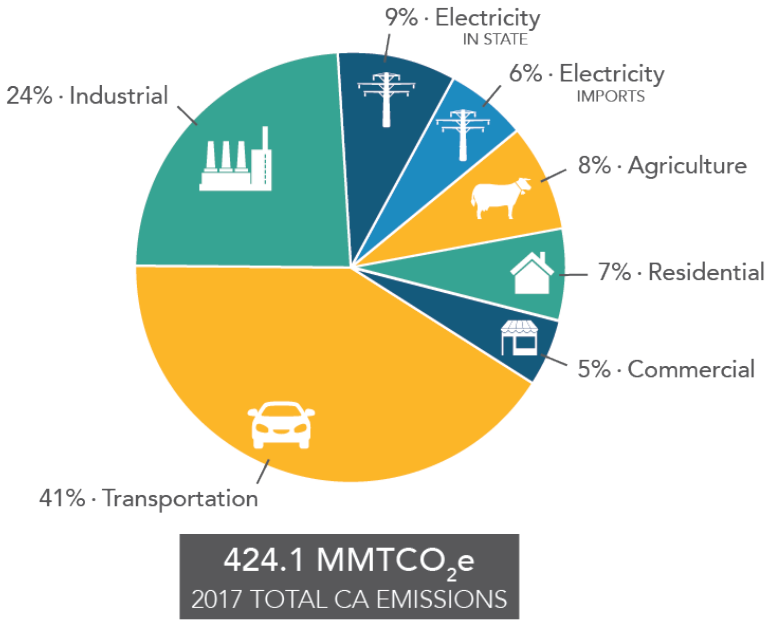
3.8.1 ENVIRONMENTAL SETTING

The environmental setting for the proposed Project as it relates to greenhouse gases (GHGs) has not changed since the 2019 SOIA EIR was prepared.

GHGs typically persist in the atmosphere for extensive periods time, long enough to be dispersed throughout the globe and result in long-term global impacts. As such, the proposed Project will not, by itself, contribute significantly to climate change; however, cumulative emissions from many projects and plans all contribute to global GHG concentrations and the climate system. Accordingly, this section considers the cumulative contribution of implementation of the proposed project to the significant cumulative impact of climate change.

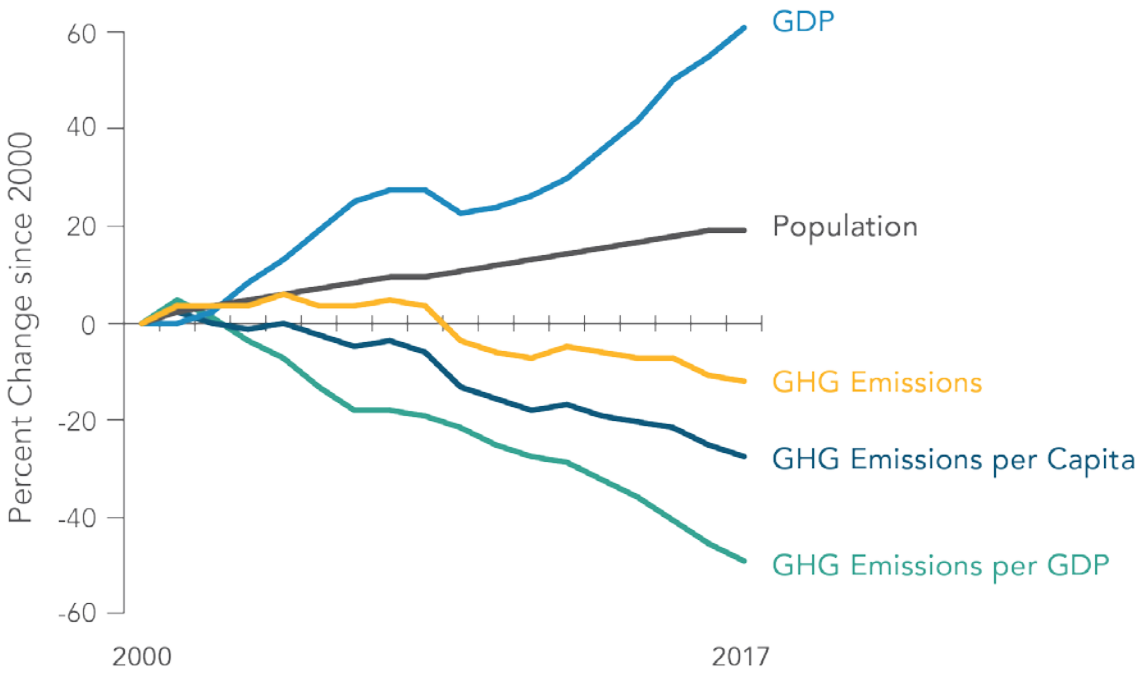
The California Air Resources Board (ARB) prepares an annual, statewide GHG emissions inventory, including an analysis of emissions by sector, or type of activity. As shown in Exhibit 3.8-1, California produced 424.1 million MT CO_2e in 2017 (the latest available full year of reporting). Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2017, accounting for 41 percent of total GHG emissions. Transportation was followed by industry, which accounted for 24 percent, and then the electricity sector (including in-state and out-of-state sources) accounted for 9 percent of total GHG emissions (ARB 2019).

California has implemented several programs and regulatory measures to reduce GHG emissions. Exhibit 3.8-2 demonstrates California's progress in achieving statewide GHG emissions reduction targets. Since 2007,



Source: ARB 2019

Exhibit 3.8-1. California 2017 GHG Emissions Inventory by Sector



Source: ARB 2019

Exhibit 3.8-2. Trends in California GHG Emissions (Years 2000 to 2017)

California's GHG emissions have been declining; GHG emissions have continued to decline even as population and gross domestic product have increased.

In 2009, a community-wide GHG emissions inventory was conducted for the City through a regional effort for Sacramento County and each jurisdiction within the county. The inventory estimated GHG emissions produced from activities in the year 2005, including transportation, waste, water, and energy-related activities. A community-wide GHG inventory update for the City of Elk Grove was completed as part of the City's General Plan and CAP update process using data from 2013 (the most current available data at the time). The 2005 and 2013 community-wide inventories were conducted using the 2012 U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions, commonly known as the U.S. Community Protocol. Since 2009, the City has revised the 2005 community-wide inventory twice: once during development of the City's Climate Action Plan to adjust for new data and methods and a second time in 2015 for the General Plan Update to incorporate new data, GHG accounting methods, and up-to-date protocols. In 2017, as part of the City of Elk Grove's General Plan update and Climate Action Plan (CAP) update process, a GHG inventory update was completed using the new baseline year of 2013. Additionally, the 2005 inventory was updated to use GWP values from the Intergovernmental Panel on Climate Change (IPCC) 5th Assessment Report to match the values used for the 2013 inventory. Revisions allow for a consistent comparison between the 2005 and 2013 inventories. The 2005 and 2013 inventories are summarized in Table 3.8-1.

Table 3.8-1 City of Elk Grove GHG Emissions Inventory (2005 – 2013)					
Sector	2005 MT CO_2e	Percent of 2005 Total	2013 MT CO_2e	Percent of 2013 Total	Percent Change 2005 to 2013
Residential buildings	225,190	27.9 %	231,400	25.3 %	+ 3 %
Non-residential buildings	103,170	12.8 %	129,860	14.2 %	+ 26 %
Transportation	348,370	43.1 %	430,340	47.0 %	+ 24 %
Off-road equipment	83,800	10.4 %	93,340	10.2 %	+ 11 %
Solid waste	36,380	4.5 %	23,720	2.6 %	- 35 %
Landfills	2,980	0.4 %	2,540	0.3 %	- 15 %
Water and wastewater	3,070	0.4 %	7,177	0.8 %	+ 134 %
Agriculture	5,450	0.7 %	1,020	0.1 %	- 81 %
Total	**808,410**	**100 %**	**919,407**	**100 %**	**+ 13 %**

Notes:
[1] MT CO_2e = metric tons of carbon dioxide equivalent;
[2] Totals may not be the exact sum due to rounding.
Source: City of Elk Grove 2019a

As with the state, as a whole on-road transportation is the largest source of GHG emissions in the City, contributing more than 43 percent of the total. For the City, the proportion of overall emissions attributable to the transportation sector increased between 2005 and 2013 from approximately 43 percent to approximately 47 percent.

3.8.2 REGULATORY FRAMEWORK

The regulatory framework surrounding GHG emissions, as it pertains to the proposed Project, is described in the 2019 SOIA EIR. The following highlights changes in the regulatory framework since the time the 2019 SOIA EIR was drafted.

Executive Order B-55-18 (2018)

Executive Order B-55-18 acknowledges the environmental, community, and public health risks posed by future climate change. It further recognizes the climate stabilization goal adopted by 194 states and the European Union under the Paris Agreement. Based on the worldwide scientific agreement that carbon neutrality must be achieved by midcentury, Executive Order B-55-18 establishes a new state goal to achieve carbon neutrality as soon as possible and no later than 2045, and to achieve and maintain net negative emissions thereafter. The Executive Order charges the ARB with developing a framework for implementing and tracking progress towards these goals. Executive Order B-55-18 is only binding on state agencies.

California Code of Regulations (CCR) Title 20, Part 6

The California Energy Commission (CEC) is responsible for implementing the CCR Title 24, Part 6, *Energy Efficiency Standards for Residential and Nonresidential* Buildings. The Title 24 standards are updated on a three-year basis and have been incrementally working toward the State's 2020 goal of zero-net-energy use of all new homes. The most recent update was adopted in 2019 and went into effect on January 1, 2020. Implementation of

these standards will result in the average new home using zero-net-energy and nonresidential buildings using about 30 percent less energy than those built to the 2016 standards.

Senate Bill 100

Senate Bill (SB) 100 was adopted in September of 2018 and requires that by December 1, 2045 that 100 percent of retail sales of electricity to be generated from renewable or zero-carbon emission sources. SB 100 supersedes the renewable energy requirements set by SB 350, SB 1078, SB 107, and SB X1-2. However, the interim renewable energy thresholds from the prior Bills of 44 percent by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030, will remain in effect.

Sacramento Area Council of Governments

The Sacramento Area Council of Governments (SACOG) is designated by the State and federal governments as the Metropolitan Planning Organization (MPO) and is responsible for developing a regional Metropolitan Transportation Plan (MTP) and Sustainable Communities Strategy (SCS) in coordination with Sacramento, Yolo, Yuba, Sutter, El Dorado, and Placer counties and the 22 cities within those counties (excluding the Tahoe Basin).

SACOG plays a central role in transportation infrastructure planning for the region, while also serving as a forum for the study, planning, and resolution of other planning issues facing the local member governments. The most recent MTP/SCS for the SACOG region was adopted in November 2019. The 2020 MTP/SCS lays out a plan that links land use, air quality, and transportation needs. The MTP/SCS includes strategies and policies to reduce greenhouse gas emissions from passenger vehicles to meet state targets established by ARB.

City of Elk Grove General Plan and Climate Action Plan

On February 27, 2019, the City concurrently updated and adopted the General Plan and Climate Action Plan (CAP). The CAP is intended to carry out the General Plan goals and policies to reduce GHG emissions and address the impacts of climate change. The General Plan contains the following policies and actions that affect the generation of GHG emissions and may apply to the potential future development of the Project site are highlighted below.

Urban and Rural Development

- **Policy LU-1-9:** Encourage employee intensive commercial and industrial uses to locate within walking distance of fixed transit stops. Encourage regional public transit to provide or increase coordinated services to areas with high concentrations of residents, workers, or visitors.

- **Policy LU-4-1:** Establish activity centers as community gathering places characterized by the following design element related actions.

    - Prioritize pedestrian and bicycle access.
    - Ensure local and regional transit connections are provided throughout each activity year.

Economy and the Region

- **Policy RC-1-5:** In addition to establishing a primary Major Employment Center, consider options to develop additional Major Employment Centers in portions of the City with enough available undeveloped land and potential sufficient transit access to support such a center.

- **Policy RC-3-1:** Integrate economic development and land use planning in Elk Grove with planning for regional transportation systems.

- **Policy RC-3-4:** Advocate for fixed-transit service in Elk Grove as part of a coordinated regional network designed and routed to serve Major Employment Centers, residential centers, shopping centers, and colleges and universities.

Mobility

- **Policy MOB-1-1:** Achieve State-mandated reductions in VMT by requiring land use and transportation projects to comply with the specific metrics and limits. These metrics and limits shall be used as thresholds of significance in evaluating projects subject to CEQA.

- **Policy MOB-1-4:** Consider all transportation modes and the overall mobility of these modes when evaluating transportation design and potential impacts during circulation planning.

- **Policy MOB-3-1: I**mplement a balanced transportation system using a layered network approach to building Complete Streets that ensure the safety and mobility of all users, including pedestrians, cyclists, motorists, children, seniors, and people with disabilities.

- **Policy MOB-3-2:** Support strategies that reduce reliance on single-occupancy private vehicles and promote the viability of alternative modes of transport.

- **Policy MOB-3-7:** Develop a complete and connected network of sidewalks, crossings, paths, and bike lanes that are convenient and attractive, with a variety of routes in pedestrian-oriented area.

- **Policy MOB-3-15:** Utilize reduced parking requirements when and where appropriate to promote walkable neighborhoods and districts and to increase the use of transit and bicycles.

- **Policy MOB-3-16:** Establish parking maximums, where appropriate, to prevent undesirable amounts of motor vehicle traffic in areas where pedestrian, bike, and transit use are prioritized.

- **Policy MOB-3-17:** Ensure new multifamily and commercial developments provide bicycle parking and other bicycle support facilities appropriate for the users of the development.

- **Policy MOB-4-1:** Ensure that community and area plans, specific plans, and development projects promote pedestrian and bicycle movement via direct, safe, and pleasant routes that connect destinations inside and outside the plan or project area. This may include convenient pedestrian and bicycle connections to public transportation.

- **Policy MOB-4-5:** Encourage employers to offer incentives to reduce the use of vehicles for commuting to work and increase commuting by active transportation modes. Incentives may include a cash allowance in lieu of a parking space and onsite facilities and amenities for employees such as bicycle storage, shower rooms, lockers, trees, and shaded seating areas.

- **Policy MOB-5-1:** Support a pattern of land uses and development projects that are conducive to the provision of a robust transit service.

- **Policy MOB-5-4:** Support mixed-use and high-density development applications close to existing and planned transit stops.

- **Policy MOB-5-6:** Provide the appropriate level of transit service in all areas of Elk Grove, through fixed-route service in urban areas, and complementary demand response service in rural areas, so that transit-dependent residents are not cut off from community services, events, and activities.

- **Policy MOB-5-7:** Maintain and enhance transit services throughout the City in a manner that ensures frequent, reliable, timely, cost-effective, and responsive service to meet the City's needs. Enhance transit services where feasible to accommodate growth and transit needs as funding allows.

- **Policy MOB-5-8:** Support and use infrastructure improvements and technological advancements such as intelligent transportation management tools to facilitate the movement and security of goods through the City in an efficient manner.

- **Policy MOB-5-9:** Assist in the provision of support facilities for emerging technologies such as advanced fueling stations (e.g., electric and hydrogen) and smart roadway signaling/signage.

- **Policy MOB-5-10:** Work with a broad range of agencies to encourage and support programs that increase regional average vehicle occupancy. Examples include providing traveler information, shuttles, preferential parking for carpools/vanpools, transit pass subsidies, road and parking pricing, and other methods.

- **Policy MOB-5-11:** Encourage and create incentives for the use of environmentally friendly materials and innovative approaches in roadway designs that limit runoff and urban heat island effects. Examples include permeable pavement, bioswales, and recycled road base, asphalt, and concrete.

Natural Resources

- **Policy NR-2-2:** Maximize and maintain tree coverage on public lands and in open spaces.

- **Policy NR-2-4:** Maintain and enhance an urban forest by preserving and planting trees in appropriate densities and locations to maximize energy conservation and air quality benefits.

- **Policy NR-3-8:** Reduce the amount of water used by residential and nonresidential uses by requiring compliance with adopted water conservation measures.

- **Policy NR-3-9:** Promote the use of greywater systems and recycled water for irrigation purposes.

- **Policy NR-3-12:** Advocate for native and/or drought-tolerant landscaping in public and private project.

- **Policy NR-3-6:** Continue interagency partnerships to support water conservation.

- **Policy NR-4-1:** Require all new development projects which have the potential to result in substantial air quality impacts to incorporate design, and/or operational features that result in a reduction in emissions equal to 15 percent compared to an "unmitigated baseline project." An unmitigated baseline project is a development project which is built and/or operated without the implementation of trip reduction, energy conservation, or similar features, including any such features which may be required by the Zoning Code or other applicable codes.

- **Policy NR-4-4:** Promote pedestrian/bicycle access and circulation to encourage residents to use alternative modes of transportation in order to minimize direct and indirect emissions of air contaminants.

- **Policy NR-4-5:** Emphasize demand management strategies that seek to reduce single-occupant vehicle use in order to achieve State and federal air quality plan objectives.

- **Policy NR-4-6:** Offer a public transit system that is an attractive alternative to the use of private motor vehicles.

- **Policy NR-4-8:** Require that development projects incorporate best management practices during construction activities to reduce emissions of criteria pollutants.

- **Policy NR-5-1:** By 2030 reduce community-wide greenhouse gas emissions to 4.1 metric tons of carbon dioxide equivalents (MT CO_2e) per capita. By 2050 reduce community-wide greenhouse gas emissions to 1.4 $MTCO_2e$ per capita to meet the State's 2050 greenhouse gas emissions reduction goals.

- **Policy NR-5-2:** Improve the health and sustainability of the community through improved regional air quality and reduction of greenhouse gas emissions that contribute to climate change.

- **Policy NR-5-3:** Support efforts by the Sacramento Metropolitan Air Quality Management District and the California Air Resources Board to decrease greenhouse gas emissions from stationary sources.

- **Policy NR-5-4:** Preserve, protect, and enhance, as appropriate, the community's carbon sequestration resources to improve air quality and reduce net carbon emissions.

- **Policy NR-6-1:** Promote energy efficiency and conservation strategies to help residents and businesses save money and conserve valuable resources.

- **Policy NR-6-3:** Promote innovation in energy efficiency.

- **Policy NR-6-5:** Encourage renewable energy options that are affordable and benefit all community members.

- **Policy NR-6-6:** Encourage the use of solar energy systems in homes, commercial businesses, and City facilities as a form of renewable energy.

- **Policy NR-6-7:** Promote energy conservation measures in new development to reduce on-site emissions and 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. \

Sustainable Development

- **Policy SD-2-1:** Incorporate green building techniques and best management practices in the site design, construction, and renovation of all public projects

- **Policy SD-2-2:** Support innovation and green building best management practices for all new private development

City of Elk Grove Climate Action Plan

The City Council adopted its first Climate Action Plan (CAP) in 2013. The first update to the CAP was adopted in February 2019 and amended in December 2019. The CAP identifies sources of GHG emissions attributable to land uses and activities within City limits and identifies measures to reduce emissions through energy use, land use, solid waste, and transportation strategies. The CAP includes the following topics for emission reduction strategies: An Innovative and Efficient Built Environment; Resource Conservation; and Transportation Alternatives and Congestion Management. The amended 2019 CAP is structured to serve as a programmatic tiering document for the purposes of CEQA. For analysis of GHG emissions impacts under CEQA, projects can achieve streamlining pursuant to the provisions of Section 15183.5 by including all applicable GHG reduction measures in the CAP as a part of project location or design and/or as mitigation measures in the environmental document, thus demonstrating that the project would have a cumulatively less than significant impact on the environment

Table 3.8-2 presents GHG reduction measures from the City's 2019 CAP.

Table 3.8-2 City of Elk Grove Climate Action Plan Applicable GHG Reduction Measures

	Reduction Measures	Policy Topic
BE-4	Building Stock: Encourage or Require Green Building Practices in New Construction. Encourage new construction projects to comply with CALGreen Tier 1 standards, including a 15 percent improvement over minimum Title 24 Part 6 Building Energy Efficiency Standards.	Built Environment
BE-5	Building Stock: Phase in Zero Net-Energy Standards in New Construction. Phase in zero net energy (ZNE) standards for new construction, beginning in 2020 for residential projects and 2030 for commercial projects. Specific phase-in requirements and ZNE compliance standards will be supported by updates in the triennial building code updates, beginning with the 2019 update.	Built Environment
BE-6	Building Stock: Electrification in New and Existing Residential Development. Encourage and incentivize new residential developments to include all electrical appliances and HVAC systems in the design of new projects. Support local utilities in implementing residential retrofit programs to help homeowners convert to all electrical appliances and HVAC systems. Explore the feasibility of phasing in minimum standards for all-electric developments.	Built Environment
BE-7	Building Stock: Solar Photovoltaics in New and Existing Residential and Commercial Development. Encourage and require installation of on-site solar photovoltaic (PV) in new single-family and low-rise multi-family developments. Promote installation of on-site PV systems in existing residential and commercial development.	Built Environment
BE-8	SMUD Greenergy and SolarShare Programs. Encourage participation in SMUD's offsite renewable energy programs (i.e., Greenergy, SolarShares), which allow building renters and owners to opt into cleaner electricity sources.	Built Environment
RC-1	Waste Reduction. The City shall facilitate recycling, reduction in the amount of waste, and reuse of materials to reduce the amount of solid waste generated.	Resource Conservation

Table 3.8-2 City of Elk Grove Climate Action Plan Applicable GHG Reduction Measures		
	Reduction Measures	Policy Topic
RC-2	Organic Waste Reduction. The City will target reduction of organic waste disposal, consistent with statewide goals, of 50 percent of 2014 levels by 2020 and 75 percent by 2025, using alternatives such as composting, anaerobic digestion, and biomass energy	Resource Conservation
TACM-1	Local Goods. Promote policies, programs, and services that support the local movement of goods in order to reduce the need for travel.	Transportation Alternatives & Congestion Management
TACM-2	Transit-Oriented Development. Support higher-density, compact development along transit by placing high-density, mixed-use sites near transit opportunities.	Transportation Alternatives & Congestion Management
TACM-3	Intracity Transportation Demand Management. The City shall continue to implement strategies and policies that reduce the demand for personal motor vehicle travel for intracity (local) trips.	Transportation Alternatives & Congestion Management
TACM-4	Pedestrian and Bicycle Travel. Provide for safe and convenient pedestrian and bicycle travel through implementation of the Bicycle, Pedestrian and Trails Master Plan and increased bicycle parking standards.	Transportation Alternatives & Congestion Management
TACM-6	Limit Vehicle Miles Traveled. Achieve a 15 percent reduction in daily VMT compared to existing conditions (2015) for all new development in the City, consistent with state mandated VMT reduction targets for land use and transportation projects.	Transportation Alternatives & Congestion Management
TACM-7	Traffic Calming Measures. Increase the number of streets and intersections that have traffic calming measures.	Transportation Alternatives & Congestion Management
TACM-8	Tier 4 Final Construction Equipment. Require all construction equipment used in Elk Grove to achieve EPA-rated Tier 4 Final diesel engine standards by 2030 and encourage the use of electrified equipment where feasible.	Transportation Alternatives & Congestion Management
TACM-9	EV Charging Requirements. Adopt an electric vehicle (EV) charging station ordinance that establishes minimum EV charging standards for all new residential and commercial development. Increase the number of EV charging stations at municipal facilities throughout the City.	Transportation Alternatives & Congestion Management

Source: City of Elk Grove 2019b

3.8.3 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

METHODOLOGY

Emissions of GHGs have the potential to adversely affect the environment because such emissions contribute cumulatively to global climate change. It is unlikely that a single project will contribute significantly to climate change, but cumulative emissions from many projects could affect global GHG concentrations and the climate system. Therefore, impacts are analyzed within the context of the potential contribution to the cumulatively significant impact of climate change.

GHG emissions were estimated using similar methods as those described in Section 3.4 of this EIR, "Air Quality." In addition to criteria air pollutants, CalEEMod Version 2016.3.2 and the Road Construction Emissions Model were also used to estimate GHG emissions associated with construction and operational activities. Detailed modeling inputs, assumptions, and calculations are available in Appendix E.

For construction, GHG emissions were estimated for off-road construction equipment, material delivery trucks, haul trucks, and construction worker vehicles. For operational activities, GHG emissions were estimated for activities associated with mobile, area, and energy sources, as well as solid waste disposal and water consumption. The specific timing of construction and operation of any individual use within the Project site is unknown, and subject to market conditions and other factors outside the control of the City. This EIR assumes a 20-year development period. Therefore, GHG emissions associated with operations of all future development

within the Project site were estimated for the full development of potential land uses within the Project site in the year 2040; this incorporated the fleet mix for the year 2040[1] to reflect the anticipated turnover of vehicles over the duration of the construction period and resultant increase in fuel efficiency and decrease in emissions from motor vehicles, but conservatively used the 2018 (most recent) carbon intensity factor for electricity and an adjusted energy intensity to account for implementation of the 2019 Title 24 standards without projecting future reductions in electricity carbon intensity or increases in building energy efficiency.

In order to provide a more comprehensive assessment of cumulative GHG emissions, construction-related GHG emissions that would result from construction of all assumed land uses and infrastructure improvements were summed and then amortized over a 25-year operational lifetime[2] and added to the operational emissions associated with these land uses. The annual operational emissions, along with the amortized construction emissions, were compared with applicable significance thresholds to determine cumulative significance.

THRESHOLDS OF SIGNIFICANCE

The thresholds for determining the significance of impacts for this analysis are based on the environmental checklist in Appendix G of the CEQA Guidelines. The proposed Project would have a significant impact associated with the generation of GHG emissions and climate change if implementation of the proposed Project would:

- generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, or
- conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Assembly Bill (AB) 32, Executive Order B-30-15, SB 32, and Executive Order S-3-05 represent the framework for CEQA analysis of GHG emissions impacts in California. For development projects and plans, it is important to evaluate whether a subject project "incorporates efficiency and conservation measures sufficient to contribute its portion of the overall greenhouse gas reductions necessary" for the State to achieve its own mandates (*Center for Biological Diversity, et al. v. California Department of Fish And Wildlife, the Newhall Land And Farming Company*, California Supreme Court, Case No. 5217763). If a project or plan demonstrates that the rate of GHG emissions is efficient enough to provide its share of State emissions reduction targets, the impact is not cumulatively considerable (*Center for Biological Diversity, et al. v. California Department of Fish and Wildlife*, page 12; Crockett 2011).

As stated in Appendix E, the significance criteria established by the applicable air quality management district may be relied on to make the above determinations. For land development and construction projects, SMAQMD considers a project to exceed GHG emission thresholds[3] if:

[1] This varies from the methodology used for the estimate of maximum daily criteria air pollutants described in Section 3.4, "Air Quality," of this EIR, which modeled operational emissions for the year 2022 to represent a conservative estimate of the maximum potential daily emissions.

[2] The 25-year operational lifetime is a conservative estimate of the operational life of a typical development project. Estimates derived from the State of California Executive Order D-16-00 and US Green Building Council's, *The Costs and Financial Benefits of Green Building* (SMAQMD 2020).

[3] SMAQMD adopted an updated land development GHG threshold, including Best Management practices on April 23, 2020, via resolution 2020-009.

- the annual construction-related emissions exceed 1,100 MT CO_2e/year; or
- the project fails to demonstrate consistency with the State Climate Change Scoping Plan by implementing the following best management practices (BMP), or equivalent on-site or off-site mitigation, as applicable:
    - All projects must implement Tier 1 BMPs (BPM 1 and 2):
        - BMP 1 – projects shall be designed and constructed without natural gas infrastructure;
        - BMP 2 – projects shall meet the current CalGreen Tier 2 standards, except all electric vehicle capable spaces shall instead be electric vehicle ready.
    - Projects that exceed 1,100 metric tons/year after implementation of Tier 1 BMPs must implement Tier 2 BMPs (BMP 3):
        - BMP 3 – residential projects shall achieve a 15 percent reduction in vehicle miles traveled per resident and office projects shall achieve a 15 percent reduction in vehicle miles traveled per worker compared to existing average vehicle miles traveled for the county, and retail projects shall achieve a no net increase in total vehicle miles traveled to show consistency with SB 743.

The City of Elk Grove has adopted GHG emissions targets that, if achieved, based on emissions reduction quantification under the updated CAP and analysis in the General Plan EIR, would enable the City to continue to reduce community-wide emissions in proportion to the State's GHG reduction targets (City of Elk Grove 2019a, b).

The GHG emissions efficiency of a project or plan is the amount of emission per some unit of measurement. An efficiency target can be developed that mirrors statewide emissions reduction legislation and executive orders. To create an efficiency target, one would simply divide the statewide emissions target for a specified target year by the forecast population for the same year. This would yield an emissions "budget" for each California resident, and allow a community to assess whether or not its emissions rate is consistent with this emissions budget.

The City identified, and adopted, the following recommended per-capita GHG efficiency targets to reduce the City's annual GHG emissions, consistent with the framework used to develop the State's emissions reduction targets:

- 4.1 MT CO_2e per capita by 2030.
- 1.4 MT CO_2e per capita by 2050.

Similarly, a GHG efficiency target may also be expressed on a per-service population basis, in which service population is defined as the total number of residents plus employment. Using equivalent assumptions with regard to the locally relevant emissions sources accounted for by the City in establishing its per capita GHG efficiency threshold, the following GHG emissions per service population would be required to reduce emissions in proportion to the State's GHG reduction targets:

- 2.8 MT CO_2e per service population by 2030.
- 0.8 MT CO_2e per service population by 2050.

For the purposes of analysis, GHG emissions efficiency targets for the year 2040 were extrapolated based upon the City's 2030 and 2050 targets, assuming a linear reduction in emissions over time to meet the 2050 target. The following GHG emissions efficiency threshold would apply to operations in the year 2040:

- 2.75 MT CO_2e per capita in 2040.
- 1.81 MT CO_2e per service population in 2040.

The current SMAQMD approach to GHG thresholds and operational BMPs was established after the adoption of the General Plan and CAP. Therefore, while these BMPs are not explicitly contained within the City's planning documents, they are relevant for consideration in an analysis of GHG-related impacts for projects within SMAQMD's jurisdiction and are considered to demonstrate consistency with the State Scoping Plan. Because the Project would accommodate a mix of land uses that is assumed to include residential, commercial, industrial, and open space, using a per-service-population GHG efficiency threshold for operational emissions is an appropriate quantitative metric of evaluation and, along with the SMAQMD thresholds, is presented in the analysis below to establish a determination of significance for the proposed Project.

Having established the State policy and regulatory framework for assessing cumulative significance of GHG emissions, and using both the air district points of reference and the GHG emissions efficiency threshold to demonstrate the required GHG emissions rate to achieve consistency with State legislation and Executive Orders, this SEIR answers the two checklist questions provided by CEQA Guidelines Appendix G in a single impact assessment. Whether or not the proposed Project would generate GHG emissions that would have a significant impact on the environment depends on whether the proposed Project would comply with the SMAQMD thresholds of significance and whether the rate of GHG emissions (per service population) from potential future development within the Project site would include a fair share of emissions reduction, consistent with the State's own reduction targets under AB 32, Executive Order B-30-15, SB 32 and Executive Order S-3-05.

IMPACT ANALYSIS

Impact 3.8-1. Generation of Greenhouse Gas Emissions or Conflict with an Applicable Plan, Policy, or Regulation Adopted for the Purpose of Reducing the Emissions of GHGs.

GHG emissions attributable to construction and operations of future development within the Project site, as well as off-site improvements to support development of the Project site, are considered to result in a **cumulatively considerable** contribution to the significant cumulative impact of climate change.

The proposed Project will generate GHG emissions due to construction and operation of proposed on-site land uses and off-site improvements. Construction-related GHG emissions would be generated primarily from exhaust emissions associated with off-road construction equipment, construction worker commutes, and vendor and haul truck trips. Operational GHG emission sources would include energy consumption (i.e., electricity and natural gas), transportation, solid waste, and water and wastewater. GHG emissions generated by these sources were quantified using emission factors and methodologies described in Section 3.4, "Air Quality." As described in Section 3.4, "Air Quality," in order to estimate annual construction emissions for a plan-level analysis when specific land use development information is unknown, SMAQMD recommends a conservative assumption that 25 percent of the total plan or project is constructed in a single year. This assumption would provide conservative results and would overestimate annual emissions associated with possible future development within the Project site since it is very unlikely that 25 percent of this relatively large development area would actually be under

construction in any given year. In addition, the construction-related emissions estimates use the conservative assumption that construction would occur in the earliest possible year (2021). Because of this conservative assumption, actual emissions would be less than the estimates presented in this SEIR due to use of a more modern and cleaner burning (less emitting) construction equipment and vehicle fleet mix in future years.

Table 3.8-3 summarizes the maximum annual and total construction-related and annual operational emissions associated with development of the Project site and off-site improvements. In order to provide a more comprehensive assessment of cumulative GHG emissions, construction-related GHG emissions that would result from full buildout of the General Plan were summed and then amortized over an estimated 25-year operational lifetime and added to the operational emissions associated with these land uses.

Table 3.8-3 Estimated GHG Emissions Associated with Development of the Project Site and Off-Site Improvement Areas

Emissions Source	GHG Emissions (MT CO_2e)
Construction GHG Emissions	
Maximum Annual Construction Emissions	5,499
Total Potential Construction Emissions[1]	18,494
Amortized Construction-Related Emissions[2]	740
Annual Operational GHG Emissions	
Area	12
Energy	17,403
Mobile	64,757
Waste	4,016
Water	1,478
Total Annual Operational Emissions	**87,667**
Total Annual Project Emissions, including Amortized Construction + Operational Emissions	**88,406**
Total Residents Associated with Development of the Project Site	2,283
Total Employment Generated by Development of the Project Site	7,708
Total Service Population Associated with Proposed Project	9,990
Emissions per Capita (MT CO_2e/capita) at Full Buildout[3,4]	**38.7**
Emissions per Service Population (MT CO_2e/ service population) at Full Buildout[3,4]	**8.9**

Notes: GHG = greenhouse gas; MT CO_2e = metric tons of carbon dioxide equivalents

1 Total construction emissions are estimated by multiplying the annual worst-case construction scenario for on-site development, which represents construction emissions associated with development of 25% of the total proposed land uses, by four, and then adding construction-related emissions of off-site development.

2 Total Potential Construction emissions are amortized over 25 years. The operational lifetime estimate is derived from the State of California Executive Order D-16-00 and US Green Building Council's October 2003 report on The Costs and Financial Benefits of Green Buildings (SMAQMD 2020).

3 Full buildout of all land uses within the Project site were modeled for the year 2040.

4 GHG efficiency-based metric is calculated using the sum of the amortized construction-related emissions and the annual operational emissions.

Note: Totals do not add due to rounding.

Source: Modeled by AECOM in 2020.

Amortized annual construction emissions would be below the 1,100 MT CO_2e/year threshold that is recommended by SMAQMD for construction related emissions. In addition, if construction were to occur at a steady pace over the anticipated 20-year construction duration and the total construction emissions were generated equally over each year, average annual GHG emissions would be approximately 925 MT CO_2e per year, which would be less than the SMAQMD construction threshold for annual GHG emissions. However, if 25 percent of the assumed land uses within the Project site were constructed in a single year, as modeled in the maximum potential construction scenario, this would generate approximately 5,499 MT CO_2e, which would exceed the SMAQMD construction threshold.

Future development of assumed land uses within the Project site would generate long-term operational emissions from day-to-day activities. As shown in Table 3.8-3, the sum of amortized construction and total annual operational emissions from the proposed Project would result in GHG emissions of 38.7 MT CO_2e per capita and 8.9 MT CO_2e per service population. This exceeds both the per capita and per service population emissions thresholds developed for this SEIR for 2040 of 2.75 MT CO2e and 1.81 MT CO2e, respectively.

As discussed in 3.8.2, "Regulatory Framework," the City of Elk Grove updated its General Plan and CAP in 2019. The primary motivation for the City to adopt and regularly update the CAP is to "enable new development projects consistent with the CAP and General Plan to tier from the CAP's environmental review process and minimize subsequent project-level analysis" (City of Elk Grove 2019b).

The City's General Plan includes goals and policies related to sustainability and resource protection, including the reduction of GHG emissions consistent with State and local goals (General Plan Goal NR-5). The CAP details the strategies to reduce GHG emissions and provides specific actions and target indicators to achieve the intended reduction levels. The City estimates that implementation of the GHG reduction strategies of the CAP would enable the City to achieve the State-recommended GHG reduction targets for 2020 and 2030 and demonstrate initial progress towards meeting the State's long-term 2050 goal.

The Project site was included as part of the East Study Area in the evaluation of the City of Elk Grove General Plan Update and CAP Update in 2019. The CAP GHG Reduction Measure TACM-6 and General Plan Policy MOB-1.1 are consistent with SMAQMD BMP-3, which identifies VMT reductions to ensure consistency with SB 743. However, SMAQMD BMP-1 and BMP-2, which require all projects to be designed without natural gas and meet CalGreen Tier 2 standards with electric vehicle ready parking spaces, can only be considered in the context of development proposals since these BMPs relate to design details.

SACOG did not include the Project site as an area that would develop during the planning horizon of the 2020 MTP/SCS. SACOG has developed population and employment projections that inform and are informed by land use and transportation planning throughout the region. According to these projections, the City would add 12,870 dwelling units and 15,750 new employees by 2040 without consideration of any development within the Project site (SACOG 2019). If the City is successful in attracting more development between present and 2040 than forecast by SACOG, this would vary from the planning assumptions used by SACOG to develop the MTP/SCS and assess the region's progress toward ARB's per-capita GHG reduction goals for passenger vehicles and light-duty trucks.

The City's intent is for future projects in the East Study Area to facilitate development that would create a better balance between the types of local jobs available and the skills and interests of the local labor force (Project

Objective #5). If residents of Elk Grove are able to reduce their vehicle commute or use non-vehicular modes to reach employment, this could help to reduce the most important source of GHG emission: transportation.

The City will require future developments to incorporate applicable CAP reduction measures, including implementing strategies and policies to reduce the demand for personal motor vehicle travel for intracity (local) trips (Reduction Measure TACM 3); providing for safe and convenient pedestrian and bicycle travel (Reduction Measure TACM 4); achieving a 15-percent reduction in daily VMT compared to existing conditions (2015) for all new development (Reduction Measure TACM 6); and implementing minimum EV charging standards for all new residential and commercial development (Reduction Measure TACM 9).

While the application of the City's Project Objectives and CAP would reduce GHG emissions, since there are no land use plans or development proposals available for analysis at this time, it is not possible to quantify these reductions and compare the resulting emissions estimate to GHG emissions significance thresholds. Therefore, the impact is **cumulatively considerable**.

Mitigation Measures

Mitigation Measure 3.8-1a: Achieve GHG Emissions Rate Consistent with State Guidance (2019 SOIA EIR Mitigation Measure 3.8-1)

Prior to issuance of building permits, Project Building Plans shall demonstrate compliance with the following applicable measures included in the City's Climate Action Plan, to the satisfaction of the City of Elk Grove Planning Division:

- BE-4: The Project shall comply with 2016 CalGreen Tier 1 standards, including a 15 percent improvement over minimum Title 24, Part 6, Building Energy Efficiency Standards. If building permits are issued subsequent to January 1, 2020, the Project shall provide a level of efficiency at least that of Tier 1 of the 2016 CalGreen Code, or baseline of the current CalGreen Code, whichever is more efficient.

- BE-5: Should any residential portion of the Project (including single-family and multi-family) be constructed after January 1, 2025, these units shall be constructed as Zero Net Energy units. The Project shall achieve a Total Energy Deign Rating (Total EDR) and Energy Efficiency Design Rating (Efficiency EDR) of zero, consistent with the standards in Title 24, Part 6 of the California Code of Regulations, for all units permitted after January 1, 2025.

- BE-6: At least 10 percent of all residential units shall include all-electric appliances and HVAC systems, including, but not limited to, (A) a heat pump water heater with a minimum Uniform Energy Factor of 2.87, and (B) an induction cooktop/range for all cooking surfaces in the unit.

- TACM-8: A minimum of 25 percent of the off-road construction fleet used during construction of the Project shall include Environmental Protection Agency certified off-road Tier 4 diesel engines (or better).

- TACM-9: The Project shall, at a minimum, provide the following minimum electrical vehicle service equipment:

  - EV-ready for all single-family units;
  - For multi-family units, 2.5 percent of parking stalls with EV charging equipment installed and 2.5 percent of parking stalls EV-ready; and
  - For retail uses, 3 percent of parking stalls with EV charging equipment installed and 3 percent of parking stalls EV-ready.

- Should the City adopt a higher standard prior to issuance of any applicable building permit, such higher standards shall apply.

Mitigation Measure 3.8-1b: Implement the SMAQMD BMPs, or equivalent on-site or off-site mitigation, as applicable for land use operations

The City of Elk Grove shall require, as a part of plans for development within the Project site, the implementation of the following SMAQMD BMPs, or BMPs as they may be revised in the future, or equivalent on-site or off-site mitigation, as applicable. If equivalent on-site or off-site mitigation is used in-lieu of the below measures, it must be demonstrated that the proposed measures would achieve an equivalent or greater reduction in the GHG emissions rate.

- All projects must implement Tier 1 BMPs (BPM 1 and 2):
  - BMP 1 – projects shall be designed and constructed without natural gas infrastructure;
  - BMP 2 – projects shall meet the current CalGreen Tier 2 standards, except all electric vehicle capable spaces shall instead be electric vehicle ready.

- Projects that exceed 1,100 metric tons/year after implementation of Tier 1 BMPs must implement Tier 2 BMPs (BMP 3):
  - BMP 3 – residential projects shall achieve a 15 percent reduction in vehicle miles traveled per resident and office projects shall achieve a 15 percent reduction in vehicle miles traveled per worker compared to existing average vehicle miles traveled for the county, and retail projects shall achieve a no net increase in total vehicle miles traveled to show consistency with SB 743.

Significance after Mitigation

Mitigation Measure 3.8-1a requires that future development within the Project site demonstrate consistency with the City's CAP and other feasible reduction strategies needed to achieve a GHG emissions rate that is consistent with the State legislative framework. Achieving the performance standard established in this mitigation measure would allow the City to demonstrate that development within the Project site would be consistent with the State legislative framework that, in California, has been established for assessing the cumulative significance of GHG emissions impacts. Mitigation Measure 3.8-1b requires that future development within the Project site implement the SMAQMD BMPs, or equivalent on-site or off-site mitigation. Implementation of these measures would further reduce future operational GHG emissions over the lifetime of the proposed development. Table 3.8-4 presents what the GHG emissions rate of future land use operations would be assuming, at a minimum, the full

development of the Project site would achieve the VMT limits outlined in General Plan Policy MOB-1-1 and demonstrate consistency with SMAQMD BMP 3 and SB 743.

Table 3.8-4 Estimated GHG Emissions Associated with Development of the Project Site with VMT Reductions Consistent with General Policy MOB-1-1

Emissions Source	GHG Emissions (MT CO_2e)
Construction GHG Emissions	
Maximum Annual Construction Emissions	5,499
Total Potential Construction Emissions[1]	18,494
Amortized Construction-Related Emissions[2]	740
Operational GHG Emissions	
Area	12
Energy	17,403
Mobile	27,616
Waste	4,016
Water	1,478
Total Annual Operational Emissions	**50,526**
Total Project Emissions, including Amortized Construction + Operational Emissions	**51,266**
Total Residents Associated with Development of the Project Site	2,283
Total Employment Generated by Development of the Project Site	7,708
Total Service Population Associated with Proposed Project	9,990
Emissions per Capita (MT CO2e/capita) at Full Buildout[3,4]	**22.5**
Emissions per Service Population (MT CO_2e/ service population) at Full Buildout[3,4]	**5.1**

Notes: GHG = greenhouse gas; MT CO_2e = metric tons of carbon dioxide equivalents

1 Total construction emissions are estimated by multiplying the annual worst-case construction scenario for on-site development, which represents construction emissions associated with development of 25% of the total proposed land uses, by four, and adding construction-related emissions of off-site development.

2 Total Potential Construction emissions are amortized over 25 years. The operational lifetime estimate is derived from the State of California Executive Order D-16-00 and US Green Building Council's October 2003 report on The Costs and Financial Benefits of Green Buildings (SMAQMD 2020).

3 Full buildout of all land uses within the project site were modeled for the year 2040, and mitigation emissions assume VMT limits of General Plan Policy MOB-1-1 are achieved at full development of the project site.

4 GHG efficiency-based metric is calculated using the sum of the amortized construction-related emissions and the annual operational.

Totals do not add due to rounding.

Source: Modeled by AECOM in 2020

As shown in Table 3.8-4, achievement of the VMT reduction targets would substantially reduce the GHG emissions rate of the Project's future operations and amortized construction emissions. The estimate in Table 3.8-4 includes only the benefit of VMT reductions and does not include benefits associated with an increase in the use of electric or other alternative fuel vehicles that could result from the implementation of City programs designed to increase electric vehicle use beyond the regional average fleet mix (such as CAP Reduction Measure TACM 9). However, meeting the City's VMT limits alone would not achieve the required GHG emissions reduction required to demonstrate consistency with the State's GHG emissions reductions target for 2030 or long-term goal for 2050. Additional emissions reductions would be achieved through the implementation of other energy-

reduction measures, such as the use of on-site solar photovoltaic systems to off-site building energy demand, implementation of new construction without natural gas infrastructure, increased resource conservation measures to reduce water demand and solid waste generation of future operations, and other feasible reduction measures. However, it is not possible at this time to guarantee the success of this mitigation measure in achieving an emissions rate that would be consistent with AB 32, SB 32, and S-3-05, particularly given the need to monitor a GHG reduction strategy and make revisions that take into account new regulatory guidance, technology, and economic changes that make emission reduction strategies that are not currently feasible become feasible in the future. There is no additional feasible mitigation. As with the 2019 SOIA EIR, the impact is **cumulatively considerable and unavoidable**.

3.9 HAZARDS, HAZARDOUS MATERIALS, AND WILDFIRE

Comments received on the Notice of Preparation (NOP) were reviewed during preparation of this SEIR. However, no comments related to hazards, hazardous materials, or wildfire were received.

3.9.1 ENVIRONMENTAL SETTING

HAZARDOUS MATERIALS

A Phase I Environmental Site Assessment (ESA) for the City-owned parcel was prepared by Blackburn Consulting, Inc. (BCI 2014). A detailed discussion of the results of the ESA was provided in the 2019 SOIA EIR, and the existing conditions at the City-owned parcel, and throughout the rest of the Project site, have not changed since the 2019 SOIA EIR was prepared.

As discussed in the 2019 SOIA EIR, the Project site includes several residences and associated outbuildings, along with wells, septic systems, and small propane tanks. Due to the age of some of these structures, asbestos and lead-based paint may be present. A small warehouse present at the Project site has contained small quantities of properly stored chemicals. BCI identified an orchard on a portion of the City-owned parcel from a 1947 topographic map and 1937 aerial photograph. By 1984, the orchard had been cleared. Persistent pesticides such as dichlorodiphenyltrichloroethane (DDT) and lead arsenate were commonly used in fruit/nut orchards prior to 1972.

The off-site drainage improvement areas consist of existing agricultural drainage channels, and three ponds (approximately 0.5 acre, 8 acres, and 15 acres, respectively).

KNOWN HAZARDOUS MATERIALS SITES

In support of this SEIR, AECOM performed an updated search of publicly available databases maintained under Public Resources Code Section 65962.5 (i.e., the "Cortese List") in 2020 to determine whether any known hazardous materials are present either in or within 0.25 mile of the Project site, in addition to those that were previously discussed in the 2019 SOIA EIR. The Hazardous Waste and Substances Site List (the "EnviroStor" database) is maintained by the California Department of Toxic Substances Control (DTSC) as part of the requirements of Public Resources Code Section 65962.5. The State Water Resources Control Board (SWRCB) maintains the GeoTracker database, an information management system for groundwater. The results of records searches from the EnviroStor and GeoTracker databases indicate there are no additional open or closed hazardous materials sites within 0.5 mile of the Project site or the off-site improvements areas that were not already discussed in the 2019 SOIA EIR (DTSC 2020, SWRCB 2020). No records of any toxic releases, hazardous waste, or other violations were found that would affect the Project site.

As discussed in the 2019 SOIA EIR, the Project site is not listed on any county, State, or federal government lists as a contaminated site. The off-site improvements areas are also not listed for any known contamination. There are no known contaminated municipal groundwater wells, active or inactive landfills, producing California Division of Oil and Gas petroleum wells, or registered underground storage tanks (USTs) located on, adjacent to, or within 0.5 mile of the Project site. No confirmed, State or federal "Superfund" sites were identified within 1 mile of the Project site or the off-site improvement areas.

Areas of Elk Grove north and west of the Project site along Grant Line Road and East Stockton Boulevard are zoned for commercial and industrial use. These areas include numerous warehouses, the City's solid waste collection facility, and the regional Suburban Propane facility.

SCHOOLS

The closest schools are Elk Grove High School and Markofer Elementary School, which are located approximately 1.5 miles northwest of the Project site.

AIRPORTS AND AIRSTRIPS

The closest public-use airport is Franklin Field, approximately 6.75 miles southwest of the Project site. The nearest active, privately operated airstrip—Mustang Airport (on Arno Road north of Galt)—is located approximately 3.2 miles southeast of the Project site.

WILDLAND FIRE HAZARDS

As described in the 2019 SOIA EIR, the Project site is located within a Local Responsibility Area (LRA) as designated by the California Department of Forestry and Fire Protection (CAL FIRE). LRAs include cities and unincorporated areas where fire protection is provided by local agencies (e.g., fire protection districts and counties). The Project site, off-site improvement areas, and the surrounding areas are within a Non-Very High Fire Hazard Severity Zone (CAL FIRE 2018).

3.9.2 REGULATORY FRAMEWORK

CITY OF ELK GROVE GENERAL PLAN

The City's General Plan (City of Elk Grove 2019), contains the following policies related to hazards, hazardous materials, and wildfire that are applicable to the proposed Project.

- **Policy EM-1-1:** Seek to maintain acceptable levels of risk of injury, death, and property damage resulting from reasonably foreseeable safety hazards.

- **Policy ER-1-1:** 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 ER-1.2. Hazardous physical effect shall be determined in accordance with Policy ER-1.3.

- **Policy ER-1-2:** For the purpose of implementing Policy ER-1.1, the City considers an event to be "reasonably foreseeable" when the probability of the event occurring is as indicated in Table 8-1 (see Table 3.9-1 below).

- **Policy ER-1-3:** For the purpose of implementing Policy ER-1.1, use the Threshold of Exposure standards shown in Table 8-2 (see Table 3.9-2 below) to determine the potential "hazardous physical effect" from either:

Table 3.9-1 Acceptable Probability of Reasonably Foreseeable Risks to Individuals by Land Use	
Land Use	Probability of Occurrence Per Year
"Agriculture, Light Industrial, and Industrial" Uses involving continuous access and the presence of limited number of people but easy evacuation, e.g., open house, warehouses, manufacturing plants, etc.	Between 100 in 1 million and 10 in 1 million (10^{-4} to 10^{-5})
"Commercial" Uses involving continuous access but of easy evacuation, e.g., commercial uses, offices.	Between 10 in 1 million and 1 in 1 million (10^{-5} to 10^{-6})
"Residential" All other land uses without restriction including institutional uses, residential areas, etc.	1 in 1 million and less (10^{-6})
Source: City of Elk Grove 2019:8-10	

a) Placing a use near an existing hazardous facility which could expose the new use to hazardous physical effects, or

b) Siting a hazardous facility that could expose other nearby uses to hazardous physical effects.

Reasonably foreseeable level of risk standards may be considered by the City when supported by substantial evidence.

- **Policy ER-1-4:** Work to identify and eliminate hazardous waste releases from both private companies and public agencies.

- **Policy ER-1-4a:** 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 which will be determined by the City of Elk Grove.

- **Policy ER-1-5:** Storage of hazardous materials and waste will be strictly regulated, consistent with state and federal law.

- **Policy ER-1-5a:** 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 ER-1-5b:** 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 ER-1-6:** Seek to ensure that all industrial facilities are constructed and operated in accordance with up-to-date safety and environmental protection standards.

- **Policy ER-1-7:** 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.

Table 3.9-2 Policy Threshold of Exposure Criteria for Agricultural, Residential, and Non-Residential Land Uses

Land Use	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 = 60 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)/60 min Target concentration = 3 ppm chlorine	Radiant dose = 200 kJ/ m_2 (3) Exposure time = 30 sec Target radiant energy = Radiant dose/Exposure time Target radiant energy = (200 kJ/m_2)/30 sec Target radiant energy = 6.67 kW/m_2	All uses shall be 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)
Residential (all density ranges) (5)	1.0 psig			
Office/ Commercial	1.0 psig			
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/m_2 Exposure time = 15 sec Target radiant energy = Radiant dose/ Exposure time Target radiant energy = (200 kJ/m_2)/15 sec Target radiant energy = 13.34 kW/m_2	
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/m_2: kiloJoules per square meter (a measure of radiant heat received); kW/m_2: kilowatts per square meter; 1.0 kJ/m_2 = 1.0 kW/m_2 for 1 sec = 1 kW/ (m_2-sec).

(4) As defined in Policy ER-1-2.

(5) Includes schools, parks, libraries, and other similar public gathering places regardless of their location.

Source: City of Elk Grove 2019:8-12

- **Policy ER-1-8:** Support continued coordination with the California Office of Emergency Services, the California Department of Toxic Substances Control, the California Highway Patrol, the Sacramento County Department of Environmental Health Services, the CCSD Fire Department, the Elk Grove Police Department, and other appropriate agencies in hazardous materials route planning and incident response.

3.9.3 Environmental Impacts and Mitigation Measures

Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact related to hazards, hazardous materials, and wildfire if it would:

- 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 one-quarter mile of an existing or proposed school.
- be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;
- for a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area;
- impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan;
- expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires;
- if located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:
    - substantially impair an adopted emergency response plan or emergency evacuation plan;
    - due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;
    - require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment;
    - expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes;

ISSUES NOT DISCUSSED FURTHER

The following issues were dismissed from further detailed analysis in the 2019 SOIA EIR because it was determined that no impact would occur; for the reasons explained below, these issues would also result in no impact for the proposed Project as evaluated in this SEIR.

Emit Hazardous Emissions or Handle Hazardous Materials, Substances, or Waste within One-Quarter Mile of a School—The proposed Project would not emit hazardous air emissions or handle acutely hazardous materials within 0.25 mile of an existing or proposed school. The closest schools are Elk Grove High School and Markofer Elementary School, which are located approximately 1.5 miles northwest of the Project site. Thus, there would be no impact, and this issue is not addressed further in this SEIR.

Result in Airport Safety Hazards—The Project site and the off-site improvement area are not located within an airport land use plan or within 2 miles of any airport. The closest public-use airport is Franklin Field, approximately 6.75 miles southwest of the Project site. The nearest active, privately operated airstrip—Mustang Airport (on Arno Road north of Galt)—is located approximately 3.2 miles southeast of the Project site. Thus, there would be no impact, and this issue is not addressed further in this SEIR.

IMPACT ANALYSIS

Impact 3.9-1: Routine Transport, Use, or Disposal of Hazardous Materials.

Construction of future regional commercial, light and heavy industrial, and mixed uses at the Project site, as well as the off-site drainage improvements, would involve the routine storage, use, transport, and disposal of small quantities of hazardous materials such as fuels, oils and lubricants, paints and paint thinners, glues, and cleaning fluids (e.g., solvents). The Project site could be developed with home improvement, hardware, or auto parts stores. Medical uses may use or store pressurized oxygen tanks, medical waste, biohazardous materials, and/or radioactive materials. The Project site would also be developed with light manufacturing uses that could potentially use, store, or dispose of hazardous materials.

The California Highway Patrol (CHP) and Caltrans enforce regulations for transport of hazardous materials on local roadways, and DTSC regulates the use of these materials, as outlined in CCR Title 22. Project developers and their construction contractors would be required to comply with the California EPA's Unified Program (e.g., hazardous materials release response plans and inventories, California Uniform Fire Code hazardous materials management plans and inventories). The federal and State Departments of Transportation (through the Hazardous Materials Transportation Act) and other regulatory agencies provide standards designed to avoid releases, including provisions regarding securing materials and container design.

Facilities that would use hazardous materials 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 Office of Emergency Services, the designated Certified Unified Program Agency (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 policies and Municipal Code requirements through project conditions of approval. Therefore, this impact is considered **less than significant.**

Impact 3.9-2: Potential Human Health Hazards from Exposure to Existing On-Site Hazardous Materials.

There are no known areas of existing soil or groundwater contamination, either on- or off-site, that would pose a hazard for project-related construction or operation.

Older buildings on the Project site that would be demolished as part of the project could have asbestos, electrical equipment containing polychlorinated biphenyls (PCBs), fluorescent lights containing mercury vapors, and/or lead-based paints. Section 19827.5 of the California Health and Safety Code requires local agencies to comply with hazardous air pollutant regulations for asbestos. The City of Elk Grove would regulate asbestos through conditions of approval and Sacramento Metropolitan Air Quality Management District (SMAQMD) would be notified 10 days in advance of any proposed demolition or abatement work. Site-specific development within the Project site is required to comply with the California Health and Safety code for abatement of lead-based paint. Requirements for disposal and recycling of fluorescent light tubes containing mercury are specified in 22 CCR Section 66261.50; requirements for disposal of PCB-containing equipment are specified in 22 CCR Section 66261.24 and Part 761 of CFR Title 40.

Pasture, dry-farmed crops, and natural grasses, such as those historically and currently grown in and around the Project site, typically require little to no applications of environmentally persistent pesticides. However, orchards and orchard-cultivated soils in the Project area may have been contaminated through the repeated application of agricultural chemicals to fruit or nut trees. If evidence of soil or groundwater contamination exceeding ambient or background concentrations is discovered during project-related construction, work would cease until appropriate worker health and safety precautions, as specified by Title 8 of the California Code of Regulations (Section 5194) promulgated by the California Occupational Safety and Health Agency (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.

In addition, the City of Elk Grove would enforce its General Plan and Municipal Code through project conditions of approval, specifically General Plan Policy ER-1-5b 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.

For all of the reasons discussed above, this impact is considered **less than significant.**

It should be noted that, the prior 2019 EIR included the following Mitigation Measure 3.9-2. This mitigation measure remains applicable to the Project.

> **Mitigation Measure 3.9-2: Hazardous Materials Identification and Remediation (2019 SOIA Mitigation Measure 3.9-2)**

For development proposed after 5 years have passed (after 2023), update the review of environmental risk databases for the presence of potential hazardous materials. This evaluation should consider the SOIA Area and any off-site improvement areas and if this assessment or other indicators point to the presence or likely presence of contamination, Phase I environmental site assessments and/or Phase II soil/groundwater testing and remediation shall be required before development. The sampling program developed as a part of the Phase II EA shall be conducted to determine the degree and location of contamination, if any, exists. If contamination is determined to exist, it will be fully remediated, by qualified personnel, in accordance with federal, State, and local regulations and guideline established for the treatment of hazardous substances. The designation of encountered contamination will 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, Department of Toxic Substances Control, and Regional Water Quality Control Board guidelines shall be implemented. Any land disturbance near potential hazardous sites should occur only after the remediation and clean-up of the existing site is complete.

Impact 3.9-3: Upset and Accident Conditions.

The Project site is approximately 3,000 feet from the Suburban Propane facility. City General Plan Policy ER-1-2 defines the probability of reasonably foreseeable for different land uses (see Table 3.9-1) and General Plan Policy ER-1-3 states that placing a land use not consistent with the criteria defining reasonably foreseeable events would be a significant adverse impact. The policy defines agriculture, light industrial, and industrial as allowed land uses in areas where the probability of an accident is between 10^{-4} and 10^{-5} (between 10 and 100 in 1 million), and commercial uses as allowed uses when the probability of accident is between 10^{-5} and 10^{-6} (between 1 and 10 in 1 million). Residential and institutional uses are allowed in areas where the probability of an incident is less than 10^{-6} (1 in 1 million).

Using the General Plan EIR's approach, only the extreme northwestern corner of the Project site falls within the 10^{-6} contour indicating a 1-in-one-million risk, with much lower risks (as shown by the 10^{-7} and 10^{-8} contours) at greater distances for the rest of the Project site and the off-site improvement areas. The land uses evaluated under the proposed Project for this SEIR would be consistent with risk factors defined by the City General Plan.

Information about Suburban Propane is provided in detail in this SEIR to promote public disclosure. Per CEQA, this is not considered an adverse physical environmental effect because it is an existing condition (i.e., predating initial consideration of the proposed Project) unrelated to any of the CEQA significance thresholds for hazards and hazardous materials. However, since the proposed land uses evaluated in this SEIR would be consistent with risk factors defined as acceptable by the City General Plan, this impact is considered **less than significant.**

Impact 3.9-4: Interfere with Emergency Response or Evacuation Plans.

Sacramento County, along with other area agencies including the City of Elk Grove, have prepared the *Sacramento Countywide Local Hazard Mitigation Plan* (Foster Morrison Consulting 2016). In the event of an emergency that would require citizens to evacuate, including those citizens who live in the City of Elk Grove, the City (and possibly Sacrament County) would implement its emergency operations plan, evacuation plan, and mass care and shelter plan. Future streets included within the Project site will be required to comply with the City's and Cosumnes Community Service District (CCSD) Fire Department's design standards pertaining to emergency access.

Nearby roadways in the vicinity of the Project site, such as Waterman Road and Grant Line Road, could be affected intermittently during construction at the Project site resulting in decreased emergency response times. Construction activities for the off-site drainage improvements would have no effect on local roadways, since this work would occur a long distance from any paved roadway. However, construction activities at the Project site 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. Potential reduction of emergency response services during construction of the proposed land uses at the Project site would be a **potentially significant** impact.

Mitigation Measure 3.9-4: Implement Traffic Control Plans (2019 SOIA EIR Mitigation Measure 3.9-4).

Implement traffic control plans for construction activities that may affect road rights-of-way during Project construction. The traffic control plans shall be designed to avoid traffic-related hazards and maintain emergency access during construction phases. The traffic control plan will illustrate the location of the proposed work area; provide a diagram showing the location of areas where the public right-of-way would be closed or obstructed and the placement of traffic control devices necessary to perform the work; show the proposed phases of traffic control; and identify the time periods when traffic control would be in effect and the time periods when work would prohibit access to private property from a public right-of-way. The plan may be modified in order to eliminate or avoid traffic conditions that are hazardous to the safety of the public. Traffic control plans should be submitted to the affected agencies, as appropriate, shall be submitted to the City for review and approval before approval of improvement plans, where future construction may cause impacts on traffic.

Significance after Mitigation

Implementation of Mitigation Measure 3.9-4 would reduce Project impacts related to interference with emergency response or emergency evacuation plans to a **less-than-significant** level because a traffic control plan, designed to avoid traffic-related hazards and maintain emergency access during construction phases, would be prepared and submitted to the City for approval.

Impact 3.9-5: Risks from Wildfires.

Areas at risk for extreme wildfires are designated by CAL FIRE as those lands where dense vegetation with severe burning potential prevails, as well as areas with limited access due to topography or lack of roads. The Project site, off-site improvement areas, and Project vicinity are not located in or near a State Responsibility Area; rather, they are located in a Local Responsibility Area (CAL FIRE 2018). Furthermore, the Project site, off-site improvement areas, and vicinity are classified as a non-very high fire hazard severity zone (CAL FIRE 2018), which is defined as an area not prone to intense, damaging wildfires.

Fire protection services would continue to be provided by the nearby CCSD (see Section 3.13, “Public Services and Recreation,” for further discussion of the CCSD Fire Department). The proposed land use assumption changes to allow regional commercial and additional industrial development would not require additional fire department personnel or equipment as compared to what was previously analyzed in the 2019 SOIA EIR. Therefore, this impact is considered **less than significant.**

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3.10 HYDROLOGY AND WATER QUALITY

Comments received on the Notice of Preparation (NOP) were reviewed during preparation of this SEIR. A comment letter was submitted by the Sacramento County Mosquito & Vector Control District requesting that the off-site drainage improvements be designed so as not to induce an increase in mosquito breeding. A comment letter submitted by the Sacramento County Farm Bureau also requested that the SEIR evaluate how the conversion of agricultural land to urban development would affect groundwater supply for continuing off-site agricultural uses in the Project vicinity. In addition, a comment letter was submitted by the Sacramento Local Agency Formation Commission (LAFCo), stating that LAFCo "maintains an interest" in the Project's impacts on water availability and stormwater management and flooding. A comment was also received by an individual expressing concern related to groundwater supply and the required Groundwater Sustainability Plan. The City reviewed and considered this information during preparation of this section.

Comments were also received by an individual requesting that the SEIR evaluate the effects of climate change on water availability. The California courts have stated that the required focus of an EIR is on the physical impacts of a project on the environment, not the impacts of the environment on a project. Therefore, the potential effects of climate change on water availability are not evaluated in this document. However, water supply planning efforts that are undertaken by a variety of agencies such as the City of Elk Grove, Sacramento County Water Agency, and the groundwater sustainability agencies that are currently jointly preparing the Groundwater Sustainability Plan for the South American Subbasin (see the subsection below entitled "Groundwater"), may consider climate change. The same individual also requested that the SEIR evaluate the financial cost to the community of improving water infrastructure and providing water to the proposed development. However, pursuant to the CEQA Guidelines Section 15131, "economic or social effects of a project shall not be treated as significant effects on the environment", and therefore such impacts are not evaluated in this SEIR. Please see also Section 3.15, "Utilities and Service Systems," for additional detailed information related to water supply planning and infrastructure.

3.10.1 ENVIRONMENTAL SETTING

The Project site and off-site improvement areas are located in the Sacramento River hydrologic basin, in the Lower Deer Creek Watershed. The watershed generally slopes from northeast to southwest with an average slope of about 0.10 percent. Rainfall in the vicinity of the Project site occurs primarily in the winter and early spring.

SURFACE WATER HYDROLOGY

The Project site does not contain any undisturbed natural stream corridors. The surface water resources nearest to the Project site are Deer Creek and the Cosumnes River, which are approximately 0.25 mile and 0.5 mile to the east, respectively.

For modeling purposes, three subwatersheds were designated at the Project site: Mosher, Mahon, and Grant Line. The Grant Line subwatershed extends off site to the north, across Grant Line Road and includes the area between the UPRR and Mosher Road, north to Kent Street. The Grant Line subwatershed also includes the Waterman 75 project, on the north side of Grant Line Road. All three subwatersheds discharge to Deer Creek at different locations, through a series of ditches and by overland runoff. Three unnamed ponds located off the Project site to the east and south (approximately 0.75 acres, 15 acres, and 8 acres, respectively) collect much of this runoff

before discharging to Deer Creek. Runoff from Grant Line Road is conveyed in a piped storm drain system to a ditch on the south side of the road, where flows are conveyed to the west, parallel to Grant Line Road. This roadside ditch conveys runoff to another ditch that runs south, parallel to the UPRR, along the southwestern border of the Project site. This ditch adjacent to the UPRR ultimately drains to an approximately 8-acre pond off the Project site to the south. A short reach of open channel conveys runoff from the 8-acre pond to Deer Creek (West Yost Associates 2020).

Within the Project site, past agricultural practices have modified the natural stormwater runoff patterns such that an unusually small amount of peak runoff is ultimately discharged to Deer Creek to the south. These practices included field leveling and the reuse of captured stormwater within a system of ditches, culverts, and irrigation-type sump ponds (including the three off-site ponds listed above). Pumps within the sump ponds are used for irrigating fields through general field flooding practices, resulting in increased infiltration within the fields and reduced runoff (West Yost Associates 2020).

The Waterman 75 Project is a 95-acre mixed use development project proposed for the area north of the Waterman Road/Grant Line Road intersection. As noted by West Yost (2020), a previous drainage study for the Waterman 75 Project established the size and alignment of a future pipeline that will convey stormwater runoff from Waterman 75 to Deer Creek. The pipeline was planned for a 48-inch diameter along the future extension of Waterman Road southeast along the border of the City-owned parcel within the Project site, and an easement for this drainage pipeline was obtained along this path through the Project site to the existing off-site 15-acre pond.

SURFACE WATER QUALITY

Section 303(d) of the federal Clean Water Act requires each state to periodically prepare a list of all surface waters in the state for which beneficial uses of the water (e.g., drinking, recreation, aquatic habitat, and agricultural use) are impaired by pollutants. Beneficial uses for waters in the project region are contained in the *Water Quality Control Plan for the Sacramento-San Joaquin River Basins* (Basin Plan), adopted by the Central Valley Regional Water Quality Control Board (RWQCB) in 2018, which also provides water quality objectives and standards for waters of the Sacramento River and San Joaquin River basins, including the Delta.

Section 303(d) of the CWA also requires states to identify waters where the permit standards, any other enforceable limits, or adopted water quality standards are still unattained. The law requires states to develop Total Maximum Daily Loads (TMDLs) to improve the water quality of impaired water bodies. TMDLs are the quantities of pollutants that can be safely assimilated by a water body without violating water quality standards. TMDLs are developed for impaired water bodies to maintain beneficial uses, achieve water quality objectives, and reduce the potential for future water quality degradation. National Pollutant Discharge Elimination System (NPDES) permits for water discharges (for both construction and operation) must take into account the pollutants for which a water body is listed as impaired.

Deer Creek discharges to the Cosumnes River. The Cosumnes River is listed as an impaired water body on the California Clean Water Act Section 303(d) list (State Water Resources Control Board 2017). The Cosumnes River is listed for toxicity, and TMDL criteria are still being developed. Because a portion of the City-owned parcel was historically used as an orchard, residual pesticides and herbicides could be present in the soil, and therefore could also be present in the runoff conveyed by the agricultural drainage ditches.

FLOODING

According to the current Federal Emergency Management Agency (FEMA 2012) Flood Insurance Rate Maps (FIRMs), those portions of the Project site that would pre-zoned and annexed as part of the proposed Project are not located in a 100-year flood hazard zone (see Exhibit 3.10-1). A small area of the Project site, designated for future parks and open space uses, is located in a 100-year flood hazard zone (Zone AE). The off-site drainage channel improvements, the off-site 60-inch underground drainage pipeline, and the off-site 15-acre and 8-acre ponds are also within the mapped 100-year flood hazard zone (Zone AE) (see Exhibit 3.10-1).

Additional small areas of land in the southern portion of the Project site are within the 200-year flood zone designated as part of the Central Valley Flood Protection Plan (CVFPP) and updated by subsequent floodplain studies commissioned by the City of Elk Grove for local creek systems that have a watershed area of at least 10 square miles (City of Elk Grove 2019a). The 200-year flood zone includes a portion of the area proposed for heavy industrial land uses. In addition, the extreme southeastern edge of the area where future mixed-use development could occur is also within the City-mapped 200-year flood zone (see Exhibit 3.10-1).

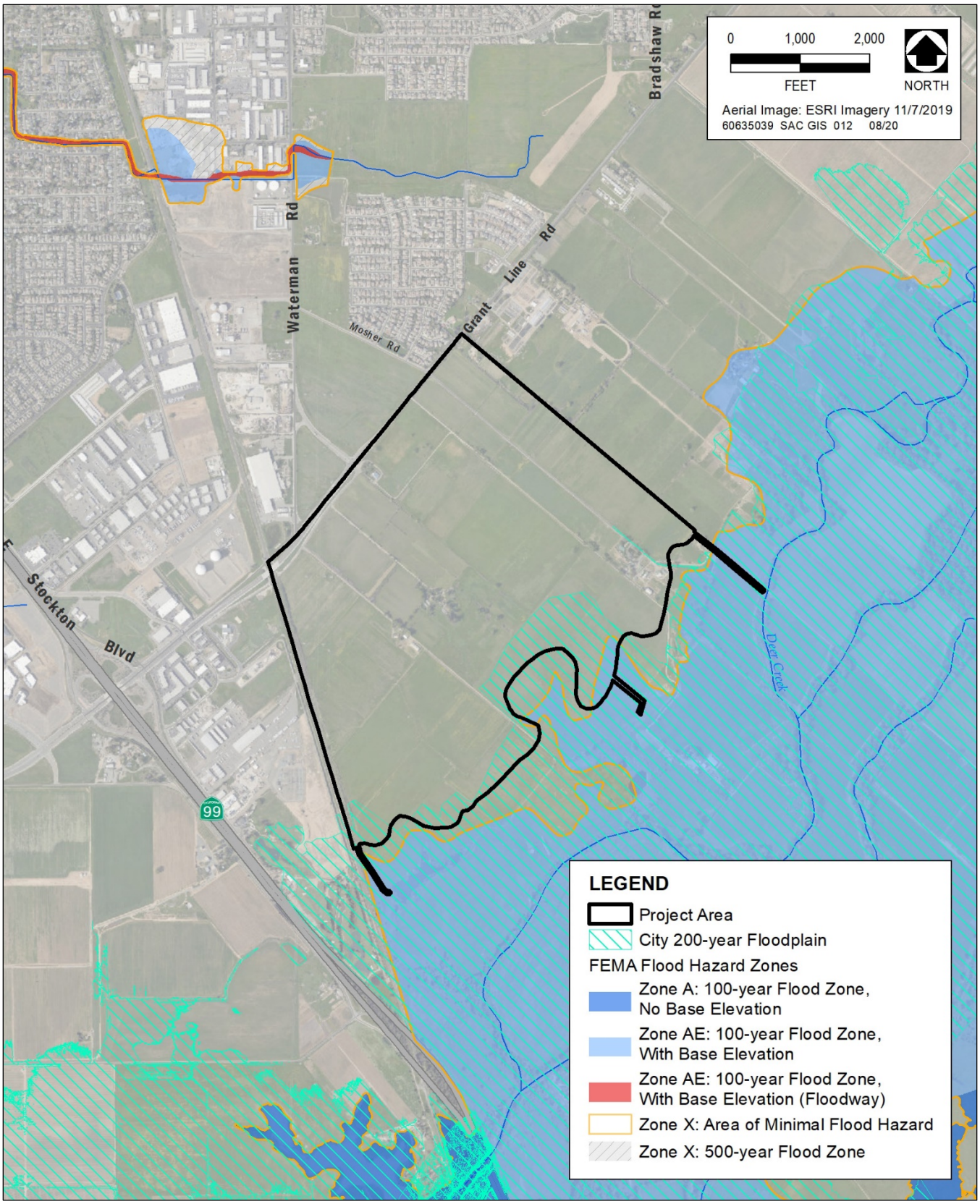
The off-site ponds that would receive Project site drainage range from approximately 0.5 acres to 15 acres in size. Given the long distance of the Project site to active seismic sources (see Section 3.7, "Geology, Soils, Minerals, and Paleontological Resources"), a seismic seiche at any of these ponds is unlikely. Since the Project site is approximately 150 miles from the Pacific Ocean, tsunamis would not represent a hazard at the Project site.

GROUNDWATER

The Project site is located within the Sacramento Valley Groundwater Basin, South American Subbasin (Basin ID 5-21.65) (identified locally in some water supply documents as the Central Basin, which has similar boundaries). The active river and stream channels where extensive sand and gravel deposits exist, particularly along the American, Cosumnes, and Sacramento River channels, are the primary source of recharge for the aquifer system (Sacramento Central Groundwater Authority 2012).

The California Department of Water Resources (DWR) has determined that the South American Subbasin is a high priority basin; however, is not in a condition of critical overdraft (DWR 2019). The Sacramento Central Groundwater Authority submitted an Alternative Groundwater Sustainability Plan (Alternative GSP) in 2016 (Sacramento Central Groundwater Authority 2016), which consisted of Sacramento Central Groundwater Authority's Central Sacramento County Groundwater Management Plan that was originally prepared in 2006. However, DWR has since required that a standard GSP be prepared. There are six Groundwater Sustainability Agencies (GSAs) within the South American Subbasin: Sacramento County, Northern Delta, Omochumne-Hartnell Water District, Reclamation District 551, Sacramento Central Groundwater Authority, and the Sloughouse Resource Conservation District. Under a collective Memorandum of Understanding entered into in 2020, the GSAs will be preparing a GSP by January 31, 2022 (as required by DWR under the Sustainable Groundwater Management Act) (South American Groundwater Subbasin 2020).

As described in the 2019 SOIA EIR, the Sacramento Central Groundwater Authority's Alternative GSP analyzed the change in groundwater storage in the Central Basin from 2005 to 2015. The difference in total annual average change in storage over the 2005 to 2015 timeframe was calculated to be approximately 4,000 acre-feet per year (afy). This equates to four to five large municipal wells in the subbasin and is representative of a basin in



Sources: City of Elk Grove 2019a, FEMA 2012

Exhibit 3.10-1. Flood Zones

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 continued to recover at its deepest points and the Sacramento Central Groundwater Authority is now focused on working with outside agencies to keep water from leaving the basin, and improving basin conditions where and when possible (Sacramento Central Groundwater Authority 2016). Groundwater storage in the recharge area underlying Elk Grove and surrounding areas is continuing to increase as a result of recharge from the construction of large conjunctive use and surface water infrastructure facilities, 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 AND SUSTAINABLE YIELD

The Water Forum Agreement set the long-term average annual extraction of groundwater (i.e., sustainable yield) from the Central Basin at 273,000 afy. As shown in Table 3.10-1, groundwater extraction has been within the Water Forum Agreement's sustainable yield from 2005 to 2015. The least amount of groundwater extraction over this period occurred in 2011 (202,379 afy) and the most occurred in 2008 (256,954 afy). The average groundwater extraction during the drought years (2011–2015) was approximately 219,000 afy (Sacramento Central Groundwater Authority 2016) (Table 3.10-1). Irrigation and domestic water demand at the Project site is currently met with private on-site wells.

3.10.2 REGULATORY FRAMEWORK

CITY OF ELK GROVE GENERAL PLAN

The City's General Plan (City of Elk Grove 2019b), contains the following policies related to hydrology and water quality that are applicable to the proposed Project.

Natural Resources

- **Policy NR 3-1:** Ensure that the quality of water resources (e.g., groundwater, surface water) is protected to the extent possible.
- **Policy NR 3-12:** Advocate for native and/or drought-tolerant landscaping in public and private projects.
- **Policy NR-3-12a:** Require the planting of native and/or drought-tolerant landscaping in landscaped medians and parkway strips to reduce water use and maintenance costs.
- **Policy NR 3-2:** Integrate sustainable stormwater management techniques in site design to reduce stormwater runoff and control erosion during and after construction. Where feasible, require on-site natural systems such as vegetated bioswales, green roofs, and rain gardens in the treatment of stormwater to encourage infiltration, detention, retention, groundwater recharge, and/or water reuse on-site. Roads and structures shall be designed, built and landscaped so as to minimize erosion during and after construction. Post-development peak storm water run-off discharge rates and velocities shall be designed to prevent or reduce downstream erosion, and to protect stream habitat.

Table 3.10-1 Central Basin Groundwater Extraction, 2005-2015

	Water User					Groundwater Extraction (afy)					
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015[2]
Urban	78,070	80,277	79,780	84,498	81,287	73,680	68,679	66,478	64,547	54,610	54,111
Agriculture[1]	167,062	166,148	165,234	164,320	163,406	162,494	116,500	134,600	152,400	133,900	140,000
Rural	7,852	7,946	8,041	8,136	8,231	8,326	17,200	23,400	22,900	23,100	23,000
Total	**252,984**	**254,321**	**253,055**	**256,954**	**252,924**	**244,498**	**202,379**	**224,478**	**239,847**	**211,610**	**217,111**

Notes: afy = acre-feet per year.

[1] Improved agricultural water supply requirement estimates using State DWR's Integrated Water Flow Model (IWFM) Demand Calculator occurred in 2011.

[2] Agriculture and Rural extractions for calendar year 2015 were not available and is based on the nominal average of previous 3 years.

Source: Sacramento Central Groundwater Authority 2016

- **Policy NR 3-3:** Implement the City's National Pollutant Discharge Elimination System permit through the review and approval of development projects and other activities regulated by the permit.

- **Policy NR 3-7:** Continue to eliminate water use inefficiencies and maintain ongoing communication with water suppliers to ensure sustainable supply.

- **Policy NR 3-8:** Reduce the amount of water used by residential and nonresidential uses by requiring compliance with adopted water conservation measures.

- **Policy NR 3-9:** Promote the use of greywater systems and recycled water for irrigation purposes.

Services, Health, and Safety

- **Policy ER-2-1:** Oppose the construction of flood management facilities that would alter or reduce flows in the Cosumnes River and support retention of the Cosumnes River floodplain in non-urban uses consistent with location in an area subject to flooding

- **Policy ER 2-2:** Require that all new projects not result in new or increased flooding impacts on adjoining parcels or on upstream and downstream areas.

- **Policy ER 2-5:** Give priority to the designation of appropriate land uses in areas subject to flooding to reduce risks to life and property. Construction of new flood management projects shall have a lower priority, unless land use controls (such as limiting new development in flood-prone areas) are not sufficient to reduce hazards to life and property to acceptable levels.

- **Policy ER 2-6:** Development shall not be permitted on land subject to flooding during a 100-year event, based on the most recent floodplain mapping prepared by FEMA or updated mapping acceptable to the City of Elk Grove. Potential development in areas subject to flooding may be clustered onto portions of a site which are not subject to flooding, consistent with other policies of this General Plan.

- **Policy ER 2-7:** A buildable area outside the 100-year floodplain must be present on every residential lot sufficient to accommodate a residence and associated structures. Fill may be placed to create a buildable area only if approved by the City and in accordance with all other applicable policies and regulations. The use of fill in the 100-year floodplain to create buildable area is strongly discouraged and shall be subject to review to determine potential impacts on wildlife, habitat, and flooding on other parcels.

- **Policy ER-2-11:** Vehicular access to the buildable area of all parcels must be at or above the 10-year flood elevation.

- **Policy ER-2-12:** Creation of lots whose access will be inundated by flows resulting from a 10-year or greater storm shall not be allowed. Bridges or similar structures may be used to provide access over creeks or inundated are areas, subject to applicable local, State, and federal regulations.

- **Policy ER-2-17:** 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.

- **Policy ER-2-18:** Drainage facilities should be properly maintained to ensure their proper operation during storms.

- **Policy ER 6-6:** Work with the Sacramento County Water Agency, Elk Grove Water Agency, and other water utilities to support programs and conservation activities intended to help water customers voluntarily conserve approximately 10 percent over time.

- **Policy ER 6-7:** Enforce the City's water-efficient landscape ordinance that is as strict as or stricter than the State Water Resources Control Board regulations affecting local water agencies, and ensure future state updates are incorporated in some form to the City's ordinance. Provide opportunity for and encourage public reporting of violations.

- **Policy ER 6-8:** Continue to participate in the Sacramento Stormwater Quality Partnership to educate and inform the public about urban runoff pollution, work with industries and businesses to encourage pollution prevention, require construction activities to reduce erosion and pollution, and require developing projects to include pollution controls that will continue to operate after construction is complete.

Land Use

- **Policy LU-3-26:** Require annexation proposals to demonstrate compliance with all of the following criteria:

    - Criteria 1. The annexation proposal is consistent with the applicable Land Use Program and Study Area organizing principles.

    - Criteria 2. The annexation proposal is consistent with the City's multimodal transportation goals, including integration of alternative transportation facilities as applicable.

    - Criteria 3. The annexation proposal provides for the planned, orderly, efficient development of the City within near-term time frames, recognizing opportunities or limitations to achieving substantially the same project within the existing City consistent with the General Plan. Options to achieve this criteria include, but are not limited to, a market demand/feasibility analysis.

    - Criteria 4. The annexation proposal is consistent with and furthers the Community Vision, as shown by demonstrating one or more of the following:

        – How the proposal furthers regional goals as expressed through the Sacramento Region Blueprint and the MTP/SCS.

        – How the proposal facilitates development of a regional attractor (e.g., Major Employment Center) or use that implements one or more of the General Plan Supporting Principles.

        – How the proposal furthers General Plan goals or objectives.

        – How the proposal provides key infrastructure or facilities needed to maintain or improve community service levels.

- Criteria 5. The annexation proposal does not reduce safety, utility, and infrastructure service levels within the City limits to less than the acceptable service standards or work level standards adopted by the City or the applicable service agency.

- Criteria 6. The annexation proposal identifies the source of future water supply for areas proposed for new development, in compliance with the Sustainable Groundwater Management Act.

3.10.3 Environmental Impacts and Mitigation Measures

Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact related to hydrology and water quality if it would:

- violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;

- substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;

- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

  i) result in substantial erosion or siltation on- or off-site;

  ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

  iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

  iv) impede or redirect flood flows;

- in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or

- conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Issues Not Discussed Further

The following issues were dismissed from further detailed analysis in the 2019 SOIA EIR because it was determined that no impact would occur; for the reasons explained below, these issues would also result in no impact for the proposed Project as evaluated in this SEIR.

Release of Pollutants from Seiche or Tsunami Hazards—The off-site ponds that would receive Project site drainage are approximately 0.5 acre, 8 acres, and 15 acres in size, respectively. Given the long distance of the Project site to active seismic sources (see Section 3.7, “Geology, Soils, Minerals, and Paleontological Resources”), a seismic seiche at any of these ponds is unlikely. Since the Project site is approximately 150 miles

from the Pacific Ocean, tsunamis would not represent a hazard at the Project site. Thus, there would be no impact and these issues are not discussed further in this SEIR.

IMPACT ANALYSIS

Impact 3.10-1: Violate Water Quality Standards or Waste Discharge Requirements.

Although the Project site and the off-site improvement areas are generally level, the potential exists for erosion to occur during construction activities, particularly during the rainy season. Construction activities such as vegetation removal, grading, staging, trenching, and excavation for foundations and utilities, would expose soils to erosive forces and could transport sediment into local drainages, thereby increasing turbidity, degrading water quality, and resulting in siltation to local waterways. Intense rainfall and associated stormwater runoff could result in short periods of sheet erosion within areas of exposed or stockpiled soils. If uncontrolled, these soil materials could cause sedimentation of downstream surface waterbodies. The construction process may also result in accidental release of other pollutants to surface waters. Groundwater quality can be affected either by direct contact during construction-related earthmoving activities, or by indirect contact as a result of percolation of stormwater. Future development within the Project site would also result in changes to land use, natural vegetation, and an increase in impervious surface, and would introduce new sources of water pollutants, thereby producing "urban runoff." Pollutants contained within urban runoff may include but are not limited to sediment, oxygen-demanding substances (e.g., organic matter), nutrients (primarily nitrogen and phosphorus), heavy metals, bacteria, oil and grease, and toxic chemicals, all of which can degrade receiving water quality. Earthmoving activities that could encounter groundwater are issued Waste Discharge Requirements (WDRs) by the Central Valley RWQCB through the project-specific permitting process; the WDRs contain provisions that are specifically intended to protect groundwater quality. Protection of surface water and groundwater quality from stormwater runoff and percolation is accomplished through implementation of a SWPPP with associated BMPs, and the City's Municipal Separate Storm Sewer System (MS4) permit (discussed below).

Proposed projects that disturb more than 1 acre are required by law to comply with the provisions of the SWRCB's NPDES General Permit for Storm Water Discharges Associated With Construction and Land Disturbance Activities (Order 2009-009-DWQ as amended by Order 2012-0006-DWQ) (Construction General Permit). The Construction General Permit requires preparation of a SWPPP and implementation of associated BMPs that are specifically designed to reduce construction-related erosion. The Construction General Plan also requires preparation of a spill prevention plan. Construction techniques that could be implemented to reduce the potential for stormwater runoff may include minimizing site disturbance, controlling water flow over the construction site, stabilizing bare soil, and ensuring proper site cleanup. BMPs that could be implemented to reduce erosion may include silt fences, staked straw bales/wattles, silt/sediment basins and traps, geofabric, trench plugs, terraces, water bars, soil stabilizers, and re-seeding and mulching to revegetate disturbed areas.

The City encourages developers and engineers to use the water quality treatment principles in the *California Stormwater Quality Association (CASQA) Construction Best Management Practice Handbook* (CASQA 2019), which provides guidelines for planning, implementing, and maintaining effective, site-specific control measures to improve water quality and reduce adverse hydrologic effects, including hydromodification, from stormwater and non-stormwater discharges.

Site-specific development within the Project site would be required to adhere to City of Elk Grove NPDES permit requirements and City of Elk Grove Municipal Code requirements related to Stormwater Management and

Discharge Control (Chapter 15.12, "Stormwater Management and Discharge Control"). In addition, future development applications would be required to comply with Chapter 16.44, "Land Grading and Erosion Control," of the Elk Grove Municipal Code. Chapter 16.44 requires submittal of grading plans that include elevations, location, extent and slope of all proposed grading; the location of any disposal areas, fills or other special features to be included in the work; the quantity of material to be excavated, the quantity of material to be filled, whether such excavation or fill is permanent or temporary, and the amount of such material to be imported to or exported from the site; a delineation of the area to be cleared and grubbed; a statement of the estimated starting date, grading completion date, and when site improvements will be completed; the location, implementation schedule, and maintenance schedule of all erosion control measures and sediment control measures to be implemented or constructed prior to, during or after the proposed activity; a description of measures designed to control dust and stabilize the construction site road and entrance; and a description of the location and methods of storage and disposal of construction materials. The plans must be consistent with the Citywide drainage strategy and would be reviewed by the Public Works Department before design review.

The City is part of the Sacramento Stormwater Quality Partnership, which manages stormwater pollutants through its NPDES/WDR permit to discharge stormwater from municipal separate storm sewer systems (MS4 Permit) issued by the Central Valley RWQCB in 2008. The MS4 permit requires the City to address post-construction stormwater runoff from new development and redevelopment projects by requiring both source and treatment control BMPs. The MS4 permit is implemented through Elk Grove Municipal Code Chapter 15.12, "Stormwater Management and Discharge Control," which requires submittal of drainage plans that identify existing flows, measures to reduce potential hydrologic impacts, proposed drainage facilities, and plans to accommodate increased flows and connections to the City's existing drainage facilities. Commercial facilities require appropriate NPDES permits/WDRs, and implementation of BMPs consistent with the CASQA *Industrial/Commercial BMP Handbook* (2014) or its equivalent, including annual reporting of any structural control measures and treatment systems. These measures to protect water quality are intended to support the City's compliance with the *Water Quality Control Plan (Basin Plan) for the Sacramento and San Joaquin River Basins* (Central Valley RWQCB 2018).

The City of Elk Grove's Storm Drainage Master Plan (City of Elk Grove 2011) requires that low impact development (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 in order to manage stormwater (City of Elk Grove 2011). The Storm Drainage Master Plan recommends that all runoff from developed areas should be directed into detention basins: "The detention basins, in conjunction with LID, will provide all the necessary stormwater quality treatment and flood flow mitigation for the developing areas within the watershed" (City of Elk Grove 2011:15-11).

Finally, as noted in Section 3.9, "Hazards, Hazardous Materials, and Wildfire," a portion of the City-owned parcel formerly contained an orchard. Certain organochlorine pesticides, which have been associated with orchards prior to 1972, can remain persistent in soils and there is the potential for these chemicals to be transported during construction to drainage ways in stormwater runoff resulting in impacts to water quality. However, as discussed in detail in Impact 3.9-2, if evidence of soil or groundwater contamination exceeding ambient or background concentrations is discovered during Project -related construction, work would cease, 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. In addition, compliance with the City's requirements related to water quality and wastewater discharge would ensure that stormwater would be captured and treated as necessary according to the Sacramento Stormwater Quality Partnership's MS4 permit, City's Storm Drainage Master Plan (City of Elk Grove 2011), and City Municipal Code requirements.

For all of the reasons stated above, as with the 2019 SOIA EIR (Impact 3.10-2), this impact is considered **less than significant.** In addition, the mitigation measure below will be imposed to further reduce the potential for an impact.

Mitigation Measures

Mitigation Measure 3.10-1: Implement Mitigation Measure 3.9-2 (2019 SOIA EIR Mitigation Measure 3.9-2)

Impact 3.10-2: Substantially Decrease Groundwater Supplies or Interfere with Groundwater Recharge.

The development of urban uses at the Project site would change the demands for water supply, which would be provided by the Sacramento County Water Agency's (SCWA) Zone 40. An amendment to the Zone 40 Water Supply Master Plan (Brown and Caldwell 2020) has been prepared, which considers the provision of water service to the proposed urban development at the Project site. In general, municipal water supply demands are less than agricultural water supply demands; therefore, water demands for development at the Project site (i.e., 1,383 acre-feet per year) is less than the current estimated water demand required for agricultural irrigation (1,982 acre-feet per year). The use of the existing on-site groundwater wells for agricultural irrigation and rural residential use would be discontinued when the project site is developed.

As shown in Table 3.15-2 in Section 3.15, "Utilities and Service Systems," SCWA would have surface water and groundwater supplies that exceed demands within Zone 40 from 2020 to 2040 in all water years. The majority of SCWA's water supply comes from groundwater wells (75 percent), with remaining supply met by surface water supplies from the American and Sacramento Rivers. SCWA pumps groundwater from the South American Sub-basin of the Sacramento Valley Groundwater Basin. SCWA anticipates that, at buildout of its service area, and assuming that appropriative water and Central Valley Project (CVP) contract water continue to be available, surface water will account for approximately 70 percent of water supplies during average and wet years and account for approximately 30 percent of water supplies in the driest years, thereby resulting in a long-term average of approximately 60 percent of water demands being met by surface water supplies (Brown and Caldwell 2020). Therefore, water supply would be available to meet the water supply demands of future development within the Project site.

Although an Alternative GSP was submitted to DWR in 2016 under the Sustainable Groundwater Management Act, DWR has since required that a standard GSP be prepared for the South American Subbasin. The GSP is in process under a Memorandum of Understanding entered into by the six GSAs within the South American Subbasin and is planned for completion in January of 2022. The South American Subbasin is not in a condition of critical overdraft. The Sacramento Central Groundwater Authority determined that, from 2005 to 2015, groundwater levels in the South American Subbasin continued to recover at the subbasin's deepest points and management is now focused on working with outside agencies to keep water from leaving the basin, and improving basin conditions where and when possible (Sacramento Central Groundwater Authority 2016). Further, groundwater storage in the recharge area underlying Elk Grove and surrounding areas is continuing to increase as

a result of increased use of surface water in the South American Subbasin, the fallowing of previously irrigated agricultural lands transitioning into new urban development, recharge from the construction of large conjunctive use and surface water infrastructure facilities, increased use of recycled water, and water conservation. The increase in storage in this portion of the subbasin has filled the previous long-term cone of depression and has eroded the ridge of higher groundwater separating it from the Cosumnes Subbasin (Sacramento Central Groundwater Authority 2016).

As a signatory to the Water Forum Agreement, SCWA is committed to adhering to the long-term average sustainable yield of the Central Basin (273,000 acre-feet) (Brown and Caldwell 2011). As shown in Table 3.10-1, groundwater extraction was within the Water Forum Agreement's sustainable yield from 2005 to 2015. Since (1) an amendment to the Zone 40 Water Supply Master Plan has been prepared, determining that it can supply water for the proposed project (as required by 2019 SOIA EIR Mitigation Measure 3.15-1); (2) the Sacramento Central Groundwater Authority's Alternative GSP found that the basin could be sustainably managed to include existing and proposed supply; and (3) water supply for the proposed Project is included as part of the City's 2019 General Plan for future projects and therefore would be included as part of the GSP that is in process for the South American Subbasin, as with the 2019 SOIA EIR, this impact is considered **less than significant.**

The *Water Master Plan* fulfills the requirements identified in Mitigation Measure 3.15-1 of the 2019 SOIA EIR that requires the City of Elk Grove to prepare a Plan for Services that that depicts the locations and appropriate sizes of all on-site water system facilities to accommodate the amount of development identified for the annexation territory. The amended WSMP fulfills the requirements identified in Mitigation Measure 3.15-1 of the 2019 SOIA EIR that requires evaluation of SCWA's off-site water supply infrastructure to serve the Project site. Furthermore, compliance with City General Plan policies and standards identified above would also ensure implementation of Mitigation Measure 3.15-1 of the 2019 SOIA EIR.

Impact 3.10-3: Alteration of Drainage Patterns Resulting in Substantially Increased Erosion, Siltation, Downstream Flooding, or Increased Stormwater Runoff Volumes.

The Elk Grove Municipal Code Chapter 15.12, "Stormwater Management and Discharge Control," requires submittal of drainage plans that identify existing flows, potential hydrologic impacts, proposed drainage facilities, and plans to accommodate increased flows and connections to the City's existing drainage facilities. West Yost Associates (West Yost 2020) has prepared a site-specific Drainage Master Plan for the Project site that includes the land uses analyzed in this SEIR. The Drainage Master Plan was developed with consideration of stormwater management systems designed to take maximum advantage of the natural hydrological processes of the existing landscape, including the following goals:

- Stormwater management systems should be designed so that potential impacts to the flow, volume, and quality of downstream discharges to Deer Creek will be minimized.
- The drainage plan must conform to applicable local, State, and federal laws and regulations, including the Sacramento Region Stormwater Quality Design Manual (Sacramento Stormwater Quality Partnership 2018), as well as the Sacramento City/County Drainage Manual Volume 2, Hydrology (Sacramento County and City of Sacramento 1996).
- The drainage system should avoid the use of hydraulic pumping systems and extensive mass grading efforts.

Due to a lack of soils with high infiltration capacity in the area, detention basins were chosen to provide flood control, water quality treatment, and reduce hydromodification effects. The detention basins were sized in conformance with City standards. Additionally, West Yost modeled and sized major storm drain system trunk lines, identified suitable outfall locations to Deer Creek, and evaluated and recommended (as necessary), adjustments to the configuration and capacity of existing drainage ditches and culverts. Only the major trunk line piping systems were sized for buildout conditions since future detailed storm drain system designs will accompany submittals for each planned phase of development once detailed site layouts are available.

A hydraulic analysis of the major existing conveyance facilities within the Project area, including ditches, culverts, and agricultural-related storage ponds, was performed using the XPSWMM model. Project-related hydrologic modeling complied with the requirements in the Sacramento City/County Drainage Manual, Volume 2, Hydrology.

The three larger subwatersheds in the Project area (Grant Line, Mahon, and Mosher) were further divided into 24 subsheds for purposes of the stormwater drainage modeling and design. All subsheds would drain directly into one of seven on-site detention basins that are proposed at key locations within the Project site (see Exhibit 2-6, "On-Site Drainage Facilities") to provide runoff storage volume that would reduce the potential for increases in peak flood flows and to provide flow duration control to reduce hydromodification effects and water quality concerns. Underground drainage pipelines within the Project site would convey post- Project runoff from small to moderate storms to the detention basins. During large rainfall events, excess flow would be conveyed overland through streets and open space. However, all overland flow at the Project site would be directed into the on-site detention basins. In accordance with the Sacramento Region Stormwater Quality Design Manual, the proposed detention basins have been configured with 4:1 side slopes, a basin length that is three times the width, and a depth between 4 and 8 feet where possible. The basins have been designed to provide 1 foot of freeboard during the 100-year, 24-hour storm event. All detention basins were sized to incorporate hydromodification requirements as required by the Sacramento City/County Drainage Manual.

Stormwater quality treatment would be provided in detention basins using the dry extended detention approach with a 48-hour drawdown. The specific requirements for the water quality treatment facilities were determined from the Sacramento Region Stormwater Quality Design Manual. The Sacramento Area Hydrology Model (SAHM) was used to determine the requirements for hydromodification mitigation. The major drainage facilities both on and off the Project site were sized as required for the 2-, 10-, and 100-year storm events. The water quality storage volumes in the detention basins would be released over 48 hours in compliance with the requirements of the Sacramento Region Stormwater Quality Design Manual. The water quality flows would be released through an orifice constructed in a riser at the detention basin outlet. Because the stored water would be released over a 48-hour period, the detention basins would not create areas of new mosquito breeding habitat.

Stormwater flows from the Project site would be discharged to Deer Creek at three different locations, as shown on Exhibit 2-7, "Off-Site Drainage Facilities" (in Chapter 2, "Project Description").

As noted previously, a 48-inch underground drainage pipeline is planned to traverse the Project site in an northwest-southeast direction along the boundary of the City-owned parcel, and discharge to an existing approximately 15-acre off-site pond, in order to convey stormwater drainage from the Waterman 75 project north of Grant Line Road. Runoff from the City-owned parcel currently drains to the south. Due to requirements for the grade of the Waterman 75 pipeline and the elevation of the City-owned parcel, it is not possible for stormwater

runoff from the City-owned parcel to be conveyed across the path of the future Waterman 75 pipeline. Therefore, stormwater runoff from the City parcel would also drain to the Waterman 75 pipeline. To accommodate this, the drainage pipeline would need to be increased from its originally planned size of 48 inches to 60 inches. In addition, the planned improvements to the outfall at the off-site pond would require an elevation change in order to allow for gravity flow. The following modifications at the 15-acre off-site pond would be required:

- **Modify the pond inlet.** Modify the pond's inlet to accommodate additional flows, as necessary.
- **Reconfigure the pond outlet.** The outfall from the pond should be configured to be at or below the elevation of the 60-inch outfall pipe, which is currently estimated to be about an elevation of 40.4 feet above mean sea level.
- **Lower the pond elevation.** The pond stores water for use by the property owner so if the change to the outfall results in a lower outlet, the rest of the pond will need to be lowered to maintain a large enough pool for the current agricultural operations in addition to stormwater drainage from the Project site and the Waterman 75 project.
- **Modify the conveyance channel.** Widen the existing conveyance channel from the pond outlet to the existing Deer Creek outfall.

Because the pond is used by the landowner for agricultural water storage, detailed survey data would be needed during the design phase to determine exactly how the existing 15-acre pond would need to be reconfigured. It should be noted the lowering the bottom elevation of the pond to allow an increased volume of water storage would not increase the amount of existing mosquito breeding habitat, because the surface acreage of the pond would not change.

An existing drainage channel that runs along the northeastern Project site boundary would be deepened by approximately 1.5 feet both on and off the Project site to the southeast, in order to convey some of the Project site stormwater flows. This channel discharges into an existing 0.5-acre pond. From the pond, flows drain back into an existing channel to Deer Creek.

Finally, an existing drainage ditch that runs along the southwestern Project site boundary adjacent to the UPRR would be widened to a 3-foot trapezoidal channel, with 3:1 side slopes and a 14-foot bottom width. The improved drainage channel would convey a portion of the Project site's stormwater runoff to an existing off-site approximately 8-acre pond. A short reach of open channel conveys runoff from the 8-acre pond to Deer Creek, and this channel would not need to be modified.

The volume of Project -related flood flows that would be discharged to Deer Creek at each of the above three outfalls (see Exhibit 2-7, "Off-Site Drainage Facilities") was established based on typical peak flow rates determined using the Sacramento Method. Because the selected allowable discharge rates would be higher than the existing peak flows discharged to Deer Creek, an analysis was performed to ensure that no significant negative impacts would occur in Deer Creek. The resulting maximum increase in water surface rise in Deer Creek was calculated to be 0.02 feet, which is insignificant based on Sacramento County's floodplain ordinance (which considers a significant increase to be greater than 0.10 feet). The analysis also found that tailwater water surface elevations at the proposed Deer Creek outfalls would not be affected. West Yost has confirmed in written correspondence from the Sacramento County local floodplain administrator that the proposed increases to peak

flows from the Project site are acceptable. Therefore, the proposed detention basins provide adequate flood control performance.

Based on the results of site-specific drainage modeling and design (West Yost 2020), in compliance with the Elk Grove Municipal Code Chapter 15.12, the proposed Project would not result in substantially increased erosion, siltation, downstream flooding, and the proposed drainage facilities have been appropriately sized to detain stormwater runoff volumes such that increased flooding would not occur and provide for water quality treatment and reduce hydromodification. The site-specific drainage modeling and design when implemented complies with the 2019 SOIA EIR Mitigation Measure 3.10-4. Therefore, as with the 2019 SOIA EIR, this impact is considered **less than significant.**

Impact 3.10-4: Impede Flood Flows or Risk Release of Pollutants from Inundation in a Flood Hazard Zone.

As shown in Exhibit 3.10-1, although those portions of the Project site that are currently proposed for prezoning and annexation are located outside of the FEMA 100-year floodplain, a small area along the southeast boundary of the Project site in the area designed for parks/open space uses is located within the 100-year floodplain (within a later annexation phase). In addition, portions of the heavy industrial area, and the eastern boundary of the future mixed-use area, are within a mapped 200-year floodplain. Chapter 23.42.040 of the City's Municipal Code, "Flood Combining District," indicates that development in a 200-year floodplain is not allowed unless certain findings are made. However, development in areas with flood depths less than 3 feet is exempt from the finding requirement, as allowed under Senate Bill 5. West Yost performed an analysis of the 200-year floodplain in the Project area and determined that no portions of the Project site that are within the mapped 200-year floodplain limits would experience depths of flooding greater than 1 foot. Therefore, Urban Level of Flood Protection requirements are not applicable to the Project site (West Yost 2020).

Elk Grove Municipal Code 16.50 (Flood Damage Prevention) addresses requirements for construction within floodplains. Specifically, this chapter requires the issuance of a Floodplain Development Permit for any development within a special flood hazard area and requires specific construction methods be followed. Generally, habitable structures, such as homes and offices, are prohibited in special flood hazard areas. Non-habitable accessory structures, including but not limited to garages, small accessory structures, and utilities, may be constructed subject to the design requirements listed in Municipal Code Section 16.50.060.

None of the areas proposed for Light Industrial (LI), Heavy Industrial (HI), or Regional Commercial (RC) are within the 100-Year Floodplain. For the area proposed for Parks and Open Space (P/OS), if there are any structures proposed, structures within the 100-year floodplains could impede or redirect flood flows. Therefore, this impact is considered **potentially significant**.

Mitigation Measure 3.10-4a: Ensure Structures are Outside of the 100-Year Floodplain (2019 SOIA EIR Mitigation Measure 3.10-5)

The City of Elk Grove shall verify that no habitable structures or structures that negatively obstruct the flow of water are proposed within the 100-year floodplain. Further, all development shall comply with applicable provisions of Elk Grove Municipal Code Section 16.50 (Flood Damage Prevention).

Mitigation Measure 3.10-4b: Prevent Storage of Construction Materials and Equipment in a Flood Zone During the Rainy Season.

The City shall note on the construction plans and require as a condition of grading permits that construction materials and equipment shall not be stored in a 100- or 200-year floodplain between October 1 and April 31 of any year during construction.

Significance after Mitigation

As with the 2019 SOIA EIR, implementation of Mitigation Measures 3.10-4a and 3.10-4b would reduce impacts associated with structures that impede or redirect flood flows and reduce the risk of release of pollutants from flood inundation to a **less-than-significant** level because the City of Elk Grove would ensure that habitable structures or structures that negatively obstruct the flow of water would be located outside of the 100-year floodplain, and that construction equipment and materials would not be stored in floodplains during the rainy season. This is consistent with the 2019 SOIA EIR, Impact 3.10-5.

Impact 3.10-5: Conflict with a Water Quality Control Plan or Sustainable Groundwater Management Plan.

For the reasons described in Impacts 3.10-1 and 3.10-2, above, the proposed Project would not conflict with or obstruct implementation of the *Water Quality Control Plan (Basin Plan) for the Sacramento and San Joaquin River Basins* (Central Valley RWQCB 2018) or the *South American Subbasin Alternative Groundwater Sustainability Plan* (Sacramento Central Groundwater Authority 2016). Therefore, this impact would be **less than significant.**

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3.11 LAND USE, POPULATION, HOUSING, EMPLOYMENT, ENVIRONMENTAL JUSTICE, AND UNINCORPORATED DISADVANTAGED COMMUNITIES

The City conducted a review of comments on the Notice of Preparation (NOP) prior to preparation of this SEIR. A comment letter was received from the Sacramento Local Agency Formation Commission (LAFCo) indicating it is unclear as to whether the City intends the SEIR to serve as the environmental document for use by LAFCo, as a responsible agency, in its consideration of future annexation requests or if subsequent environmental documents would be prepared for individual development projects as they are proposed and reviewed by the City. In addition, a comment letter was submitted by the Sacramento County Farm Bureau expressing concern related to leap-frog development. The City reviewed and considered this information during preparation of this section.

3.11.1 ENVIRONMENTAL SETTING

The environmental setting for this section is essentially unchanged since the 2019 SOIA EIR was drafted. The following environmental setting provides current (2020) land use, population, housing, employment, environmental justice, and unincorporated disadvantaged communities conditions that have changed since the 2019 SOIA EIR was drafted.

EXISTING AND ADJACENT LAND USES

As identified in the 2019 SOIA EIR, most of the Project site is devoted to agriculture (i.e., row crops and pasture). The Project site also includes three existing home sites, five residences, and multiple barns and sheds.

Future Land Uses in the Vicinity of the Project Site

The City's General Plan identifies the Project site within the approximately 1,772-acre East Study Area. The East Study Area is southeast of Grant Line Road, running along the City boundary between existing five-acre developments along Equestrian Drive and the railroad tracks to the southwest. Employment uses are anticipated to function as an extension adjoining industrial development to the north and northwest, and according to the General Plan, the employment uses envisioned for the East Study Area will focus on industrial, office, and regional retail uses. In the central and northeastern portions of the East Study Area, uses will transition to residential neighborhoods that are compatible with existing neighborhoods to the north of Grant Line Road, as well as with the rural and agricultural areas located to the northeast and southeast. Opportunities for community-oriented commercial uses exist at major intersections along Grant Line Road at Bradshaw Road and Elk Grove Boulevard (City of Elk Grove 2019).

POPULATION

The City of Elk Grove's total population increased from 72,665 at its incorporation in 2000 to 176,154 in 2020, an increase of 142 percent during this 20-year period (California Department of Finance [DOF] 2020); however, this also included the annexation of Laguna West in 2004. The City estimates that Elk Grove's population will increase to 332,250 persons at buildout of its General Plan, including buildout of its study areas (City of Elk Grove 2019).

HOUSING

According to the DOF, the total number of housing units in the City of Elk Grove was 55,438 in 2020, with an average household size of 3.27 persons per unit, compared to 2.79 in unincorporated Sacramento County (DOF 2020). The larger percentage of single-family homes in Elk Grove versus countywide could be a factor in Elk Grove's larger average household size.

SACOG estimates that total number of housing units in the City of Elk Grove will be 65,660 by 2035, 66,570 by 2040, and 102,850 at buildout (SACOG 2019). This includes the estimated number of housing units that could be constructed as part of the Laguna Ridge Specific Plan, Lent Ranch Market Place, the Southeast Policy Area, Sterling Meadows, and the Triangle Special Planning Area (SACOG 2019). SACOG's future housing projections do not include development of the City's study areas (SACOG 2019). The estimated number of housing units at buildout of City's General Plan, which includes estimates of the total number of housing units that could be generated from future development of its study areas, would be 102,865 (City of Elk Grove 2019).

The 2020 MTP/SCS designates the Project site as "Lands Not Identified for Development" in the MTP/SCS planning period (SACOG 2019). Therefore, the Project site is not included in SACOG's future housing projections.

EMPLOYMENT

The largest industry sector in terms of local employment is education, health care, and social assistance, making up approximately 26 percent of the jobs in the city of Elk Grove, followed by public administration (15 percent), and the retail trade (10 percent) (U.S. Census Bureau 2018).

The average commute time for workers commuting to employment centers both inside and outside the City was approximately 33.5 minutes (U.S. Census Bureau 2018). Approximately 89 percent of those workers drove or carpooled to work in a car, truck, or van and approximately 5 percent walked, bicycled, or rode public transit (U.S. Census Bureau 2018).

Based on the current employment totals and projections, SACOG estimates that Elk Grove would have approximately 57,640 jobs by 2035, 60,070 jobs by 2040, and 122,160 at buildout (SACOG 2019). This includes the estimated number of jobs that could be generated as part of the Laguna Ridge Specific Plan, Lent Ranch Market Place, the Southeast Policy Area, and the Triangle Special Planning Area (SACOG 2019). The Project site is not included in SACOG's employment projections.

The City estimates the number of new jobs at buildout of the City's General Plan, which includes estimates of the total number of jobs that could be generated from future development of its study areas, would be 122,155 (City of Elk Grove 2019).

Unemployment

The estimated labor force in the City in 2019 was 83,100 residents, of which 80,500 were employed (EDD [California Employment Development Department] 2020a). The City's unemployment rate was 3.1 percent in 2019 (EDD 2016b). This unemployment rate is lower than Sacramento County. Sacramento County's unemployment rate in 2019 was 3.7 percent (EDD 2020a). The unemployment rate does not include individuals

16 years or over who have stopped looking for work or who are underemployed. The coronavirus pandemic has affected unemployment rates and participation rates nationwide. The latest estimate for the Elk Grove Census Designated Place is 11.5 percent from July 2020, but is identified by the Employment Development Department as being preliminary and not seasonally adjusted (EDD 2020b).

JOBS/HOUSING BALANCE

SACOG estimated that, by 2035, continued development of the Laguna Ridge Specific Plan, Lent Ranch Market Place, the Southeast Policy Area, and the Triangle Special Plan, as well as other planned development (not including the Project site, which was not anticipated in the MTP/SCS) could increase the City's jobs to 57,640 and housing units to 65,660, for a jobs-to-housing unit ratio of 0.88 by 2035. By 2040, SACOG estimated that jobs could increase to 60,070 and housing units to 66,570 for a ratio of 0.90 (SACOG 2019).

The City's policy is to designate sufficient land in employment-generating categories to provide opportunities for Elk Grove's working population and jobs in categories matching resident's employment levels (Policy LU-1-8 of the General Plan). The City General Plan estimates that buildout of the City would accommodate 48,102 new housing units and generate 77,339 new jobs, resulting in at total of 102,865 housing units and 122,155 jobs (City of Elk Grove 2018, 2019).[1] These totals include existing housing units and jobs plus new housing units and jobs generated by future development within the City limits and its study areas. Based on these data, the City estimates that buildout of the General Plan's land uses would give the City a jobs-to-housing ratio of 1.21. This ratio is essentially the same as SACOG's planned regional average of 1.2 jobs to housing ratio by 2040 (SACOG 2019).

As stated previously, the Project site is within the East Study Area. The City estimates that the East Study Area could accommodate 4,806 housing units and generate 3,875 new jobs, resulting is a jobs-to-housing ratio of 0.81 (City of Elk Grove 2019).

DISADVANTAGED UNINCORPORATED COMMUNITIES

Senate Bill (SB) 244 defines a "disadvantaged unincorporated community" as any area with 10 or more dwelling units that either is within a city sphere of influence, is an island within a city boundary, or is geographically isolated and has existed for more than 50 years, and that has a median household income of less than 80 percent of the statewide annual median. As shown of Exhibit 3.11-1, no disadvantaged unincorporated communities are contiguous with the Project site.

3.11.2 REGULATORY FRAMEWORK

ENVIRONMENTAL JUSTICE

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 provides the authority and procedures for the initiation, conduct, and completion of changes of organization and reorganization of cities and districts. The act specifies the factors that a local agency formation commission is required to consider in the review of a proposal for a change of organization or reorganization, including, among other factors, the extent to which the proposal will promote environmental justice. Environmental justice, for purposes of this law the meaningful involvement of people of all races, cultures, incomes, and national origins, with respect to those same

[1] There is no buildout date anticipated for the General Plan (City of Elk Grove 2018). Future employment-generating land uses will be determined by market conditions (City of Elk Grove 2019).

actions, to ensure a healthy environment for all people such that the effects of pollution are not disproportionately borne by any particular populations or communities.

METROPOLITAN TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY

On November 18, 2019, the Sacramento Area Council of Governments (SACOG) approved the *2020 Metropolitan Transportation Plan/Sustainable Communities Strategy* (2020 MTP/SCS), which is a regional transportation plan and land use strategy designed to build more vibrant places, accommodate changes in transportation and transportation funding, and build a safe and reliable multi-modal transportation system, including a focus on:

- 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 2020 MTP/SCS 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 and associated greenhouse gas emissions. The 2020 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). In the 2020 MTP/SCS, SACOG categorized the urbanized land within its jurisdiction into four Community Types according to land use and density/intensity: Center and Corridor Communities, Established Communities, Developing Communities, and Rural Residential Communities.

The 2020 MTP/SCS identifies the Project site as Lands Not Identified for Development (SACOG 2019). These areas of the region are not expected to develop to urban levels during the MTP/SCS planning period (in this case, through 2040). The MTP/SCS is not a land use plan – the land use assumptions are used to develop land use scenarios to examine in conjunction with different transportation investment strategies and outcomes related to transportation, air quality, and greenhouse gas emissions rates.

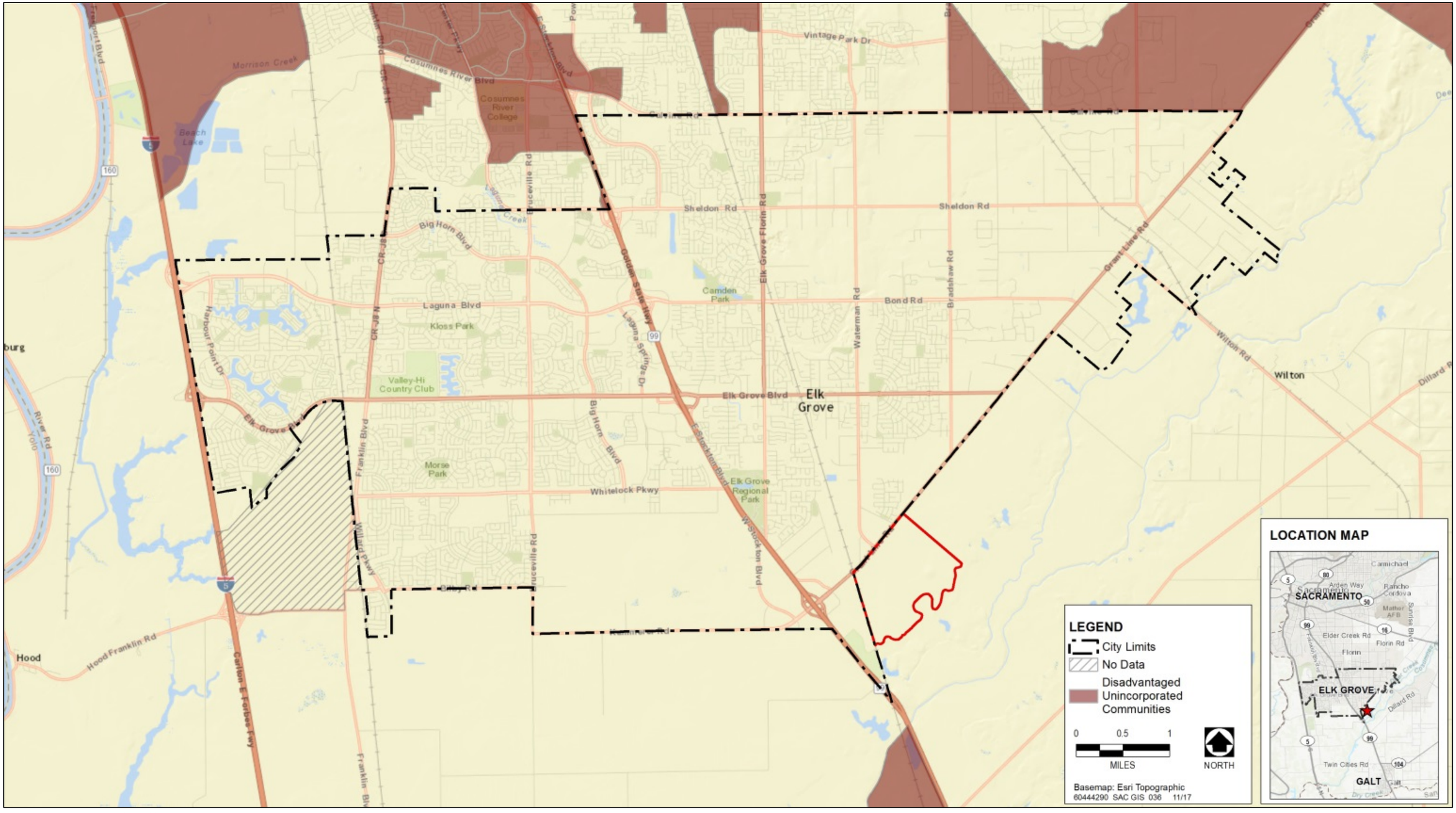
Elk Grove General Plan

The City's General Plan (City of Elk Grove 2019), contains the following policies related to land use, population, housing, and employment that are applicable to the proposed Project.

Urban and Rural Development

Development Pattern

- **Policy LU-1-2:** Foster development patterns that will achieve a complete community in Elk Grove, particularly with respect to increasing jobs and economic development and increasing the City's jobs-to-employed resident ratio while recognizing the importance of housing and a resident workforce.



Sources: 2010 Census, adapted by AECOM in 2016

Exhibit 3.11-1 Disadvantaged Unincorporated Communities

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Employment Land Uses

- **Policy LU-1-8:** Seek to designate sufficient land in all employment-generating categories to provide opportunities for Elk Grove's working population and jobs in categories matching resident's employment level.

Study Area Organizing Principles

- **Policy LU-3-1:** Ensure that future development in the Study Areas is consistent with the City's Vision and Supporting Principles by implementing the Study Area organizing principles provided herein.

  The City envisions that future development within the Study Areas will occur within a broader organizing framework of land use principles (referred to as organizing principles). Development shall occur within one or more of the following three districts.

  1. Activity District, which focuses on higher densities and intensities of retail, services, employment and residential uses.

  2. Residential Neighborhood District, where residential development, with neighborhood-serving retail and parks and schools, occurs.

  3. Open Space/Conservation District, which includes large urban parks, open spaces, and agriculture-related uses.

- **Policy LU-3-2:** Employment land uses in Activity Districts should meet the following guidelines:

  - Regional Commercial and Employment Center uses should be located along major arterial roadways and generally within one-quarter mile of major intersections.

  - Community Commercial uses larger than 15 acres should be located along collector and arterial roadways, and adjacent to Mixed Use, Medium Density Residential, or High Density Residential uses.

  - Regional Commercial and Community Commercial uses should be sited within walking distance (generally one-half mile) of planned or existing transit stops.

  - Uses that may generate very high service populations (employees and/or customers) should be located within one-quarter mile of planned or existing transit stops.

  - Heavy Industrial and Light Industrial uses should be buffered from Residential uses by Public Service, Open Space, or Commercial uses.

East Study Area Development Pattern

- **Policy LU-3-13:** Ensure that the land use plans submitted for properties in the East Study Area are consistent with the Land Use Diagram (Figure 4-6) and program standards (Table 4-2).

Economy and the Region

Business Diversity

- **Policy ED-1-1:** Allow for a variety of sizes and types of commercial development in order to attract a diverse range of job opportunities and types.

Business Attraction and Expansion

- **Policy ED-1-3:** Encourage the full and efficient use of vacant and underutilized parcels in appropriately designated areas to support the development and expansion of targeted commercial uses.

Local Employment Opportunities

- **Policy ED-2-1:** Continue to improve Elk Grove's jobs/housing ratio by expanding local employment opportunities, with an emphasis on attracting jobs in sectors and industries that are well matched for the skills of the local workforce.

- **Policy ED-2-2:** Maximize the use of nonresidential land for employment-generating and revenue-generating uses.

- **Policy ED-2-3:** Support efforts to provide residents with training opportunities, in particular helping residents acquire new skills needed for employment opportunities in coordination with targeted industries.

3.11.3 Environmental Impacts and Mitigation Measures

Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, impacts resulting from the implementation of the proposed Project would be considered significant if the Project would:

- physically divide an established community;

- cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect;

- induce substantial unplanned 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) or

- displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

Issues Not Discussed Further

The following issues were dismissed from further detailed analysis in the 2019 SOIA EIR because it was determined that no impact would occur; for the reasons explained below, these issues would also result in no impact for the proposed Project as evaluated in this SEIR.

- **Physically Divide an Established Community**—The Project site is adjacent to the City of Elk Grove. A residential neighborhood consisting of single-family residences is located north of Mosher Road and northeast of the Project site, opposite Grant Line Road. The proposed Project does not include any linear features, such as new roadways, that could divide this existing community. There are no additional established communities that could be divided by future development. Therefore, this issue is not evaluated further in this document.

- **Displace Substantial Numbers of People or Existing Housing**—The Project site also includes three existing home sites and five residences. These residences are not formally or informally known as a community. Therefore, the proposed Project would not displace substantial numbers of people or existing housing that would necessitate the construction of replacement housing elsewhere and this issue is not evaluated further in this EIR.

IMPACT ANALYSIS

Impact 3.11-1: Consistency with Adopted Sacramento County and Elk Grove General Plan Policies and Land Use Designations.

Currently, the Project site is located in unincorporated Sacramento County and this area was added to the City of Elk Grove's SOI in May of 2019. However, the City would have no direct land use authority over the area unless and until annexation to the City is approved by the Sacramento LAFCo. Because the Project site is located within the unincorporated area of Sacramento County and outside the legal City limit boundaries of Elk Grove, Sacramento County maintains the authority to designate allowable land uses and approve development on the site. Following LAFCo's approval of the annexation, 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. As discussed in the 2019 SOIA EIR, the Project was compared to the Sacramento County General Plan to determine the consistency of the Project with existing County General Plan policies and land use designations because the City does not have the current land use control. As described in the 2019 SOIA EIR, specific impacts and Project consistency issues associated with other resource and issue areas are addressed in each technical section of this SEIR, as appropriate. These technical sections provide a detailed analysis of other relevant physical environmental effects that could result from implementation of the proposed Project (as revised for this SEIR) and identify mitigation measures, as necessary, to reduce impacts. Implementation of the revised Project would not conflict with adopted County 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 SEIR.

Land use designations for the Project site except the Mosher property (Assessor's Parcel Number [APN] 134-0190-002) were included in the City's 2019 General Plan update for planning purposes. The City is now proposing a change in the General Plan land use designations and pre-zoning for the Project site compared to the array of uses assumed in the 2019 SOIA EIR for the Project site. The approximately 100-acre City-owned parcel would be designated for Light Industrial uses.[2] The Project site would have a reduction in the land area of Parks and Open Space, an increase in both Light Industrial and Heavy Industrial uses, a reduction in the amount of mixed General Commercial and Commercial Office uses, and a new use, Regional Commercial, proposed for 20

[2] The 2019 SOIA EIR included detailed analysis related to the development and operation of a multi-sport complex on the approximately 100-acre City-owned parcel. A multi-sport complex could still be developed through the City's conditional use permit process.

acres of land (see Exhibit 2-2 and Table 2-1 in Chapter 2).[3] The proposed Project is consistent with the City's policies to designate sufficient land in employment-generating categories to provide a diverse range of employment opportunities for Elk Grove's working population (City General Plan Policies LU-1-2, LU-1-8, ED-1-1, ED-2-2, and ED-1-3).

The City's General Plan identifies the Project site within the approximately 1,772-acre East Study Area. The Project's proposed land use would be consistent with the program standards for the East Study Area described in General Plan Policy LU-3-13. Project objectives would support the City General Plan's planning objectives for the East Study Area described in City General Plan Policy LU-3-2. The proposed Project would:

- Provide for development consistent with the General Plan Study Area Organizing Principles and the East Study Area Land Use District Program Standards.
- Create a mix of employment activities in the southwestern portion of the East Study Area that transitions to residential neighborhoods toward the northeast.
- Focus employment uses within the East Study Area on industrial, office, and regional retail uses.

As with County policies, consistency issues between implementation of the proposed Project and the City General Plan are related to land use regulations, which are, in part, based on avoiding or otherwise restricting uses that would adversely impact resources of the development site or adjacent land uses. Specific impacts and Project consistency issues associated with other resource topics are addressed in each technical section of this SEIR, as appropriate. These technical sections provide a detailed analysis of other relevant physical environmental effects that could result from implementation of the proposed Project and identify mitigation measures, as necessary, to reduce impacts. There are no inconsistencies between the proposed Project and the City's General Plan or other plans or policies that would result in a significant environmental impact not already addressed in this SEIR. Therefore, as with the 2019 SOIA EIR, this impact is considered **less than significant**.

Impact 3.11-2: Consistency with LAFCo Policies, Standards, and Procedures.

California Government Code Section 56668 sets forth criteria for evaluation of annexation projects. This statute establishes factors that LAFCo agencies must use in reviewing annexation proposals. Any future urban development within the Project site would require annexation by the City. This SEIR includes a discussion of relevant LAFCo policies, standards, and procedures throughout each of the topic-specific sections and a very detailed discussion in the 2019 SOIA EIR.

As noted previously, the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 provides the authority and procedures for the initiation, conduct, and completion of changes of organization and reorganization of cities and districts. The act specifies the factors that a local agency formation commission is required to consider in the review of a proposal for a change of organization or reorganization, including, among other factors, the extent to which the proposal will promote environmental justice. Environmental justice, for purposes of this law, is the meaningful involvement of people of all races, cultures, incomes, and national origins, with respect to those same actions, to ensure a healthy environment for all people such that the effects of pollution are

[3] The Project evaluated in this SEIR does not include pre-zoning of the parcels that are identified as Mixed Use (APN 134-0190-002) or Parks/Open Space (APN 134-0190-003).

not disproportionately borne by any particular populations or communities. This SEIR provides detailed analysis related to air pollutant emissions, including substantial pollutant concentrations that could impact sensitive receptors. Please see Section 3.4 for more detail. The area designated Heavy Industrial (HI) is in the southeastern portion of the Project site in order to avoid adverse effects related to future uses for sensitive receptors in the vicinity of the Project site.

As described in the City's General Plan, environmental justice is addressed in Chapter 3, Planning Framework; Chapter 4, Urban and Rural Development; Chapter 8, Services, Health, and Safety; Chapter 9 Community and Area Plans; Chapter 10, Implementation Strategy; and Chapter 12, Technical Information. Cities and counties are required to address environmental justice concerns of designated disadvantaged communities in the general plan. Disadvantaged communities are those identified as low income and that are disproportionately affected by environmental pollution, stressors, and social vulnerabilities that can lead to negative health effects, exposure, or environmental degradation. According to the City, there are no designated disadvantaged communities in the Elk Grove Planning Area, but it is nevertheless important that the City continually consider the effects of planning and land use decisions on the lives of residents and ensure that no area or population is disproportionately affected City of Elk Grove 2019, page 8-53 and 12-47).

LAFCo approved a SOIA for the Project site to add this area to the City of Elk Grove's SOI in May of 2019. The area that was included in the approved SOI amendment will not change as a result of the revised land use designations now proposed by the City. As described in detail in the 2019 SOIA EIR, the proposed Project would be consistent with LAFCo policies that were adopted to avoid or mitigate for an environmental effect. Thus, as with the 2019 SOIA EIR, this impact is considered **less than significant**.

While this SEIR addresses all matters related to policy consistency that relate to potential adverse environmental effects, policy consistency for other topics that are within the purview of LAFCo are subject to LAFCo's review and determinations.

Impact 3.11-3: Induce Substantial Unplanned Population Growth.

The City's intent for the proposed Project is to facilitate development that would create a better balance between the types of local jobs available and the skills and interests of the local labor force. The proposed Project supports the City's policies to improve Elk Grove's jobs-to-housing ratio by expanding local employment opportunities, with an emphasis on attracting jobs in sectors and industries that are well matched for the skills of the local workforce (Policies LU-1-2 and ED-2-1 of the City General Plan).

Assumed industrial and commercial land uses within the Project site could generate approximately 7,788 new jobs in the City at full buildout. In addition, future development of mixed uses on the Project site could add an assumed 713 housing units, or 2,304 residents for a total service population (population plus employment) of 10,092. As stated previously, the Project site is within the East Study Area. The City estimated as a part of the General Plan that the East Study Area could accommodate 4,806 housing units that would accommodate a population of 15,523 persons and employment-generating uses could result in 3,875 new jobs for a total service population of 19,398 (City of Elk Grove 2019). The total service population anticipated under the proposed Project (10,092) is less than the total assumed under the City's General Plan (19,398), but the employment estimate is substantially higher and the residential population substantially lower.

SACOG estimated that, by 2035, continued development of the Laguna Ridge Specific Plan, Lent Ranch Market Place, the Southeast Policy Area, and the Triangle Special Plan, as well as other planned development (not including the Project site, which was not anticipated in the MTP/SCS) could increase the City's jobs to 57,640 by 2035 and 60,070 by 2040 (SACOG 2019). Because development of the Project site is not included in SACOG's future employment projections, the jobs generated by the proposed Project (7,788 jobs) are not accounted for in SACOG's employment projections for the City. The SACOG projections are market-based growth estimates that project the amount and location of likely growth in the region based on a variety of socioeconomic factors that are updated every four years, and are defined by a horizon year.

If the proposed Project's level of job growth is realized during the City General Plan planning horizon and MTP/SCS 2040 horizon, it is possible that development of employment-generating land uses in other areas of the City or County would occur at a slower pace. The regional demographic and economic forecasts for SACOG use Board-adopted regional-level projections, which serve as control totals for the entire region (SACOG 2020). If residential or employment growth is higher for a particular jurisdiction, using the control totals, this would mean that residential or employment growth would need to be proportionally reduced in one or more areas.

As detailed in the 2019 SOIA EIR, the SEIR analyzes comprehensively the potential impacts associated with future development within the Project site, which conservatively assumes that the entire Project site could be subject to development. This includes any impacts related to the demographic and economic assumptions included in MTP/SCS for the Project site and for Elk Grove as a whole. The MTP/SCS is a regional plan intended to direct transportation planning and funding. However, it is also intended to address mobile source criteria air pollutant emissions and greenhouse gas emissions. This SEIR analyzes air pollutant and greenhouse gas emissions in a regional and statewide cumulative context, consistent with the MTP/SCS. This SEIR imposes mitigation that would, like the MTP/SCS, require future projects within the Project site to reduce mobile source air pollutant emissions and greenhouse gas emissions, finding significant impacts for these topics (see Section 3.4, "Air Quality," Section 3.8, "Greenhouse Gas Emissions," and Chapter 6, "Other CEQA Considerations," of this SEIR).

Physical impacts associated with development of the Project site, such as traffic, greenhouse gas emission, air quality degradation, and noise generation and impacts related to increased demand for public services and utilities, are evaluated throughout this SEIR because the Proposed project's future land uses are considered to be part of buildout of the Project site. Mitigation presented throughout this SEIR addresses environmental impacts associated with future development of the Project site. There is no significant impact that is not addressed comprehensively throughout this SEIR. Therefore, as with the 2019 SOIA EIR, this impact is considered **less than significant**.

Impact 3.11-4: Conversion of Open Space.

Future development within the SOIA Area, including the multi-sport park complex project, may lead to the conversion of open space resources, as defined by Sacramento LAFCo, to urban uses.

LAFCo includes unimproved lands devoted to agricultural lands within its definition of open space. It is assumed that the Project would result in urbanization of the Project site. Therefore, the Project may indirectly create pressure to submit additional applications for annexation. In addition, the development of the multi-sport park complex would be urbanization of open space. The potential adverse physical environmental effects associated

with this conversion of open space are addressed completely in the balance of this SEIR. This impact is considered **significant**.

Mitigation Measures

Mitigation Measure 3.11-4: Implement Mitigation Measure 3.3-1 (Preserve Agricultural Land).

Significance after Mitigation

While conservation easements placed elsewhere in the region could partially offset the direct conversion of open space attributable to future development that could occur within the Project site, this approach would not create new farmland to replace open space that could be lost. This impact is **significant and unavoidable**.

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3.12 NOISE AND VIBRATION

3.12.1 ENVIRONMENTAL SETTING

The environmental setting – including acoustical fundamentals and the existing setting related to noise and vibration – has not substantially changed since the 2019 SOIA EIR was drafted. A brief summary is provided below.

Existing major sources of noise in the Project area consist primarily of the Union Pacific Railroad (UPRR) (adjacent to the southern Project site boundary) and nearby roadways (primarily SR 99 and Grant Line Road).

The Project site consists of agricultural land, and is surrounded by agricultural land on the northeast, east, and southeast sides. Vacant land (which is planned for development as part of the Waterman 75 project) is present north of Grant Line Road across the street from most of the Project site. Industrial development is present on the northwest side of Grant Line Road and west of the Project site (west of the UPRR tracks).

Existing sensitive receptors include residential development that is present north of Grant Line Road across from the proposed mixed-use portion of the Project site. There is a rural home site (with several residences) on the Mosher property (which is proposed for future mixed uses), and there are 2–3 rural homesites in the central and southwestern portions of the Project site. The rural residential site on the Mosher property is immediately adjacent to the proposed off-site improvements associated with the northern-most agricultural ditch. Another off-site rural residence is also located approximately 250 feet east of the off-site 15-acre pond where drainage improvements are proposed. The Emerald Lakes Golf Course (on the southeast side of the UPRR tracks) is approximately 215 feet (at the closest point) southeast of the proposed off-site improvements to the agricultural drainage ditch along the UPRR tracks.

The primary source of existing groundborne vibration in the vicinity of the Project site and the off-site improvements is the UPPR.

Following drafting of the 2019 SOIA EIR, the City and Southeast Connector Joint Powers Authority have consulted on a precise roadway plan for the future widening of Grant Line Road to four lanes between Bond Road and Calvine Road. The precise plan will prepare a preliminary level design in accordance with the City of Elk Grove General Plan, Rural Roads Improvement Standards, and Southeast Connector JPA Design Guidelines. At the conclusion of the study period, the City Council will approve a document that can be used by property owners to plan their own site improvements, as well as to guide future design efforts by the City and the Southeast Connector Joint Powers Authority.

3.12.2 REGULATORY FRAMEWORK

City of Elk Grove General Plan

Since the 2019 SOIA EIR was drafted, the City adopted an updated General Plan (City of Elk Grove 2019). Noise-related policies and actions are highlighted below.

- **Policy LU-1-7:** Encourage disclosure of potential land use compatibility issues including but not limited to noise, dust, and odors, in order to provide potential purchasers with complete information to make informed decisions about purchasing property.

- **Policy LU-3-4:** Residential land uses in Activity Districts should meet the following guidelines:

    - High Density Residential uses shall be located within one-quarter mile of major intersections and planned or existing transit stops.

    - Housing should be buffered via building designs or other features from uses that produce loud noises that frequently exceed 65 decibels.

- **Policy AG-1-6:** Limit the siting of projects with land uses that might result in conflicts near existing agriculture due to noise, air quality, or odors.

- **Policy MOB 6-3:** Work with the UPRR to minimize the impact of train noise on adjacent sensitive land uses through the continued implementation of Quiet Zones.

Policies: Noise Sources and Land Use Compatibility

- **Policy N-1-1:** New development of the uses listed in Table 8-3 shall conform with the noise levels contained in the table. All indoor and outdoor areas shall be located, constructed, and/or shielded from noise sources in order to achieve compliance with the City's noise standards.

- **Policy N-1-2:** Where noise mitigation measures are required to achieve the standards of Tables 8-3 and 8-4, the emphasis of such measures shall be placed upon site planning and project design. The use of noise barriers shall be considered a means of achieving the noise standards only after all other practical design-related noise mitigation measures, including the use of distance from noise sources, have been integrated into the project.

Policies: Sensitive Land Uses

- **Policy N-1-4:** Protect noise-sensitive land uses, identified in Table 8-3, from noise impacts.

- **Policy N-1-5:** Where noise-sensitive land uses are proposed in areas exposed to existing or projected exterior noise levels exceeding the levels specified in Table 8-3 or the performance standards of Table 8-4, 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 N-1-6:** Where proposed nonresidential land uses are likely to produce noise levels exceeding the performance standards of Table 8-4 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.

- **Policy N-1-7:** The standards outlined in Table 8-4 shall not apply to transportation- and City infrastructure-related construction activities as long as construction occurs between the hours of 7 a.m. and 7 p.m., Monday through Friday, and 8 a.m. and 5 p.m. on weekends and federally recognized holidays. Work may occur beyond these time frames for construction safety or because of existing congestion that makes completing the work during these time frames infeasible.

- **Policy N-1-8:** For development projects that are subject to discretionary review, the City may require applicants to assess potential construction noise impacts on nearby sensitive uses and to minimize impacts on those uses.

- **Policy N-1-9:** For projects involving the use of major vibration-generating equipment (e.g., pile drivers, vibratory rollers) that could generate groundborne vibration levels in excess of 0.2 in/sec peak particle

velocity (ppv), the City may require a project-specific vibration impact assessment to analyze potential groundborne vibrational impacts and may require measures to reduce ground vibration levels.

- **Policy N-1-10:** For new development involving noise-sensitive receptors that could be exposed to high levels of ground vibration levels generated by freight or transit rail, the City may require a project-specific vibration impact assessment to analyze potential groundborne vibrational impacts and may require measures to reduce ground vibrational levels.

Policies: Noise Reduction Strategies

- **Policy N-2-1:** Noise created by new proposed non-transportation noise sources shall be mitigated so as not to exceed the noise level standards of Table 8-4 as measured immediately within the property line of lands designated for noise-sensitive uses.

- **Policy N-2-2:** The following criteria shall be used as CEQA significance thresholds for transportation and stationary noise sources:

  - Where existing ambient noise levels are less than 60 decibel (dB) day-night average sound level (L_{dn}) at the outdoor activity areas of noise-sensitive uses, a +5 dB L_{dn} increase in noise levels shall be considered significant; and

  - Where existing ambient 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 shall be considered significant; and

  - Where existing ambient 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 shall be considered significant. Public roadway improvements to alleviate traffic congestion and safety hazards shall utilize Federal Highway Administration (FHWA) noise standards to allow a reasonable dollar threshold per dwelling to be used in the evaluation and abatement of impacts.

  - The standards outlined in Table 8-4 shall not apply to public projects to alleviate traffic congestion and safety hazards.

- **Policy N-2-3:** Emphasize methods other than installation of sound walls in front yard areas to reduce noise to acceptable levels in residential areas that were originally constructed without sound walls.

- **Policy N-2-4:** Where sound walls or noise barriers are constructed, strongly encourage and consider requiring a combination of berms and walls to reduce the apparent height of the wall and produce a more aesthetically appealing streetscape.

Table 8-3 from the General Plan establishes the maximum allowable noise exposure levels from transportation noise for different land uses, including:

- Residential: 60 dB L_{dn} outdoor and 45 dB L_{dn} interior

- 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 as roadways): 60 dB L_{dn} outdoor and 40 dB L_{dn} interior

- Transient lodging: 60 dB L_{dn} outdoor and 45 dB L_{dn} interior

- Hospitals, Nursing Homes: 60 dB L_{dn} outdoor and 45 dB L_{dn} interior
- Theaters, Auditoriums, Music Halls: 35 dB equivalent sound level (L_{eq}) interior
- Churches, Meeting Halls: 60 dB L_{dn} outdoor and 40 dB L_{eq} interior
- Office Buildings: 45 dB L_{eq} interior
- Schools, Libraries, Museums: 45 dB L_{eq} interior

Table 8-4 from the General Plan establishes the maximum allowable noise exposure levels for new projects affected by or including non-transportation noise sources:

- Performance Standards for Typical Stationary Noise Sources: Daytime, 55 dB L_{eq}; Nighttime, 45 dB L_{eq}
- Performance Standards for Stationary Noise Sources Which Are Tonal, Impulsive, Repetitive, or Consist Primarily of Speech or Music: Daytime, 50 dB L_{eq}; Nighttime, 40 dB L_{eq}

3.12.3 Environmental Impacts and Mitigation Measures

Methodology

The methodology used for this SEIR analysis is the same as used in the original 2019 SOIA EIR.

Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, a noise impact is considered significant if implementation of the proposed Project would result in any of the following:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
- A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project;
- A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public-use airport, would the project expose people residing or working in the project area to excessive noise levels; 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 Discussed Further

The following issues were dismissed from further detailed analysis in the 2019 SOIA EIR because it was determined that no impact would occur; for the reasons explained below, these issues would also result in no impact for the proposed Project as evaluated in this SEIR.

- **Excessive Noise from an Airport**—Future development would not expose people to excessive noise levels from an airport or private airstrip. Because the Project site and the off-site improvements would not be located in an area exposed to excessive aircraft-generated noise levels (e.g., not within the 60 dB L_{dn}/community noise equivalent level (CNEL) contour of any airport), there would be no impact related to aircraft noise, and therefore this issue is not discussed further in this SEIR.

IMPACT ANALYSIS

Impact 3.12-1: Temporary, Short-Term Exposure of Sensitive Receptors to Construction Noise.

As detailed in the 2019 SOIA EIR, construction within the Project site and off-site improvement areas would require construction activities, including grading, excavation, and installation of infrastructure; and on-site building erection, paving, and landscaping. The highest construction noise levels are typically generated during grading and excavation and lower noise levels typically occur during building construction.

Typical hourly average construction-generated noise levels are about 80 dBA to 85 dBA, measured at a distance of 50 feet from the site during busy construction periods. It is unlikely, but possible that pile-driving could be required for future development. Pile driving could produce very high noise levels of approximately 105 dB at 50 feet. Noise from localized point sources (such as construction sites) typically decreases by 6 dB to 7.5 dB with each doubling of distance from source to receptor. The existing intervening ground type at the Project site is currently soft and attenuates noise due to absorption; therefore, an attenuation rate of 7.5 dB per doubling of distance was assumed and accounted for in construction operation noise level predictions.

Project-generated noise levels could exceed daytime and nighttime noise standards of 55 dB L_{eq} and 50 dB L_{eq}, respectively, at possible future on-site sensitive receptors. Construction of the off-site drainage improvements would require clearing of vegetation, excavating, trenching, installing pipeline, and grading, which could expose existing off-site sensitive receptors to equipment noise levels that exceed the applicable noise standards and/or result in a substantial temporary increase in ambient noise levels.

Residences and businesses located adjacent to areas of construction activity would be exposed to future construction noise from on-site and off-site construction activity. In addition, recreationists in the southeastern portion of the Emerald Lake Golf Course would be exposed to noise from off-site construction activity associated with improvements to the agricultural drainage ditch adjacent to the UPRR tracks. This is considered a **significant impact**.

> Mitigation Measure 3.12-1: Implement Noise-Reducing Construction Practices (2019 SOIA EIR Mitigation Measure 3.12-1).
>
> During both on- and off-site Project-related construction, the following measures shall be implemented to reduce construction noise impacts.
>
> - Noise-generating construction in areas that could affect noise-sensitive land uses shall be limited to the hours between 7 a.m. and 7 p.m. Monday through Friday, and between 8 a.m. and 6 p.m. on Saturdays and Sundays.
>
> - Noisy construction equipment and equipment staging areas shall be located as far as possible 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 manufacturers' recommendations. Equipment-engine shrouds shall be closed during equipment operation.

- All motorized construction equipment shall be shut down when not in use to prevent idling.

- 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).

- Noise-reducing enclosures shall be used around stationary noise-generating equipment (e.g., compressors and generators) when noise sensitive receptors are located within 250 feet of construction activities.

- Written notification of construction activities shall be provided to all noise-sensitive receptors located within 850 feet of construction activities. The notification shall include anticipated dates and hours during which construction activities are anticipated to occur and contact information, including a daytime telephone number, for the Project representative to be contacted in the event that noise levels are deemed excessive. Recommendations to assist noise-sensitive land uses in reducing interior noise levels (e.g., closing windows and doors) shall also be included in the notification.

- To the extent feasible and necessary to reduce construction noise levels consistent with applicable policies, acoustic barriers (e.g., noise curtains, sound barriers) shall be constructed to reduce construction-generated noise levels at affected noise-sensitive land uses. The barriers shall be designed to obstruct the line of sight between the noise-sensitive land use and on-site construction equipment.

- When future noise sensitive uses are within close proximity to prolonged construction noise, noise-attenuating buffers such as structures, truck trailers, or soil piles shall be located between noise sources and future residences, as feasible, to shield sensitive receptors from construction noise.

Significance after Mitigation

With implementation of Mitigation Measure 3.12-1, on-site and off-site impacts from temporary, short-term exposure of sensitive receptors to increased equipment noise would be reduced because construction would be limited to daytime hours, for which associated noise levels are considered exempt from the provisions of applicable standards established by the City of Elk Grove and the County of Sacramento. Furthermore, as noted in the City's General Plan, "Elk Grove is committed to implementing 'Best Management Practices' for all development and construction in Elk Grove to help reduce noise sources and exposure to noise." These best practices are specifically spelled out in Mitigation Measure 3.12-1 for the proposed Project. For example, when installed properly, acoustic barriers can reduce construction noise levels by approximately 8–10 dB (EPA 1971). However, it is not possible to demonstrate that implementing Mitigation Measure 3.12-1 would avoid significant construction noise impacts in every case. There is no additional feasible mitigation. Therefore, as with the 2019 SOIA EIR, the impact is considered **significant and unavoidable.**

Impact 3.12-2: Temporary, Short-Term Exposure of Sensitive Receptors to Increased Traffic Noise Levels from Project Construction.

As detailed in the 2019 SOIA EIR, on- and off-site construction would result in an increase of traffic volumes due to the addition of construction-generated traffic. Personnel, materials, and equipment would be transported along the local roadway network, thus increasing traffic volumes of affected roadway segments. Construction traffic noise was analyzed in the 2019 SOIA EIR using a very conservative scenario assuming construction-related traffic volume of 500 vehicles daily. Modeling results indicate that Project-generated construction-related traffic increases would result in a 0- to 1-dBA increase in short-term traffic noise levels.

Therefore, implementation of the proposed Project would not result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity associated with construction traffic. As a result, as with the 2019 SOIA EIR, this impact is considered **less than significant**.

Impact 3.12-3: Temporary, Short-Term Exposure of Sensitive Receptors to Potential Groundborne Noise and Vibration from Project Construction.

As detailed in the 2019 SOIA EIR, construction activities associated with future development in the Project site and the off-site improvement areas would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used, the location of construction activities relative to sensitive receptors, the operations/activities involved, and the construction material of buildings used for affected vibration-sensitive receptors. There are vibration-sensitive uses and structures within the Project site and adjacent to the off-site improvement areas. There are older structures on the Mosher property, in a building cluster south of the City-owned parcel at 10313 Grant Line Road, and in a house and barn cluster in the southern portion of the Project site at 10351 Grant Line Road. Construction could occur within 25 feet of these properties.

Vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. The type and density of soil can also affect the transmission of energy. Table 3.12-1 provides vibration levels for typical construction equipment.

Table 3.12-1 Typical Vibration Levels for Construction Equipment

Equipment		PPV at 25 Feet (in/sec)	Approximate L_v at 25 Feet
Pile Driver (Impact)	Upper Range	1.518	112
	Typical	0.644	104
Pile Driver (Sonic)	Upper Range	0.734	105
	Typical	0.170	93
Large Bulldozer		0.089	87
Caisson Drilling		0.089	87
Truck		0.076	86
Jackhammer		0.035	79
Small Bulldozer		0.003	58

Notes: in/sec = inches per second; Lv = the velocity level in decibels referenced to 1 microinch per second and based on the root mean square velocity amplitude; PPV = peak particle velocity

[1] For normal residential buildings and for buildings more susceptible to structural damage, respectively.

Sources: FTA 2006: 12-12

Construction vibration would occur during construction, during equipment operation, and during the transport of construction equipment and materials. Required construction equipment could include loaded trucks and bulldozers and, although very unlikely, could possibly include pile drivers. According to the FTA, vibration levels associated with the use of such equipment would be approximately 0.076 in/sec PPV and 86 vibration decibel (VdB) for trucks, 1.518 in/sec PPV and 112 VdB for upper range impact pile driver, 0.089 in/sec PPV and 87 VdB (referenced to 1 μin/sec and based on the root mean square velocity amplitude) at 25 feet, as shown in Table 3.12-1.

With respect to human annoyance for residential uses, using FTA's recommended procedure for applying a propagation adjustment to these reference levels, predicted vibration levels of typical construction activities (assuming large bulldozer as the highest vibration generating equipment) would not exceed 80 VdB (FTA's maximum-acceptable vibration standard with respect to human annoyance for residential uses) beyond 45 feet of normal vibration-sensitive receptors. There are no off-site vibration-sensitive uses within 45 feet of the edge of the Project site that would be affected by vibration. However, there would be vibration-sensitive uses within 45 feet of Project-related construction activities within the Project site and potentially adjacent to off-site drainage improvement areas that would be affected by vibration. Although very unlikely, construction activities with the use of a pile driver, vibration levels would not exceed 80 VdB (FTA's maximum-acceptable vibration standard with respect to human annoyance for residential uses) within 285 feet of normal vibration-sensitive receptors. There are vibration-sensitive receptors within 285 feet of Project-related construction activities within the Project site and off-site drainage improvement areas that would be affected by vibration.

With respect to normal buildings damage, using FTA's recommended procedure for applying a propagation adjustment to these reference levels, predicted vibration levels of typical construction activities would not exceed 0.2 in/sec PPV (Caltrans' recommended standard with respect to the prevention of structural damage for normal buildings) beyond 70 feet of normal vibration-sensitive receptors (California Department of Transportation 2009, 2013). Although very unlikely, construction activities could include the use of a pile driver, in which case vibration levels would not exceed 0.2 in/sec PPV beyond 100 feet of historic, older, or potentially sensitive vibration sensitive receptors. There are off-site vibration-sensitive uses within 70 to 100 feet of the Project site that would be affected.

With respect to potential damage to existing older buildings, predicted vibration levels of typical construction activities (assuming a large bulldozer as the highest vibration-generating equipment) would not exceed 0.08 in/sec PPV (Caltrans' recommended standard with respect to the prevention of structural damage for historic buildings) beyond 30 feet of historic structures. There are older buildings that could be within 30 feet of Project-related construction activities within the Project site that would be affected by vibration. Although very unlikely, construction activities could include the use of a pile driver, in which case vibration levels would not exceed 0.08 in/sec PPV beyond 180 feet of historic, older, or potentially sensitive structures.

Vibration-sensitive receptors are located in the vicinity of the off-site drainage improvement areas. Typical construction equipment, loaded trucks, jackhammers, bulldozers, generates vibration levels that decrease quickly over distance. Although very unlikely, if pile driving is required, this generates significantly more vibration energy and requires more distance for it to decrease the vibration levels.

Temporary, short-term vibration levels from construction of off-site improvements could exceed FTA's maximum-acceptable vibration standard of 80 VdB with respect to human response for residential uses (i.e., annoyance) at vibration-sensitive land uses. If construction activities were to occur during more noise-sensitive

hours, vibration from construction sources could annoy and/or disrupt the sleep of occupants of existing and proposed residences and expose persons to excessive groundborne vibration or groundborne noise levels.

Therefore, temporary, construction-related vibration levels could expose sensitive receptors and buildings to levels that exceed applicable standards. Thus, this impact is considered **potentially significant**.

Mitigation Measure 3.12-3: Reduce Groundborne Noise and Vibration Levels at Sensitive Receptors and Buildings (2019 SOIA EIR Mitigation Measure 3.12-3).

During construction of on-site and off-site improvements, the following measures shall be implemented to reduce groundborne noise and vibration within 60 feet of existing non-historical structures and within 25 feet of historic, older, or potentially sensitive structures:

- Route heavily loaded trucks away from residential streets where residences are within 60 feet of the edge of the roadway.
- Operate earthmoving equipment on the construction lot as far away from noise- and vibration-sensitive uses as feasible.
- Phase earthmoving and other construction activities that would affect the ground surface so as not to occur in the same time period.
- Large bulldozers and other construction equipment that would produce vibration levels at or above 86 VdB shall not be operated within 50 feet of adjacent, occupied residences. Small bulldozers shall be used instead of large bulldozers in these areas, if construction activities are required. For any other equipment types that would produce vibration levels at or above 86 VdB, smaller versions or different types of equipment shall be substituted for construction areas within 50 feet of adjacent, occupied residences.
- Construction activities shall not occur on weekends or federal holidays and shall not occur on weekdays between the hours of 7 p.m. of 1 day and 7 a.m. of the following day.

In addition, the following measures shall be implemented to reduce groundborne noise and vibration for pile driving within 200 feet of any vibration-sensitive receptor, if required by the City:

- A disturbance coordinator shall be designated, and this person's contact information shall be posted in a location near the project site that it is clearly visible to the nearby receivers most likely to be disturbed. The director would manage complaints and concerns resulting from activities that cause vibrations. The severity of the vibration concern should be assessed by the disturbance coordinator, and if necessary, evaluated by a professional with construction vibration expertise.
- The existing condition of all buildings within a 180-foot radius within the proposed pile driving activities shall be recorded in the form of a preconstruction survey. The preconstruction survey shall determine conditions that exist before construction begins for use in evaluating damage caused by construction activities.
- Vibration monitoring shall be conducted before and during pile driving operations. Every attempt shall be made to limit construction generated vibration levels in accordance with Caltrans

recommendations during pile driving and impact activities in the vicinity of the historic, older, or potentially sensitive structures.

- Pile driving required within a 285-foot radius of sensitive receptors or within 180 feet of a historic, older, or potentially sensitive structure should use alternative installation methods, where possible (e.g., pile cushioning, jetting, predrilling, cast-in-place systems, resonance-free vibratory pile drivers).

Significance after Mitigation

Implementation of Mitigation Measure 3.12-3 would substantially reduce the effects of groundborne noise and vibration on sensitive receptors because the use of large construction equipment would be restricted in the vicinity of sensitive receptors, a preconstruction survey of buildings potentially subject to vibration damage would be conducted, and vibration monitoring would be conducted in the vicinity of pile-driving activities. The activities would also be temporary. However, it is not possible to determine at this time whether this mitigation would avoid all potentially significant impacts. There is no additional feasible mitigation. As with the 2019 SOIA EIR, the impact is considered **significant and unavoidable.**

Impact 3.12-4: Long-Term Traffic Noise Levels at Existing Noise-Sensitive Receivers.

Development of the land uses proposed at the Project site would result in an increase in long-term operational traffic volumes on the local roadway network, which would generate additional noise in the Project area. To assess the impact of operational Project-generated traffic noise increases, traffic noise levels were calculated for roadway segments in the Project study area using the FHWA Highway Noise Prediction Model (FHWA-RD-77-108). Traffic noise levels were modeled under existing conditions. Average daily traffic (ADT) volumes and the distribution thereof were obtained from the traffic study prepared to support the 2019 SOIA EIR with updates related to the anticipated mix of trucks associated with development of the Project site (Fehr & Peers 2017, 2020). Refer to Appendix F of this SEIR for modeling inputs and results.

Table 3.12-2 summarizes the modeled traffic noise levels at 100 feet from the centerline of affected roadway segments. Modeled increases that would be considered substantial (i.e., an increase of 3 dBA or more), in comparison to existing no Project conditions are indicated in bold. Modeled roadway noise levels assume no natural or artificial shielding between the roadway and the receptor.

As shown in Table 3.12-2, the modeling conducted shows that full buildout of the Project site would result in traffic noise level increases ranging from + 2 dBA to + 6 dBA L_{dn}, compared to noise levels without full buildout of the Project site.[1] The Project would increase noise levels by at least 3 dB along several roadway segments. There are no existing noise-sensitive uses located along Grant Line Road between SR 99 SB Ramps and SR 99 NB Ramps, Grant Line Road between East Stockton Boulevard and Waterman Road, and Waterman Road between Mosher Road and Grant Line Road. However, there are noise sensitive land uses located along the other segments. Therefore, as also identified for the 2019 SOIA EIR, full buildout of the Project site would result in a substantial permanent increase in ambient noise levels (an increase of 3 dBA or greater). This is a **significant** impact**.**

[1] Project-related traffic noise increase under future plus project conditions would slightly vary from those under existing plus Project conditions, because adjustment in traffic rerouting to Southeast Connector was taken into account under cumulative plus Project.

Table 3.12-2 Predicted Traffic Noise Levels, Existing Plus Full Buildout of the Project Site					
Roadway	Segment Location	L_{dn} at 100 Feet, dB			
		No Project	Plus Project	Net Change	Significant Impact?
Bradshaw Road	From Elk Grove Boulevard to Grant Line Road	63	67	4	No
Grant Line Road	From SR 99 SB Ramps to SR 99 NB Ramps	68	73	5	No**
Grant Line Road	From SR 99 NB Ramps to East Stockton Boulevard	70	75	5	Yes
Grant Line Road	From East Stockton Boulevard to Waterman Road	68	74	6	No**
Grant Line Road	From Waterman Road to Mosher Road	67	71	4	Yes
Grant Line Road	From Mosher Road to Bradshaw Road	67	71	4	Yes
Grant Line Road	From Bradshaw Road to Elk Grove Boulevard	64	68	4	Yes
Kammerer Road	From Lent Ranch Parkway to Promenade Parkway	65	68	3	Yes
Kammerer Road	From Promenade Parkway to SR 99 SB Ramps	67	70	3	Yes
Mosher Road	From Waterman Road to Grant Line Road	58	67	5	Yes
Waterman Road	From Mosher Road to Grant Line Road	63	68	5	No**
SR 99	From Dillard Road to Grant Line Road	77	79	2	No
SR 99	From Grant Line Road to Elk Grove Boulevard	76	79	3	Yes

Notes: dB = A-weighted decibels; L_{dn} = day-night average noise level, SB = Southbound, NB=Northbound.

* Traffic noise levels are predicted at a standard distance of 100 feet from the roadway centerline and do not account for shielding from existing noise barriers or intervening structures. Traffic noise levels may vary depending on actual setback distances and localized shielding.

** No noise-sensitive uses within 100 feet of the segment.

Source: Data modeled by AECOM 2020

As described in the Tiered Initial Study with Mitigated Negative Declaration for the Capital Southeast Connector – B2 project, future vehicular travel along Grant Line Road would increase noise levels as experienced by sensitive receptors along this corridor (Capital SouthEast Connector Joint Powers Authority 2017). This environmental document provides estimates of existing conditions, future conditions with no mitigation, and future conditions with construction of a sound wall and use of rubberized asphalt for 84 receptors located north of Grant Line Road in the vicinity of the Project site, showing less-than-significant impacts related to transportation noise. The noise mitigation for the Capital Southeast Connector – B2 project would provide benefits for noise sensitive uses in the vicinity of the Project site and located along roadways that would be affected by Project traffic. Table 17 from this Initial Study identifies existing noise conditions, noise levels in 2035 without the road widening project, and noise levels in 2035 with the road widening project, as well as project noise levels with mitigation applied for 84 receptors along the Grant Line Road corridor between Waterman Road on the west and Bradshaw Road on the east (two receptors are just east of Bradshaw Road). For future conditions with the road widening project, noise levels range from 57 to 71 dBA L^{dn}. With mitigation that will include soundwalls and rubberized asphalt, future noise levels would range from 53 to 65 dBA L^{dn}. For all but one noise receptor location (NM-3, 9876 Grant Line Road), mitigation would reduce future plus project noise levels to below future without project conditions. For NM-3, mitigation would result in a noise level of 59 dBA L^{dn} under future plus project with mitigation conditions compared to a noise level of 57 dBA L^{dn} for future without project conditions. As detailed in this Initial Study, mitigation is imposed in the form of both soundwalls and the use of rubberized asphalt or open grade pavement, which would result in less-than-significant impacts for each of the sensitive receptors located north of the Grant Line Road corridor.

Elk Grove Policy MOB-1-1 establishes vehicle miles traveled (VMT) limits for the City's Planning Area, including locations for new growth, such as the East Study Area. The implementation of this policy would reduce travel demand by incorporating density mixing of uses, pedestrian and bike infrastructure, and transit services. Reducing travel demand would reduce traffic volumes and therefore traffic noise levels. Based on direction included in the General Plan, development in the Project site would be designed to minimize potential impacts. However, it is not possible to determine at this time whether this program would avoid all potentially significant impacts. Significant traffic noise impacts at existing and future noise-sensitive areas can be difficult to feasibly mitigate. Some areas may have side of the road with noise barriers that increase noise levels experienced on the other side of the roadway. New noise barriers may have limited effectiveness for traffic noise mitigation, since openings are often required for pedestrian, bicycle, vehicle, and emergency access and visual access for safety. Quiet pavement may be infeasible due to cost. It may not be feasible to reduce traffic noise impacts to a less-than-significant level at all existing and future noise-sensitive land uses along Mosher Road between Waterman Road and Grant Line Road. There is no additional feasible mitigation. As with the 2019 SOIA EIR, the impact is considered **significant and unavoidable.**

Impact 3.12-5: Land Use Compatibility of On-Site Sensitive Receptors with Future Transportation Noise Levels.

As discussed in the 2019 SOIA EIR, proposed uses near the UPRR tracks are not noise sensitive and this impact is **less than significant**.

As detailed in the 2019 SOIA EIR, noise from future vehicle traffic would also affect future on-site noise-sensitive receptors. Noise-sensitive receptors located within future 60 dB L_{dn} noise contours would be exposed to noise levels exceeding the City of Elk Grove General Plan Noise Element standard of 60 dB L_{dn} for residential uses affected by transportation noise sources. Future residential development within the Project site could occur in areas where traffic noise could exceed the City's standard in the mixed-use area adjacent to Grant Line Road. Furthermore, it is possible that there could be high-volume roadways in the mixed-use area that are designed to funnel most traffic onto such roadways, rather than a dispersed transportation network that avoids high volumes on any single roadway. However, it is uncertain as to whether there would be residential development in the mixed-use area and how far from high-volume roadways (including Grant Line Road) this residential development would be located. The same is true in other locations within the Project site – although the predominantly planned uses are not noise sensitive (industrial and commercial), it is possible that there could be ancillary uses, such as day care, that would be noise sensitive. Therefore, impacts related to land use-noise compatibility are considered **potentially significant**.

> Mitigation Measure 3.12-5: Improve Land Use Compatibility to Reduce Exposure of On-Site Sensitive Receptors to Traffic Noise (2019 SOIA EIR Mitigation Measure 3.12-5).
>
> Consistent with General Plan Noise Policies N-1-1, N-1-2, N-2-1, N-2-2, N-2-3, and N-2-4, or these policies as they may be updated in the future, feasible strategies to improve land use/transportation noise compatibility will be incorporated into the design of projects, including, but not limited to the following strategies, as feasible:
>
> - incorporate site planning strategies to reduce noise levels within compliance of applicable noise standards, such as building orientation, which can take advantage of shielding provided by the intervening building façade at the outdoor activity area;

- consider setback distances from the noise source. Increasing the setback distance would achieve a natural attenuation of traffic noise levels due to excess ground attenuation and additional noise propagation over distance;

- use of increased noise-attenuation measures for second- and third-story facades in building construction (e.g., dual-pane, sound-rated windows; exterior wall insulation);

- install low-noise pavement, such as open-grade asphalt or rubberized asphalt.

Significance after Mitigation

Implementation of Mitigation Measure 3.12-5 would reduce the significant interior and exterior noise level impacts at affected receptors. However, it is not possible at this time to determine the effectiveness of mitigation with certainty, as there are no development applications or site plans. Significant traffic noise impacts at future noise-sensitive areas can be difficult to feasibly mitigate. Some areas may have noise barriers that increase noise levels experienced on the other side of the roadway. New noise barriers may have limited effectiveness for traffic noise mitigation since openings are often required for pedestrian, bicycle, vehicle, and emergency access and visual access for safety. Quiet pavement may be infeasible due to cost. It may not be feasible to reduce traffic noise impacts to a less-than-significant level at all noise-sensitive land uses. There is no additional feasible mitigation. As with the 2019 SOIA EIR, the impact is considered **significant and unavoidable**.

Impact 3.12-6: Land Use Compatibility of On-Site Sensitive Receptors with or Generation of Non-Transportation Noise Levels in Excess of Local Standards.

Proposed development within the Project site could involve residential uses in the mixed-use area; commercial, office, and industrial uses are proposed over most of the Project site, along with open space and recreation. Institutional and public facilities (e.g., electrical substations, and schools) could also be developed. Future development of noise-sensitive uses (e.g., residential dwellings, schools, hospitals, parks, hotels, places of worship, libraries) could occur in areas that either are currently exposed to or would be exposed to future noise from non-transportation noise sources that could exceed the 55 dB L_{eq} daytime and 45 dB L_{eq} nighttime.

The long-term operation of proposed land uses at the Project site could result in non-transportation operational noise from, but not limited to, the following potential sources:

- landscape and building maintenance activities (e.g., hand tools, power tools, lawn and garden equipment);
- mechanical equipment (e.g., pumps, generators heating, ventilation, and cooling systems);
- garbage collection;
- parking lots;
- commercial, office, and industrial activities;
- other residential, school, and recreation activities and events; and
- agricultural activities.

For a detailed description of stationary and area noise sources, please refer to pages 3.12-53 through 3.12-55 of the 2019 SOIA EIR.

The impact to future on-site receptors from stationary and area noise sources is considered **significant**.

Mitigation Measure 3.12-6: Implement Measures to Reduce Potential Exposure of Sensitive Receptors to Non-Transportation Source–Generated Noise (2019 SOIA EIR Mitigation Measure 3.12-6).

The City of Elk Grove shall require discretionary projects to reduce potential exposure of on-site sensitive receptors to non-transportation source noise.

To reduce potential long-term exposure of on-site sensitive receptors to noise generated by project-related non-transportation noise sources, the City shall evaluate individual facilities, subdivisions, and other project elements for compliance with the City Noise Ordinance and policies contained in the City's General Plan at the time that tentative subdivision maps and improvements plans are submitted. All project elements shall comply with City noise standards. The project applicants for all project phases shall implement the following measures to assure maximum reduction of project interior and exterior noise levels from operational activities.

- The proposed land uses shall be designed so that on-site mechanical equipment (e.g., heating, ventilation, and air conditioning [HVAC] units, compressors, and generators) and area-source operations (e.g., loading docks, parking lots, and recreational-use areas) are located as far as possible from or shielded from nearby noise-sensitive land uses.

- Residential air conditioning units shall be located a minimum of 10 feet from adjacent residential dwellings, including outdoor entertainment and relaxation areas, or shall be shielded to reduce operational noise levels at adjacent dwellings or designed to meet City noise standards. Shielding may include the use of fences or partial equipment enclosures. To provide effectiveness, fences or barriers shall be continuous or solid, with no gaps, and shall block the line of sight to windows of neighboring dwellings.

- To the extent feasible, residential land uses located within 500 feet of and within the direct line of sight of major noise-generating commercial uses (e.g., loading docks and equipment/vehicle storage repair facilities,) shall be shielded from the line of sight of these facilities by construction of a noise barrier. To provide effectiveness, noise barriers shall be continuous or solid, with no gaps, and shall block the line of sight to windows of neighboring dwellings.

- Dual-pane, noise-rated windows; mechanical air systems; exterior wall insulation; and other noise-reducing building materials shall be used.

- Routine testing and preventive maintenance of emergency electrical generators shall be conducted during the less sensitive daytime hours (i.e., 7:00 a.m. to 6:00 p.m.). All electrical generators shall be equipped with noise control (e.g., muffler) devices in accordance with manufacturers' specifications.

- Prior to issuance of occupancy permits, project applicants shall provide buyer-renter notification for any noise sensitive uses located within 200 feet on ongoing operations of agricultural equipment at adjacent agricultural land uses.

In addition, the City shall seek to reduce potential long-term exposure of sensitive receptors to noise generated by project-related non-transportation noise sources from public activities on school grounds, in neighborhood and community parks, and in open-space areas. Specifically, the City shall encourage the

controlling agencies (i.e., schools and park and recreation districts) to implement measures to reduce project-generated interior and exterior noise levels to within acceptable levels, including but not limited to the following:

- On-site landscape maintenance equipment shall be equipped with properly operating exhaust mufflers and engine shrouds, in accordance with manufacturers' specifications.

- For maintenance areas located within 500 feet of noise-sensitive land uses, the operation of on-site landscape maintenance equipment shall be limited to the least noise-sensitive periods of the day, between the hours of 7 a.m. and 7 p.m.

- Outdoor use of amplified sound systems within 500 feet of noise-sensitive land uses shall be permitted only between 7 a.m. and 10 p.m. Sunday through Thursday, and between 7 a.m. and 11 p.m. on Friday and Saturday.

Significance after Mitigation

Compliance with the City Noise regulations and implementation of additional mitigation measures for the control of non-transportation source noise as identified above in Mitigation Measure 3.12-6 would reduce non-transportation source noise levels at on-site sensitive receptors. Restricting noise-generating activities to daytime hours as outlined in the City's Noise Control regulations and requiring stationary equipment to achieve property line noise limits would reduce the potential for noise impacts at sensitive receptors. Achievable noise reductions from fences or barriers can vary, but typically range from approximately 5 to 10 dBA, depending on construction characteristics, height, and location. With implementation of Mitigation Measure 3.12-6, future development in the Project site would be designed to minimize potential impacts. However, it is not possible to determine at this time whether this mitigation would avoid all potentially significant impacts. There is no additional feasible mitigation. As with the 2019 SOIA EIR, the impact is considered **significant and unavoidable.**

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3.13 PUBLIC SERVICES AND RECREATION

Comments received on the Notice of Preparation (NOP) were reviewed during preparation of this SEIR. A comment letter was received from the Sacramento Local Agency Formation Commission (LAFCo) regarding the provision and adequacy of public services. The City reviewed and considered this information during preparation of this section.

3.13.1 ENVIRONMENTAL SETTING

As reported in the 2019 SOIA EIR, the public services would be provided to the Project site by Sacramento County, the City of Elk Grove, the Cosumnes Community Service District (CCSD), the Sacramento County Sheriff's Department, the City of Elk Grove's Police Department, the California Highway Patrol (CHP), and the Elk Grove Unified School District (EGUSD).

The following environmental setting presents a brief summary of public services and recreation information contained in the 2019 SOIA EIR and provides current (2020) conditions that have changed since the 2019 SOIA EIR was prepared.

FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES

The CCSD Fire Department currently provides fire protection, fire prevention, and emergency medical services to the Project site. Fire stations that would serve the Project site include Station 71 at 8760 Elk Grove Boulevard, approximately 2.25 miles northwest of the Project site, and Station 73 at 9607 Bond Road, approximately 2 miles north of the Project site. Three new fire stations are planned in the vicinity of the Project site, one in the Laguna Ridge Specific Plan Area (Station 77), west of the Project site (on Poppy Ridge Road just east of Big Horn Road); one within the Sterling Meadows project (Station 78) west of the Project site (along Lotz Parkway near Kammerer Road); and one near the intersection of Bradshaw Road and Grant Line Road (Station 79) that will be built as the need arises (City of Elk Grove 2018).

POLICE PROTECTION

Sacramento County Sheriff's Department

The Project site is currently served by the Sacramento County Sheriff's Department, which provides specialized law enforcement services to the County and local police protection to both the incorporated and unincorporated areas. The closest station to the Project site is located at 7000 65th Street in Sacramento, approximately 9 miles northwest of the Project site. The Sacramento County Sheriff's Department would continue to provide law enforcement services to unincorporated portions of the Project site until annexation into the City occurs.

City of Elk Grove Police Department

The Elk Grove Police Department also provides certain law enforcement services to the Project site through a mutual aid agreement and would be the primary provider, following annexation. The Police Department has a force of 146 sworn officers and 108 civilian employees (Elk Grove Police Department 2019). This is equivalent to a staffing ratio of 0.80 sworn officers per 1,000 residents (City of Elk Grove Police Department 2019, California Department of Finance 2020). The Police Department operates out of one police station, located at 8400 Laguna

Palms Way, part of the City Hall complex, approximately 3.25 miles northwest of the Project site. During 2019, Police Department's actual average Priority One response time was 4.9 minutes.

California Highway Patrol

The CHP provides traffic regulation enforcement, emergency management, and vice assistance on State highways, all federal interstate highways, and other major roadways in unincorporated Sacramento County. The Project site is located within the CHP Valley Division, which is comprised of 20 area offices, one commercial vehicle enforcement facility, and four communications centers.

SCHOOLS

As noted in the 2019 SOIA EIR, the EGUSD provides K–12 education to the City of Elk Grove and the Project site. As shown on the maps of EGUSD school attendance boundaries, the Project site is served by Elk Grove Elementary School, Joseph Kerr Middle School, and Elk Grove High School (EGUSD 2020). Table 3.13-1 identifies the 2019-2020 school-year enrollments for these schools. All three schools are currently operating below design capacity.

Table 3.13-1 Elk Grove Unified School District Enrollment, 2019-2020

School Name	Grade	Enrollment	Design Capacity	Estimated Remaining Capacity
Elk Grove Elementary School	K–6	820	880	60
Joseph Kerr Middle School	7–8	907	1,519	612
Elk Grove High School	9–12	1,849	2,659	810

Source: California Department of Education 2020, EGUSD 2016

EGUSD Funding

In order to construct new schools to mitigate growth from new residential, commercial, and industrial development, EGUSD's local share comes from developer school impact fees. Based on its facilities needs assessment, EGUSD demonstrated the need to levy Level II developer fees that are higher than the statutory fee. As of June 2020, EGUSD's fees were $6.34 per square foot for residential construction and $0.66 for commercial construction (City of Sacramento Community Development Department 2020).

PARKS

Cosumnes Community Services District

The CCSD Parks and Recreation Department provides parks and recreation facilities for residents of an area of roughly 157 square miles, including the City limits of Elk Grove, plus unincorporated areas of Sacramento County. The CCSD Parks and Recreation Master Plan estimates that CCSD provides 5.26 acres of parkland per 1,000 residents in 2017, which exceeds the City and CCSD parkland standards of a minimum of 5 acres of developed parkland per 1,000 residents (CCSD Parks and Recreation 2018). The CCSD anticipates 36 new parks will be developed over the 10-year planning period of the Master Plan, and that CCSD will continue to meet or exceed the 5 acres per 1,000 residents parkland standard as development occurs and parkland is dedicated (CCSD Parks and Recreation 2018).

The closest CCSD park facilities are Berens Park, approximately 500 feet northwest of the Project site, and the Emerald Lakes Golf Course, directly to the east of the Project site. Elk Grove Regional Park is approximately 2 miles north of the Project site. No parks and recreation services are currently provided for or planned within the Project site (CCSD 2018).

City of Elk Grove

The City of Elk Grove and CCSD have an agreement for joint development and operation of all future parks in the Laguna Ridge Specific Plan, the Southeast Policy Area, and future master planned areas of the City. In addition, the City solely owns and maintains the 56-acre Civic Center Community Park located south of Elk Grove Boulevard and east of Big Horn Boulevard. Referred to as District56, the site includes an Aquatics Center, Community Center, and (currently under construction) a Preserve that will include a network of trails, benches, picnic tables, wetland area overlooks, open meadow, outdoor exercise equipment, and play equipment(City of Elk Grove 2020a). District56 is also planned to include a library and performing arts center.

3.13.2 REGULATORY FRAMEWORK

City of Elk Grove General Plan

The City's General Plan (City of Elk Grove 2019) contains the following policies related to public services and recreation that are applicable to the proposed Project.

Urban and Rural Development

Service Levels

- **Policy LU-3-33:** Ensure infrastructure and facilities are planned and designed to meet projected future demands.

Community and Resource Protection

Park Facilities

- **Policy PT-1-3:** Require the provision of park land at a minimum of 5 acres per 1,000 residents, consistent with the Quimby Act.
- **Policy PT-1-5:** Funding for maintenance of parks and/or trails shall be assured to the City's satisfaction prior to approval of any Final Subdivision Map which contains or contributes to the need for public parks and facilities.

Services, Health, and Safety

Disaster and Emergency Risk Reduction

- **Policy ER-4-1:** 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.
    - **Standard ER-4-1.a:** 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.

Disaster and Emergency Response and Public Safety

- **Policy SAF-1-1:** 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 SAF-1-2:** Encourage the use of Crime Prevention Through Environmental Design (CPTED) principles in the design of projects and buildings, as well as parks and trails.

Urban Infrastructure

- **Policy INF-1-2:** Require that water flow and pressure be provided at sufficient levels to meet domestic, commercial, industrial, and firefighting needs.

Community Infrastructure and Facilities

- **Policy CIF 4-1:** While recognizing that public 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 school siting criteria:

    - Traffic impacts on nearby roadways should be addressed and mitigated to meet City standards for roadway performance targets.

    - Schools should not be located on main roadway corridors characterized by high speeds (>35 miles/hr).

    - Schools should serve as a focal point of neighborhood activity and be interrelated with congregation facilities, parks, greenways and off-street paths whenever possible.

    - Almost all residences should be within walking distance of a school (1 mile or less) and all residences should be located within 2 miles of a school whenever possible.

    - New schools should be located 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 CIF-4-3:** Support 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.

Infrastructure Financing and Phasing

- **Policy IFP-1-6:** Fee programs and/or other finance mechanisms shall be reviewed regularly to ensure that sufficient funding will be available to construct all required facilities.

- **Policy IFP-1-7:** New development shall fund its fair share portion of impacts to all public facilities and infrastructure as provided for in State law.

- **Policy IFP-1-10:** Except when prohibited by state law, the City will endeavor to ensure 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.

3.13.3 Environmental Impacts and Mitigation Measures

Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, the proposed 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, in order 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

- include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Impact Analysis

Impact 3.13-1: Increased Demand for Fire Protection and Emergency Medical Services.

CCSD will provide fire protection, fire prevention, life safety, and emergency medical services to the Project site. Future development of the Project site includes the potential for construction of approximately 5.6 million square feet of light and heavy industrial uses and 252,650 square feet of regional commercial uses. In addition, future development of mixed uses on the Project site could add an assumed 713 dwelling units with 2,304 residents (or employment uses that would require similar levels of infrastructure and services as 713 dwelling units). Project applicants for future projects would be required to incorporate California Fire Code, California Health and Safety Code, and federal Occupational Health and Safety Administration (OSHA) requirements into the project design to address access and finished surfaces for firefighting equipment; fire hydrant placement and sufficiency of fire hydrants; and fire flow availability. Furthermore, City General Plan Policy ER-4-1 requires cooperation with the CCSD Fire Department to reduce fire hazards and City General Plan Standard ER-4-1.a requires installation of on-site fire suppression systems for all new commercial and industrial development. CCSD requires project applicants to submit project plans for review and approval to ensure California Fire Code and City standards are incorporated into project designs prior to the issuance of building permits

The CCSD Fire Department receives its funding through property taxes, fees for service, and grant funding. New development projects are required to pay fire protection development fees to fund additional facilities and equipment. These funds would help to pay for all costs associated with the development of a new fire station, if needed. A Community Facilities District has also been established to assist in the long-term mitigation of growth impacts. Annexation into the Community Facilities District or lump sum payment to offset growth impacts is required of property owners of new development through a balloting process. Fee programs and finance

mechanisms are regularly evaluated and updated, consistent with Elk Grove General Plan Policy IFP-1-6, to ensure that adequate service levels are maintained.

Future development of commercial, industrial, and mixed uses is assumed to occur over an approximately 20-year period. The CCSD Fire Department may need to build one or more of the three predesignated new fire stations (i.e., Station 77, Station 78, or Station 79) and need to hire additional firefighters, prevention, and emergency medical personnel to accommodate the increased demand for services from development of the Project site and planned development in the Laguna Ridge Specific Plan Area, Sterling Meadows, and the Southeast Policy Area. The construction and operation of new off-site facilities and expansion of existing off-site facilities by CCSD could also be required to maintain service ratios. As the recognized primary service provider for fire protection, prevention, and emergency medical and rescue services, the CCSD and the City will be encouraged to work together closely to identify fire station locations, equipment, and personnel needs to support any increased demands on the CCSD. CCSD would conduct project-level CEQA or NEPA analysis, if necessary, to analyze specific impacts and identify any required mitigation measures for construction and operation of new fire stations to serve the project site. It is speculative to attempt to predict at this time the extent to which this would create any indirect impact that is distinct from the analysis of direct Project impacts.

Incorporation of California Fire Code, California Health and Safety Code, and OSHA requirements, as well as compliance with the City's General Plan policies, 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. As with the 2019 SOIA EIR, this impact is considered **less than significant**.

Impact 3.13-2: Increased Demand for Law Enforcement Services.

After annexation of the Project site, the Elk Grove Police Department will provide law enforcement services to proposed land uses. Future development could include construction of approximately 5.6 million square feet of light and heavy industrial uses and 252,650 square feet of regional commercial uses, as well as mixed uses that could potentially include residential development. City General Plan Policy SAF-1-2 encourages the use of CPTED principles in new development to reduce the potential for crime and ensure safety measures are incorporated into project designs.[1]

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 purpose of the fees is to mitigate the impacts caused by development. As of January 2020, the City assesses a fee of $1,162 per single-family dwelling (for fewer than 3 units, including duplexes); $848 per multi-family dwelling unit, single-family, age-restricted housing, and multi-family age restricted housing; $0.09 per square foot of shopping center and commercial uses; and $0.20 per square foot of industrial uses (City of Elk Grove 2020b). This would help to ensure sufficient police protection facilities if there is development in the future within the Project site.

Future development would not affect the Police Department response times or other performance objectives because project applicants for future projects would pay development impact fees to ensure police protection personnel and equipment is provided to meet increased demand for police protection services. The Police

[1] CPTED principles consist of 1) natural surveillance by placing "eyes on the street"; 2) natural access and control through the use of doors, fences, shrubs, and other physical elements to prevent unauthorized persons access; 3) territorial enforcement by defining clear boundaries between public and private areas; and 4) maintenance and management.

Department currently has a staffing ratio of 0.80 officers per 1,000 residents (City of Elk Grove Police Department 2019, California Department of Finance 2020). The area of the Project site identified for development of mixed uses could generate up to 2,304 persons, resulting in the need for an estimated two (rounded up) officers. The addition of two new officers would not result in the need for additional police protection facilities. Therefore, as with the 2019 SOIA EIR, there would be no significant adverse physical environmental effect associated with construction and operation of new facilities and this impact is considered **less than significant**.

Impact 3.13-3: Increased Demand for Schools.

As with the 2019 SOIA EIR, the area of the Project site identified for development of mixed uses could generate school-aged children. Using EGUSD's 2020 student generation rates for residential development, the potential development of 713 dwelling units would generate could generate approximately 183 new elementary school students (grades K–6), 51 middle school students (grades 7–8), and 57 high school students (grades 9–12).[2] Based EGUSD's 2020 student generation rates for industrial and commercial development, the potential development of approximately 5.6 million square feet of light and heavy industrial development and approximately 253,000 square feet of regional commercial development could generate approximately 574 new elementary school, middle school, and high school students (grades K-12).[3]

The Project site is currently in the Elk Grove Elementary School, Joseph Kerr Middle School, and Elk Grove High School district boundaries but it should be noted that school attendance boundaries may change, so other schools may eventually provide school services. As described above, all three schools are currently operating below their design capacity. However, these schools will be used to house future students from the approved Laguna Ridge Specific Plan (7,400 homes), Sterling Meadows (1,184 homes), and the Southeast Policy Area (4,000 homes) (EGUSD 2016).

It anticipated that Elk Grove Elementary School will exceed its design capacity by 2021 and Joseph Kerr Middle School and Elk Grove High School will exceed design capacity by 2025 and may not have capacity to accommodate the students who would reside in the Project site (EGUSD 2016). The EGUSD's School Facilities Needs Analysis indicates that the Laguna Ridge South Elementary School, which would be located along Poppy Ridge Road, approximately 2.5 miles west of the Project site, and Crooked Creek Estates Elementary School, which would be located on Wyman Drive approximately 0.5 mile north of the Project site, are anticipated to be designed and constructed in the next 5 to 6 years (ODELL Planning and Research 2020). While additional schools are under construction, it may be necessary to bus students to school facilities with available capacity. Transportation of future students to schools with additional capacity could result in indirect impacts related to transportation, such as air pollutant emissions, greenhouse gas emissions, and transportation noise – impacts that are analyzed in this SEIR based on assumptions for land use change within the Project site.

City General Plan Policy IFP-1-7 requires new development to fund its fair share portion of its impacts to all public facilities as provided for in State law. In addition, 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

[2] For the purposes of this analysis, it is assumed that all land designated for mixed use would consist of multifamily units. The EGUSD estimates a student yield of 0.2572 elementary school students (grades K-5), 0.0710 middle school student (grades 6-8), and 0.0806 high school (grades 9-12) per multifamily units.

[3] The EGUSD estimates a student yield 0.093 students per 1,000 square feet of light and heavy industrial development (5,635,967/1,000 x 0.093 = 524 students) and 0.196 students per 1,000 square feet of regional commercial development (252,648/1,000 x 0.196 = 50 students).

State school bond program (City General Plan Policy CIF-4-3). Pursuant to SB 50, project applicants would be required to pay all applicable State-mandated school impact fees to EGUSD. As of June 2020, EGUSD's fees were $6.34 per square foot for residential construction and $0.66 for commercial construction, although these fees may increase by the time development is proposed (City of Sacramento Community Development Department 2020). The EGUSD would determine the assessable square footage that would be subject to the fee at the time of development. 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). As with the 2019 SOIA EIR, this impact is considered **less than significant**.

Impact 3.13-4: Increased Demand for Parks and Recreation Facilities.

As with the 2019 SOIA EIR, the potential future development of mixed uses on the Project site could add dwelling units, which would lead to increased demand for parks and recreation facilities. an assumed 713 housing units, or 2,304 residents to the CCSD service area that would increase the demand for parks and recreation facilities. City and CCSD parkland standards require a minimum of 5 acres of developed parkland per 1,000 residents. This amount of residential development would require the development of an estimated 11.5 acres of parkland, using standards maintained by the City and CCSD. Any new residential development would be required to dedicate park and recreation facilities or pay applicable impact fees, per California Government Code Section 66477 (Quimby Act), the City of Elk Grove Municipal Code Chapter 22.40, and City General Plan Policy PT-1-3, or contribute to other fair share funding mechanisms required by the City as stated in General Plan Policy PT-1-5. These impact fees could fund the development of a new park or the maintenance of existing parks. As with the 2019 SOIA EIR, this impact is considered **less than significant**.

3.14 TRANSPORTATION

Comments received on the Notice of Preparation (NOP) were reviewed during preparation of this SEIR. A comment letter was submitted by the California Department of Transportation (Caltrans) asking for revised analysis of vehicular travel demand (vehicle miles traveled or VMT), queueing analysis for the Grant Line Road interchange, and trip generation. The comments were used to inform the analysis presented in the SEIR.

The following scenarios were analyzed in a traffic study prepared to support the 2019 SOIA EIR and have been updated, as appropriate, for this SEIR (Fehr & Peers 2017):

- **Existing Conditions –** represents the baseline condition upon which Project impacts are measured.
- **Existing Plus Project Conditions (full buildout of the SOIA Area, including the multi-sports park complex project) –** reflects changes in traffic and circulation conditions associated with implementation of the proposed Project.
- **Cumulative No-Project Conditions –** reflects the future 2035 without implementation of the proposed Project.
- **Cumulative plus Project Conditions (full buildout of the SOIA Area, including the multi-sports park complex project) –** reflects changes in future 2035 traffic and circulation associated with implementation of the proposed Project.
- **Cumulative plus Project Conditions (full buildout of the SOIA Area, including the multi-sports park complex project, practice, tournament, stage events, league events, and county fair) –** reflects changes in future 2035 traffic with full buildout of the SOIA Area, including the multi-sports park complex project and associated special events.

Both cumulative and project-level transportation effects are addressed in this section.

3.14.1 ENVIRONMENTAL SETTING

The environmental setting for this SEIR is essentially the same as that provided in detail in the 2019 SOIA EIR.

3.14.2 REGULATORY FRAMEWORK

STATE PLANS, POLICIES, LAWS, AND REGULATIONS

Vehicle Miles Traveled (VMT)

The 2019 SOIA EIR included a discussion of the regulatory framework related to VMT. Since the time the 2019 SOIA EIR was drafted, regulatory changes to the CEQA Guidelines that implement SB 743 were approved on December 28, 2018 and statewide implementation began July 1, 2020. On February 27, 2019, the City adopted a new General Plan, which included provisions for the implementation of SB 743 and established thresholds for VMT. See additional discussion below.

Caltrans published the Vehicle Miles Traveled-Focused Transportation Impact Study Guide in May of 2020. This guidance document replaces the Guide for the Preparation of Traffic Impact Studies for use with local land use projects. The Transportation Impact Study Guide provides Caltrans' perspective on the review of a land use project or plan's transportation analysis relative to VMT. The Guide identifies projects that are presumed to have a less-than-significant effect, such as certain projects in Transit Priority Areas, projects in low VMT areas, affordable housing projects, local-serving retail, and small projects. The Guide describes how Caltrans may view analysis that is consistent with the Governor's Office of Planning and Research Technical Advisory, as well as the approach to comments Caltrans may take where lead agencies have developed their own approach for evaluating VMT effects.

REGIONAL AND LOCAL PLANS, POLICIES, LAWS AND REGULATIONS

SACOG Metropolitan Transportation Plan

Since the drafting of the 2019 SOIA EIR, the Sacramento Area Council of Governments (SACOG) updated the Metropolitan Transportation Plan Sustainable Communities Strategy (MTP/SCS). On November 18, 2019, the Sacramento Area Council of Governments (SACOG) approved the *2020 Metropolitan Transportation Plan/Sustainable Communities Strategy*, which is a regional transportation plan and land use strategy designed to build more vibrant places, accommodate changes in transportation and transportation funding, and build a safe and reliable multi-modal transportation system. The 2020 MTP/SCS includes a land use strategy to improve mobility and reduce travel demand from passenger vehicles by prioritizing compact and transit-oriented development. The MTP provides a 20-year transportation vision and corresponding list of projects. The MTIP identifies short-term projects (7-year horizon) in more detail. SACOG is also responsible for the oversight and distribution of most federal and State transportation funding sources.

City of Elk Grove

Since the 2019 SOIA EIR was drafted, the City adopted a General Plan (on February 27, 2019 with amendments through December of 2019). The General Plan includes goals and policies to guide both present and future development within the City's jurisdiction. The City of Elk Grove's General Plan policies regarding transportation that may apply to potential future development in the Project site are provided below (some policies and standards may not apply directly to the proposed Project, but rather are relevant for the cumulative context).

- **Policy MOB-1-1:** Achieve State-mandated reductions in VMT by requiring land use and transportation projects to comply with the following metrics and limits. These metrics and limits shall be used as thresholds of significance in evaluating projects subject to CEQA. Projects that do not achieve the daily VMT limits outlined below shall be subject to all feasible mitigation measures necessary to reduce the VMT for, or induced by, the project to the applicable limits. If the VMT for or induced by the project cannot be reduced consistent with the performance metrics outlined below, the City may consider approval of the project, subject to a statement of overriding considerations and mitigation of transportation impacts to the extent feasible, provided some other stated form of public objective including specific economic, legal, social, technological or other considerations is achieved by the project.

    - (a) New Development – Any new land use plans, amendments to such plans, and other discretionary development proposals (referred to as "development projects") are required to demonstrate a 15 percent

reduction in VMT from existing (2015) conditions. To demonstrate this reduction, conformance with the following land use and cumulative VMT limits is required:

- (i) Land Use – Development projects shall demonstrate that the VMT produced by the project at buildout is equal to or less than the VMT limit of the project's General Plan land use designation, as shown in Table 6-1, which incorporates the 15 percent reduction from 2015 conditions.

- (ii) Cumulative for Development Projects in the Existing City-Development projects within the existing (2017) City limits shall demonstrate that cumulative VMT within the City including the project would be equal to or less than the established Citywide cumulative limit of 6,367,833 VMT (total daily VMT).

- (iii) Cumulative for Development Projects in Study Areas – Development projects located in Study Areas shall demonstrate that cumulative VMT within the applicable Study Area would be equal to or less than the established limit shown in Table 6-2.

Table 6-2 from the General Plan establishes the VMT limit for the total East Study Area (which includes the Project site and other lands to the northeast) as 420,612 VMT per day.

- **Policy MOB-3-1:** Implement a balanced transportation system using a layered network approach to building complete streets that ensure the safety and mobility of all users, including pedestrians, cyclists, motorists, children, seniors, and people with disabilities.

- **Policy MOB-3-2:** Support strategies that reduce reliance on single-occupancy private vehicles and promote the viability of alternative modes of transport.

  - **Standard MOB-3-2.a:** Require new development to install conduits for future installation of electric vehicle charging equipment.

- **Policy MOB-3-3:** Whenever capital improvements that alter street design are being performed within the public right-of-way, retrofit the right-of-way to enhance multimodal access to the most practical extent possible.

- **Policy MOB-3-4:** As new roads are constructed, assess how the needs of all users can be integrated into the street design based on the local context and functional classification.

- **Policy MOB-3-5:** Strive to balance needs for personal travel, goods movement, parking, social activities, business activities, and ease of maintenance when planning, operating, maintaining, and expanding the roadway network.

- **Policy MOB-3-6:** Execute complete streets design in accordance with neighborhood context and consistent with specific guidance in community plans or area plans, as applicable.

- **Policy MOB-3-7:** Develop a complete and connected network of sidewalks, crossings, paths, and bike lanes that are convenient and attractive, with a variety of routes in pedestrian-oriented areas.

- **Policy MOB-3-8:** Provide a thorough and well-designed wayfinding signage system to help users of all modes of travel navigate the City in an efficient manner.

- **Policy MOB-3-9:** As funds become available, provide for the operation and maintenance of facilities for bicycle and pedestrian networks proportionate to the travel percentage milestone goals for each mode of transportation in the Bicycle, Pedestrian, and Trails Master Plan.

- **Policy MOB-3-10:** Design and plan roadways such that the safety of the most vulnerable user is considered first using best practices and industry design standards.

- **Policy MOB-3-11:** Consider the safety of schoolchildren as a priority over vehicular movement on all streets within the context of the surrounding area, regardless of street classifications. Efforts shall specifically include tightening corner-turning radii to reduce vehicle speeds at intersections, reducing pedestrian crossing distances, calming motorist traffic speeds near pedestrian crossings, and installing at-grade pedestrian crossings to increase pedestrian visibility.

- **Policy MOB-3-12:** Provide for safe and convenient paths and crossings along major streets within the context of the surrounding area, taking into account the needs of the disabled, youth, and the elderly.

- **Policy MOB-3-13:** Continue to design streets and approve development applications in a manner that reduces high traffic flows and parking demand in residential neighborhoods.

- **Policy MOB-3-14:** Regulate the provision and management of parking on private property to align with parking demand, with consideration for access to shared parking opportunities.

- **Policy MOB-3-15:** Utilize reduced parking requirements when and where appropriate to promote walkable neighborhoods and districts and to increase the use of transit and bicycles.

- **Policy MOB-3-16:** Establish parking maximums, where appropriate, to prevent undesirable amounts of motor vehicle traffic in areas where pedestrian, bike, and transit use are prioritized.

- **Policy MOB-3-17:** Ensure new multifamily and commercial developments provide bicycle parking and other bicycle support facilities appropriate for the users of the development.

- **Policy MOB-4-1:** Ensure that community and area plans, specific plans, and development projects promote context-sensitive pedestrian and bicycle movement via direct, safe, and pleasant routes that connect destinations inside and outside the plan or project area. This may include convenient pedestrian and bicycle connections to public transportation.

- **Policy MOB-4-2:** Provide on-site facilities and amenities for active transportation users at public facilities, including bicycle parking and/or storage and shaded seating areas.

- **Policy MOB-4-3:** Prioritize infrastructure improvements that benefit bicycle and pedestrian safety and convenience over vehicle efficiency improvements within and near community facilities, activity centers, and other pedestrian-oriented areas.

- **Policy MOB-4-4:** Employ the recommendations and guidelines in the Bicycle, Pedestrian, and Trails Master Plan when planning and designing bicycle, pedestrian, and trail facilities and infrastructure, including updates to the Capital Improvement Program.

- **Policy MOB-4-5:** Encourage employers to offer incentives to reduce the use of vehicles for commuting to work and increase commuting by active transportation modes. Incentives may include a cash allowance in lieu of a parking space and on-site facilities and amenities for employees such as bicycle storage, shower rooms, lockers, trees, and shaded seating areas.

- **Policy MOB-5-1:** Support a pattern of land uses and development projects that are conducive to the provision of a robust transit service. Consider amendments to the land use plan, as appropriate, that increase the density and intensity of development along the City's fixed transit alignment and other major transit corridors.

- **Policy MOB-5-2:** Advocate for the City's preferred fixed transit alignment for light rail or bus rapid transit from north of the city to the Southeast Policy Area and ensure proposed projects are complementary to such an alignment.

- **Policy MOB-5-3:** Consult with the Sacramento Regional Transit District when identifying and designing complete streets improvements near likely light rail alignment corridors in order to prioritize access to and use of transit to sites along that corridor.

- **Policy MOB-5-4:** Support mixed-use and high-density development applications close to existing and planned transit stops.

- **Policy MOB-5-5:** Promote strong corridor connections to and between activity centers that are safe and attractive for all modes.

- **Policy MOB-5-6:** The City shall work to incorporate transit facilities into new private development and City project designs including incorporation of transit infrastructure (e.g. electricity and fiber-optic cable), alignments for transit route extensions, new station locations, bus stops, and transit patron waiting area amenities (e.g. benches and real-time traveler information screens).

- **Policy MOB-5-7:** Provide the appropriate level of transit service in all areas of Elk Grove, through fixed-route service in urban areas, and complementary demand response service in rural areas, so that transit-dependent residents are not cut off from community services, events, and activities.

- **Policy MOB-5-8:** Maintain and enhance transit services throughout the City in a manner that ensures frequent, reliable, timely, cost-effective, and responsive service to meet the City's needs. Enhance transit services where feasible to accommodate growth and transit needs as funding allows.

- **Policy MOB-5-9:** Continue working with community partners to expand public transit service that benefits Elk Grove workers, residents, students, and visitors. Examples of expanded transit service include increased service frequency, establishing additional routes and stops, and creating dedicated transit lanes.

- **Policy MOB-5-10:** Encourage the extension of bus rapid transit and/or light rail service to existing and planned employment centers by requiring a dedication of right-of-way. Advocate and plan for light rail

alignment and transit stop locations that best serve the needs of the community and fit within the planned mobility system.

- **Policy MOB-5-11:** Encourage commuter rail transportation by providing for a potential train station location for Amtrak and/or other rail service providers along the Union Pacific Railroad's Sacramento Subdivision line.

- **Policy MOB-5-12:** The City will work towards the enhancement and improvement of transit service with the objective of creating major transit corridors with frequent service (i.e. less than 30-minute headways) and street segments where transit is prioritized.

- **Policy MOB-5-13:** Consider the implementation of traffic signal priority, queue jumps, and exclusive transit lanes to reduce transit passenger delay and improve transit speed, reliability and operating efficiency.

City of Elk Grove Climate Action Plan

Since the 2019 SOIA EIR was drafted, the City updated its Climate Action Plan (CAP) February 2019 and amended in December 2019. The CAP identifies sources of GHG emissions attributable to land uses and activities within City limits and identifies measures to reduce emissions through energy use, land use, solid waste, and transportation strategies. As noted in Section 3.8 of this SEIR, Greenhouse Gas Emissions, since transportation is the top source of GHG emissions in Elk Grove, the CAP includes a focus on reducing emissions related to transportation, including the following Reduction Measures, which will apply to future development projects proposed within the Project site that use the CAP for analysis of GHG emissions effects:

- **TACM 2:** Transit-Oriented Development. Support higher-density, compact development along transit by placing high-density, mixed-use sites near transit opportunities.

- **TACM 3:** Intracity Transportation Demand Management. The City shall continue to implement strategies and policies that reduce the demand for personal motor vehicle travel for intracity (local) trips.

- **TACM 4:** Pedestrian and Bicycle Travel. Provide for safe and convenient pedestrian and bicycle travel through implementation of the Bicycle, Pedestrian and Trails Master Plan and increased bicycle parking standards.

- **TACM 6:** Limit Vehicle Miles Traveled. Achieve a 15 percent reduction in daily VMT compared to existing conditions (2015) for all new development in the City, consistent with state mandated VMT reduction targets for land use and transportation projects.

- **TACM 7:** Traffic Calming Measures. Increase the number of streets and intersections that have traffic calming measures.

- **TACM 9:** EV Charging Requirements. Adopt an electric vehicle (EV) charging station ordinance that establishes minimum EV charging standards for all new residential and commercial development. Increase the number of EV charging stations at municipal facilities throughout the City.

City of Elk Grove

On February 27, 2019, the City adopted a new General Plan, which included provisions for the implementation of SB 743 and established thresholds for VMT. The City updated the Transportation Analysis Guidelines in December of 2019. The Transportation Analysis Guidelines assist the City, other agencies, developers and property owners, and transportation and environmental professionals with assessing the potential transportation-related effects of proposed projects and plans. The Transportation Analysis Guidelines establish protocols for impact assessment and include guidance for General Plan consistency analysis and analysis under CEQA.

3.14.3 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

METHODOLOGY

The 2019 SOIA detailed the methodology for transportation impact analysis, including the then-applicable approach to identifying foreseeable and possible impacts to roadway, transit, and bicycle/pedestrian facilities, including both an analysis of vehicular travel demand (vehicle miles traveled or VMT) and related to possible future traffic congestion (expressed in terms of level of service or LOS). This SEIR describes an updated analysis for VMT associated with the revised Project, as developed by Fehr & Peers (Fehr & Peers 2020).

The 2019 SOIA EIR, as well as the Transportation Master Plan for the revised Project identify on- and off-site vehicular transportation improvements, the impacts of which are analyzed in this SEIR. In addition to the on- and off-site transportation improvements recommended in the 2019 SOIA EIR and Transportation Master Plan, Fehr & Peers recommends widening Grant Line Road to eight through lanes at the Waterman Road/Grant Line Road intersection with buildout of the proposed Project, including the following, which are changes to the 2019 SOIA EIR's Mitigation Measure 3.14-1:

- Three left-turn lanes, one through lane, and one right-turn lane on the northbound approach;
- Two left-turn lanes, one through lane, and one right-turn lane on the southbound approach;
- Two left-turn lanes, four through lanes, and two right-turn lanes on the eastbound approach; and
- Two left-turn lanes, four through lanes, and one right-turn lane on the westbound approach.

Vehicle Miles Traveled

As discussed in the traffic study prepared to support the 2019 SOIA EIR (Fehr & Peers 2017) and the traffic analysis conducted to support this SEIR (Fehr & Peers 2020), the City uses total daily VMT and VMT per service population as the basis for VMT analysis.

Fehr & Peers completed a VMT analysis of the revised Project to determine if the revised Project complies with City of Elk Grove General Plan Policy adopted to reduce VMT and achieve State-mandated reductions in VMT (Policy MOB-1-1). A separate Transportation Master Plan has been prepared to identify on-site circulation infrastructure required to support the revised Project (Wood Rodgers 2020).

Fehr & Peers used the following steps to estimate trip generation and VMT:

- **Estimated Building Area –** Estimated building area using floor-to-area ratios applied in the analysis of the 2019 SOIA EIR.

- **Trip Generation –** Used trip rates published in the Institute of Transportation Engineers (ITE) 10th Edition Trip Generation Manual to estimate typical weekday, AM peak hour, and PM peak-hour trip generation for the original project analyzed in the 2019 SOIA EIR and the revised Project analyzed in this SEIR.

- **Vehicle Mix (Cars, Light Trucks, Heavy Vehicles) –** Estimated the mix of cars, light trucks, and heavy vehicles associated with the proposed industrial land uses, based on trip generation data collected at a warehouse facility in Patterson CA.

- **Service Population –** Estimated employment for the original 2019 project and the revised Project using per acre employment densities used in the analysis of the 2019 SOIA EIR. Estimated population based using an average of 3.23 persons per household for single-family residential land use (i.e., Mixed Mosher Use), based on Table 3.2 of Planning Framework chapter of the City's General Plan.

- **VMT Per Service Population –** Calculated VMT per service population by land use category using a modified version of SACOG's SACSIM regional travel demand forecasting model.

- **Automobile VMT –** Estimated automobile VMT, consistent with CEQA Section 15064.3 and the Governor's Office of Planning and Research (OPR) Technical Advisory on Evaluating Transportation Impacts in CEQA. Multiplied daily trip generation for cars and light trucks (i.e., automobiles) by the applicable VMT per service population by land use. Estimated automobile VMT for soccer fields by multiplying daily trip generation for cars and light trucks by and an average trip length of five miles.

State Route 99 Off-Ramp Vehicle Queueing

As a part of the updates to the transportation analysis conducted to support this SEIR, Fehr & Peers has compared potential queuing under cumulative plus project conditions to the available storage on SR 99 northbound and southbound off-ramps using the Synchro 8 software, concluding that vehicle queues would not exceed available storage:

- **Northbound SR 99 off-ramp**. Available storage (feet): 1,500. 95th percentile vehicle queue: 775.

- **Southbound SR 99 off-ramp**. Available storage (feet): 1,600. 95th percentile vehicle queue: 1,075.

THRESHOLDS OF SIGNIFICANCE

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

- Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities;

- Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b);

- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- Result in inadequate emergency access.

IMPACT ANALYSIS

Impact 3.14-1. Conflict with an applicable transportation plan, ordinance, policy, or congestion management program.

Future annexation and development activities within the proposed Project site would be required to comply with applicable transportation plans, ordinances, and policies establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel. The City's review of proposed development projects includes review and conditioning related to all relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

Future projects will be required to comply with Policies MOB-3-1, 3-3, 3-4, 3-8, 3-10, 3-11, 3-12, 4-1, 4-3, and 5-5 which require the development of transportation systems that support all modes and users and establish priority for non-vehicular transportation modes. Policy MOB-3-9 requires funding for bicycle and pedestrian networks to achieve the City's mode split goals. Policies MOB-3-15 and 3-16 seek to reduce excess parking in order to promote walkable neighborhoods and commercial districts. Policies MOB-3-17 and 4-2 require parking and other amenities for active transportation users in multi-family and commercial developments. Policies MOB-5-1, 5-2, 5-3, 5-4, 5-6, 5-7, 5-8, 5-9, 5-10, 5-11, 5-12, and 5-13 establish the City's intent to establish land use and development patterns that support transit service and to expand and improve transit service.

The City's existing Bicycle and Pedestrian Master Plan includes proposed facilities on Kammerer Road and Grant Line Road and is being updated as of the writing of this document. The Master Plan did not consider development of the East Study Area, and therefore additional facilities will be included for the Project site as a part of the Master Plan Update. The City will require compliance with the updated Master Plan as a part of future development proposals within the Project site. Facilities planned within the Project area are described in the Transportation Master Plan (see Appendix G).

The City will review and condition future development projects, as necessary, to comply with these and other relevant policies, transportation plans, improvement standards, and other requirements. As with the 2019 SOIA EIR,, the impact is **less than significant**. See below under Impact 3.14-2 for analysis of VMT effects.

Impact 3.14-2. Conflict or inconsistency with CEQA Guidelines section 15064.3, subdivision (b).

As detailed in the 2019 SOIA EIR, SB 743 directed OPR to prepare guidance for analyzing the impact of travel demand, which is expressed using the metric of VMT. OPR prepared a Technical Advisory on Evaluating Transportation Impacts in CEQA, which contains OPR's recommendations regarding VMT analysis, potential significance thresholds, approaches to analysis for different types of projects (land use versus transportation projects, for example), and potential mitigation strategies (OPR 2017).

The City of Elk Grove approved Transportation Analysis Guidelines for transportation analysis studies and reports. The Transportation Analysis Guidelines includes guidance for transportation analysis as it pertains to the

City General Plan VMT policy (i.e., General Plan Policy MOB-1-1) for CEQA analysis, along with screening methods, analysis methodology, significance criteria, impact assessment, and mitigation strategies. Fehr & Peers has prepared the VMT analysis for the revised Project using the City's guidelines.

The revised Project would generate approximately 8,200 fewer trips per day and a total of 209,581 daily VMT for passenger vehicles, which is a reduction of approximately 22,185 daily VMT compared to the original project analyzed in the 2019 SOIA EIR. Fehr & Peers also estimated the VMT associated with each of the assumed land uses in the Project site to compare with the City's VMT limits, resulting in:

- Heavy Industrial (HI): 64,483
- Light Industrial (LI): 80,275
- Mixed Use: 28,343
- Regional Commercial (RC): 36,480
- Total 209,581

Pursuant to the City's Transportation Analysis Guidelines, passenger vehicle daily VMT for the Project has been compared with the City's VMT limits by land use designation (General Plan Table 6-1), yielding:

- Heavy Industrial (HI): 28.5 VMT per service population; General Plan VMT limit is 39.5 VMT per service population
- Light Industrial (LI): 23.5 VMT per service population; General Plan VMT limit is 24.5 VMT per service population
- Mixed Use: 12.3 VMT per service population; General Plan VMT limit for Residential Mixed Use is 21.2 VMT per service population
- Regional Commercial (RC): 60.8 VMT per service population; General Plan VMT limit for Residential Mixed Use is 44.3 VMT per service population

The total VMT limit for the East Study Area is 420,612 (see General Plan Table 6-2), and the total VMT estimated for the Project site would be 52 percent less than this total limit. The City estimated as a part of the General Plan that the East Study Area could accommodate a total service population of approximately 19,398 (City of Elk Grove 2019). The total service population anticipated under the proposed Project is 10,092, which represents approximately 52 percent of the total service population estimated by the City for the East Study Area. Based on Fehr & Peers' VMT estimate, the revised Project represents approximately 47 percent of the total VMT limit for the East Study Area, but 52 percent of the total service population, and therefore, the assumed mix of uses within the Project site would general VMT at a rate that would allow the East Study Area as a whole to remain within the City's VMT limits.

When development projects are proposed and land use and transportation plans are developed, the City will apply Policy MOB-1-1 to proposed projects to achieve the General Plan VMT limits. The City will require compliance with policies, such as Policies MOB-3-1, 3-3, 3-4, 3-8, 3-10, 3-11, 3-12, 4-1, 4-3, and 5-5, which require the

development of transportation systems that support all modes and users and establish priority for non-vehicular transportation modes, and Policies MOB-3-15 and 3-16, which seek to reduce excess parking in order to promote walkable neighborhoods and commercial districts. The City will apply Policies MOB-5-1, 5-2, 5-3, 5-4, 5-6, 5-7, 5-8, 5-9, 5-10, 5-11, 5-12, and 5-13, which establish the City's intent to establish land use and development patterns that support transit service and to expand and improve transit service.

If necessary for future projects to achieve the City's VMT limits, the City will require VMT reduction strategies, including those identified in the City's Transportation Analysis Guidelines, such as:

- Land use-related components such as project density, location, and efficiency related to other housing and jobs; and diversity of uses within the project. Also includes access and proximity to destinations, transit stations, and active transportation infrastructure.
- Establishing or connecting to a pedestrian/bike network; traffic calming within and in proximity to the project; car sharing programs; shuttle programs.
- Improvements to the transit system including reach expansion, service frequency, types of transit, access to stations, station safety and quality, parking (park-and-ride) and bike access (to transit itself and parking), last-mile connections.
- For residential: transit fare subsidies, education/training of alternatives, rideshare programs, shuttle programs, bike share programs For employer sites: transit fare subsidies, parking cash-outs, paid parking, alternative work schedules/telecommute, education/training of alternatives, rideshare programs, shuttle programs, bike share programs, end of trip facilities
- A fee is leveed that is used to provide non-vehicular transportation services that connect project residents to areas of employment or vice versa. This service may be provided by the project applicant in cooperation with major employers.
- Addition of Class 1, Class 2, or Class 4 bicycle facilities.
- Addition of sidewalks or other pedestrian improvements.
- Incorporation of transit-related improvements.

The City will also require future projects that use the City's Climate Action Plan to streamline GHG emissions impact analysis to apply reduction strategies, including those focused on supporting high-density development near transit, providing safe and convenient non-vehicular transportation options, and reducing VMT by at least 15 percent.

Development projects will also be required to implement Mitigation Measure 3.4-2, which requires strategies to reduce operational ozone precursors. Since transportation is by far the most important source of ozone precursors, Mitigation Measure 3.4-2 will be required to focus on reducing vehicular travel demand in order to reduce ozone precursors.

Development projects will also be required to implement Mitigation Measure 3.8-1a, which requires strategies to reduce operational greenhouse gas emissions. Since transportation is by far the most important source of

greenhouse gas emissions, Mitigation Measure 3.8-1a will be required to focus on reducing vehicular travel demand in order to reduce greenhouse gas emissions.

As with the 2019 SOIA EIR, since the City will require compliance with the VMT limits, and since the City uses compliance with the VMT limits as an indication of a less than significant impact related to VMT, as with the 2019 SOIA EIR, the impact is **less than significant**.

VMT can be an indicator of potential adverse physical environmental effects. Please refer also to Section 3.4 of this EIR, "Air Quality," which comprehensively analyzes and provides feasible mitigation for air pollutant emissions; Section 3.8, "Greenhouse Gas Emissions," comprehensively analyzes and provides feasible mitigation for GHG emissions; and Section 3.12, "Noise and Vibration," which comprehensively analyzes and provides feasible mitigation for noise and vibration impacts. Please also see the discussion of transportation energy use in Section 3.16 of this EIR, "Energy."

Impact 3.14-3. Hazards due to a design feature.

This impact is related to site-specific design features and potential incompatible uses. Potential hazardous design features that may occur to provide access to future development include sharp curves, dangerous intersections, or shared turn lanes. Future development projects and future transportation improvements within the Project site, as well as off-site improvements required to serve the Project site will be required to comply with the City's improvement standards, which are designed to avoid design hazards. Policy RC-3-3 from the City's 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 in order to improve operations. This may include joint transportation planning efforts, roadway construction and funding. Any future roadway improvements required within the Elk Grove City limits or Project site would be constructed to American Association of State Highway and Transportation Officials, Caltrans, Sacramento County, and City of Elk Grove roadway standards, as applicable, and would therefore not result in potential traffic related hazards. Therefore, as with the 2019 SOIA EIR, the impact would be **less than significant**.

Impact 3.11-4. Inadequate emergency access.

This impact is related to site-specific design features and emergency access. Emergency access impacts would be evaluated at a project level by the City at the time of future development application submittal. The City's General Plan Policy MOB-7-1a requires that roadways are designed consistent with the City's required pavement widths, which accommodate all multi-modal users and emergency vehicles. The Transportation Master Plan describes how circulation and access would be provided throughout the Project site via Arterial Streets and Collector Streets. Additional local access streets will be required as a part of future development project applications. Compliance with Policy RC-3-3, which indicates that the City will coordinate and participate with the City of Sacramento, Sacramento County, and Caltrans on roadway improvements that are shared by the jurisdictions in order to improve operations, would ensure that continuous and adequate emergency access would occur throughout the Project site. Therefore, as with the 2019 SOIA EIR, the impact would be **less than significant**.

3.15 UTILITIES AND SERVICE SYSTEMS

Comments received on the Notice of Preparation (NOP) were reviewed during preparation of this SEIR. A comment letter was submitted by the Sacramento Local Agency Formation Commission (LAFCo), stating that LAFCo "maintains an interest" in the project's impacts on water availability. The City reviewed and considered this information during preparation of this section.

A letter from the Sacramento Metropolitan Utility District (SMUD) expressing interest in impacts of the Project related to overhead and or underground transmission and distribution line easements; utility line routing; electrical load needs/requirements; energy efficiency; climate change; cumulative impacts related to the need for increased electrical delivery; the potential need to relocate and or remove any SMUD infrastructure.

Comments were also received by an individual requesting that the SEIR evaluate the effects of climate change on water availability. The California courts have stated that the required focus of an EIR is on the physical impacts of a project on the environment, not the impacts of the environment on a project. Therefore, the potential effects of climate change on water availability are not evaluated in this document. However, water supply planning efforts that are undertaken by a variety of agencies such as the City of Elk Grove, Sacramento County Water Agency, and the groundwater sustainability agencies that are currently jointly preparing the Groundwater Sustainability Plan for the South American Subbasin (see the Section 3.10, "Hydrology and Water Quality") may consider climate change. The same individual also requested that the SEIR evaluate the financial cost to the community of improving water infrastructure and providing water to the proposed development. However, pursuant to the CEQA Guidelines Section 15131, "economic or social effects of a project shall not be treated as significant effects on the environment", and therefore such impacts are not evaluated in this SEIR.

3.15.1 ENVIRONMENTAL SETTING

As reported in the 2019 SOIA EIR, utilities and service systems would be provided to future development by the Sacramento County Water Agency (SCWA), the Sacramento Area Sewer District (SASD) (formerly known as County Sanitation District-1), and Sacramento Regional County Sanitation District (SRCSD).

Since the 2019 SOIA EIR was approved, additional detailed water supply and wastewater studies have been conducted relative to the infrastructure that would be required to serve the Project site. Additional information related to on-site and off-site infrastructure needs is summarized below.

WATER SUPPLY

Currently, there are no public water supply facilities within the Project site. The majority of the Project site is located within the "overlap service area" of the Omochumne-Hartnell Water District (OHWD) and the SCWA, with the exception of 17 acre and 48 acres that are located exclusively in the OHWD and SCWA service areas, respectively.

Domestic water supplies are currently provided by private groundwater wells and most agricultural water supplies are provided by OHWD's irrigation wells. The water use for the Project site was estimated using average annual water demand factors and the acreage of crop types within the SOIA Area (Johnson and Cody 2015, Jensen pers. comm., 2018). As shown in Table 3.15-1, the total annual water usage for agricultural crops on the SOIA Area is approximately 1,981.5 acre-feet per year (afy).

Table 3.15-1 Estimate of Crop Water Usage within the SOIA Area				
Crop Type	Average Annual Water Use per Acre[1]		Estimated Acres within SOIA Area[2]	Total Annual Water Usage (afy)
	Acre-Feet	Gallons		
Oats	1.4	456,192	118	165.2
Pasture	4.1	1,335,990	443	1,816.3
Total	**3.8**	**1,792,182**	**561**	**1,981.5**

Notes: afy = acre-feet per year

Average acre-feet applied per acre values used from Johnson and Cody 2015. For oats, the value for grains was used (i.e., barley, oats, and rye).

Acreage of crop types was provided by the Sacramento County Agricultural Department.

Source: Average Annual Water Use per Acre from Johnson and Cody 2015; Jensen, pers. comm., 2018

Water Supply Sources for SCWA Zone 40

Future development of the Project site would require adequate treated water service. As noted in the 2019 SOIA EIR, areas inside Zone 40 are served conjunctively with groundwater (pumped from the South American Sub-basin of the Sacramento Valley Groundwater Basin, which is identified locally as the Central Basin), surface water, and recycled water. SCWA's conjunctive use program is a coordinated approach to manage surface water and groundwater supplies to maximize the yield of available water resources. In wet and normal water years, SCWA would divert surface water from the American and Sacramento Rivers, consistent with the entitlement contracts described below and shown in Table 3.15-2. The underlying groundwater basin would be replenished in wet years as a result of this reliance on surface water. In dry water years, SCWA's surface water could be reduced based on recommended dry-year cutback volumes outlined in the Water Forum Agreement—those volumes that purveyors have agreed not to divert from the American River during dry years. During dry years, SCWA would increase groundwater pumping so that it could continue to meet the water demand of its customers.

Surface-Water Supplies

SCWA surface-water supplies are obtained from the following sources (Brown and Caldwell 2020):

- Central Valley Project Water (Public Law 101-514 ["Fazio water"]) – SCWA executed a Central Valley Project (CVP) water-service contract pursuant to Public Law 101-514 (referred to as "Fazio water") that provides a permanent water supply of 22,000 afy, with 15,000 afy allocated to SCWA and 7,000 afy allocated to the City of Folsom.

- SMUD 1 Assignment – 15,000 afy of SMUD's CVP contract water has been assigned to the SCWA under the terms of an agreement with SMUD. The long-term availability of SMUD 1 water is 13,000 afy.

- SMUD Assignment 2 – 15,000 afy of SMUD's CVP contract water has been assigned to the SCWA under the terms of an agreement with SMUD. The long-term availability of SMUD 2 water is 13,000 afy.

- Appropriative Water Supplies – the State Water Resources Control Board (SWRCB) appropriates water from the American River to SCWA under Permit 21209. The amount of appropriated water available for use could range up to 71,000 afy in wet years, primarily during 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 the 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.

- Other Water Supplies – Other water supplies are water transfers that would be obtained from various water users that hold surface water rights on the Sacramento River and the American River upstream of SCWA's point of diversion. To obtain these supplies, SCWA would enter into purchase and transfer agreements with other entities that hold surface water rights. SCWA's estimated long-term average use of these water supplies would be approximately 9,600 afy.

Table 3.15-2 summarizes SCWA's surface water supplies for the normal water years, single-dry water years, and multiple dry-years assuming no constraint on supply capacity. The long-term average supply values presented in Table 3.15-2 assume that the supplies are all fully utilized with no infrastructure capacity constraints for all of the water year types (Brown and Caldwell 2020).

Table 3.15-2 Summary of Zone 40 Surface Water Supplies

Water Supply Source	Contract Water Right Transfer Amount (afy)
Central Valley Water Project (Fazio water, SMUD 1, and SMUD 2)	45,000
Appropriative Water (SWRCB Permit 21209)	71,000
City of Sacramento Place of Use Agreement	9,300
Other Water Supplies[2]	9,600
Total	**134,900**

Notes: afy = acre-feet per year

[1] Other water supplies are water transfers that would be obtained from various water users that hold surface water rights on the Sacramento River and the American River upstream of SCWA's point of diversion.

Source: Brown and Caldwell 2020

Recycled Water

Recycled water is currently provided to SCWA by SRCSD. This water is used within the Zone 40 service area to offset demand by parks and for other nonpotable uses. Recycled water use would increase to a total of 3,300 afy when the recycled water system is completed in the East Franklin and Laguna Ridge areas. Recycled water supply is assumed to be available at 100 percent of full supply in wet, average, dry, and driest years. (Brown and Caldwell 2020). Extension of recycled water to the Project area is not planned.

Groundwater Supplies

Approximately 75 percent of SCWA's water supply comes from groundwater wells. SCWA pumps groundwater from the South American Sub-basin of the Sacramento Valley Groundwater Basin (identified locally as the Central Basin). This groundwater basin is not adjudicated. As a signatory to the Water Forum Agreement, SCWA is committed to adhering to the long-term average sustainable yield of the Central Basin (273,000 acre-feet) (Brown and Caldwell 2020). See Section 3.10, "Hydrology and Water Quality," for further discussion of groundwater conditions in the Central Basin.

SCWA has a remediated groundwater supply of 8,900 afy in accordance with the terms and conditions in the agreement entitled "Agreement between Sacramento County, SCWA, and Aerojet-General Corporation With

Respect To Transfer of GET Water" dated May 18, 2010. The timing and amount of remediated groundwater available is subject to change as a result of on-going negotiations with water purveyors affected by groundwater contamination and with Aerojet/Boeing, as their remediation plans may change as directed by various regulatory agencies (Brown and Caldwell 2020).

SCWA Zone 40 Water Supplies and Demands

SCWA has amended its Water Supply Master Plan (WSMP) to address the sufficiency of water supplies to meet the demand of the proposed Project (Brown and Caldwell 2020). In addition, the amended WSMP updates substantial portions of the 2005 WSMP, including Zone 40 buildout land use acreages, unit water demand factors, recent historical demographics and water demands, projected water demands, growth rate projections, projected water supply availability, and groundwater supply descriptions, and presents new information, including existing water facilities descriptions; buildout population, connections, and dwelling units by service area; water demand factors expressed as demand per dwelling unit and per type of customer; projected maximum day and annual use of surface water and groundwater for dry and wet/average years; and an evaluation of storage and pump station capacity (Brown and Caldwell 2020).

Water supplies and demands within SCWA Zone 40 would be the same during normal, single-dry, and multiple-dry years; however, the year-to-year mix of surface and groundwater would be adjusted, as necessary, to meet the demands as part of its conjunctive use water supply program. Table 3.15-3 identifies surface water and groundwater supply and demand within SCWA Zone 40 from 2020 to 2040 in normal, single dry, and multiple dry years excluding the proposed Project. As shown in Table 3.15-3, SCWA would have water supplies that exceed demands in all water years.

WATER SUPPLY INFRASTRUCTURE

SCWA will deliver water supplies to the Project site through existing 24-inch and 16-inch transmission pipelines located in Grant Line Road. The 24-inch transmission main originates west of the Project site and extends easterly within Grant Line Road to the intersection of Waterman Road. From Waterman Road, the transmission main continues easterly as a 16-inch-diameter transmission main. There are two proposed points of connection to the existing transmission main in Grant Line Road: one at the intersection of Waterman Road, and one at the intersection of Mosher Road. Exhibit 2-4 in Chapter 2, "Project Description," shows the proposed points of connection with existing off-site SCWA facilities.

The maximum day, peak hour, and fire flow demands for the proposed Project would be primarily supplied from the Elk Grove Groundwater Water Treatment Plant (GWTP) and to some extent from the East Park GWTP (Brown and Caldwell 2020). The Elk Grove GWTP and storage tanks are located west of Waterman Road and north of Grant Line Road and the East Park GWTP is located east of Waterman Road and north of Elk Grove Boulevard (Brown and Caldwell 2020). The WSMP amendment determined other planned SCWA water system improvements required to serve the Project site would consist of an additional 16-inch transmission pipeline along Grant Line Road that would provide additional water supply from the future the Bond Road GWTP (Brown and Caldwell 2020).

Table 3.15-3 Comparison of Water Supply and Demand in Zone 40 (2020–2040)[1]

Water Year	Source	Projected Demands (afy)				
		2020	2025	2030	2035	2040
Normal Year	**Supply**					
	Surface water[2]	134,900	134,900	134,900	134,900	134,900
	Groundwater	40,000	40,000	40,000	40,000	40,000
	Recycled water	1,700	1,700	1,700	1,700	1,700
	Remediated groundwater	8,900	8,900	8,900	8,900	8,900
	Total Supply	**185,500**	**185,500**	**185,500**	**185,500**	**185,500**
	Total Demand	**45,500**	**53,900**	**62,800**	**71,800**	**80,900**
	Difference (Supply minus Demand)	140,000	131,600	122,700	113,700	104,600
Single-Dry Year	**Supply**					
	Surface water[2]	25,600	22,700	24,200	26,400	28,800
	Groundwater	70,000	70,000	70,000	70,000	70,000
	Recycled water	1,700	1,700	1,700	1,700	1,700
	Remediated groundwater	8,900	8,900	8,900	8,900	8,900
	Total Supply	**106,200**	**103,300**	**104,800**	**107,000**	**109,400**
	Total Demand	**45,500**	**53,900**	**62,800**	**71,800**	**80,900**
	Difference (Supply minus Demand)	60,700	49,400	42,000	35,200	28,500
Multiple-Dry Year 1	**Supply**					
	Surface water[2]	134,900	134,900	134,900	134,900	134,900
	Groundwater	40,000	40,000	40,000	40,000	40,000
	Recycled water	1,700	1,700	1,700	1,700	1,700
	Remediated groundwater	8,900	8,900	8,900	8,900	8,550
	Total Supply	**185,500**	**185,500**	**185,500**	**185,500**	**185,500**
	Total Demand	**45,500**	**53,900**	**62,800**	**71,800**	**80,900**
	Difference (Supply minus Demand)	140,000	131,600	122,700	113,700	104,600
Multiple-Dry Year 2	**Supply**					
	Surface water[2]	33,600	29,300	31,500	34,700	38,400
	Groundwater	70,000	70,000	70,000	70,000	70,000
	Recycled water	1,700	1,700	1,700	1,700	1,700
	Remediated groundwater	8,900	8,900	8,900	8,900	8,900
	Total Supply	**114,200**	**109,900**	**112,100**	**115,300**	**119,00**
	Total Demand	**45,500**	**53,900**	**62,800**	**71,800**	**80,900**
	Difference (Supply minus Demand)	68,700	56,000	49,300	43,500	38,100
Multiple-Dry Year 3	**Supply**					
	Surface water[2]	25,600	22,700	24,200	26,400	28,800
	Groundwater	70,000	70,000	70,000	70,000	70,000
	Recycled water	1,700	1,700	1,700	1,700	1,700
	Remediated groundwater	8,900	8,900	8,900	8,900	8,900
	Total Supply	**106,200**	**103,300**	**104,800**	**107,000**	**109,400**
	Total Demand	**45,500**	**53,900**	**62,800**	**71,800**	**80,900**
	Difference (Supply minus Demand)	60,700	49,400	42,000	35,200	28,500

21,600Notes: afy = acre-feet per year

[1] Water supplies and demands within SCWA Zone 40 would be the same during normal, single-dry, and multiple-dry years; however, the year-to-year mix of surface and groundwater would be adjusted as necessary to meet the demands as part of its conjunctive use water supply program.

Surface water supplies consist of Central Valley Project water (Fazio, SMUD 1, and SMUD 2), appropriative water, City of Sacramento Place of Use water, and other supplies.

Source: Brown and Caldwell 2020; Data compiled by AECOM 2020

WASTEWATER COLLECTION, AND CONVEYANCE, TREATMENT FACILITIES

The Project site is not currently served by a municipal wastewater service provider. Rather, wastewater service is currently provided by on-site septic systems. Future development within the Project site will require municipal wastewater collection and treatment services through extension of SASD and SRCSD infrastructure.

Sacramento Area Sewer District

SASD provides local wastewater collection and conveyance services and infrastructure throughout the Sacramento region. There are two existing points of connection to the existing SASD system immediately adjacent to the Project site (see Exhibit 2-5 in Chapter 2):

- A 12-inch pipeline is on the north side of Grant Line Road near the end of Waterman Court. The 12-inch pipeline extends west for approximately 550-feet before becoming a 15-inch pipeline. The 15-inch pipeline continues west in Grant Line Road for approximately 2,300 feet before tying into a 27-inch trunk line just east of State Route 99.

- An 18-inch pipeline is stubbed beneath the Union Pacific Railroad along the western border of the Project site approximately 2,000 feet south of Grant Line Road. The 18-inch pipeline travels below the railroad easement for approximately 110 feet where it then becomes a 21-inch pipeline near East Stockton Boulevard.

Sacramento Regional County Sanitation District

SRCSD is responsible for collection by interceptors (sanitary sewers that are designed to carry flows in excess of 10 million gallons per day [mgd]) and for wastewater treatment in Sacramento County. This District owns, operates, and is responsible for the collection, trunk, and interceptor sewer systems throughout Sacramento County, as well as the Sacramento Regional Wastewater Treatment Plant (SRWTP) located west of Elk Grove.

SRCSD has completed an Interceptor Sequencing Study that will aid in planning and implementing regional conveyance projects and assisting contributing agencies in coordination of collection system facilities. The southeastern portion of the Project site is within the SRCSD service area and the and off-site wastewater facilities to serve the Project site have been planned for in the SRCSD Interceptor Sequencing Study. The Interceptor Sequencing Study identifies the southeastern portion of the Project site as located within the SRCSD service area. The remainder of the Project site is outside of the SRCSD service area but within the SRCSD SOI.

Sacramento Regional Wastewater Treatment Plant

Wastewater flows collected from SRCSD interceptors are ultimately transported into the SRWTP. The SRWTP is located west of Elk Grove and is owned and managed by SRCSD. 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 2019, the SRWTP receives and treats an average of 115 mgd each day and the SRWTP discharge constituents are below permitted discharge limits specified in the NPDES permit (SRCSD 2019).

Recycle Water

The SRCSD currently owns and operates a 5-mgd Water Reclamation Facility (WRF) that has been producing Title 22 tertiary recycled water since 2003. The WRF is located within the SRWTP property. The SRCSD uses a portion of the recycled water at the SRWTP and the remainder is wholesaled to SCWA. SCWA retails the recycled water, primarily for landscape use, to select customers in the City in the Laguna West area. SRCSD is planning for increased delivery of recycled water to other areas of the City, including the East Franklin, Laguna Ridge, and the Southeast Policy Area, as well as potential agricultural customers south of the City. However, SRCSD does not have any planned facilities that could provide recycled water to the Project site or vicinity. Additionally, the SRCSD is not a water purveyor and potential use of recycled water in the Project site must be coordinated between the key stakeholders (e.g., land use jurisdictions, water purveyors, users, and the recycled water producers).

SOLID WASTE

The Integrated Waste Department manages the City of Elk Grove's residential solid waste franchise and plans, coordinates, promotes and implements citywide solid waste reduction, recycling, composting, and public education activities. In 2018, the City disposed of a total of 103,973 tons of solid waste (CalRecycle 2018).

Residential solid waste services in Elk Grove are provided by Republic Services (formally known as Allied Waste) under an exclusive franchise agreement. Commercial solid waste is collected by private franchised haulers and disposed of at various facilities, most of which have more than 70 percent capacity remaining, including Altamont Landfill & Resource Recovery, Recology Hay Road, Bakersfield Metropolitan Sanitary Landfill, Foothill Sanitary Landfill, Forward Landfill, Inc., Keller Canyon Landfill, L and D Landfill, North County Landfill, Potrero Hills Landfill, and Sacramento County Landfill (Kiefer) (City of Elk Grove 2020).

3.15.2 REGULATORY FRAMEWORK

California Green Building Standards Code

The standards included in the 2019 California Green Building Standards Code (CALGreen Code) (Title 24, Part 11 of the California Code of Regulations) became effective on January 1, 2020. The CALGreen Code was developed to enhance the design and construction of buildings, and the use of sustainable construction practices, through planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental air quality (California Building Standards Commission 2019). The most significant efficiency improvements to the residential standards in the 2019 CALGreen Code include improvements for attics, walls, water heating, and lighting and standards for residential plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) to reduce indoor demand for potable water.

Chapters 4 and 5 of the 2019 CALGreen Code requires residential and nonresidential developments to comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance, whichever is more stringent. Both chapters require all residential and nonresidential construction contractors to reduce construction waste and demolition debris by 65 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. The code also specifies that the amount of materials diverted should be calculated by weight or volume, but not by both. In addition, the 2019 CALGreen Code requires that 100 percent of trees, stumps, rocks, and associated vegetation and soils resulting primarily from land clearing be reused or recycled.

City of Elk Grove General Plan

The City's General Plan (City of Elk Grove 2019) contains the following policies related to utilities and service systems that are applicable to the proposed Project.

Services, Health, and Safety

Urban Infrastructure

- **Policy INF-1-1:** Water supply and delivery systems shall be available in time to meet the demand created by new development.
    - **Standard INF-1-1a:** The following shall be required for all subdivisions to the extent permitted by State law:
        - Proposed water supply and delivery systems shall be available at the time of tentative map approval to the satisfaction of the City. The water agency providing service to the project may use several alternative methods of supply and/or delivery, provided that each is capable individually of delivering water to the project.
        - The agency providing water service to the subdivision shall demonstrate prior to the City's approval of the Final Map that sufficient capacity shall be available to accommodate the subdivision plus existing development, and other approved projects in the same service area, and other projects that have received commitments for water service.
        - Off-site and on-site water infrastructure sufficient to provide adequate water to the subdivision shall be in place prior to the approval of the Final Map or their financing shall be assured to the satisfaction of the City, consistent with the requirements of the Subdivision Map Act.
        - Off-site and on-site water distribution systems required to serve the subdivision shall be in place and contain water at sufficient quantity and pressure prior to the issuance of any building permits. Model homes may be exempted from this policy as determined appropriate by the City, and subject to approval by the City.
- **Policy INF-2-1:** Sewage conveyance and treatment capacity shall be available in time to meet the demand created by new development.
    - **Standard INF-2-1a:** The following shall be required for all development projects, excluding subdivisions:
        - Sewer/wastewater treatment capacity shall be available at the time of project approval.

- All required sewer/wastewater infrastructure for the project shall be in place at the time of project approval, or shall be assured through the use of bonds or other sureties to the City's satisfaction.

- **Standard INF-2-1b:** The following shall be required for all subdivisions to the extent permitted by State law:

  - Sewage/wastewater treatment capacity shall be available at the time of tentative map approval.

  - The agency providing sewer service to the subdivision shall demonstrate prior to the approval of the Final Map by the City that sufficient capacity shall be available to accommodate the subdivision plus existing development, and other approved projects using the same conveyance lines, and projects which have received sewage treatment capacity commitments.

  - Onsite and offsite sewage conveyance systems required to serve the subdivision shall be in place prior to the approval of the Final Map, or their financing shall be assured to the satisfaction of the City, consistent with the requirements of the Subdivision Map Act.

  - Sewage conveyance systems within the subdivision shall be in place and connected to the sewage disposal system prior to the issuance of any building permits. Model homes may be exempted from this policy as determined appropriate by the City, and subject to approval by the City.

Community Infrastructure and Facilities

- **Policy CIF-1-1:** 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.

- **Policy CIF-1-2:** Reduce municipal waste through recycling programs and employee education.

- **Policy CIF-1-3:** Encourage businesses to emphasize resource efficiency and environmental responsibility and to minimize pollution and waste in their daily operations.

Infrastructure Financing and Phasing

- **Policy IFP-1-3:** Require secure financing for all components of the transportation system through the use of special taxes, assessment districts, developer dedications, or other appropriate mechanisms in order to provide for the completion of required major public facilities at their full planned widths or capacities consistent with this General Plan and any applicable service master plan. For the purposes of this policy, "major" facilities shall include the following:

  - All wells, water transmission lines, treatment facilities, and storage tanks needed to serve the project.
  - All sewer trunk and interceptor lines and treatment plants or treatment plant capacity

- **Policy IFP-1-4:** Use financial capacity to secure financing for major facilities as identified in Policy IFP-1-3 if necessary, including, but not limited to:

  - Issuing bonds
  - Using City funds directly, with repayment from future development fees

- Fee programs
- Developer financing

- **Policy IFP-1-6:** Fee programs and/or other finance mechanisms shall be reviewed regularly to ensure that sufficient funding will be available to construct all required facilities.

- **Policy IFP-1-7:** New development shall fund its fair share portion of impacts to all public facilities and infrastructure as provided for in State law.

- **Policy IFP-1-8:** Infrastructure improvements must be financed and/or constructed concurrent with or prior to completion of new development.

    - **Standard IFP-1-8a:** Establish concurrency measures to ensure infrastructure adequately serves future development:

        – Coordinate public facility and service capacity with the demands of new development.

        – Require that the provision of public facilities and service to new development does not cause a reduction in established service levels for existing residents.

        – Ensure that new infrastructure will meet the required level of service standards set by the City's General Plan and Municipal Code.

- **Policy IFP-1-10:** Except when prohibited by state law, the City will endeavor to ensure 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.

3.15.3 Environmental Impacts and Mitigation Measures

Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact related to utilities and service systems if it would:

- require or result in the relocation or construction of new or expanded water, wastewater treatment facilities, or storm water drainage, electrical power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects;

- not have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years;

- result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;

- generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure or otherwise impair the attainment of solid waste reduction goals; or

- not comply with federal, State, or local management and reduction statutes and regulations related to solid waste.

IMPACT ANALYSIS

Impact 3.15-1: Require or Result in the Relocation of or the Construction of New or Expanded Utilities and Service Systems Facilities, the Construction of Which Could Cause Significant Environmental Effects.

The proposed Project would require the construction of new or expanded electrical, natural gas, water, and wastewater facilities. The following discussion identifies future on-site and off-site utilities and service systems required to serve the proposed Project and the potential for construction of new or expanded systems to cause significant environmental effects. Impacts related to stormwater management facilities are addressed in Section 3.10, "Hydrology and Water Quality."

Electrical and Natural Gas

The City of Elk Grove is served by Sacramento Municipal Utility District's (SMUD's) aboveground and underground electric transmission and distribution lines. The Project site would include extension of electricity services by SMUD, and electricity could be served from the 69-kilovolt line on Grant Line Road. Additional facilities, such as substation/s, transformers, and distribution equipment could be required to serve future uses. SMUD's power line would be connected to a utility transformer and metering/distribution equipment in the site's service yard and the City would connect service feeders that would extend throughout the site. SMUD would require 12.5-foot overhead/underground public utility easements along all streets and a 25-foot easement along Grant Line Road for the existing 69kV line. There is an existing 12kV overhead line along Waterman Road and Grant Line Road; an existing and proposed 12kV line along Mosher Road; a proposed second 69kV circuit along Grant Line Road on an existing pole line; and proposed 12kV underground lines along Grant Line Road and Waterman Road. As required by the City's General Plan Policy IFP-1-8, infrastructure required to serve new development shall be constructed concurrent with, or prior to such development.

Pacific Gas and Electric Company (PG&E) currently provides natural gas service within the City of Elk Grove; however, the natural gas lines do not currently serve the Project site according to the Gas Transmission Pipeline Systems Map (PG&E 2017). The existing grid network of gas lines would have to be extended to serve the increased demand for natural gas generated by development on the Project site.

Extension of off-site electrical and natural gas infrastructure are the responsibility of SMUD and PG&E, respectively. SMUD and PG&E would conduct project-level CEQA or National Environmental Policy Act (NEPA) analysis, if necessary, to analyze specific impacts and identify any required mitigation measures for construction and operation of new off-site facilities to serve the Project site.

On-site electrical transmission infrastructure and natural gas lines would be installed underground and would generally follow the alignment of the internal roadway network.

The 2019 SOIA EIR included the following Mitigation Measure, which remains applicable to the Project:

Mitigation Measures

Mitigation Measure 3.15-1: Prepare Utility Service Plans that Demonstrate Adequate Electrical and Natural Gas Supplies and Infrastructure are Available before the Annexation of Territory within the SOIA (2019 SOIA EIR Mitigation Measure 3.16-2)

The City of Elk Grove shall require 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 within the annexation territory. The utility service plans shall demonstrate that SMUD will have adequate electrical supplies and infrastructure and PG&E will have adequate natural gas supplies and infrastructure available for the amount of future development proposed within the annexation territory. If SMUD or PG&E must construct or expand facilities, environmental impacts associated with such construction or expansion should be avoided or reduced through the imposition of mitigation measures. Such measures should include those necessary to avoid or reduce environmental impacts associated with, but not limited to, air quality, noise, traffic, biological resources, cultural resources, GHG emissions, hydrology and water quality, and others that apply to specific construction or expansion of natural gas and electric facilities projects.

Water System Facilities

Future development within the Project site would receive domestic water service through construction of on-site water distribution system that connects to existing off-site SCWA infrastructure. An *Elk Grove Multi-Sport Complex & Sphere of Influence Annexation Water Master Plan* (Water Master Plan) was prepared to identify on-site backbone water distribution system to meet the proposed Project's water demand and fire flow requirements (Wood Rogers 2020a). The on-site water distribution infrastructure layout has been designed to comply with SCWA requirements and would consist of a 16-inch transmission main that extends north from Waterman Road along western boundary of the City-owned parcel and 8-inch, 12-inch, and 14-inch transmission pipelines constructed within road rights-of-way. The on-site water distribution system would connect to SCWA's existing 16-inch and 24-inch transmission pipelines located in Grant Line Road at two proposed points of connection: one at the intersection of Waterman Road, and one at the intersection of Mosher Road (see Exhibit 2-4 in Chapter 2). Impact 3.15-2 identifies the proposed Project's water demand and addresses the availability of SCWA water supplies to serve the proposed Project and reasonably foreseeable future development during normal, dry, and multiple dry years. See Appendix B for a detailed discussion of proposed water distribution systems improvements.

The City outlines specific requirements to ensure water systems are available to meet demands created by new development. These requirements include preparing an infrastructure plan that identifies backbone infrastructure necessary to serve proposed development (Policy LU-3-27 of the City General Plan) and demonstrating on-site and off-site water supply infrastructure provides sufficient capacity to serve proposed development (Policy INF-1-1 and Standard INF-1-1a of the City General Plan). New development is required to contribute its fair share portion for funding new infrastructure facilities (Policies IFP-1-3 and IFP-1-7 of the City General Plan). In addition, infrastructure improvements would be financed and/or constructed concurrent with or prior to the completion of new development (Policy IFP-1-8 and Standard IFP-1-8a of the City General Plan).

The Water Master Plan fulfills the requirements identified in Mitigation Measure 3.15-1a of the 2019 SOIA EIR that requires the City of Elk Grove to prepare a Plan for Services that that depicts the locations and appropriate

sizes of all on-site water system facilities to accommodate the amount of development identified for the annexation territory. The amended WSMP fulfills the requirements identified in Mitigation Measure 3.15-1 of the 2019 SOIA EIR that requires evaluation of SCWA's off-site water supply infrastructure to serve the Project site. Furthermore, compliance with City General Plan policies and standards identified above would also ensure implementation of Mitigation Measure 3.15-1 of the 2019 SOIA EIR.

The amended WSMP evaluated the capacity for SCWA's existing off-site water supply infrastructure to serve the Project site. The WSMP determined that the existing Grant Line Road transmission main and Elk Grove GWTP and East Park GWTP have capacity to meet the demands of the proposed Project (Brown and Caldwell 2020). Although not required to serve the Project site, an additional 16-inch transmission pipeline along Grant Line Road would provide additional water supply capacity to the Project site from the future the Bond Road GWTP (Brown and Caldwell 2020). The proposed Grant Line Road transmission main and Bond Road GWTP are proposed for construction as part of SCWA's Phase 3 capital improvement plan (Brown and Caldwell 2020). The WSMP estimates Phase 3 capital improvements would be implemented beyond 2036.

The 2019 SOIA EIR also included Mitigation Measure 3.15-1b, which provided for the City to coordinate with SCWA on the use of non-potable water supplies in the Project area to ensure there are no cross connection or contamination issues. No non-potable water supplies are planned in the Project; therefore, this mitigation measure has been fulfilled.

Wastewater Collection and Conveyance Facilities

Future development within the Project site would receive municipal wastewater service through construction of on-site wastewater collection and conveyance facilities that connect to existing off-site SASD infrastructure with capacity to serve the Project site.

An *Elk Grove Multi-Sport Complex & Sphere of Influence Annexation Level II Sewer Study (*Level II Sewer Study*)* was prepared in accordance with SASD's design standards and minimum sewer study requirements to identify on-site backbone wastewater collection and conveyance facilities to serve the Project site (Wood Rogers 2020). The on-site wastewater collection and conveyance system would consist of 8-inch, 12-inch, and 13-inch gravity sewers constructed within road rights-of-way that would convey wastewater flows to a 12-inch pipeline on the north side of Grant Line Road or to an 18-inch pipeline stubbed beneath the Union Pacific Railroad on the western border of the Project site (see Exhibit 2-5 in Chapter 2). SASD conducted an analysis and confirmed that the existing off-site conveyance system has adequate capacity to accommodate peak wet-weather flows generated by the project site at full build-out (Wood Rogers 2020b). Impact 3.15-3 addresses the adequacy of the SRWTP to treat the proposed Project's wastewater flows in addition to SRWTP's existing commitments. See Appendix C for a detailed discussion of proposed wastewater collection and conveyance improvements.

The City outlines specific requirements to ensure wastewater facilities are available to meet demands created by new development. These requirements include preparing an infrastructure plan that identifies backbone infrastructure necessary to serve proposed development (Policy LU-3-27 of the City General Plan) and demonstrating on-site and off-site wastewater infrastructure provides sufficient capacity to serve proposed development (Policy INF-2-1 and Standards INF-2-1a and INF-2-1b of the City General Plan). New development is required to contribute its fair share portion for funding new infrastructure facilities (Policies IFP-1-3 and IFP-1-7 of the City General Plan). In addition, infrastructure improvements would be financed and/or constructed

concurrent with or prior to the completion of new development (Policy IFP-1-8 and Standard IFP-1-8a of the City General Plan).

The Level II Sewer Study fulfills the requirements identified in Mitigation Measure 3.15-2 of the 2019 SOIA EIR, which required the City of Elk Grove to prepare a Plan for Services that that depicts the locations and appropriate sizes of wastewater collection and conveyance facilities and demonstrates that SASD wastewater collection and conveyance facilities will have sufficient capacity to accommodate the amount of development identified for the annexation territory. Compliance with City General Plan policies and standards identified above would also ensure implementation of Mitigation Measure 3.15-2 of the 2019 SOIA EIR.

Conclusion

Environmental impacts related to constructing the infrastructure to serve the future development are analyzed throughout the various environmental topic specific sections of this EIR. The placement of these utilities has been considered in the other sections of this EIR, such as Section 3.4 of this EIR, "Air Quality," Section 3.5, "Biological Resources," Section 3.6, "Cultural and Tribal Cultural Resources," and other sections that specifically analyze the potential for future development. Where necessary, these sections include mitigation measures that would reduce or avoid the impacts of developing infrastructure on the physical environment. There is no additional significant impact related to construction of new or expanded utilities and service systems within the Project site beyond which is comprehensively analyzed throughout this EIR. Therefore, as with the 2019 SOIA EIR, this impact is considered **less than significant**.

Impacts resulting from off-site infrastructure improvements could include, but are not limited to, short-term impacts on air quality and greenhouse gas emissions associated with construction, potential impacts on special-status plants and wildlife or sensitive habitats; potential disturbance of known or unknown cultural or paleontological resources; short-term increases in erosion and stormwater runoff; and short-term increases in construction noise levels.

Impact 3.15-2: Increased Demand for Water Supplies.

Water supply for the Project site would be provided by the SCWA's Zone 40. The Water Supply Master Plan calculated water demands for the proposed Project. In determining the demand assumptions to use for the proposed Project, a number of factors have been considered, including the proposed prezoning and the range of land uses (e.g., warehousing and distribution, manufacturing, retail, office) that are assumed, as well as the potential for a sports complex use for the City-owned property (which could occur through the City's conditional use permit process). Generally, parks and sports facilities are the most intensive water user of those permitted uses within the industrial land use designation. Therefore, in order to analyze the most conservative scenario, the Water Master Plan assumed the City-owned property would be developed as a sports complex.

SCWA's Zone 40 water-demand factors were applied to the acreage for each future land use designation that generates water use within the Project site (Wood Rogers 2020a, Brown and Caldwell 2020). As shown on

Table 3.15-4, the estimated water demand assuming development of the sports complex, commercial, industrial, and mixed uses has been conservatively estimated as 1,383 afy.[1, 2]

Table 3.15-4 Projected Water Demands for within the Project Site

Land Use Category	Unit Water Demand Factors (af/ac/yr)	Land Use (acres)	Water Demand (afy)
Mixed Use	2.15	118.9	256
Regional Commercial	2.02	57.9	117
Light Industrial	2.02	74.4	150
Heavy Industrial	2.02	143.2	289
Parks and Open Space	2.80	169.0	473
Right of Way	0.18	8.2	1.5
Subtotal	**--**	**571.5**	**1,287**
Water System Losses (7.5%)	--	--	97
Total Demand	**--**	**--**	**1,383**

Notes: af/ac/yr = acre-feet per acre per year; afy = acre-feet per year.
Source: Brown and Caldwell 2020, Wood Rogers 2020a, adapted by AECOM in 2020

The amended WSMP indicates that water supplies and demands within SCWA Zone 40 would be the same during normal, single-dry, and multiple-dry years; however, the year-to-year mix of surface and groundwater would be adjusted, as necessary, to meet the demands as part of its conjunctive use water supply program. As shown in Table 3.15-3, SCWA would have water supplies that exceed demands within Zone 40 from 2020 to 2040 in all water years, excluding the proposed Project's water supply demand.

As discussed above, SCWA has amended its WSMP to include service for the proposed Project (Brown and Caldwell 2020). The water supply demands for the proposed Project (1,383 afy) were added to water demand projections contained in the amended WSMP and shown in Table 3.15-3. As shown in Tables 8-12, 8-13, and 8-14 of the amended WSMP, water supply is projected to be sufficient to meet demands of the proposed Project and existing and planned development in Zone 40 in normal, single-dry, and multiple dry years (Appendix B).

The City outlines specific requirements to ensure water supplies are available to meet demands created by new development. These requirements include demonstrating water supplies are available to accommodate new development plus existing development, and other approved projects in the same service area, and other projects that have received commitments for water service (Policy INF-1-1 and Standard INF-1-1a of the City General Plan).

The amended WSMP fulfills the requirements identified in Mitigation Measure 3.15-1 of the 2019 SOIA EIR, which requires demonstration 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. Furthermore, compliance with City General Plan policies and standards identified above

[1] This water supply demand does not reflect 2019 CALGreen Code (Title 24, Part 11 of the California Code of Regulations) requirements to reduce indoor demand for potable water by 20 percent and to reduce landscape water usage by 50 percent or water conservation measures that may be implemented by future development.

[2] The water supply demand for development of the City-owned property with industrial land uses is estimated as 1,333 afy (Brown and Caldwell).

would also ensure implementation of Mitigation Measure 3.15-1 of the 2019 SOIA EIR. Therefore, as with the 2019 SOIA EIR, the impact is considered **less than significant**.

Impact 3.15-3: Increased Demand for Wastewater Treatment Facilities.

Buildout of the proposed Project would result in new residential, commercial, and industrial development and parks and open space that would generate additional wastewater that increases demand for wastewater treatment at the SRWTP. The Level II Sewer Study assumes sewage conveyance for an estimated total of 3,429 Equivalent Single-Family Dwelling Units (ESDs), based on the SASD standard assumption of 6 ESDs per acre and 1,860 gallon per day (gpd) per acre. The Level II Sewer Study conservatively includes gross acreages and does not deduct for areas that would be in future public road rights-of-way (note, existing right-of-way for Grant Line Road has been deducted). As shown on Table 3.15-5, buildout of the proposed Project would generate an estimated 1.05 mgd of average dry-weather flow and, as calculated in the Level II Sewer Study, 2.74 mgd of peak wet-weather flow (Wood Rogers 2020b).

Table 3.15-5 Proposed Project Average Dry Weather Flow

Land Use	Acreage	Flow Rate (gallon per day per acre)	Average Dry Weather Flow (mgd)
Mixed Use	118.9	1,860	0.12
Regional Commercial	20.0	1,860	0.22
Light Industrial	216.2	1,860	0.40
Heavy Industrial	143.2	1,860	0.27
Parks and Open Space	65.1	1,860	0.04
Right of Way	8.2	0	0
Total	**571.5**	**--**	**1.05**

Notes:
mgd = million gallons per day
Source: Wood Rogers 2020b

The SRWTP has a design capacity of 181 mgd with the potential to expand to 218 mgd. As of 2019, the SRWTP receives and treats an average of 115 mgd each day. When proposed Project -related wastewater flows (1.05 mgd) are combined with the current average dry-weather flows (115 mgd), implementation of the proposed Project would not result in an increase in wastewater flows that exceed the current disposal capacity of 181 mgd average dry-weather flow. The SRCSD anticipates conservation measures implemented throughout the service area would result in the existing 181 mgd average dry-weather flow capacity to be adequate for at least 40 more years (SRCSD 2014:6-2). Therefore, the SRWTP would have adequate capacity to treat wastewater flows generated by future development within the Project site in addition its existing commitments. As with the 2019 SOIA EIR, this impact is considered a **less than significant**.

Impact 3.15-4: Increased Generation of Solid Waste and Compliance with Solid Waste Statutes and Regulations.

Future development within the Project site 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 2019 CALGreen Code (Title 24, Part 11 of the California Code of Regulations) requires all construction contractors to reduce construction waste and demolition debris by

65 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. The Code also specifies that the amount of materials diverted should be calculated by weight or volume, but not by both (California Building Standards Commission 2019). In addition, the 2016 CALGreen Code requires that 100 percent of trees, stumps, rocks, and associated vegetation and soils resulting primarily from land clearing be reused or recycled.

The City provides recycling programs, such as curbside recycling of paper, plastics, and bottles, to reduce the volume of solid waste transported to landfills. City General Plan Policy CIF-1-3 encourages business to minimize waste in their daily operations. In addition, the Space Allocation and Enclosure Design Guidelines for Trash and Recycling (City Municipal Code Title 30, Chapter 30.90) reduces wastes by requiring businesses and multi-family residential uses to provide integrated collection areas with recycling components.

Residential solid waste in the City of Elk Grove is collected and hauled by Republic Services. Waste generated by proposed nonresidential uses could be hauled by any of a number of permitted haulers as selected by the individual developer, and wastes would be hauled to a variety of permitted landfills. Solid waste is collected by private franchised haulers and disposed of at various facilities, most of which have more than 70 percent capacity remaining, including Altamont Landfill & Resource Recovery, Recology Hay Road, Bakersfield Metropolitan Sanitary Landfill, Foothill Sanitary Landfill, Forward Landfill, Inc., Keller Canyon Landfill, L and D Landfill, North County Landfill, Potrero Hills Landfill, and Sacramento County Landfill (Kiefer) (City of Elk Grove 2020). The area of the Project site identified for development of mixed uses could generate approximately 3.8 tpd of solid waste.[2] Future development of commercial and industrial uses could generate approximately 58.8 tpd of solid waste.[3] Combined, these landfills have a large volume of landfill capacity (150 million cubic yards) available to serve future development. The closure dates of the Kiefer Landfill and L and D Landfill are anticipated to be approximately January 1, 2064 and January 1, 2031, respectively.

Future development would comply with all federal, State, and local solid waste statues and regulations, including Compliance with the CalGreen Code; the City's the Construction and Demolition Debris Reduction, Reuse, and Recycling Ordinance; Space Allocation and Enclosure Design Guidelines; Assembly Bill 1826 (mandatory commercial organics recycling); and other City recycling programs. The Kiefer Landfill, L and D Landfill, and Yolo County Central Landfill have sufficient landfill capacity available to accommodate solid-waste disposal needs for future development within the Project site. Therefore, as with the 2019 SOIA EIR, impacts related to sufficient landfill capacity and compliance with applicable statutes and regulations related to solid waste are considered **less than significant**.

[2] Based on CalRecycle's estimated 2018 annual per capita disposal rate of 3.3 pounds per resident per day, the estimated total population for the proposed project (2,304 persons) would generate approximately 7,600 pound per day of solid waste, which equates to 3.8 tpd (CalRecycle 2020).

[3] Based on CalRecycle's estimated 2018 annual per capita disposal rate of 15.1 pounds per employee per day and an estimated 7,788 employees for the proposed project, approximately 117,600 pound per day of solid waste would be generated per day, which equates to 58.8 tpd (CalRecycle 2020).

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3.16 ENERGY

Comments received on the Notice of Preparation (NOP) were reviewed during preparation of this SEIR. However, no comments related to energy were received.

3.16.1 ENVIRONMENTAL SETTING

The environmental setting for the proposed Project as it relates to energy has not substantively changed since the 2019 SOIA EIR was prepared.

Electric services in the City of Elk Grove are provided by the Sacramento Municipal Utility District (SMUD). Electricity is generated through a combination of nuclear power plants; natural gas-fired power plants; renewable energy sources, such as wind, solar, geothermal, and small hydroelectric facilities; and additional energy purchased from other energy suppliers. SMUD receives power through varied sources, including hydropower, natural-gas-fired generators, renewable energy from solar and wind power, and power purchased on the wholesale market (which may include one or more of the other sources listed above). In 2018, the SMUD power mix was comprised of 20 percent eligible renewable resources, such as biomass, solar, wind, geothermal, and small hydroelectric power plants that generate 30 megawatts (MW) or less of electricity; 26 percent from large hydroelectric; 54 percent from natural gas; and less than one percent from other unspecified power sources (i.e., electricity that is not traceable to specific generation sources by any auditable contract) (SMUD 2019a).[1] The proportion of SMUD-delivered electricity generated from eligible renewable energy sources is anticipated to increase over the next three decades to comply with the SB 100 goals described below in Section 3.16.2.

In 2018, PG&E delivered approximately 44,794 million therms (MM therms) of natural gas throughout its service area (CEC 2020a). Of this total, the County of Sacramento received 305 MM therms, which accounted for 6 percent of the total natural gas deliveries within the PG&E service area (CEC 2020b). Transportation is, by far, the largest energy consuming sector in California, accounting for more approximately 40 percent of all energy use in the state (U.S. Energy Information Administration 2020a) and, therefore, fuel use and travel demand are very important for consideration in an assessment of energy efficiency.

Gasoline and diesel fuel constitute 83 and 17 percent of petroleum-based fuels sold in California, respectively. In 2018, sales of diesel fuel to California end users was approximately 1,187,100 gallons per day (gpd) and sales of gasoline to California end users was approximately 455,900 gpd (CEC 2019a, 2019b). While gasoline and diesel fuel remain the primary fuels fused for transportation in California, the types of transportation fuel have diversified in California and elsewhere. Various statewide regulations and plans (e.g. Low Carbon Fuel Standard, AB 32 Scoping Plan) encourage the use of a variety of alternatives are used to reduce demand for petroleum-based fuel. Depending on the vehicle capability, conventional gasoline and diesel are increasingly being replaced by alternative transportation fuels including biodiesel, electricity, ethanol, hydrogen, natural gas, and other synthetic fuels. California has a growing number of alternative fuel vehicles through the joint efforts of the California Energy Commission (CEC), ARB, local air districts, federal government, transit agencies, utilities, and other public and private entities. By the end of 2018, California drivers owned almost 500,000 electric and plug-in hybrid vehicles. In 2019, nearly one-fourth of the nation's electric vehicle charging stations were in California

[1] Renewable energy sources for the purposes of California's renewable portfolio standard of 33 percent renewable energy generation by 2020 include biomass, solar, wind, geothermal, and small hydroelectric power plants that generate 30 MW or less of electricity.

(U.S. Energy Information Administration 2020b). As of August 2020, the City of Elk Grove contained 20 public and 2 private alternative fueling stations (Alternative Fuels Data Center 2020).

3.16.2 REGULATORY FRAMEWORK

The regulatory framework for energy supply and efficiency, as it pertains to the proposed Project, is described in the 2019 SOIA EIR. The following highlights changes in the regulatory framework since the preparation of the 2019 SOIA EIR.

FEDERAL LAWS, REGULATIONS, PLANS, AND POLICIES

Energy Policy and Conservation Act and CAFÉ Standards

The Energy Policy and Conservation Act of 1975 established the first fuel economy standards for on-road motor vehicles sold in the United States. The National Highway Traffic and Safety Administration (NHTSA) is responsible for establishing vehicle standards and revising existing standards. The Corporate Average Fuel Economy (CAFE) program was created to determine vehicle manufacturers' compliance with the fuel economy standards. The United States Environmental Protection Agency (EPA) administers the testing program that generates the fuel economy data.

On August 2, 2018, the National Highway Traffic Safety Administration and EPA proposed the Safer Affordable Fuel Efficient Vehicles Rule (SAFE Rule). On September 27, 2019, the EPA and the National Highway Traffic Safety Administration published the "SAFE Vehicles Rule Part One: One National Program" (84 Fed. Reg. 51310). The Part One Rule revokes California's authority to set its own GHG emissions standards and set zero-emission vehicle mandates in California. Part 2 of the regulations, which, if implemented, would address fuel efficiency standards for light-duty vehicles model years 2021 through 2026, have not been drafted as of the writing of this document.

STATE LAWS, REGULATIONS, PLANS, AND POLICIES

California Energy Commission Plans and Programs

The CEC is the state's primary energy policy, planning, and energy efficiency standards regulatory agency. The CEC collects and analyzes energy-related data, prepares statewide energy policy recommendations and plans, promotes and funds energy efficiency programs, and adopts and enforces appliance and building energy efficiency standards. The CEC has five major responsibilities: (1) forecasting future energy needs and keeping historical energy data, (2) licensing thermal power plants 50 MW or larger, (3) promoting energy efficiency through appliance and building standards, (4) developing energy technologies and supporting renewable energy, and (5) planning for and directing the state response to an energy emergency.

Last updated in 2008, the State of California Energy Action Plan establishes goals and specific actions to ensure adequate, reliable, and reasonably priced electrical power and natural gas supplies, initiatives for increasing supply and reducing demand, in the context of global climate change (CEC 2008).

The CEC conducts assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery, and distribution, The CEC adopts the Integrated Energy Policy Report (IEPR) every two years and an update every other year. The 2019 IEPR, adopted February 2020, is the most recent report and provides a

summary of energy issues, outlining strategies and recommendations to further California's goal of ensuring reliable, affordable, and environmentally responsible energy sources (CEC 2020c).

California Public Utilities Commission

The CPUC has authority to set electric rates, regulate natural gas utility service, protect consumers, promote energy efficiency, and ensure electric system reliability. The CPUC has established rules for the planning and construction of new transmission facilities, distribution facilities, and substations. Utility companies are required to obtain permits to construct certain power line facilities or substations. The CPUC also has jurisdiction over the siting of natural gas transmission lines.

The CPUC regulates distributed generation policies and programs for both customers and utilities. This includes incentive programs (e.g., California Solar Initiative) and net energy metering policies. Net energy metering allows customers to receive a financial credit for power generated by their on-site system and fed back to the utility. The CPUC is involved with utilities through a variety of energy procurement programs, including the Renewable Portfolio Standard program.

The CPUC Long Term Energy Efficiency Strategic Plan, which is the roadmap to achieving maximum energy savings in California through 2020, was originally adopted in 2008 and subsequently updated in 2011 to include a lighting chapter (CPUC 2011). Action plans provide a framework for implementing each chapter of the Strategic Plan. Consistent with California's energy policy and electricity "loading order", the Energy Efficiency Strategic Plan indicates that energy efficiency is the highest priority resource in meeting California's energy needs. The CPUC also adopted energy goals for all new residential construction in California to be zero net energy (ZNE) by 2020. The ZNE goal means new buildings must use a combination of improved efficiency and distributed renewable energy generation to meet 100 percent of their annual energy need (CEC 2015b). In addition to the ZNE goals for residential buildings by 2020, the CPUC has adopted goals that all new commercial construction in California will be ZNE by 2030 and 50 percent of existing commercial buildings will be retrofit to ZNE by 2030.

Renewable Portfolio Standard

State legislation has established increasingly stringent renewable portfolio standard (RPS) requirements for California's utility companies. RPS-eligible energy sources include wind, solar, geothermal, biomass, and small-scale hydro projects.

SB 1078 (Chapter 516, Statutes of 2002) required retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010.

Executive Order S-14-08 expanded the state's Renewable Portfolio Standard to 33 percent renewable power by 2020. Executive Order S-21-09 directs ARB under its AB 32 authority to enact regulations to help the state meet its Renewable Portfolio Standard goal of 33 percent renewable energy by 2020. The 33 percent-by-2020 goal and requirements were codified in April 2011 with SB X1-2. This new Renewable Portfolio Standard applies to all electricity retailers in the state, including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. SB 350 (2015) increased the renewable-source requirement to 50 percent by 2030, which was further increased under SB 100 in 2018 to 60 percent by 2030 and requiring all the State's electricity to come from carbon-free resources by 2045.

These requirements reduce the carbon content of electricity generation associated with both existing and new development, including that within the Project site.

California Code or Regulations, Title 20 and 24

New buildings constructed in California must comply with the standards contained in California Code of Regulations (CCR) Title 20, Energy Building Regulations, and Title 24, Energy Conservation Standards.

Title 20 standards range from power plant procedures and siting to energy efficiency standards for appliances, ensuring reliable energy sources are provided and diversified through energy efficiency and renewable energy resources. California's 2009 Appliance Efficiency Regulations (20 CCR 1601–1608) were adopted by the CEC on December 3, 2008, and approved by the California Office of Administrative Law on July 10, 2009. The regulations include standards for both federally regulated appliances and non-federally regulated appliances.

Title 24 requires the design of building shells and building components to conserve energy. The Energy Conservation Standards for new residential and nonresidential buildings were established by the CEC in June 1977 June 1977 and were most recently revised in 2019 (Title 24, Part 6 of the California Code of Regulations [Title 24]). Title 24 governs energy consumed by commercial and residential buildings in California. This includes the HVAC system; water heating; and some fixed lighting. Non-building energy use, or "plug-in" energy use, is not covered by Title 24. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. California's Building Energy Efficiency Standards are updated on an approximate 3-year cycle. The most recent update was in 2019and took effect July 1, 2020. One of the improvements included within the 2019 Building Energy Efficiency Standards is the requirements that certain residential developments, including some single-family and low-rise residential development, include on-site solar energy systems capable of producing 100 percent of the electricity demand of the residences. With implementation of solar photovoltaic systems with new residential development, homes built under the 2019 standards will use approximately 53 percent less energy than those under the 2016 standards. Nonresidential buildings are anticipated to consume 30 percent less energy as compared to nonresidential buildings constructed under the 2016 California Energy Code, primarily through prescriptive requirements for high-efficiency lighting (CEC 2018). The Energy Code is 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 related to local climatologic, geologic, or topographic conditions, provided that these standards exceed those provided in the California Energy Code. The City has adopted these energy efficiency standards and the City's Climate Action Plan requires compliance with the Tier 1 set of energy efficiency standards in the California Green Building Standards Code (CALGreen).

CALGreen (24 CCR Part 11) is intended to enhance the design and construction of buildings through the use of building concepts that benefit the environment and public health and encourage sustainability in construction and operations of a building. The provisions of the code apply to the planning, design, construction, use and occupancy of all newly constructed buildings and structures throughout California. Some key provisions of the code include, but are not limited to, requirements related to the installation of electric vehicle charging infrastructure in residential and nonresidential developments, establishment of maximum fixture water use rates to reduce indoor water use consumption, diversion of 65 percent of construction and demolition waste from landfills, and mandatory use of low-pollutant emitting interior finish materials such as paints, carpet, and flooring.

Executive Order B-18-12

Executive Order B-18-12 orders all new State buildings and major renovations beginning design after 2025 be constructed as Zero Net Energy facilities. The Executive Order sets an interim target for 50 percent of new facilities beginning design after 2020 to be Zero Net Energy. It directs State agencies to take measures toward achieving Zero Net Energy for 50 percent of the square footage of existing State-owned building area by 2025.

LOCAL LAWS, REGULATIONS, PLANS, AND POLICIES

City of Elk Grove General Plan

The City of Elk Grove General Plan (adopted 2019) includes policies that promote energy conservation and reduction strategies.

Urban and Rural Development

- **Policy LU-1-9:** Encourage employee intensive commercial and industrial uses to locate within walking distance of fixed transit stops. Encourage regional public transit to provide or increase coordinated services to areas with high concentrations of residents, workers, or visitors.

- **Policy LU-4-1:** Establish activity centers as community gathering places characterized by the following design element related actions.

    - Prioritize pedestrian and bicycle access.
    - Ensure local and regional transit connections are provided throughout each activity year.

Economy and the Region

- **Policy RC-1-5:** In addition to establishing a primary Major Employment Center, consider options to develop additional Major Employment Centers in portions of the City with enough available undeveloped land and potential sufficient transit access to support such a center.

- **Policy RC-3-1:** Integrate economic development and land use planning in Elk Grove with planning for regional transportation systems.

- **Policy RC-3-4:** Advocate for fixed-transit service in Elk Grove as part of a coordinated regional network designed and routed to serve Major Employment Centers, residential centers, shopping centers, and colleges and universities.

Mobility

- **Policy MOB-1-1:** Achieve State-mandated reductions in VMT by requiring land use and transportation projects to comply with the specific metrics and limits. These metrics and limits shall be used as thresholds of significance in evaluating projects subject to CEQA.

- **Policy MOB-1-4:** Consider all transportation modes and the overall mobility of these modes when evaluating transportation design and potential impacts during circulation planning.

- **Policy MOB-3-1: I**mplement a balanced transportation system using a layered network approach to building Complete Streets that ensure the safety and mobility of all users, including pedestrians, cyclists, motorists, children, seniors, and people with disabilities.

- **Policy MOB-3-2:** Support strategies that reduce reliance on single-occupancy private vehicles and promote the viability of alternative modes of transport.

- **Policy MOB-3-7:** Develop a complete and connected network of sidewalks, crossings, paths, and bike lanes that are convenient and attractive, with a variety of routes in pedestrian-oriented area.

- **Policy MOB-3-15:** Utilize reduced parking requirements when and where appropriate to promote walkable neighborhoods and districts and to increase the use of transit and bicycles.

- **Policy MOB-3-16:** Establish parking maximums, where appropriate, to prevent undesirable amounts of motor vehicle traffic in areas where pedestrian, bike, and transit use are prioritized.

- **Policy MOB-3-17:** Ensure new multifamily and commercial developments provide bicycle parking and other bicycle support facilities appropriate for the users of the development.

- **Policy MOB-4-1:** Ensure that community and area plans, specific plans, and development projects promote pedestrian and bicycle movement via direct, safe, and pleasant routes that connect destinations inside and outside the plan or project area. This may include convenient pedestrian and bicycle connections to public transportation.

- **Policy MOB-4-5:** Encourage employers to offer incentives to reduce the use of vehicles for commuting to work and increase commuting by active transportation modes. Incentives may include a cash allowance in lieu of a parking space and onsite facilities and amenities for employees such as bicycle storage, shower rooms, lockers, trees, and shaded seating areas.

- **Policy MOB-5-1:** Support a pattern of land uses and development projects that are conducive to the provision of a robust transit service.

- **Policy MOB-5-4:** Support mixed-use and high-density development applications close to existing and planned transit stops.

- **Policy MOB-5-6:** Provide the appropriate level of transit service in all areas of Elk Grove, through fixed-route service in urban areas, and complementary demand response service in rural areas, so that transit-dependent residents are not cut off from community services, events, and activities.

- **Policy MOB-5-7:** Maintain and enhance transit services throughout the City in a manner that ensures frequent, reliable, timely, cost-effective, and responsive service to meet the City's needs. Enhance transit services where feasible to accommodate growth and transit needs as funding allows.

- **Policy MOB-5-8:** Support and use infrastructure improvements and technological advancements such as intelligent transportation management tools to facilitate the movement and security of goods through the City in an efficient manner.

- **Policy MOB-5-9:** Assist in the provision of support facilities for emerging technologies such as advanced fueling stations (e.g., electric and hydrogen) and smart roadway signaling/signage.

- **Policy MOB-5-10:** Work with a broad range of agencies to encourage and support programs that increase regional average vehicle occupancy. Examples include providing traveler information, shuttles, preferential parking for carpools/vanpools, transit pass subsidies, road and parking pricing, and other methods.

- **Policy MOB-5-11:** Encourage and create incentives for the use of environmentally friendly materials and innovative approaches in roadway designs that limit runoff and urban heat island effects. Examples include permeable pavement, bioswales, and recycled road base, asphalt, and concrete.

Natural Resources

- **Policy NR-2-2:** Maximize and maintain tree coverage on public lands and in open spaces.

- **Policy NR-2-4:** Maintain and enhance an urban forest by preserving and planting trees in appropriate densities and locations to maximize energy conservation and air quality benefits.

- **Policy NR-3-8:** Reduce the amount of water used by residential and nonresidential uses by requiring compliance with adopted water conservation measures.

- **Policy NR-3-9:** Promote the use of greywater systems and recycled water for irrigation purposes.

- **Policy NR-3-12:** Advocate for native and/or drought-tolerant landscaping in public and private project.

- **Policy NR-3-6:** Continue interagency partnerships to support water conservation.

- **Policy NR-4-1:** Require all new development projects which have the potential to result in substantial air quality impacts to incorporate design, and/or operational features that result in a reduction in emissions equal to 15 percent compared to an "unmitigated baseline project." An unmitigated baseline project is a development project which is built and/or operated without the implementation of trip reduction, energy conservation, or similar features, including any such features which may be required by the Zoning Code or other applicable codes.

- **Policy NR-4-4:** Promote pedestrian/bicycle access and circulation to encourage residents to use alternative modes of transportation in order to minimize direct and indirect emissions of air contaminants.

- **Policy NR-4-5:** Emphasize demand management strategies that seek to reduce single-occupant vehicle use in order to achieve State and federal air quality plan objectives.

- **Policy NR-4-6:** Offer a public transit system that is an attractive alternative to the use of private motor vehicles.

- **Policy NR-4-8:** Require that development projects incorporate best management practices during construction activities to reduce emissions of criteria pollutants.

- **Policy NR-5-1:** By 2030 reduce community-wide greenhouse gas emissions to 4.1 metric tons of carbon dioxide equivalents (MT CO_2e) per capita. By 2050 reduce community-wide greenhouse gas emissions to 1.4 $MTCO_2e$ per capita to meet the State's 2050 greenhouse gas emissions reduction goals.

- **Policy NR-5-2:** Improve the health and sustainability of the community through improved regional air quality and reduction of greenhouse gas emissions that contribute to climate change.
- **Policy NR-5-3:** Support efforts by the Sacramento Metropolitan Air Quality Management District and the California Air Resources Board to decrease greenhouse gas emissions from stationary sources.
- **Policy NR-5-4:** Preserve, protect, and enhance, as appropriate, the community's carbon sequestration resources to improve air quality and reduce net carbon emissions.
- **Policy NR-6-1:** Promote energy efficiency and conservation strategies to help residents and businesses save money and conserve valuable resources.
- **Policy NR-6-3:** Promote innovation in energy efficiency.
- **Policy NR-6-5:** Encourage renewable energy options that are affordable and benefit all community members.
- **Policy NR-6-6:** Encourage the use of solar energy systems in homes, commercial businesses, and City facilities as a form of renewable energy.
- **Policy NR-6-7:** Promote energy conservation measures in new development to reduce on-site emissions and 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. \

Sustainable Development

- **Policy SD-2-1:** Incorporate green building techniques and best management practices in the site design, construction, and renovation of all public projects
- **Policy SD-2-2:** Support innovation and green building best management practices for all new private development

City of Elk Grove Climate Action Plan

The City of Elk Grove adopted its first Climate Action Plan (CAP) in 2013. The CAP and General Plan were since updated in 2019, and the CAP was most recently amended in late 2019 to ensure consistency with the final2019 Title 24 California Building Standards Code, specifically with regard to solar photovoltaic requirements and electric vehicle charging infrastructure standards for new development.

The CAP identifies sources of GHG emissions within the City boundary and identifies measures to reduce emissions, including measures that would also reduce energy use. The CAP includes the following policy topics that serve as the framework of specific supporting measures, action items, and target indicators for implementation of the CAP: An innovative and Efficient Built Environment, Resource Conservation, and Transportation Alternatives and Congestion Management. Table 3.16-1 presents applicable energy-related measures.

Table 3.16-1 City of Elk Grove Climate Action Plan Applicable Energy Reduction Measures		
Reduction Measures		Policy Topic
BE-1	Building Stock: Promote Energy Conservation. Promote energy conservation by residents and businesses in existing structures in coordination with other agencies and local energy providers, including SMUD and PG&E.	Built Environment
BE-4	Building Stock: Encourage or Require Green Building Practices in New Construction. Encourage new construction projects to comply with CALGreen Tier 1 standards, including a 15 percent improvement over minimum Title 24 Part 6 Building Energy Efficiency Standards.	Built Environment
BE-5	Building Stock: Phase in Zero Net-Energy Standards in New Construction. Phase in zero net energy (ZNE) standards for new construction, beginning in 2020 for residential projects and 2030 for commercial projects. Specific phase-in requirements and ZNE compliance standards will be supported by updates in the triennial building code updates, beginning with the 2019 update.	Built Environment
BE-6	Building Stock: New Construction. Adopt CALGreen Tier 1 standards to require all new construction to achieve a 15 percent improvement over minimum Title 24 CALGreen Energy requirements.	Built Environment
BE-7	Building Stock: Solar Photovoltaics in New and Existing Residential and Commercial Development. Encourage and require installation of on-site solar photovoltaic (PV) in new single-family and low-rise multi-family developments. Promote installation of on-site PV systems in existing residential and commercial development.	Built Environment
BE-8	SMUD Greenergy and SolarShare Programs. Encourage participation in SMUD's offsite renewable energy programs (i.e., Greenergy, SolarShares), which allow building renters and owners to opt into cleaner electricity sources.	Built Environment
RC-1	Waste Reduction. The City shall facilitate recycling, reduction in the amount of waste, and reuse of materials to reduce the amount of solid waste generated.	Resource Conservation
RC-2	Organic Waste Reduction. The City will target reduction of organic waste disposal, consistent with statewide goals, of 50 percent of 2014 levels by 2020 and 75 percent by 2025, using alternatives such as composting, anaerobic digestion, and biomass energy	Resource Conservation
TACM-1	Local Goods. Promote policies, programs, and services that support the local movement of goods in order to reduce the need for travel.	Transportation Alternatives & Congestion Management
TACM-2	Transit-Oriented Development. Support higher-density, compact development along transit by placing high-density, mixed-use sites near transit opportunities.	Transportation Alternatives & Congestion Management
TACM-3	Intracity Transportation Demand Management. The City shall continue to implement strategies and policies that reduce the demand for personal motor vehicle travel for intracity (local) trips.	Transportation Alternatives & Congestion Management
TACM-4	Pedestrian and Bicycle Travel. Provide for safe and convenient pedestrian and bicycle travel through implementation of the Bicycle, Pedestrian and Trails Master Plan and increased bicycle parking standards.	Transportation Alternatives & Congestion Management
TACM-6	Limit Vehicle Miles Traveled. Achieve a 15 percent reduction in daily VMT compared to existing conditions (2015) for all new development in the City, consistent with state mandated VMT reduction targets for land use and transportation projects.	Transportation Alternatives & Congestion Management
TACM-7	Traffic Calming Measures. Increase the number of streets and intersections that have traffic calming measures.	Transportation Alternatives & Congestion Management
TACM-8	Tier 4 Final Construction Equipment. Require all construction equipment used in Elk Grove to achieve EPA-rated Tier 4 Final diesel engine standards by 2030 and encourage the use of electrified equipment where feasible.	Transportation Alternatives & Congestion Management
TACM-9	EV Charging Requirements. Adopt an electric vehicle (EV) charging station ordinance that establishes minimum EV charging standards for all new residential and commercial development. Increase the number of EV charging stations at municipal facilities throughout the City.	Transportation Alternatives & Congestion Management

3.16.3 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

METHODOLOGY

Energy impacts were analyzed by assessing energy usage associated with construction and operation of development within the Project site. Future energy demand was calculated consistent with the criteria air pollutant and GHG emissions modeling, conducted using the California Emissions Estimator Model (CalEEMod) Version 2016.3.2 and the SMAQMD Road Construction Emissions Model, Version 9.0.0 (see Section 3.4, "Air Quality," and 3.8, "Greenhouse Gas Emissions," for further discussion of modeling details). Detailed project inputs, assumptions, and calculations are provided in Appendix E.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, an energy impact is considered significant if the proposed Project would:

- Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, during project construction or operation; or
- Conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

For a discussion of impacts related to the relocation or construction of new or expanded electrical power and natural gas facilities, see Section 3.15, "Utilities."

IMPACT ANALYSIS

Impact 3.16-1: Result in the Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources.

Construction-Related Energy Consumption

Construction associated with future development of the Project site, including on- and off-site improvements, would result in consumption of energy in the form of electricity, natural gas, and fossil fuels (e.g., gasoline and diesel fuel) for the duration of the construction. The primary energy demands during construction would be associated with refueling construction vehicles and equipment and would be short-term in nature. Energy in the form of fuel and electricity would be consumed during this period by construction vehicles and equipment operating on-site, trucks delivering equipment and supplies to the site, and construction workers driving to and from the site.

Tables 3.16-2 and 3.16-3 present the fuel consumption anticipated to occur as a result of Project-related construction activities. Table 3.16-2 presents the maximum annual fuel consumption for the most intense construction-year scenario (assuming 25 percent of the assumed land uses within the Project site along with all off-site improvements are constructed within a single year). Table 3.16-3 presents the total and average annual fuel consumption that would occur over the anticipated 20-year construction period for full development of the Project site. Refer to Appendix E for detailed model inputs, assumptions and calculations.

Table 3.16-2 Construction Fuel Consumption, Maximum Annual Construction-Year				
Phase	Source	MT CO_2e/ Year [a]	Predominant Fuel Type	Gallons/Year
Demolition	Off-Road Equipment	445.12	Diesel	43,811
	Hauling	0.00	Diesel	-
	Vendors	0.00	Diesel	-
	Workers	12.27	Gasoline	1,380
Site Preparation	Off-Road Equipment	438.18	Diesel	43,128
	Hauling	0.00	Diesel	-
	Vendors	0.00	Diesel	-
	Workers	14.72	Gasoline	1,656
Grading	Off-Road Equipment	714.16	Diesel	70,292
	Hauling	0.00	Diesel	-
	Vendors	0.00	Diesel	-
	Workers	16.35	Gasoline	1,840
Building Construction	Off-Road Equipment	302.94	Diesel	29,817
	Hauling	0.00	Diesel	-
	Vendors	1136.36	Diesel	111,847
	Workers	786.62	Gasoline	88,513
Paving	Off-Road Equipment	262.41	Diesel	25,828
	Hauling	0.00	Diesel	-
	Vendors	0.00	Diesel	-
	Workers	12.27	Gasoline	1,380
Architectural Coating	Off-Road Equipment	262.41	Diesel	25,828
	Hauling	0.00	Diesel	-
	Vendors	0.00	Diesel	-
	Workers	12.27	Gasoline	1,380
Total Gallons			**Diesel**	**350,550**
			Gasoline	**96,150**

Notes:
CO_2 = carbon dioxide; CO_2e = carbon dioxide equivalent; MT = metric tons
Sources:
[a] Modeled by AECOM in 2020

Table 3.16-3 Construction Fuel Consumption, Total and Average Annual				
Phase	Source	MT CO_2e/ Year [a]	Fuel Type	Gallons/Year
Demolition	Off-Road Equipment	1780.48	Diesel	175,244
	Hauling	0.00	Diesel	-
	Vendors	0.00	Diesel	-
	Workers	49.06	Gasoline	5,521
Site Preparation	Off-Road Equipment	1752.72	Diesel	172,511
	Hauling	0.00	Diesel	-
	Vendors	0.00	Diesel	-
	Workers	58.87	Gasoline	6,625
Grading	Off-Road Equipment	2856.65	Diesel	281,166
	Hauling	0.00	Diesel	-
	Vendors	0.00	Diesel	-
	Workers	65.42	Gasoline	7,361
Building Construction	Off-Road Equipment	1211.78	Diesel	119,270
	Hauling	0.00	Diesel	-
	Vendors	4545.45	Diesel	447,387
	Workers	3146.47	Gasoline	354,053
Paving	Off-Road Equipment	1049.64	Diesel	103,311
	Hauling	0.00	Diesel	-
	Vendors	0.00	Diesel	-
	Workers	49.06	Gasoline	5,521
Architectural Coating	Off-Road Equipment	1049.64	Diesel	103,311
	Hauling	0.00	Diesel	-
	Vendors	0.00	Diesel	-
	Workers	49.06	Gasoline	5,521
Total Gallons			**Diesel**	**1,402,201**
			Gasoline	**384,600**
Average Annual (over the 20-year construction period)			**Diesel**	**70,110**
			Gasoline	**19,230**

Notes:
CO_2 = carbon dioxide; CO_2e = carbon dioxide equivalent; MT = metric tons
Sources:
[a] Modeled by AECOM in 2020

Energy consumption would vary depending on the type of construction activities. For example, although it is unlikely, to conservatively estimate maximum potential fuel demands, it is assumed that a year of maximum-potential development could include construction of up to 25 percent of assumed land uses within the Project site and all off-site improvements in a single year. Under this scenario, and as shown in Table 3.16-2, approximately 350,550 gallons of diesel and 96,150 gallons of gasoline would be consumed in a single year. Because of these conservative assumptions, actual maximum annual construction-related fuel consumption could be less than those estimated, and more likely reflective of the average annual fuel constumption shown in Table 3.16-3. Considering a more steady rate of development over an anticipated 20-year development period, average annual fuel consumption would be approximately 70,110 gallons of diesel and 19,230 gallons of gasoline per year, for a total of 1,402,201 gallons of diesel and 384,600 gallons of gasoline over the 20-year construction period.[2] In addition, estimates for both maximuma annual and average annual fuel consumption assume construction in the earliest possible year (2021). If construction is delayed or occurs over a longer period, fuel use could be reduced because of a more modern and fuel efficient construction equipment and vehicle fleet mix, increased use of alternative fuels, and a less intensive and overlapping construction schedule.

Fuel consumed during construction would be temporary in nature and would not represent a significant demand on available fuel, beyond normal construction fuel usage. There are no known Project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in the City. The City and future applicants would be required to demonstrate consistency with policies and actions in the City of Elk Grove's General Plan that are intended to promote efficient energy use. This would include Policy NR-4-8 and related standards, which requires development projects within the City incorporate best management practices during construction activities, including the implementation of the SMAQMD Basic Construction Emission Control Practices for all projects. The SMAQMD Basic Construction Emission Control Practices require equipment idling time be minimized to a maximum of 5 minutes, current certificates of compliance for ARB's In-Use Off-Road Diesel-Fueled Fleets Regulation [California Code of Regulations, Title 13, sections 2449 and 2449.1], and that all construction equipment be maintained in proper working condition according to manufacturer's specifications and be checked by a certified mechanic to demonstrate it is running in proper condition before it is operated. These actions would help to ensure on-site equipment is operating with maximum fuel efficiency.

However, because the details of future development projects are not currently known, it is possible that construction within the Project site could involve substantial energy demand. This impact is conservatively assumed to be **significant**.

Building Operational Energy Consumption

Operation of land uses and infrastructure in the Project site would consume energy for multiple purposes, including, but not limited to, building heating and cooling, refrigeration, lighting, electronics, office equipment and commercial machinery. Table 3.16-4 provides a summary of the potential electrical and natural gas demands by land use. Electrical and natural gas demand would be approximately 87,164,490 kWh/year and 170,611,820 thousand British thermal units (kBtu)/year, respectively.

[2] These calculations are based on the CalEEMod emissions estimates for proposed construction activities and application of U.S. Energy Information Administration CO_2 emissions coefficients (U.S. Energy Information Administration 2018) to estimate fuel consumption for each phase of construction activities.

Table 3.16-4 Estimated Annual Electrical and Natural Gas Demand		
Location	Electrical Demand (kWh/year)	Natural Gas Demand (kBtu/year)
Commercial	2,778,550	1,067,870
Heavy Industrial	31,844,400	64,745,800
Light Industrial	46,826,200	95,206,700
Mixed Use	5,715,340	9,591,450
Total	**87,164,490**	**170,611,820**

Notes: kWh = kilowatt-hours; kBtu = thousand British thermal unit

Source: AECOM 2020

SMUD would provide electricity and would continue to prioritize renewable energy and aims to provide dependable renewable resources for 60 percent of its load by 2030, excluding additional renewable energy acquired for certain customer programs (SMUD 2019b).

The SMUD power mix is comprised of approximately 20 percent eligible renewable resources, such as biomass, solar, wind, geothermal, and small hydroelectric power plants, as well as an additional 26 percent from large hydroelectric sources, ensuring that electricity consumption in the Project site relies heavily on renewable sources. SMUD provides several customer programs geared toward energy efficiency and access to renewable energy and the SMUD Integrated Resource Plan, which outlines its roadmap for reducing GHG emissions and meeting State RPS requirements, accounts for these programs' impacts on total demand and peak demand for electricity and also anticipates an increased focus on energy efficiency and electrification in the coming years (SMUD 2019b). Some of the SMUD customer programs that would be applicable to development within the Project site include, but are not limited to, incentives for builders and design teams to construct all-electric new homes; the installation of electric vehicle chargers for some commercial and residential customers; the SolarShares program in which customers participate in a community solar product for their electricity; the Greenergy program in which participants can opt-in to receive a blend of renewables from a power content label that is their own; and incentives for the installation of energy-efficient equipment, controls, and processes at commercial and industrial customers' facilities.

Development in the Project site would be constructed to meet currently-applicable energy efficiency standards at the time of construction. In accordance with California Code of Regulations Title 20 and Title 24, development within the Project site would be requipred to comply with the building energy requiprements and California Building Standards Code, including CALGreen. This includes meeting energy standards for water and space heating and cooling equipment, insulation for doors, pipes, walls, and ceilings, and appliances, ues of high-efficiency lighting, implementation of solar photovoltaic systems to off-set a designated portion of on-site electricity demands, and other requirements. Improvements would also be eligible for rebates and other incentives from both the electric and gas providers for the Project site for the use of energy-efficient appliances and systems, which would further reduce the overall operational energy consumption associated with development in the Project site.

Development of the Project site would be required to demonstrate consistency with policies and actions in the City of Elk Grove's General Plan and reduction measures in the City's CAP that are intended to promote more efficient use of energy. This would include reduction measures BE-4, BE-5, BE-6, BE-7, and BE-8, which are intended to increase building energy efficiency and promote generation of renewable energy. Reduction

Future developments within the Project site would be subject to adherence with the most recent CALGreen Code and the Building Energy Efficiency Standards, including the more stringent Tier 1 standards required per the City's Climate Action Plan (CAP). This will, would ensure that future development would consume energy efficiently through the incorporation of such features as efficient water heating systems, high performance attics and walls, and high efficacy lighting. The City's CAP would require approximately 10 percent of any future residential units to be all-electric; thus, such units would not involve any natural gas demand. Compliance with these code and policy requirements would reduce potential energy demand. The CalGreen Code, was developed to enhance the design and construction of buildings and sustainable construction practices through planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental air quality. The CEC projects that the 2019 Building Energy Efficiency Standards will reduce energy demand of new residential construction by 53 percent and that of new nonresidential development by 30 percent as compared to comparable buildings constructed under the 2016 California Energy Code, and more so for older buildings (CEC 2018). Implementing these provisions would increase energy efficiency.

All new development will be required to comply with code requirements that would reduce total energy consumption, improve energy efficiency, and reduce peak and base demand for electricity and other forms of energy. However, because there are no development proposals within the Project site, it is not currently possible to demonstrate how, or to what degree the City's CAP reduction measures would apply to the Project, or what energy reductions would result from the application of such CAP reduction measures.

The City will require future developments to incorporate applicable CAP reduction measures, including implementing measures to exceed State mandated energy standards (Reduction Measures BE-4); phase in zero net-energy standards in new construction (Reduction Measure BE-5); electrification of and implementation of solar photovoltaic systems in new development (Reduction Measure BE-6 and BE-7); and encouraging future development to participate in SMUD's offsite renewable energy programs (Reduction Measure BE-8).

While the application of the City's Project Objectives and CAP would reduce operational energy demand, since there are no land use plans or development proposals available for analysis at this time, it is not possible to ensure the extent to which these measures could be implemented or quantify the potential reductions. Therefore, the impact is considered **significant**.

Operational Transportation-Related Energy Consumption

As noted previously, transportation is the largest energy consuming sector in California, and therefore, travel demand is a critical consideration in assessing energy efficiency.

Using the land use scenario developed for the purpose of analysis in this EIR, possible future development in the Project site could generate an approximate average daily VMT of 651,225 which would generate an estimated annual fuel use of 5,796,158 gallons of gasoline and 1,862,106 gallons of diesel fuel per year, or an average annual energy demand of 981,668 MMBtu.[3,4]

[3] This analysis assumes diesel (heat content) is 5.825 MMBtu/barrel, that for vehicular gasoline there are 5.218 MMBtu/barrel, that there are 42 gallons/barrel, that there are 10 therms/MMBtu, and an annualization factor of 347 days/year. These assumptions are consistent with guidance provided in the Climate Registry - 2017 Climate Registry Default Emission Factors: Table 13.1 (Available at: http://www.theclimateregistry.org/wp-content/uploads/2017/05/2017-Climate-Registry-Default-Emission-Factors.pdf).

[4] Trip summary information modeled in CalEEMod can be reviewed in Appendix E of this EIR.

Development of the Project site would generate job opportunities for Elk Grove residents that are currently commuting, and potentially shorten commute trips. Actual travel demand will depend on the density and development intensity of development, mixing of land uses, the relationship between land uses in the Project site and adjacent areas, the level of pedestrian, bicycle, and transit infrastructure, parking standards, the relative affordability of housing, and other factors that are not currently known. The Project site was included as part of the East Study Area in the evaluation of the City's 2019 Update to its General Plan and CAP. Whether future residents would commute to jobs outside the city or county is unknown, but residents would likely be influenced by commute times, the price of fuel, and other social and economic factors. Future development within the Project site would be required to demonstrate consistency with policies and actions in the City of Elk Grove's General Plan and reduction measures in the City's CAP that are intended to promote more efficient use of energy. This would include reduction measures TACM-1 through 9, which are intended to reduce VMT attributable to development in Elk Grove. The CAP Reduction Measure TACM-6 and General Plan Policy MOB-1.1 identify VMT reductions to ensure consistency with SB 743, reducing overall VMT associated with the proposed Project. However, because there are no land use plans or development proposals within the Project site, it is not currently possible to demonstrate how, or to what degree the City's CAP reduction measures would apply to the Project, or what energy efficiency benefits would result from the application of such CAP reduction measures. Implementing these provisions would increase transportation-related energy efficiency. However, possible future development within the proposed Project site could substantially increase transportation-related energy consumption. The impact is considered **significant**.

Please refer also to Section 3.4 of this EIR, "Air Quality," which comprehensively analyzes and provides feasible mitigation for air pollutant emissions; Section 3.8, "Greenhouse Gas Emissions," comprehensively analyzes and provides feasible mitigation for GHG emissions; and Section 3.12, "Noise and Vibration," which comprehensively analyzes and provides feasible mitigation for noise and vibration impacts.

Mitigation Measures

Mitigation Measure 3.16-1a: Implement Mitigation Measures 3.4-2, 3.8-1a and 3.8-1b (2019 SOIA EIR Mitigation Measure 3.16-1a)

Mitigation Measure 3.16-1b: Incorporate Energy Conservation Strategies (2019 SOIA EIR Mitigation Measure 3.16-1b)

Incorporate strategies for direct energy conservation, as well as strategies that indirectly conserve energy into the design and construction of new development, including, but not limited to:

- use recycled building materials that minimize energy-intensive generation and shipping/transport of new materials;
- install energy-efficient lighting, including a lighting control system with dimmer switches to minimize the energy expended for unused fields;
- install water-efficient landscaping and irrigation systems to minimize the energy consumption associated with water supply systems;

- design energy-efficient buildings, including complying with California Energy Commission Title 24 requirements for energy-efficient roofing and insulation; and

- conserve existing trees and plant new trees to provide shade and minimize watering requirements.

Significance after Mitigation

Future development in the Project site would increase energy demand. However, the City would require, as part of plans for development within the Project site, compliance with the policies and actions of the City's General Plan and CAP. Additionally, projects will also need to incorporate energy efficient design elements and energy conservation measures included in the City's General Plan, including those related to reducing VMT, as well as ongoing cooperation with SMUD and local agencies to support renewable energy production, in addition to the implementation of State building and energy efficiency standards.

Development within the Project site would be subject to policies and standards designed to improve energy efficiency and avoid inefficient, excessive, and unnecessary consumption of energy due in construction and operations. Mitigation Measure 3.4-2 would require reductions in ozone precursors from operational emissions sources, which would include implementation of City General Plan policies MOB-1-1, MOB-3-1, MOB-3-2, MOB-3-7, MOB-3-15, MOB-3-16, MOB-4-1, MOB-4-5, NR-4-1, NR-4-4, NR-6-5, and NR-6-7 (or equivalent measures as may be amended). Implementation of these measures would have the co-benefit of reduced operational energy demand. Mitigation Measures 3.8-1a and 3.8-1b would require implementation of GHG emission reduction strategies, including those from the City's most recent CAP and the SMAQMD Best Management Practices for greenhouse gas emissions reduction. These GHG emission reduction measures would also reduce energy use. The City will require future developments to incorporate applicable CAP reduction measures, including implementing strategies and policies to improve the energy efficiency of new buildings, both residential and nonresidential, through building design and construction that meets or exceeds the State Building Energy Efficiency Standards (BE-4) and phases in zero net-energy standards for new construction (BE-5), incorporates electrification of and the use of solar photovoltaic systems on new residential construction (BE-6 and BE-7), participation in SMUD's renewable energy programs (BE-8), and waste reduction strategies (RC-1 and 2), as applicable to new development. Incorporation of applicable CAP reduction measures in plans for development will also the demand for personal motor vehicle travel for intracity (local) trips (Reduction Measure TACM 3); providing for safe and convenient pedestrian and bicycle travel (Reduction Measure TACM 4); and achieving a 15-percent reduction in daily VMT compared to existing conditions (2015) for all new development (Reduction Measure TACM 6) . Mitigation Measure 3.16-1b would reduce energy demand and improve energy conservation by reducing energy associated with transportation of building materials, lighting, irrigation, and heating and cooling.

Energy efficiency is a possible indicator of environmental impacts. The actual adverse physical environmental effects associated with energy use and the efficiency of energy use detailed throughout this EIR in the environmental topic-specific sections. For example, use of energy for transportation leads to air pollutant emissions, the impacts of which are addressed in Sections 3.4 and 3.8 of this EIR. There is no significant impact associated with energy efficiency that is not addressed in the environmental topic-specific sections of this EIR. However, Development in the Project site would increase demand for energy resources, including fossil fuels, electricity, and natural gas. A large body of existing regulations would have the effect of improving energy efficiency of new construction and transportation-related energy demand, thereby reducing energy demand and

potential adverse environmental effects associated with energy use. However, the location and intensity of future development is not known at this time, and given the scale of possible development that could be proposed within the Project site in the future, it is possible that future development could cause the inefficient, wasteful, or unnecessary consumption of energy. There is no additional feasible mitigation. As with the 2019 SOIA EIR, the impact is **significant and unavoidable**.

Impact 3.16-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

As described above in the discussion of Impact 3.16-1, implementation of the proposed Project would result in the development of new land uses that would induce new demand for electricity and natural gas, as well as induce additional VMT that would result in the consumption of fossil fuels. However, design and construction of buildings would be required to comply with the most recently adopted California Building Energy Efficiency Standards Code and California Green Building Standards Code (CalGreen), and Mitigation Measure 3.8-1a requires future development projects to comply with 2016 CalGreen Tier 1 standards, including a 15 percent improvement over minimum Title 24. Future developments within the Project site would be subject to adherence with the most recent CALGreen Code and the Building Energy Efficiency Standards, including the more stringent Tier 1 standards required per the City's CAP. This would ensure that future development would consume energy efficiently through the incorporation of such features as efficient water heating systems, high performance attics and walls, and high efficacy lighting. The City's CAP would require approximately 10 percent of any future residential units to be all-electric; thus, such units would not involve any natural gas demand. The City's General Plan and CAP encourage energy efficient design standards and transportation systems, promote energy efficiency in new construction that meet or exceed State Building Energy Efficiency Standards, promote energy efficiency and conservation programs associated with utilities, and require compliance with federal, State, and local energy-related regulations, all of which are consistent with the aforementioned plans and policies to promote renewable energy and energy efficiency. Finally, the City's intent is for future projects in the East Study Area to facilitate development that would create a better balance between the types of local jobs available and the skills and interests of the local labor force (Project Objective #5). If residents of Elk Grove are able to reduce their vehicle commute or use non-vehicular modes to reach employment, this could help to reduce the significant energy consuming sector of transportation. Implementation of the proposed Project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Therefore, as with the 2019 SOIA EIR, this impact is **less than significant**.

4 CUMULATIVE IMPACTS

This section provides an analysis of the cumulative impacts of the proposed Project considered together with other past, present, and probable future projects producing related impacts, as required by Section 15130 of the CEQA Guidelines.

Cumulative impacts are defined in CEQA Guidelines Section 15355 as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." A cumulative impact occurs from "the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time" (CEQA Guidelines Section 15355[b]).

Consistent with CEQA Guidelines Section 15130(a), the discussion of cumulative impacts in this SEIR focuses on significant and potentially significant cumulative impacts. CEQA Guidelines Section 15130(b), in part, provides the following:

> The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.

4.1 APPROACH

The CEQA Guidelines Section 15130(b)(1) identifies 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. For this SEIR, both the plan and the list approach have been combined.

As with the original 2019 SOIA EIR, past, present, and probable future plans and projects that are considered in this cumulative analysis are described by the Sacramento Area Council of Governments (SACOG) in the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS). The land use scenario included int the MTP/SCA for the Sacramento region includes anticipated past development and future development through 2040 (SACOG 2020). SACOG estimates that Elk Grove will grow by a total of 12,860 housing units between the baseline year for the MTP/SCS (2016) and 2040. This is a 24-percent increase. The MTP/SCS identifies a 35-percent increase in employment in Elk Grove by 2040 (15,750 new jobs). In addition, the City separately commissioned a study of employment trends in Elk Grove (City of Elk Grove 2016). According to this study, in 2013, Elk Grove had approximately 44,806 jobs, which would be a jobs-to-housing ratio of approximately 0.86, using California Department of Finance (DOF) estimates of dwelling units in 2013 (DOF 2017).

Because the Project site is located in unincorporated Sacramento County, the land uses included in the Sacramento County General Plan, which was adopted in 2011 and updated in 2017, are also considered in this

cumulative analysis. The land use assumptions embodied in the Sacramento County General Plan include not only new development, but also existing development and development currently in entitlement review by the County (Sacramento County 2017).

Past, present, and probable future plans and projects that are considered in this cumulative analysis also include buildout of the City of Elk Grove's General Plan (updated in 2019), and future development outside of the City limits, including the Kammerer Road/Highway 99 SOIA and Bilby Ridge SOIA (City of Elk Grove 2019a).

4.2 CUMULATIVE IMPACT ANALYSIS

The following sections contain a discussion of the cumulative effects anticipated from Project implementation along with the related projects for each of the environmental topic areas evaluated in this SEIR.

The cumulative analysis conforms with Section 15130 of the CEQA Guidelines, which specifies that the "discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great a detail as is provided of the effects attributable to the project alone."

4.2.1 AESTHETICS

The geographic scope for the aesthetics cumulative impact analysis includes the immediate, publicly accessible area, including the area along Grant Line Road, as well as areas that could be affected by site lighting. The geographical setting for lighting impacts includes the area directly affected by site lighting, as well as the areas of southern Elk Grove affected by major area lighting sources, including commercial developments on State Route 99 (SR 99) and Elk Grove Boulevard, including the Elk Grove Auto Mall and Suburban Propane, which are well lit at night.

VISUAL CHARACTER AND QUALITY

As the southern areas of Elk Grove are developed (e.g., Southeast Policy Area [SEPA], Lent Ranch Marketplace, Kammerer Road SOIA, Bilby Ridge SOIA, Laguna Ridge Specific Plan, Sterling Meadows, the Wilton Rancheria Resort project), these projects all contribute to a cumulative impact on the scenic character visible along the southern edge of the City. The Lent Ranch Marketplace (Elk Grove Promenade) was approved and construction began but was halted due to economic conditions. The Sterling Meadows development is under construction. The proposed Kammerer Road/Highway 99 SOIA is located west of SR 99 and represents the potential for future development south of Kammerer Road. Other projects affecting this view include the Florin Vineyard Community Plan in Sacramento County and the Sunrise-Douglas Community Plan in Rancho Cordova. Furthermore, development is occurring on 3,585 acres in Folsom south of Highway 50. Many of these projects occur along the planned Capital Southeast Connector project, a 35-mile parkway that would span from I-5 to Highway 50. All these projects would affect the visual character and quality of the area south of Grant Line Road. As described in Chapter 3, "Environmental Impact Analysis," of this SEIR, this includes views of Elk Grove's traditional agricultural areas with croplands, pastures, oaks, and distant views of the Cosumnes River/Deer Creek floodplain and related riparian vegetation. These views are available along the southern edges of Elk Grove, including along Grant Line Road. Further to the northeast, views from Grant Line Road include vineyards, grasslands, and the Sierra Nevada foothills.

The potential for cumulative impacts on visual character was evaluated in the City's General Plan EIR (Impact 5.1.4), which determined that further conversion of the region's rural landscape to urban development would result in a significant cumulative impact (City of Elk Grove 2018). The General Plan evaluation included the developments of Waterman 75 and Laguna Ridge, as well as the SEPA and other developments (including the proposed parks/open space and commercial and industrial land uses at the Project site).

The Project site is in a transitional zone between developed areas of Elk Grove and agricultural uses in Sacramento County east of SR 99 and south of Grant Line Road. Views to the south of Grant Line Road, including the Project site, are of moderate visual quality and the area's visual character is representative of Elk Grove's agricultural heritage. The aesthetic and visual quality of the Project site has been affected by past projects, including commercial uses along Grant Line Road, industrial uses along the UPRR tracks, including Suburban Propane, and residential developments to the north. There are several residential developments to the south of Grant Line Road near the Project site, along with a plant nursery and the now-closed Sunrise Skyranch Airport.

Proposed development at the Project site would have frontage on Grant Line Road and would introduce structural elements into the landscape that would detract from the visual qualities of the existing agricultural open space. Foreground views of the project's entrance, landscaping, and signage would be available as motorists approach the intersection of Grant Line Road and Waterman Road and drive northeast. There are no public views of the off-site improvements except for the northern end of the drainage ditch that is adjacent to the Union Pacific Railroad (UPRR) tracks. This ditch is proposed for widening and deepening, but would have a visually similar appearance from Grant Line Road as compared to existing conditions. Public views toward the proposed on-site development from Grant Line Road would change substantially and this impact would be a significant cumulative impact.

These impacts would occur in an area that provides expansive background views of farmland, the Deer Creek and Cosumnes River floodplain, and the foothills, including from the UPRR overpass. Views of the proposed commercial and industrial development would be prominent and could detract from views. However, views of the foothills are primarily to the northeast down the Grant Line corridor, and these views would not be impeded. However, because of the overall area's agricultural heritage, the Project's incremental contribution to cumulative impacts on the area's visual character would be **cumulatively considerable**. All the projects in Elk Grove (and other Sacramento County communities) would be required to comply with conditions of approval, zoning regulations, and design guidelines for road frontage and landscaping. However, these measures would not reduce the Project's impacts on views of this pastoral landscape and this impact would be **cumulatively significant and unavoidable.**

LOSS OF TREES OF LOCAL IMPORTANCE

Development in the City could lead to the removal of trees of local importance, as defined in the Elk Grove Municipal Code, Title 19, "Trees," Chapter 19.12, "Tree Preservation and Protection." However, the City requires mitigation for these trees. Mitigation would provide 1 new inch diameter at breast height (dbh) of tree for each inch dbh lost (1:1 ratio). Developers must prepare a mitigation plan to provide on-site or off-site replacement, payment of an in-lieu fee, preservation of existing trees, or on-site or off-site relocation. Thus, there is no significant cumulative impact.

Future project applicants would be required to implement Mitigation Measure 3.2-2, which requires establishment of a tree mitigation plan that including planting replacement trees to compensate for the removal of trees of local

importance, as defined in the Elk Grove Municipal Code, Title 19, "Trees," Chapter 19.12, "Tree Preservation and Protection." Therefore, the proposed Project would result in a **less-than-significant cumulative impact**.

LIGHTING AND GLARE

The cumulative effects of recent and proposed projects, including Lent Ranch, Sterling Meadows, the Southeast Policy Area, the Grant Line Road widening, and other SOIAs to the west, combined with past projects such as the Auto Mall, Highway 99, and area park and high school stadium lighting, would result in significant cumulative impact from nighttime lighting that would intermittently (during evening use and events) reduce the darkness of the night sky. The potential for cumulative impacts on nighttime lighting and glare was evaluated in the City's General Plan EIR (Impact 5.1.5), which determined that introduction of new sources of nighttime lighting and glare would result in a significant cumulative impact (City of Elk Grove 2018). The General Plan evaluation included the developments of Laguna Ridge, as well as the SEPA and other developments (including the proposed parks/open space [with a multi-sports park stadium] and commercial and industrial land uses at the Project site).

Under the proposed Project evaluated in this SEIR, nighttime lighting would be limited to security lighting for internal streets, commercial and industrial buildings, parking lots, and residences developed in the mixed-use area. The off-site drainage improvements would not require nighttime lighting.

To minimize on-site lighting effects, project applicant(s) would be required to comply with Title 23 of the Elk Grove Municipal Code, which contains standards for lighting that address shielding of light fixtures, photometric calculations to determine the allowed level of illumination, and fixture height. Furthermore, the City's Design Guidelines encourage shielded and downward-pointing lighting. The citywide Design Guidelines include provisions for outdoor light fixtures to be directed/shielded downward. Development projects at the project site would be required to limit outdoor lighting, which would be directed downward and shielded to minimize light spillover and skyglow. Further, the City would require conditions of approval that minimize the use of reflective materials in building design. Compliance with City General Plan policies, zoning regulations, and Design Guidelines would minimize lighting and glare for development within the Project site. The off-site improvement areas would not require new lighting.

Notwithstanding City requirements, development of regional commercial, light and heavy industrial, and mixed uses would still contribute to the cumulative increase in nighttime lighting from new development, and therefore would result in a **cumulatively considerable and significant and unavoidable impact.**

4.2.2 AGRICULTURAL RESOURCES

The geographic scope for agricultural resources consists of Sacramento County.

Past, present, and future projects throughout the region have, and will continue to convert existing agricultural land to other uses – predominantly urban use. This includes plans and projects in Sacramento County, including the cities of Elk Grove, Sacramento, Rancho Cordova, Folsom, Citrus Heights, and all existing, approved, proposed, and reasonably foreseeable development projects within these jurisdictions. This includes the SEPA west of the Project site, the Lent Ranch Marketplace, and other large regional projects, including the potential casino west of the Project site. In addition to these local development projects, there are several urban development projects in Sacramento County and throughout the Central Valley that are contributing to the cumulative loss of agricultural resources, including Prime Farmland, Unique Farmland, or Farmland of Statewide

Importance and lands under Williamson Act Contract. Continued urbanization of the region in accordance with applicable land use plans, as well as those approved and proposed development projects described previously, would continue to convert agricultural and open space land to urban uses with residential and commercial buildings and associated roadways and other infrastructure. The continued conversion of farmland in the region is a significant cumulative impact.

There is no prime agricultural land within the Project site as defined by Government Code Section 56064 of the Cortese-Knox-Hertzberg Local Government Reorganization Act. Based on analysis of the Sacramento County Important Farmland map (DOC 2019), an estimated 409 acres of on-site Farmland of Statewide Importance could be directly and permanently converted to nonagricultural, urban use. The three new off-site improvement areas assessed as a part of this SEIR are not currently actively used for agricultural production, as they are existing channels that would be widened or deepened, or areas where drainage pipelines would be installed and where disturbance related to drainage improvements would be temporary. In 2016, an estimated 207,483 acres of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance existed in Sacramento County. A conversion of an estimated 129 acres of Farmland of Statewide Importance would account for less than 1 percent of this total.[1] The total conversion of Farmland of Statewide Importance 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 at the project site could affect nearby agricultural uses and result in the conversion of adjacent agricultural lands. According to the Elk Grove General Plan and EIR, the loss of agricultural productivity on lands designated for urban uses is a significant and unavoidable consequence of future development. Implementation of the proposed project would contribute to the incremental decline of Farmland of Statewide Importance Farmland in the county, region, and state and contribute to the irreversible conversion of this agricultural land. Implementation of Mitigation Measures 3.3-1 would help to preserve farmland. However, this would not create new farmland. There is no additional feasible mitigation. Therefore, the Project's impact would be **cumulatively significant and significant and unavoidable**.

Furthermore, 179 acres of land within the Project site is under Williamson Act contracts. Cancellation of these Williamson Act contracts before their expiration date would be required before construction within the area identified for mixed uses and a portion of the park/open space area. The off-site drainage improvements would not result in the cancellation of any Williamson Act contracts. The amount of land in Sacramento County under Williamson Act contract is decreasing. Between 2000 and 2015 (the most recent data year available), the area of Williamson Act contract lands in Sacramento County decreased from 187,102 to 174,656, or 7.1 percent. The cancellation of land under Williamson Act contracts within the Project site would be relatively small acreage in the context of the county's entire acreage of land under Williamson Act contacts. Furthermore, implementation of Mitigation Measure 3.3-1 would help to preserve farmland, including land held under Williams Act contracts. However, cancellation of Williamson Act contracts would contribute to the incremental decline of contract land in the county and would result in the irreversible conversion of this agricultural land on these contract lands. Therefore, the project's impact would be **cumulatively significant and significant and unavoidable**.

1 Appendix G of the CEQA Guidelines focuses the analysis on conversion of agricultural land on Prime Farmland, Farmland of Statewide Importance, or Unique Farmland.

Implementation of Mitigation Measure 3.3-3 would reduce the Project's potential for conflicts with ongoing off-site agricultural uses. In addition, the City of Elk Grove Municipal Code Chapter 14.05 ("Right to Farm Ordinance") protects the rights of agricultural property owners and farmers to continue agricultural operations on their land. Therefore, the Project's impact would be **less than cumulatively considerable.**

4.2.3 AIR QUALITY

The geographic scope for air quality consists of the Sacramento Valley Air Basin (SVAB).

GENERATION OF SHORT-TERM CONSTRUCTION AND LONG-TERM OPERATIONAL EMISSIONS OF CRITERIA AIR POLLUTANTS AND PRECURSORS, OR CONFLICT WITH OR OBSTRUCT AN AIR QUALITY PLAN

By its nature, air pollution is largely a cumulative impact. All new development that would result in an increase in air pollutant emissions would contribute to cumulative construction air quality impacts. In addition, operational emissions from all new development in the region also affect the attainment status of an air basin, particularly as a result of increased traffic and energy demands from additional development The implementation of regional and local development within the Sacramento Valley Air Basin would generate increase short-term construction and long-term operational emissions that may cumulatively exceed regional thresholds and conflict with or obstruct implementation of the applicable air quality plan. This is a cumulatively significant impact.

Sacramento County's attainment status for the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) has not changed since the 2019 SOIA EIR was prepared. Sacramento County currently meets NAAQS for all criteria air pollutants except ozone and the 24-hour particulate matter with an aerodynamic diameter less than 2.5 microns (PM2.5) standard. Sacramento County meets the CAAQS for all criteria air pollutants except ozone and particulate matter with an aerodynamic diameter less than 10 microns (PM10). As summarized in Tables 3.4-1 and 3.4-3 (Section 3.4-1, "Air Quality") of this SEIR, short-term construction-related emissions (for on-site development and the off-site improvements) as well as long-term operational emissions would exceed both maximum daily and maximum annual Sacramento Metropolitan Air Quality Management District (SMAQMD) thresholds for criteria air pollutants and ozone precursors. Implementation of Mitigation Measures 3.4-1a and 3.4-1b would reduce the Project's short-term construction emissions to a less-than-significant level. However, SMAQMD considers that if a project's impacts would be significant at the project-level, it could also be considered significant on a cumulative level. Implementation of Mitigation Measure 3.4-2 would reduce the Project's operational emissions, but it is not possible to determine at this time where such emissions would be reduced to a less-than-significant level. Operations of future development could result in air pollutant emissions that still exceed the SMAQMD thresholds. Even if emissions are reduced to levels that are below SMAQMD thresholds, the Project would still contribute to increased overall emissions throughout the SVAB. There is no additional feasible mitigation available that would avoid these impacts. The proposed Project could make a **cumulatively considerable contribution** to **significant cumulative** air quality impacts.

EXPOSURE OF SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS

Exposure of sensitive receptors to substantial pollutant concentrations, such as toxic air contaminants (TACs) and carbon monoxide (CO) generally occurs on a localized rather than regional basis. As discussed in Section 3.4-1, "Air Quality" of this SEIR, development of the proposed Project would not expose sensitive receptors to

substantial concentrations of CO. Because site-specific details of development are not known at the present time and construction at the Project site could occur in phases adjacent to existing on-site rural residences, implementation of Mitigation Measures 3.4-1a and 3.4-3b are necessary to ensure the Project's impacts would be less than significant. Since there are no other known projects among those considered as part of this cumulative analysis that are both large enough and would involve construction in close enough proximity to these rural residences to result in TAC impacts, the proposed Project's cumulative contribution would be **less than significant.**

ODOR EMISSIONS

Odor impacts are generally localized and do not combine with odor impacts in nearby jurisdictions to increase the severity of impacts. The closest cumulative project is the Waterman 75 project, on the north side of Grant Line Road north of the project site. Even if this project were to be constructed at the same time as portion of the proposed Project, implementation of Mitigation Measure 3.4-6 would avoid conflicts between Project-generated odor emissions and sensitive receptors. Therefore, a **cumulatively significant impact would not occur**, and the proposed Project would **not result in a cumulatively significant incremental contribution** to odor impacts.

4.2.4 BIOLOGICAL RESOURCES

The geographic scope for biological resources includes the land surrounding the Project site and off-site improvements areas, as well as the greater Sacramento County region, including the cities of Elk Grove, Sacramento, Rancho Cordova, Folsom, Citrus Heights, and all existing, proposed, and reasonably foreseeable development projects within these jurisdictions.

Cumulative development in the vicinity of the Project site within the City of Elk Grove includes the Laguna Ridge Specific Plan, Southeast Policy Area (SEPA), Sterling Meadows, and the Lent Ranch Marketplace projects, which are anticipated to increase residential and commercial uses covering over 2,000 acres between these projects, along with the Kammerer Road/Highway 99 SOIA (City of Elk Grove 2019a). These planned development areas occur less than 5 miles away from the Project site and the off-site improvements areas, and Project-related activities could contribute to the cumulative loss of native plant communities, wildlife habitat values, special-status species and their potential habitat, and wetland/aquatic resources within the region.

Past and present actions by humans have substantially altered biological resources in the Central Valley region of California including Sacramento County, specifically, compared to historical conditions. Among the most important of these past actions have been conversion of natural vegetation and habitats to agricultural and developed land uses; fill and alteration of aquatic habitats; flood control and water supply projects; and the introduction of nonnative species, which in many cases have competed with, preyed upon, and degraded habitat for native species. More recently, the large-scale conversion of agricultural habitats to urban land uses has resulted in substantial loss of habitat for species such as State-listed Swainson's hawk that have adapted to use agricultural habitats in response to loss of their natural habitats. Past, present, and foreseeable future urbanization in the city of Elk Grove has contributed substantially to the loss of grassland, wetland, and agricultural habitats that are important to many species in the region, including listed species like Swainson's hawk and other raptors, and greater sandhill crane. Therefore, the impact of the cumulative projects is **significant**.

Climate change and associated sea-level rise may also contribute to human-caused impacts to these species in the future. The Central Valley is generally becoming hotter and drier as a result of climate change and the region has

been experiencing more frequent droughts with reduced precipitation and snowpack contributing to the system. With regards to the effects of sea-level rise, it should be noted that the Delta is surrounded by levees and is a highly regulated system, and it is likely that measures would be taken to compensate for rising levels within the Delta. It is difficult to predict with any certainty the degree to which climate change and sea-level rise may affect the local special-status plant and wildlife species. For Swainson's hawk, climate change is another human-induced factor that could substantially reduce the extent and quality of habitat for this species. The proposed Project could have a **cumulatively considerable** contribution to the **significant cumulative** impact on Swainson's hawk due the fact that a large area of suitable habitat would be converted to urban land uses. No feasible mitigation would avoid this impact on Swainson's hawk because there is a limited amount of suitable habitat land available and there would be a net loss of habitat regardless of the acreage preserved as compensatory mitigation.

Roosting and foraging habitat for a variety of special-status bird species in the Central Valley, such as wetland habitats in the off-site improvement areas, may also be adversely affected by climate change. The changes to these habitats that may occur as a result of climate change are uncertain and speculative, but it is likely that climate change will adversely affect at least some of these special-status species, such as the wintering population of greater sandhill cranes using the Cosumnes River floodplain. It is possible that development of the Project site and the off-site improvements may contribute in some way to the cumulative impact of climate change related to this and other special-status species. The SSCHP addresses the potential effects of climate change on greater sandhill crane and other covered species and has developed biological goals and measurable objectives focused on mitigating those potential future impacts (County of Sacramento et al. 2018).

As specified in the CEQA Guidelines (Section 15126.2), when evaluating the impacts of a proposed project, the lead agency should normally limit its examination to changes in the existing physical conditions at the time of the NOP or at the time the environmental analysis commenced (in this case, 2020). What specific changes to habitats and shifts in distribution of plants and animals in the region may occur as a result of climate change within the time frame of the development that could eventually occur as a result of the proposed Project is too speculative for meaningful evaluation.

These past and present actions have resulted in significant adverse effects on the extent, species composition, and functioning of natural habitats that occur in the region, and on the distribution and abundance of plant and wildlife species associated with these habitats. Large areas of freshwater marsh, riparian, valley oak woodland, grassland, and vernal pool vegetation have been lost or degraded in the region over the past 100 years. The increase in the distribution and abundance of invasive plant species and nonnative plant communities, the large number of plant and wildlife species listed as threatened or endangered or considered sensitive by the CDFW, and the dramatic reductions in the extent of aquatic habitats and natural vegetation in the Central Valley region are evidence of these overall significant adverse effects. These actions have altered habitats, biotic interactions, and physical processes that continue to affect species in the region today. Therefore, the impact of the cumulative projects is significant.

The Project site is primarily agricultural land that provides limited habitat values to most species; however, agricultural lands provide important foraging habitat for Swainson's hawk, white-tailed kite, northern harrier, greater sandhill crane, and loggerhead shrike. The Project site also contains burrow habitat for burrowing owl and American badger. The off-site improvement areas contain sensitive natural habitats including wetlands that support a wide variety of special-status plant and wildlife species. Although mitigation measures are proposed to

compensate for the loss of habitat from the Project site and for potentially small areas of lost habitat from the off-site drainage improvements, fully compensating for these impacts by preserving existing habitat in the vicinity is infeasible because there is a limited amount of suitable habitat land available and there would be a net loss of habitat regardless of the acreage preserved as compensatory mitigation. Because there has been a substantial loss of natural and agricultural habitats for these species that has resulted in a notable decline in their regional population numbers, loss of habitat from the region is considered a significant cumulative impact. Therefore, the loss of cropland and irrigated pasture, and potentially a small amount of lost habitat from the required off-site drainage improvements, could have a **cumulatively considerable contribution** to this **significant cumulative impact**. Impacts on the sensitive biological resources resulting from future development of the Project site requires implementation of Mitigation Measures 3.5-1a, 3.5-1c, 3.5-1d, 3.5-2a, 3.5-2b, 3.5-3a, 3.5-3b, 3.5-3c, 3.5-4, 3.5-5, 3.5-6a, 3.5-6b, 3.5-8, 3.5-9a, 3.5-9b, and 3.5-13, Implementation of these mitigation measures would reduce impacts on sensitive biological resources resulting from future development of the Project site and the off-site improvement areas. However, no additional feasible mitigation is available that would avoid this impact. The impact is **significant and unavoidable**.

4.2.5 CULTURAL AND TRIBAL CULTURAL RESOURCES

The geographic scope for cultural resources consists of the greater Sacramento County region, including the cities of Elk Grove, Sacramento, Rancho Cordova, Folsom, Citrus Heights, and all existing, approved, proposed, and reasonably foreseeable development projects within these jurisdictions.

Cumulative development in the vicinity of the Project site within the City of Elk Grove includes the Southeast Policy Area (SEPA) west of the SOIA Area, the Lent Ranch Marketplace, and other large regional projects, including the Wilton Rancheria Resort project site. Continued urbanization of the region in accordance with applicable land use plans as well as those approved and proposed development projects described previously, could result in the disturbance of cultural resources, which includes archaeological and historic-period built environment resources. Regulations protecting cultural resources have substantially reduced the rate and intensity of these impacts. However, even with these regulations, cultural resources are still degraded or destroyed as cumulative development in proceeds. Therefore, the impact of the cumulative projects is significant.

As discussed in Section 3.6, “Cultural and Tribal Cultural Resources,” the on-site structures and features have not yet been evaluated for historic significance. Additionally, development of the off-site drainage improvements has a potential to affect off-site Tribal Cultural Resources. Development in the Project site and the off-site improvement areas would involve earth-moving activities and grading during construction. The potential to encounter previously unknown cultural materials on the Project site is moderate, and the potential to encounter unknown materials in the off-site improvement areas is high, thus the proposed Project has the potential to adversely affect previously unknown significant cultural resources. Because all significant cultural resources are unique and non-renewable members of finite classes, all adverse effects or negative impacts erode a dwindling resource base. The loss of any one archaeological site or historic-period built environment property has the potential to affect all others in a region since these resources are best understood in the context of the entirety of the cultural system of which they are a part. The proposed Project, in combination with other development in the region, could contribute to the loss of significant cultural resources.

Compliance with California law, City of Elk Grove policies, and implementation of the Mitigation Measures 3.6-2a, 3.6-2b, and 3.6-2c will ensure that any cultural resources encountered during construction, including

archaeological features or potential human remains, would be treated in an appropriate manner under CEQA and other applicable laws and regulations. This would reduce the potential for a significant impact resulting from inadvertent damage or destruction of presently undocumented cultural resources. If an inadvertent discovery of cultural materials (including human remains) is made during Project-related construction activities, disturbances in the area of the find must be halted and appropriate treatment and protection measures must be implemented, all in consultation with a professional archaeologist and in accordance with CEQA Guidelines Section 15126.4 if the resource is an historical resource of an archaeological nature and/or with CEQA Section 21083.2 if the resource is a unique archaeological resource. Implementation of Mitigation Measures 3.6-2a, 3.6-2b, and 3.6-2c would also help to protect tribal cultural resources, because these measures require preparation of site-specific archaeological surveys, consultation with culturally affiliated California Native American tribes (including potential monitoring during construction of the off-site improvements by a Native American tribal member), proper treatment of materials encountered during construction activities, incorporation of measures to protect archaeological resources, and preservation/avoidance of archaeological resources as feasible. If human remains are discovered during construction activities, implementation of Mitigation Measure 3.6-4 requires compliance with Health and Safety Code Section 7050 et seq. and Public Resources Code Section 5097.9 et seq.. Although compliance with California law, City of Elk Grove policies, and Mitigation Measures 3.6-2a, 3.6-2b, 3.6-2c, and 3.6-4 contained in this SEIR would reduce the potential for adverse effects, impacts to archaeological and historical resources, including Tribal Cultural Resources, are considered **cumulatively considerable** due to the cumulative loss of resources in the region. No additional feasible mitigation is available. These impacts are **cumulatively significant and unavoidable**.

4.2.6 GEOLOGY, SOILS, MINERALS, AND PALEONTOLOGICAL RESOURCES

The geographic scope for geology and soils consists of Sacramento County, and the geographic scope for paleontological resources consists of the greater Sacramento Valley region.

Geology, Soils, and Seismicity

The geologic formations, soil types, and seismic hazards of each project considered in this cumulative analysis vary depending on project location, and therefore are site-specific. Therefore, the geology, soils, and seismic impacts are site specific and generally do not combine to result in cumulative impacts. Furthermore, as with the proposed Project, development projects considered in the cumulative analysis would be required to comply with applicable State and local building codes and regulations, including the California Building Standards Code (CBC), which requires a site-specific geotechnical report that includes design and engineering requirements specifically intended to reduce hazards from geologic, soils, and seismic hazards. Therefore, **no additive effect would result and no cumulatively significant impact** related to geologic, soils, or seismic hazards would occur.

Paleontological Resources

Fossil discoveries resulting from excavation and earth-moving activities associated with development are occurring with increasing frequency throughout the state. The value or importance of different fossil groups varies depending on the age and depositional environment of the rock unit that contains the fossils, their rarity, the extent to which they have already been identified and documented, and the ability to recover similar materials under more controlled conditions (such as for a research project). Unique, scientifically-important fossil discoveries are relatively rare, and the likelihood of encountering them is site-specific and is based on the type of specific geologic rock formations found underground. These geologic formations vary from location to location.

Some of the projects considered in this cumulative analysis could encounter Pleistocene-age or older deposits that have yielded unique paleontological resources in the past and therefore are considered paleontologically sensitive. Therefore, the cumulative projects could result in damage to or destruction of unique paleontological resources, which would be a significant cumulative impact.

The Project site and the off-site improvement areas are located in the Riverbank Formation, which is considered to be of high paleontological sensitivity. Implementation of Mitigation Measure 3.7-6 would result in the Project avoiding damage to or destruction of unique paleontological resources. Therefore, the Project's contribution to this cumulatively significant impact would be **less than cumulatively considerable**.

4.2.7 GREENHOUSE GAS EMISSIONS

Greenhouse gases (GHGs) typically persist in the atmosphere for extensive periods time—long enough to be dispersed throughout the globe and result in long-term global impacts that contribute to climate change. As such, the proposed Project will not, by itself, contribute significantly to climate change; however, cumulative emissions from many projects and plans all contribute to global GHG concentrations and the climate system. Accordingly, GHG emissions are inherently cumulative. Please see Section 3.8, "Greenhouse Gas Emissions," of this SEIR for the analysis of the proposed Project's contribution to the significant cumulative impact of climate change.

4.2.8 HAZARDS, HAZARDOUS MATERIALS AND WILDFIRE

The geographic scope for hazards and hazardous materials consists of the City of Elk Grove's General Plan Planning Area, which includes the Project site.

Development associated with the cumulative projects and the proposed Project would involve the storage, use, disposal, and transport of hazardous materials (such as asphalt, fuel, lubricants, and solvents) to varying degrees during demolition, construction, and operation. Facilities that use hazardous materials during operation are required to obtain applicable local and state permits and comply with appropriate regulatory agency standards designed to avoid hazardous waste releases. The storage, use, disposal, and transport of hazardous materials are extensively regulated by various federal, State, and local agencies, and therefore construction companies and businesses (during the operational phase) that would handle any hazardous substances are required by law to implement and comply with these existing hazardous-materials regulations. These health and safety impacts usually occur on a project-by-project basis, rather than cumulatively.

Some of the past, present, and future cumulative project sites could contain existing hazards materials (e.g., underground or aboveground storage tanks, septic systems, stained soils [indicating potential contamination], lead-based paints, asbestos-containing materials, or contaminated groundwater plumes). However, if hazardous materials are encountered on site during construction of the proposed Project and the cumulative projects, the associated impacts would be localized to the individual project sites and would not be additive to other hazardous materials-related impacts at the Project site or other individual cumulative project sites. Therefore, no additive effect would result and **no cumulatively significant impact** related to hazards or hazardous materials would occur.

4.2.9 HYDROLOGY AND WATER QUALITY

The geographic scope for surface water hydrology and water quality consists of the City of Elk Grove. The cumulative context for groundwater consists of the Sacramento Valley – South American Subbasin.

GROUNDWATER

Development of the cumulative projects within the South American Subbasin will increase the need for groundwater. The South American Subbasin has been designated by the California Department of Water Resources (DWR) as a high priority basin, but is not in a condition of critical overdraft. As a signatory to the Water Forum Agreement, the Sacramento County Water Agency (SCWA) is committed to adhering to the long-term average sustainable yield of the basin. The Water Forum estimated that the long-term average annual sustainable yield of the basin was 273,000 afy, while extractions were estimated at 217,000 afy in 2015. The Sacramento Central Groundwater Authority (SCGA) submitted an Alternative Groundwater Sustainability Plan (GSP) in 2016 (Sacramento Central Groundwater Authority 2016), which consisted of SCGA's Central Sacramento County Groundwater Management Plan that was originally prepared in 2006. DWR has since required SCGA to prepare a standard GSP, which is in process as of the time of preparation of this SEIR. DWR requires annual reporting of subbasin conditions every five years to demonstrate how subbasin operations have stayed below the sustainable yield. The Alternative GSP identified provisions to maintain groundwater pumping levels within the sustainable yield, including reducing demand, conjunctive use, and aquifer storage and recovery projects, that would apply to all signatories of the Water Forum Agreement, including SCWA and SCGA. Because water supply for the proposed Project has been included in SCWA's Zone 40 Water Supply Master Plan Amendment (Brown and Caldwell 2020) indicating that sufficient water supplies are available, and because the Project's water supply is included in the Elk Grove General Plan (City of Elk Grove 2019a) and therefore is part of the SCGA's GSP for the South American Subbasin, a cumulatively significant impact would not occur, and the proposed Project would have a **less than cumulatively considerable** impact.

EROSION, SILTATION, POLLUTED RUNOFF, AND FLOOD HAZARDS

Development of the cumulative projects and the proposed Project would include on-site and off-site excavation and grading activities that could result in erosion; result in increased impervious surfaces that would generate increased stormwater runoff that could result in increased pollutant transport and exceedance of existing drainage systems; and construction of buildings, homes, and other structures that could be constructed in a floodplain, which could affect hydrology and water quality in the cumulative study area. However, compliance with the National Pollutant Discharge Elimination System permitting requirements (i.e., both the Statewide Construction General Permit and the local operational Municipal Separate Storm System [MS4] Permits), Clean Water Act permitting requirements, and applicable local regulations such as flood control ordinances and grading permits, would ensure that the cumulative projects would not result in a significant cumulative impact, and the proposed Project would result in a **less-than-significant cumulative contribution**.

4.2.10 LAND USE, POPULATION, HOUSING, EMPLOYMENT, ENVIRONMENTAL JUSTICE, AND UNINCORPORATED DISADVANTAGED COMMUNITIES

The geographic scope for land use, population, housing, employment, environmental justice, and unincorporated disadvantaged communities consists of the Sacramento County region, including the cities of Elk Grove, Sacramento, Rancho Cordova, Folsom, and Citrus Heights.

CONSISTENCY WITH LAND USE

Cumulative development within the region would result in a significant change in land use, and individual projects would need to be considered in context of their compliance with adopted land use plans. Plans with which compliance may be analyzed include general plans, habitat conservation plans, and regional transportation plans. For the proposed Project, appropriate plans to consider include the SACOG 2020 MTP/SCS and the City's General Plan. Land use inconsistencies are not physical effects in and of themselves and combinations of policy inconsistencies would not rise to the level of a physical effect. Cumulative effects of the physical changes related to the Project are discussed in the other topics in this section. **No cumulatively considerable** impacts would occur.

POPULATION, HOUSING, AND EMPLOYMENT

Like land use policy inconsistency, population growth is not considered a significant cumulative effect because it is not a physical environmental impact. However, the direct and indirect effects, such as housing and infrastructure needs that are related to population growth, can lead to physical environmental effects.

Incorporated cities, including Elk Grove, Sacramento, Rancho Cordova, Folsom, and Citrus Heights, and Sacramento County implement general plans and specific or master plans that could potentially accommodate substantially greater population and employment growth compared to regional forecasts and planning efforts. 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. Considering the indirect effects from past, present, and future development under the cumulative plans, the potential for population growth in the county is a **significant cumulative** impact.

Assumed industrial and commercial land uses within the Project site could generate approximately 7,788 new jobs in the City at full buildout. In addition, future development of mixed uses on the Project site could add an assumed 713 housing units, or 2,304 residents for a total service population (population plus employment) of 10,092. As stated previously, the Project site is within the East Study Area. The City estimated as a part of the General Plan that the East Study Area could accommodate 4,806 housing units that would accommodate a population of 15,523 persons and employment-generating uses could result in 3,875 new jobs for a total service population of 19,398 (City of Elk Grove 2019). The total service population anticipated under the proposed Project (10,092) is less than the total assumed under the City's General Plan (19,398), but the employment estimate is substantially higher and the residential population substantially lower.

SACOG estimated that, by 2035, continued development of the Laguna Ridge Specific Plan, Lent Ranch Market Place, the Southeast Policy Area, and the Triangle Special Plan, as well as other planned development (not including the Project site, which was not anticipated in the MTP/SCS) could increase the City's jobs to 57,640 by 2035 and 60,070 by 2040 (SACOG 2019). Because development of the Project site is not included in SACOG's future employment projections, the jobs generated by the proposed Project (7,788 jobs) are not accounted for in SACOG's employment projections for the City.

As discussed in Section 3.11, "Land Use, Population, Housing, Employment, Environmental Justice, and Unincorporated Disadvantaged Communities," if the proposed Project's level of job growth is realized during the City General Plan planning horizon and MTP/SCS 2040 horizon, it is possible that development of employment-generating land uses in other areas of the City or County would occur at a slower pace. The regional demographic

and economic forecasts for SACOG use Board-adopted regional-level projections, which serve as control totals for the entire region (SACOG 2020). If residential or employment growth is higher for a particular jurisdiction, using the control totals, this would mean that residential or employment growth would need to be proportionally reduced in one or more areas.

Specific indirect impacts associated with increased population, such as traffic congestion, air quality degradation, and noise generation, are addressed in each section of this SEIR and this chapter, as appropriate. These sections provide a detailed analysis of other relevant environmental effects as a result of development of the proposed Project.

Physical impacts associated with development of the Project site, such as traffic, greenhouse gas emission, air quality degradation, and noise generation and impacts related to increased demand for public services and utilities, are evaluated throughout this SEIR because the Proposed project's future land uses are considered to be part of buildout of the Project site. Mitigation presented throughout this SEIR addresses environmental impacts associated with future development of the Project site. There is no significant impact that is not addressed comprehensively throughout this SEIR.

One of the objectives of the proposed Project is to provide employment and possibly housing opportunities. No feasible mitigation is available to reduce the population growth at the Project site to a less-than-significant level, while still meeting Project objectives. Therefore, the proposed Project would indirectly result in a **cumulatively considerable** contribution to a significant cumulative impact. Impacts associated with inducement of population, housing, and employment would be **significant and unavoidable**.

4.2.11 NOISE AND VIBRATION

The geographic scope for noise and vibration consists of the City of Elk Grove planning area.

SHORT-TERM CONSTRUCTION NOISE

Construction activities associated with development of the projects considered in this cumulative analysis may result in significant increases in ambient noise levels. Construction noise impacts are typically highly localized and therefore multiple projects would have to occur in close proximity to one another for a cumulative increase in ambient noise levels to occur. Implementation of Mitigation Measure 3.12-1 in Section 3.12, "Noise and Vibration," of this SEIR would reduce the Project's short-term construction noise impacts. However, even with implementation of this mitigation measure, it may not be possible to fully reduce all of the Project's construction noise impacts to a less-than-significant level. In accordance with City General Plan requirements, other planned and/or approved projects in the area would also be required to evaluate construction noise impacts and implement noise-reduction measures. The Waterman 75 project would be developed on the north side of Grant Line Road, across from the Project site. Because the exact nature and timing of development of both the proposed Project and the Waterman 75 project are not known at this time, there is a potential that construction noise could be generated from both projects at the same time. If that were to occur, the Project's construction noise impacts would be considered **cumulatively significant and unavoidable.**

LONG-TERM OPERATIONAL TRAFFIC NOISE

Development forecast under the City's General Plan would generate and attract vehicular travel along roadways, which would combine with traffic associated with development of the Project site to increase vehicular traffic noise in areas directly adjacent to roadways. This is a cumulatively significant impact.

Under future cumulative conditions, predicted traffic noise levels along off-site roadways in the Project vicinity would increase. As discussed in Impact 3.12-4, development at the Project site would result in significant increases in existing traffic noise levels. Under future cumulative conditions, predicted traffic noise levels along all studied roadway segments would further increase. However, there are no existing noise-sensitive uses located along Grant Line Road between SR 99 SB Ramps to SR 99 NB Ramps, Grant Line Road between East Stockton Boulevard to Waterman Road, and Waterman Road between Mosher Road to Grant Line Road.

Elk Grove Policy MOB-1-1 establishes vehicle miles traveled (VMT) limits for the City's Planning Area, including locations for new growth, such as the East Study Area. The implementation of this policy would reduce travel demand by incorporating density mixing of uses, pedestrian and bike infrastructure, and transit services. Reducing travel demand would reduce traffic volumes and therefore traffic noise levels. Based on direction included in the General Plan, development in the Project site would be designed to minimize potential impacts. However, it is not possible to determine at this time whether this program would avoid all potentially significant impacts. Significant traffic noise impacts at existing and future noise-sensitive areas can be difficult to feasibly mitigate. Some noise-sensitive areas may have noise barriers that are constructed to reduce noise levels that, once these barriers are constructed, increase noise levels experienced on the other side of the roadway once noise is reflected off the newly constructed noise barriers to the other side of the roadway. New noise barriers may have limited effectiveness for traffic noise mitigation, since openings are often required for pedestrian, bicycle, vehicle, and emergency access and visual access for safety. Quiet pavement may be infeasible due to cost.

Given that detailed development plans are not currently available, it is conceivable that traffic noise levels at some land uses may continue to exceed applicable noise impact criteria. In addition, commonly employed traffic noise mitigation measures, such as sound barriers, may not be feasible at some land uses, particularly existing residential land uses that front major roadways. As a result, the Project's contribution to this cumulatively significant impact is considered **cumulatively significant and unavoidable**.

LONG-TERM OPERATIONAL STATIONARY SOURCE NOISE

Noise sources associated with development projects in the City's planning area include landscape and building maintenance activities, mechanical equipment, solid waste collection, parking lots, commercial, office, and industrial activities, agricultural machinery and equipment, and residential, school, and recreation activities and events. Ambient noise is increasing in urbanized areas over time as a result of increased development, and noise sources that are adjacent to one another could combine to create a cumulatively significant impact.

Implementation of Mitigation Measure 3.12-6, along with compliance with the City's Noise regulations, contained in City Municipal Code Chapter 6.32, would reduce the Project's non-transportation source noise levels at on-site sensitive receptors. However, even with implementation of this mitigation measure, the Project's long-term stationary-source noise levels may not be reduced to a less-than-significant level. Furthermore, off-site agricultural noise would continue on parcels to the northeast and southeast, immediately adjacent to the development that is proposed on the Project site. Because cumulative noise increases could occur where site-

specific projects are in close proximity to one another, along with ongoing agricultural noise, the proposed Project could result in a **cumulatively significant and unavoidable contribution** to this significant cumulative impact.

GROUNDBORNE VIBRATION

Construction activities associated with the cumulative projects would result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and activities involved. Although detailed information is not currently available, construction would generally be anticipated to result in maximum groundborne vibration levels associated with bulldozing (although unlikely, in some cases pile-driving could be necessary). Sensitive receptors could be located within the threshold distances established by the Federal Transit Administration; therefore, the cumulative projects could result in a significant cumulative impact.

Implementation of Mitigation Measure 3.12-3 would reduce the Project's vibration impacts. However, even with implementation of this mitigation measure it may not be possible to fully reduce these impacts to a less-than-significant level. Operation of the UPRR generates groundborne vibration at the Project site and in the immediate Project vicinity. Furthermore, construction of the Waterman 75 development project, on the north side of Grant Line Road across from the Project site, could occur simultaneously with development of the proposed Project. Therefore, the proposed Project could result in a **cumulatively significant and unavoidable contribution** to this significant cumulative impact.

4.2.12 PUBLIC SERVICES AND RECREATION

The geographic scope for public services and recreation consists of the City of Elk Grove planning area.

FIRE PROTECTION SERVICES

The Cosumnes Community Service District (CCSD), currently provides fire protection services for the City of Elk Grove. New development within the CCSD service area would increase demand for fire protection services and facilities, potentially resulting in the need for additional staff members, facilities, and equipment. Individual development projects would be required to assess impacts related to fire protection services during the environmental review process to ensure that the CCSD has sufficient facilities and equipment to meet demand.

The project applicant(s) would provide funding for additional fire facilities and equipment necessary to serve the Project through payment of development impact fees. Similarly, all individual development projects within the CCSD service area would be required to pay development impact fees. In addition, the proposed Project and individual development projects would incorporate California Fire Code and City standards into project designs. Therefore, a **cumulatively significant** impact would not occur, and the proposed Project would not result in a cumulatively significant incremental contribution to impacts related to increased fire protection services and facilities.

The CCSD Fire Department may need to build one or more of the three predesignated new fire stations (i.e., Station 77, Station 78, or Station 79) and need to hire additional firefighters, prevention, 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 also be required to maintain service ratios. If construction and operation of CCSD facilities are required to serve future development within its service area, the Project and other individual projects could indirectly contribute to cumulative impacts. CCSD would prepare

separate CEQA documentation in the future to evaluate the cumulative environmental impacts and those cumulative impacts are not knowable at this time. It is speculative to gauge the extent to which this would create any indirect cumulative impact that is distinct from the analysis of direct Project impacts.

LAW ENFORCEMENT SERVICES

The Police Department provides law enforcement services to the City of Elk Grove. The Police Department currently has a staffing ratio of 0.80 officers per 1,000 residents. With the assumed addition of up to 2,304 persons, an estimated two (rounded up) officers could be needed. New development within the Police Department service area would increase demand for fire protection services and facilities, potentially resulting in the need for additional staff members, facilities, and equipment. Individual development projects would be required to assess impacts related to police protection services during the environmental review process to ensure that the Police Department has sufficient facilities and equipment to meet demand.

New staff, equipment, and facilities that would be necessary to provide additional law enforcement services is funded by property taxes, development impact fees, and potentially other mechanisms. The City reviews development impact fees yearly and adjusts as necessary to adequately fund police protection services. Therefore, development of the project site and other individual development projects in the Police Department's service area would not affect Police Department response times or other performance objectives because project applicants for future projects would pay development impact fees to ensure police protection personnel and equipment is provided to meet increased demand for police protection services. Therefore, a **cumulatively significant impact would not occur**, and the proposed Project would **not result in a cumulatively significant incremental contribution** to impacts related to increased police protection services and facilities.

If construction and operation of Police Department facilities are required to serve future development within its service area, the Project and other individual projects could indirectly contribute to cumulative impacts. The Police Department would prepare separate CEQA documentation in the future to evaluate the cumulative environmental impacts and those cumulative impacts are not knowable at this time. It is speculative to gauge the extent to which this would create any cumulative impact that is distinct from the analysis of direct Project impacts.

SCHOOLS

The Elk Grove Unified School District (EGUSD) provides K–12 education to the City of Elk Grove and the Project site. Development within the EGUSD service area could increase the demand for school facilities. The Project site is currently in the Elk Grove Elementary School, Joseph Kerr Middle School, and Elk Grove High School district boundaries but it should be noted that school attendance boundaries may change, so other schools may eventually provide school services. All three schools are currently operating at below design capacity. However, these schools will be used to house future students from the already approved Laguna Ridge Specific Plan (7,400 homes), Sterling Meadows (1,184 homes), and the Southeast Policy Area (4,000 homes). It is anticipated that Elk Grove Elementary School will exceed its design capacity by 2021 and Joseph Kerr Middle School and Elk Grove High School will exceed design capacity by 2025; therefore, these schools and may not have capacity to accommodate the students who may reside in the mixed-use portion of the project site. The EGUSD's School Facilities Needs Analysis indicates that the Laguna Ridge South Elementary School, which would be located along Poppy Ridge Road, approximately 2.5 miles west of the Project site, and Crooked Creek Estates Elementary School, which would be located on Wyman Drive approximately 0.5 mile north of the Project

site, are anticipated to be designed and constructed in the next 5 to 6 years (ODELL Planning and Research 2020), and therefore would have capacity to serve students from the mixed-use portion of the project site.

City General Plan Policy CIF-4-2 requires developments to incorporate new schools in their overall designs, which would render any impacts to school facilities created by the increase in residential population resulting from potential future development less than significant by assuring that adequate school facilities are provided for current and future residents. 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 (City General Plan Policy CIF-4-3). In addition, City General Plan Policy IFP-1-7 requires new development to fund its fair share portion of its impacts to all public facilities as provided for in State law. Pursuant to SB 50, new development would be required to pay all applicable State-mandated school impact fees to EGUSD. The California Legislature has declared that the school impact fee is deemed to be full and adequate mitigation under CEQA (California Government Code Section 65996). Therefore, a **cumulatively significant impact would not occur**, and the proposed Specific Plan **would not result in a cumulatively significant incremental contribution** to impacts related to increased demand for school facilities and services.

It is possible that future residential development within the mixed-use portion of the Project site would generate demand for school facilities that are not met by existing elementary, middle, and high school facilities. Future students could potentially be bused or driven to schools within the EGUSD boundaries, resulting in indirect cumulative impacts related to transportation, such as air pollutant emissions, greenhouse gas emissions, and transportation noise. Off-site impacts associated with possible school facility development are not knowable at this time. It is speculative to gauge the extent to which this would create any cumulative impact that is distinct from the analysis of direct Project impacts.

PARKS AND RECREATION

The CCSD provides parks and recreation facilities for residents of the city of Elk Grove, as well as portions of Sacramento County. CCSD serves an area of roughly 157 square miles, including the city limits of the City of Elk Grove, plus unincorporated areas of Sacramento County.

New development, including future development within the Project site, would generate demand for new and existing recreational facilities in Elk Grove and the unincorporated county. Future development within the Project site could add an assumed 713 housing units, or 2,304 residents to the CCSD service area. This amount of residential development would require the development of an estimated 11.5 acres of parkland, using standards maintained by the City and CCSD. Payment of the development impact fees would provide financing for public facilities, including parks and recreational facilities, which are required to serve new development. Similarly, individual development projects would be required to assess impacts related to parks and recreational facilities during the environmental review process to ensure sufficient facilities to meet demand and Individual development projects would be required to dedicate park and recreation facilities or pay applicable impact fees, per California Government Code Section 66477 (Quimby Act), the City of Elk Grove Municipal Code Chapter 22.40, and City General Plan Policy PT-1-3, or contribute to other fair share funding mechanisms required by the City as stated in General Plan Policy PT-1-5. Therefore, a **cumulatively significant impact would not occur**, and the proposed Project would **not result in a cumulatively significant incremental contribution** to impacts related to parks and recreation facilities.

4.2.13 TRANSPORTATION AND TRAFFIC

Please see Section 3.14, "Transportation," for a discussion of the proposed Project's cumulative traffic impacts.

4.2.14 UTILITIES

The geographic scope for utilities consists of future development that would occur within each utility provider's service area. Utilities and service systems would be provided to future development by the Sacramento County Water Agency (SCWA), the Sacramento Area Sewer District (SASD), and the Sacramento Regional County Sanitation District (SRCSD). The related projects discussed in this section include future development that would occur within each provider's service area.

WATER SUPPLY AND WATER SYSTEMS

Water supply for the Project site would be provided by the SCWA's Zone 40. Zone 40 provides water supply through a conjunctive-use water supply system consisting of surface water, groundwater, and recycled water. SCWA prepared a Water Supply Master Plan (WSMP) Amendment that addresses water supply and water infrastructure for the Project site (Brown and Caldwell 2020). The amended WSMP indicates that water supplies and demands within SCWA Zone 40 would be the same during normal, single-dry, and multiple-dry years; however, the year-to-year mix of surface and groundwater would be adjusted, as necessary, to meet the demands as part of its conjunctive use water supply program. As shown on Table 3.15-3 in Section 3.11, "Utilities and Service Systems," SCWA would have water supplies that exceed demands in all water years.

SCWA's Zone 40 water-demand factors were applied to the acreage for each future land use designation that generates water use within the Project site (Wood Rogers 2020a, Brown and Caldwell 2020). As shown on Table 3.15-5 in Section 3.11, the estimated water demand assuming development of the sports complex, commercial, industrial, and mixed uses has been conservatively estimated as 1,383 acre-feet per year (afy).[2, 3] The water supply demands for the proposed Project (1,383 afy) were added to water demand projections contained in the amended WSMP and shown in Table 3.15-3 in Section 3.11. As shown in Tables 8-12, 8-13, and 8-14 of the amended WSMP, water supply is projected to be sufficient to meet demands of the proposed Project and existing and planned development in Zone 40 in normal, single-dry, and multiple dry years. Therefore, a **cumulatively significant impact would not occur**, and the proposed Project would **not result in a cumulatively significant incremental contribution** to impacts related to water supply demand.

The amended WSMP evaluated the capacity for SCWA's existing off-site water supply infrastructure to serve the Project site. The WSMP determined that the existing Grant Line Road transmission main and Elk Grove GWTP and East Park GWTP have capacity to meet the demands of the proposed Project and existing and future development (Brown and Caldwell 2020). Therefore, **no significant cumulative** impact would occur.

2 The water supply demand for development of the City-owned property with industrial land uses is estimated as 1,333 afy (Brown and Caldwell).

3 The water supply demand for development of the City-owned property with industrial land uses is estimated as 1,333 afy (Brown and Caldwell).

WASTEWATER COLLECTION, CONVEYANCE, AND TREATMENT FACILITIES

Wastewater collection and conveyance facilities would be provided by SASD and wastewater treatment would be provided by SRCSD.

As shown in Table 3.16 in Section 3.11, buildout of the proposed Project would generate an estimated 1.05 million gallons per day (mgd) of average dry-weather flow. The SRWTP has a design capacity of 181 mgd with the potential to expand to 218 mgd. As of 2019, the SRWTP receives and treats an average of 115 mgd each day (SRCSD 2019). When proposed Project -related wastewater flows (1.05 mgd) are combined with the current average dry-weather flows (115 mgd), implementation of the proposed Project would not result in an increase in wastewater flows that exceed the current disposal capacity of 181 mgd average dry-weather flow. The SRCSD anticipates conservation measures implemented throughout the service area would result in the existing 181 mgd average dry-weather flow capacity to be adequate for at least 40 more years (SRCSD 2014). Therefore, the SRWTP would have adequate capacity to treat wastewater flows generated by future development within the Project site in addition its existing commitments. A **significant cumulative impact would not occur**, and the proposed Project **would not result in a cumulatively significant incremental contribution** to impacts related to wastewater treatment.

SASD conducted an analysis and confirmed that the existing off-site conveyance system has adequate capacity to accommodate peak wet-weather flows generated by the project site at full build-out in addition to existing and future development (Wood Rogers 2020b). Therefore, **no significant cumulative** impact would occur.

SOLID WASTE

Residential solid waste in the City of Elk Grove is collected and hauled by Republic Services. Waste generated by proposed nonresidential uses could be hauled by any of a number of permitted haulers as selected by the individual developer, and wastes would be hauled to a variety of permitted landfills. Solid waste is collected by private franchised haulers and disposed of at various facilities, most of which have more than 70 percent capacity remaining, including Altamont Landfill & Resource Recovery, Recology Hay Road, Bakersfield Metropolitan Sanitary Landfill, Foothill Sanitary Landfill, Forward Landfill, Inc., Keller Canyon Landfill, L and D Landfill, North County Landfill, Potrero Hills Landfill, and Sacramento County Landfill (Kiefer) (City of Elk Grove 2020). The area of the Project site identified for development of mixed uses could generate approximately 3.8 tpd of solid waste.[4] Future development of commercial and industrial uses could generate approximately 58.8 tpd of solid waste.[5] Combined, these landfills have a large volume of landfill capacity (150 million cubic yards) available to serve future development. The closure dates of the Kiefer Landfill and L and D Landfill are anticipated to be approximately January 1, 2064 and January 1, 2031, respectively.

Future development would comply with all federal, State, and local solid waste statues and regulations, including Compliance with the CalGreen Code; the City's the Construction and Demolition Debris Reduction, Reuse, and Recycling Ordinance; Space Allocation and Enclosure Design Guidelines; Assembly Bill 1826 (mandatory

4 Based on CalRecycle's estimated 2018 annual per capita disposal rate of 3.3 pounds per resident per day, the estimated total population for the proposed project (2,304 persons) would generate approximately 7,600 pound per day of solid waste, which equates to 3.8 tpd (CalRecycle 2020).

5 Based on CalRecycle's estimated 2018 annual per capita disposal rate of 15.1 pounds per employee per day and an estimated 7,788 employees for the proposed project, approximately 117,600 pound per day of solid waste would be generated per day, which equates to 58.8 tpd (CalRecycle 2020).

commercial organics recycling); and other City recycling programs. The Kiefer Landfill, L and D Landfill, and Yolo County Central Landfill have sufficient landfill capacity available to accommodate solid-waste disposal needs for future development within the Project site. Therefore, **no significant cumulative** impact would occur.

4.2.15 ENERGY

ENERGY USE

The geographic scope for energy resources consists of the City of Elk Grove and the larger Sacramento County region.

Increased demand for electrical and natural gas supplies and infrastructure is a byproduct of all future land uses and development throughout the Sacramento region. Energy is consumed for heating, cooling, and electricity in homes and businesses; for public infrastructure and service operations; and for agriculture, industry, and commercial uses. Each service provider is responsible for ensuring adequate provision of these utilities within their jurisdictional boundaries and would be responsible for upgrading their existing electrical and natural gas distribution systems or constructing new distribution systems to meet the demands of individual projects.

As noted in Section 3.16 "Energy," transportation is, by far, the largest energy consuming sector in California, accounting for approximately 40 percent of all energy use in the state (U.S. Energy Information Administration 2018). Since transportation accounts for more energy consumption than heating, cooling, and powering of buildings, powering industry, or any other use, the overall efficiency of energy use in the region will depend importantly on the ability of local lead agencies to plan in a way that reduces travel demand. SACOG's 2016 MTP/SCS demonstrates an increase in energy efficiency through 2035 in relation to transportation energy use – household generated vehicle miles traveled (VMT) per capita is forecast to decrease by more than 8 percent; SACOG also estimates that total VMT will decrease by almost 7 percent during the 2016 MTP/SCS planning period (SACOG 2016, Chapter 5B, page 91).

Energy efficiency will also increase in relation to heating and cooling of buildings. The State of California adopted the California Green Building Standards Code (CALGreen Code), which establishes mandatory standards for all buildings in California, including for energy efficiency. This Code is updated over time and in each instance, the energy efficiency standards are increased.

The City of Elk Grove General Plan Update (City of Elk Grove 2019a) and Climate Action Plan Update (City of Elk Grove 2019b) include energy conservation strategies for land use, transportation, community design, public facilities and infrastructure, which also support the reductions in GHG emissions and increased emissions in criteria pollutants. However, the demand for energy and consumption of energy resources would still increase should the area become developed. Future land use patterns, new construction and building renovations, and commuting patterns would increase demand for energy in the City. This would result in a significant cumulative increase in the demand for energy and the need for construction and/or extension of additional facilities to generate and/or distribute electricity and natural gas to serve the Project site. Therefore, the increase in regional development would result in a significant cumulative impact.

Project development would increase energy demand. However, the City would require all discretionary projects to comply with the City's General Plan and Climate Action Plan. Additionally, site-specific projects would also need to incorporate energy efficient design elements and energy conservation measures included in the City's General

Plan, including those related to reducing VMT, as well as ongoing cooperation with SUMD and local agencies to support renewable energy production, in addition to the implementation of State building and energy efficiency standards. Development of the Project site would be subject to policies and standards designed to improve energy efficiency and avoid inefficient, excessive, and unnecessary consumption of energy due in construction and operations. Implementation of Mitigation Measures 3.16-1a and 3.16-1b, which include incorporation of energy conservation strategies in project designs, would reduce impacts associated with energy consumption. Mitigation measures would reduce energy demand and improve energy conservation by reducing energy associated with transportation of building materials, lighting, irrigation, and heating and cooling; require reductions in ozone precursors from operational emissions sources; and require implementation of GHG emission reduction strategies. However, given the scale of possible development that could be proposed in the future, the impact would be considered significant and unavoidable. Therefore, development of the Project site could result in a **cumulatively considerable contribution** to a significant cumulative impact related to the increased energy demand. There is no additional feasible mitigation. The impact is **cumulatively significant and unavoidable**.

ELECTRICITY AND NATURAL GAS

Development at the Project site would increase demand for electricity and natural gas services and require the development of new utility infrastructure to deliver services to future development. Electrical and natural gas service in the City of Elk Grove is provided by SMUD and PG&E, respectively.

Projects in the SMUD and PG&E service areas would vary in size and have different amounts of development. However, they would be expected to increase the demand for electricity and natural gas supplies and related infrastructure. Individual development projects in the region would be required to assess project impacts during the environmental review process to ensure that SMUD has sufficient electrical supplies and PG&E has sufficient natural gas supplies to meet demand. Therefore, **a cumulatively significant impact would not occur**, and the project **would not result in a cumulatively significant incremental contribution** to impacts related to the increased demand for electrical and natural gas services.

New or extensions of existing SMUD and PG&E off-site infrastructure could be required to serve development in the Project site and other future projects within the SMUD and PG&E service areas. If construction and operation of SMUD and PG&E facilities are required to serve future development within their service areas, the Project and other individual projects could indirectly contribute to cumulative impacts. Construction and operation of off-site electrical and natural gas facilities are the responsibility of SMUD and PG&E, respectively. SMUD and PG&E would prepare separate CEQA documentation in the future to evaluate the cumulative environmental impacts and those cumulative impacts are not knowable at this time. It is speculative to gauge the extent to which this would create any cumulative impact that is distinct from the analysis of direct Project impacts.

5 ALTERNATIVES

5.1 INTRODUCTION

CEQA requires the consideration and analysis of alternatives to a proposed project. According to the CEQA Guidelines, the range of alternatives "shall include those that could feasibly accomplish most of the basic purposes of the project and could avoid or substantially lessen one or more of the significant impacts" (CEQA Guidelines Section 15126.6[c]; see also CEQA Guidelines Section 15126.6[a]).

Section 15126.6(a) of the CEQA Guidelines requires that an EIR describe:

> "…a range of reasonable alternatives to the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason."

In defining "feasibility," CEQA Guidelines Section 15126.6(f)(1) 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.

The CEQA Guidelines further require that the alternatives be compared to a proposed project's environmental impacts and that the "no project" alternative be considered (CEQA Guidelines Section 15126.6[e]). The CEQA Guidelines provide guidance on defining and analyzing alternatives. Section 15126.6[b] states:

> "… the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly."

5.2 SELECTION OF ALTERNATIVES

5.2.1 CRITERIA

Alternatives were selected for evaluation in this SEIR based on criteria in the CEQA Guidelines Section 15126.6. These criteria include (1) ability of the alternative to attain most of the basic project objectives; (2) feasibility of

the alternative; and (3) ability of the alternative to avoid or substantially reduce one or more significant environmental effects of the proposed Project.

The City has evaluated potential alternatives relative to the objectives of the proposed Project. For the purpose of alternatives analysis under CEQA, project objectives may not be defined so narrowly that the range of alternatives is unduly constrained. Alternatives that would impede to some degree the attainment of the project objectives or would be more costly may also be considered.

5.2.1 PROJECT PURPOSE AND OBJECTIVES

The following objectives have been established for the proposed Project:

- Provide for development consistent with the General Plan Study Area Organizing Principles and the East Study Area Land Use District Program Standards.
- Create a mix of employment activities in the southwestern portion of the East Study Area that transitions to residential neighborhoods toward the northeast.
- Focus employment uses within the East Study Area on industrial, office, and regional retail uses.
- Designate open space as needed to meet resource conservation standards and to provide an adequate floodplain buffer.
- Facilitate development that would create a better balance between the types of local jobs available and the skills and interests of the local labor force.

5.3 ALTERNATIVES CONSIDERED IN DETAIL IN THE SEIR

The proposed Project involves most of the same development in the same locations as assessed in the 2019 SOIA EIR. The approximately 100-acre City-owned parcel in the center of the project site was formerly designated Public Open Space/Recreation and now would be designated for Light Industrial uses. The Project site would have a reduction in the land area of Parks and Open Space, an increase in both Light Industrial and Heavy Industrial uses, a reduction in the amount of mixed General Commercial and Commercial Office uses, and a new use, Regional Commercial, proposed for 20 acres of land. Regional Commercial uses are generally characterized by retail and service uses that serve a regional market area.

Based on the criteria for selection of the alternatives discussed above in Section 5.2, the City has determined that is it appropriate to keep the same alternatives that were evaluated in the 2019 SOIA EIR: Alternative 1: No-Project Alternative and Alternative 2: Reduced Size Alternative.

5.3.1 ALTERNATIVE 1: NO-PROJECT ALTERNATIVE

CEQA Guidelines Section 15126.6(e)(2) states that a discussion of the "No Project" alternative must consider "what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans."

Most of the Project site is designated as Farmland of Statewide Importance (424 acres), with several smaller areas of Farmland of Local Importance (including the City-owned parcel) (129 acres). The Project site is currently used

for agricultural production, consisting of row crops and pasture, with three existing home sites, five rural residences, and multiple barns and sheds associated with agricultural activities. Most of the Project site is zoned for agricultural uses with a small area in the south zoned for industrial use. For purposes of this SEIR, the No-Project Alternative assumes continued agricultural use on 527 acres and intensive industrial development on 41 acres, as shown in Exhibit 5-1.

ABILITY OF ALTERNATIVE TO MEET PROJECT OBJECTIVES

This alternative would not meet the Project objectives since it would not create new jobs in the form of industrial and commercial development opportunities, and there would be no mixed-use development. This alternative would not address the City's jobs-housing balance.

5.3.2 ALTERNATIVE 2: REDUCED SIZE ALTERNATIVE

Under this alternative, development would be limited to the 100-acre City property and the Kendrick and Cypress Avenue properties, approximately 385 acres total, as shown in Exhibit 5-2. The Kendrick and Cypress Avenue properties would be industrial and commercial, although in slightly different amounts as compared to the proposed Project. The front approximately 50 acres of the City property would be employment uses along the frontage with Grant Line Road, with approximately 50 acres of multi-sport park complex in the rear. There would be no stadium or separate land set aside for fairground use (though the fair use could occur on the same land as the sports park complex). The balance of the Project site would not be developed with mixed uses or parks/open space, but instead would continue to be used for agriculture. Development under this alternative would require generally the same off-site drainage improvements as the proposed project.

ABILITY OF ALTERNATIVE TO MEET PROJECT OBJECTIVES

This alternative could generally meet the Project objectives, albeit potentially not to the same degree as the proposed Project since there would be less industrial and mixed-use development to address the City's jobs-housing balance.

5.4 ALTERNATIVES ANALYSIS

5.4.1 AESTHETICS

ALTERNATIVE 1: NO-PROJECT ALTERNATIVE

With the continuation of existing agricultural uses, it is likely that no visual change would occur, or that any future activities permitted under the zoning and designation such as the construction of minor outbuildings or farming facilities or changes in agricultural operations would not entail a significant change in the visual character of the project site. No damage to scenic vistas or scenic resources within a state scenic highway would occur. There would be no additional sources of light or glare.

If development were to be approved on the industrial portion, it would likely be similar to the industrial development considered under the proposed Project, although the extent would be much less than the proposed Project. Thus, aesthetics impacts would be reduced compared to the proposed Project.

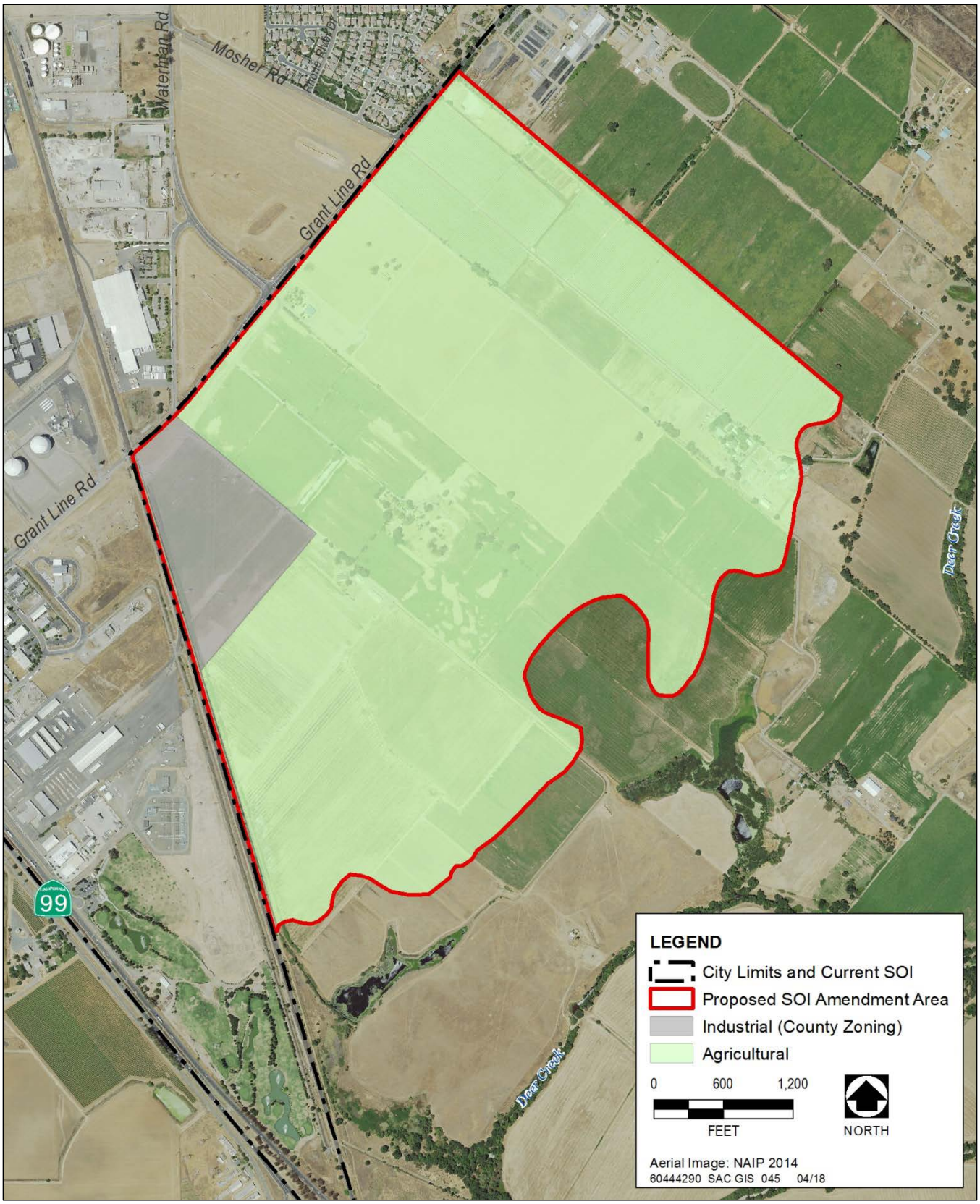

Exhibit 5-1. Alternative 1: No Project Alternative

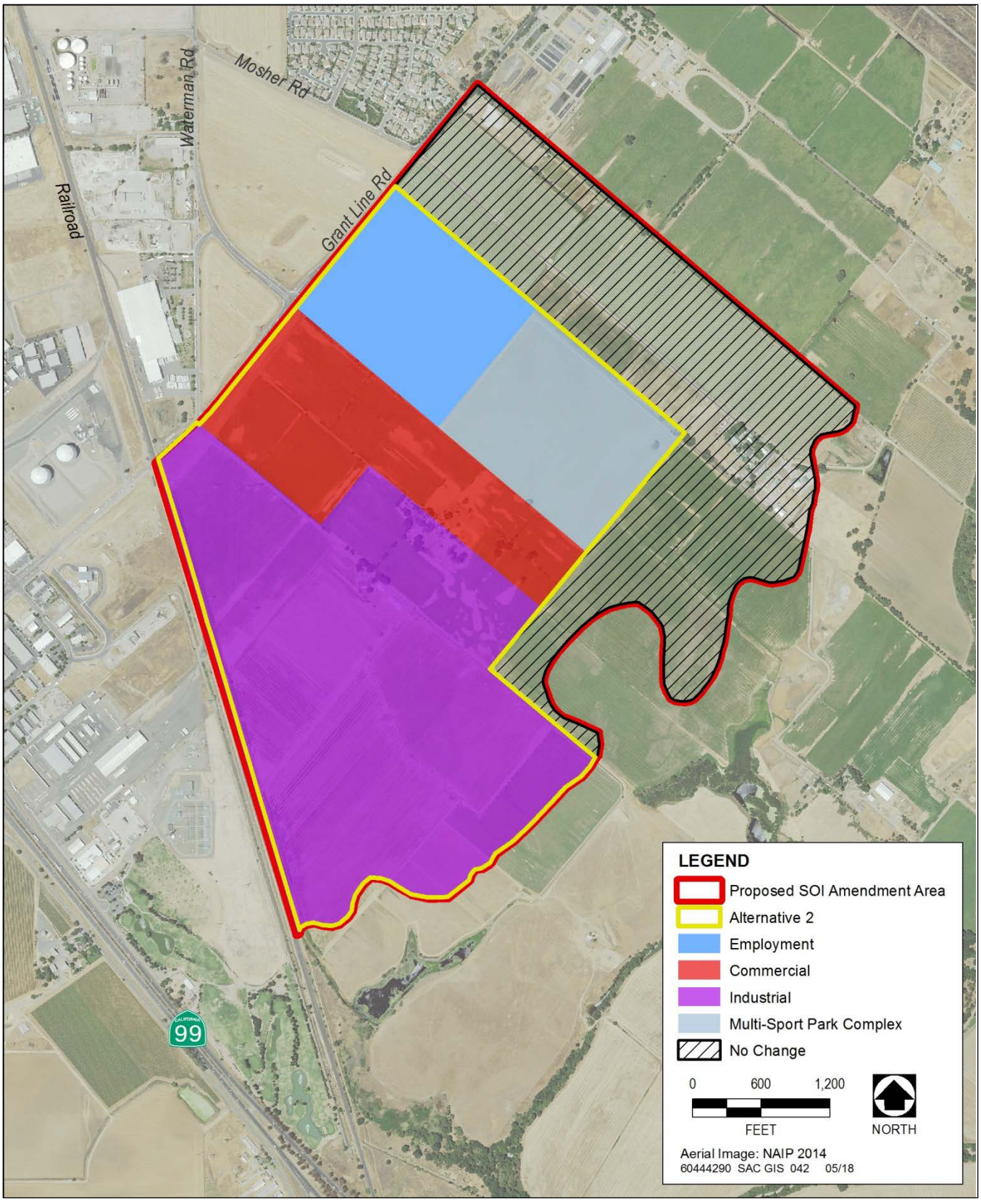

Exhibit 5-2. Alternative 2: Reduced Size Alternative

ALTERNATIVE 2: REDUCED SIZE ALTERNATIVE

Similar to the proposed Project, future development could have impacts on aesthetics, although the extent would be much less than the proposed Project. As described in Section 3.2, "Aesthetics," because the area has little or no topographical relief and the adjacent areas are private farmland, industrial, or protected floodplain, public views are limited. Portions of the Project site are visible from Grant Line Road and from the intersections of Grant Line Road and Mosher and Waterman Roads, and from pedestrians walking on the new sidewalks installed as part of the UPRR grade separation. Motorists traveling east have views of the Project site after crossing over the elevated portion of Grant Line Road at the UPRR grade separation, for approximately 0.65 mile. The Project site is also visible to motorists traveling west on Grant Line Road as they approach the intersection with Waterman Road and the UPRR grade separation. There are no public views of the off-site drainage improvements. For these public views, Alternative 2 would still introduce structural elements into the landscape that would detract from the visual qualities of the existing agricultural open space, changing the visual character. However, the extent of the development would be reduced compared to the proposed Project – there would be no stadium or separate land set aside for fairground use. Thus, aesthetics impacts would be reduced compared to the proposed Project.

5.4.2 AGRICULTURAL RESOURCES

ALTERNATIVE 1: NO-PROJECT ALTERNATIVE

There is no Prime Farmland on the Project site. Approximately 424 acres of the Project site are designated as Farmland of Statewide Importance, and 129 acres are designated as Farmland of Local Importance (including the 100-acre City-owned parcel). If development were to be approved on the industrial portion, it would likely be similar to the industrial development considered under the proposed Project. No off-site drainage improvements would be required, but those off-site improvements would not result in the conversion of existing farmland to urban uses. Existing agricultural operations could continue on 527 acres of the Project site. No Williamson Act lands would be developed under this alternative. In addition, no conversion of Farmland of Local Importance would occur and the conversion of Farmland of Statewide Importance would be 38 acres compared to 424 acres under the proposed Project. Therefore, the impacts of Alternative 1 on agricultural resources would be reduced as compared to the proposed Project.

ALTERNATIVE 2: REDUCED SIZE ALTERNATIVE

Alternative 2 would not convert Prime Farmland. Alternative 2 would result in substantially less conversion of Important Farmland. Alternative 2 would convert approximately 278 acres of Farmland of Statewide Importance, compared to 424 acres under the proposed Project, and approximately 110 acres of Farmland of Local Importance, compared to 129 acres under the proposed Project. Furthermore, Alternative 2 would avoid impacts to on-site Williamson Act contract lands. Off-site drainage improvements would be required, but those off-site improvements would not result in the conversion of existing farmland to urban uses or the cancellation of existing Williamson Act contracts. Existing agricultural operations could continue in the areas not proposed for development. Therefore, the impacts of Alternative 2 on agricultural resources would be reduced as compared to the proposed Project.

5.4.3 AIR QUALITY

ALTERNATIVE 1: NO-PROJECT ALTERNATIVE

Existing air pollutant emissions associated with agricultural activities would still occur on most of the Project site. Temporary emissions associated with maintenance activities or construction of new agriculture-related structures could also occur on-site. Under Alternative 1, construction would occur on 41 acres of the Project site compared to 571 acres under the proposed Project. There would be reduced exhaust emissions associated with off-road construction equipment and construction worker commutes. Therefore, the amount of construction-related air pollutants that would be generated under Alternative 1 would be substantially reduced as compared to the proposed Project. Operational generation of criteria air pollutants and precursors, as well as toxic air contaminants, would also be reduced compared to the proposed Project. Thus, the air quality impacts would be reduced compared to the proposed Project.

ALTERNATIVE 2: REDUCED SIZE ALTERNATIVE

Under Alternative 2, construction would occur on 385 acres of the Project site compared to 571 acres under the proposed Project. Construction of generally the same off-site drainage improvements would still be required. Less construction and development would occur under Alternative 2, and there would be reduced exhaust emissions associated with off-road construction equipment and construction worker commutes. Therefore, the amount of construction-related air pollutants that would be generated would be reduced under Alternative 2 as compared to the proposed Project.

Operational generation of criteria air pollutants and precursors, as well as toxic air contaminants, would also be reduced compared to the proposed Project. There would be a reduced amount of industrial and commercial development and no residential development; thereby resulting in less traffic-related exhaust emissions. Thus, the operational air quality impacts under Alternative 2 would be reduced compared to the proposed Project.

5.4.4 BIOLOGICAL RESOURCES

ALTERNATIVE 1: NO-PROJECT ALTERNATIVE

Under Alternative 1, most of the Project site would continue to function as habitat for special-status wildlife species, and potentially for one special-status plant species. As with the proposed Project, industrial development could adversely affect special-status plants and habitat for special-status species, but only in a small area of cropland in the northwest corner of the Project site. Furthermore, due to the much smaller amount of development, the off-site improvements that would be necessary as part of the proposed Project would not be required under Alternative 1. Therefore, impacts related to the loss and degradation of habitat for special-status wildlife and plant species would be greatly reduced both in type (since no wetlands or associated special-status species would be affected under Alternative 1), and in scope (due to the smaller acreage).

On both agricultural and industrial lands, property owners would still be required to comply with Sections 1602, 3503, 3511, 4700, 5050, and 5515 of the California Fish and Game Code, which prohibit diversion or obstruction of streamflow and streambeds, prohibit “take” of protected species (including raptors), and prohibit destruction of nests or eggs of any bird. Finally, the Federal Endangered Species Act (16 U.S.C. Section 1531 et seq.) prohibits private parties from engaging in any activity that may result in “take” of a species listed as threatened or endangered.

Development could occur on 41 acres of the Project site, and this conversion from agricultural land uses to urban land uses would result in loss of suitable nesting and foraging habitat for Swainson's hawk and other raptors. However, as compared to the impacts of the proposed project, the impacts of Alternative 1 on biological resources would be greatly reduced.

ALTERNATIVE 2: REDUCED SIZE ALTERNATIVE

As with the proposed Project, development of the Project site could adversely affect one special-status plant and habitat for special-status wildlife. Furthermore, Alternative 2 would require the same off-site drainage improvements as the proposed Project. Impacts related to the loss and degradation of habitat for special-status wildlife and plant species would be similar in type, although they would be reduced due to the smaller acreage.

Development could occur on 385 acres of the Project site, and this conversion from agricultural land uses to urban land uses would result in loss of suitable nesting and foraging habitat for Swainson's hawk and other raptors. In addition, the off-site improvements could result in loss of sensitive habitats and or numerous additional species of special-status plants and wildlife. Therefore, as compared to the impacts of the proposed Project, the impacts of Alternative 2 on biological resources would be similar.

5.4.5 CULTURAL AND TRIBAL CULTURAL RESOURCES

ALTERNATIVE 1: NO-PROJECT ALTERNATIVE

Under Alternative 1, urban development could occur on 41 acres of the Project site. If cultural materials are unearthed, they would be subject to same regulations protecting cultural resources as discussed in detail in Section 3.6, "Cultural and Tribal Cultural Resources." Furthermore, the reduced area of development would avoid any potential impacts to Tribal Cultural Resources and would avoid impacts to any of the existing on-site structures which have yet to be evaluated for historical significance. Therefore, the potential for adverse impacts to cultural resources would be reduced compared to the proposed Project. The same potential to uncover and potentially damage or destroy unknown cultural and archaeological materials or human remains would occur under Alternative 1, but would be limited to a 41-acre area under Alternative 1 (as compared to 571 acres under the proposed Project.

Although the same types of impacts could occur, they would occur in a much smaller area as compared to the proposed Project and would occur in an area that is farther from the Deer Creek/Cosumnes River floodplain where prehistoric settlements were more likely to have been located. Furthermore, Alternative 1 would avoid potential impacts to Tribal Cultural Resources and to any structures on the Project site (which may be found to be historic). Therefore, the impacts of Alternative 1 would be reduced as compared to the proposed Project.

ALTERNATIVE 2: REDUCED SIZE ALTERNATIVE

The Mosher and Mahon portions of the Project site (see Section 3.6, "Cultural Resources," of this SEIR) are both outside of the boundary of Alternative 2 and therefore potentially historic facilities on those properties would not be affected. However, Alternative 2 still could have impacts on a farmstead, an Italianate house that dates to the late 19th century, and other old farm structures that may be historical resources for CEQA when they are evaluated in the future. The off-site drainage improvements would not affect any known cultural resources but may adversely affect a Tribal Cultural Resource similar to the proposed Project. If cultural materials are unearthed, they would be subject to regulations protecting cultural resources. Therefore, the potential for adverse impacts to

cultural resources would be reduced compared to the proposed Project, but since it is not possible to know whether or not there are subsurface resources that could be affected, it is not possible to determine at this time whether actual impacts would be reduced relative to the proposed Project. Because this alternative would result in similar potential to unearth cultural resources if development were to occur, because development would still occur over a relatively large area, would still have the potential to adversely affect historic resources and potentially a Tribal Culture Resource from the off-site improvements, Alternative 2 would have similar impacts on cultural resources as compared to the proposed Project.

5.4.6 GEOLOGY, SOILS, MINERALS, AND PALEONTOLOGICAL RESOURCES

ALTERNATIVE 1: NO-PROJECT ALTERNATIVE

Under Alternative 1, construction could occur on 41 acres of the Project site compared to 571 acres under the proposed Project. The same regulations related to site preparation and the construction of buildings, including the California Building Standards Code, which provides minimum standards for building design throughout California, would apply. Although similar less-than-significant impacts from seismic, soils, and geologic hazards would occur, they would be reduced as compared to the proposed Project since substantially less land would be developed.

Because the entire Project site is considered paleontologically sensitive, development of the industrial parcel would have the same potential for significant impacts to unique paleontological resources. However, because earthmoving activities would occur on only 41 acres instead of 571 acres, and the off-site drainage improvements would not be necessary, the potential for adverse impacts to unique paleontological resources would be greatly reduced under Alternative 1 as compared to the proposed Project.

ALTERNATIVE 2: REDUCED SIZE ALTERNATIVE

Under Alternative 2, development could occur on 385 acres as compared to 571 acres under the proposed Project. The same regulations related to site preparation and the construction of buildings, including the California Building Standards Code, which provides minimum standards for building design throughout California, would apply. Although similar less-than-significant impacts from seismic, soils, and geologic hazards would occur, they would be reduced as compared to the proposed Project since substantially less land would be developed.

Because all of the Project site and the off-site areas are considered paleontologically sensitive, development under Alternative 2 would have the same potential for significant impacts to unique paleontological resources. Because earthmoving activities would still occur on a large portion of the Project site (i.e., 385 acres) plus the off-site improvements areas, the potential for adverse impacts to unique paleontological resources would be similar under Alternative 2 as compared to the proposed Project.

5.4.7 GREENHOUSE GAS EMISSIONS

ALTERNATIVE 1: NO-PROJECT ALTERNATIVE

Small temporary GHG emissions associated with agricultural maintenance activities or construction of new agriculture-related structures on site would continue. In addition, livestock and fertilizer application are sources of GHG emissions.

Under Alternative 1, construction could occur on 41 acres of the Project site compared to 571 acres under the proposed Project. There would be less construction-related GHG emissions generated by exhaust emissions associated with off-road construction equipment, heavy-duty material haul trucks, and construction worker commutes. Therefore, development under Alternative 1 would have reduced short-term construction-related GHG emissions compared to the proposed Project

Operational GHG emission sources, including energy consumption (i.e., electricity and natural gas), transportation, and water and wastewater, would be less compared to the proposed Project since less development would occur.

ALTERNATIVE 2: REDUCED SIZE ALTERNATIVE

Under Alternative 2, construction would occur on 385 acres of the Project site compared to 571 acres under the proposed Project, which would generate GHG emissions. Construction of the same off-site drainage improvements would be required, which would also generate GHG emissions. However, there would be less construction-related GHG emissions generated by exhaust emissions associated with off-road construction equipment, heavy-duty material haul trucks, and construction worker commutes under Alternative 2 as compared to the proposed Project because a smaller area would be developed with the same types of land uses.

There would be a reduction in the acreage and square footage of development under this alternative and an associated reduction in operational GHG emission sources, including energy consumption (i.e., electricity and natural gas), transportation, and water and wastewater. It is not known what land use, transportation, pricing, or design strategies would be incorporated under Alternative 2, and therefore not possible to know the rate of GHG emissions relative to the proposed Project. However, it is reasonable to assume that the total GHG emissions would be reduced under Alternative 2 compared to the proposed Project.

5.4.8 HAZARDS, HAZARDOUS MATERIALS, AND WILDFIRE

ALTERNATIVE 1: NO-PROJECT ALTERNATIVE

The storage, use, disposal, and transport of hazardous materials are extensively regulated by various federal, State, and local agencies, and therefore agricultural companies, construction companies, and businesses (during the operational phase on the industrial parcel) that would handle any hazardous substances would be required by law to implement and comply with these existing hazardous-materials regulations. During the construction phase on the 41-acre industrial parcel, similar to the proposed Project, hazardous materials, such as fuels, oils and lubricants, paints, glues, and cleaning fluids, could be required, although the amount of development would be reduced. Facilities that would use hazardous materials on site after any future development would be required to obtain permits and comply with appropriate regulatory agency standards designed to avoid hazardous waste releases. Construction and operation of industrial development under Alternative 2 would be required to comply with applicable building, health, fire, and safety codes, as described for the proposed Project. Reducing the amount of development (41 acres as compared to 571 acres) would also reduce the likelihood that a potential hazardous materials upset and accident condition would occur. Thus, hazards and hazardous materials impacts under Alternative 1 would be reduced compared to the proposed Project.

ALTERNATIVE 2: REDUCED SIZE ALTERNATIVE

The storage, use, disposal, and transport of hazardous materials are extensively regulated by various federal, State, and local agencies, and therefore agricultural companies, construction companies, and businesses (during the operational phase on the industrial parcel) that would handle any hazardous substances would be required by law to implement and comply with these existing hazardous-materials regulations. During the construction phase both on-site and for the off-site drainage improvements, similar to the proposed Project, hazardous materials such as fuels, oils, and lubricants, would be required, although the area where these materials would be used during construction would be reduced. Facilities that would use hazardous materials on site during the operational phase would be required to obtain permits and comply with appropriate regulatory agency standards designed to avoid hazardous waste releases, similar to the proposed Project. Operation of commercial and industrial development under this alternative would be required to comply with applicable building, health, fire, and safety codes, as described for the proposed Project. Reducing the amount of development (385 acres as compared to 571 acres) would also reduce the likelihood that a potential hazardous materials upset and accident condition would occur. Thus, hazards and hazardous materials impacts under Alternative 2 would be reduced as compared to the proposed Project.

5.4.9 HYDROLOGY AND WATER QUALITY

ALTERNATIVE 1: NO-PROJECT ALTERNATIVE

Depending on crop types and agricultural practices, continuing water demand could be considerable. In addition, agricultural production—which would allow the use of fertilizers and pesticides—could affect water quality. As with the proposed Project, the 41 acres of industrial development could affect long-term water quality due to increased impervious surfaces and urban stormwater runoff. Construction and grading activities associated with the 41 acres of industrial development have the potential to cause temporary and short-term increased erosion and sedimentation and increase pollutant loads in stormwater runoff. Development on the industrial parcel would involve earth-disturbing activities (e.g., cut and fill, vegetation removal, grading, and trenching) that could expose disturbed areas and stockpiled soils to winter rainfall and stormwater runoff.

However, under Alternative 1, construction would occur on only 41 acres of the Project site as compared to 571 acres under the proposed Project. Furthermore, construction of the off-site improvements would not be required. With the substantial reduction in development, the level of temporary, construction-related impacts would be reduced under Alternative 1 compared to the proposed Project. In addition, Alternative 1 would greatly reduce the amount of new impervious surfaces added on-site compared to the proposed Project and therefore would decrease the peak discharge flow and rate of stormwater runoff generated on the Project site.

Continued agricultural uses would potentially increase the amount of groundwater recharge as compared to the proposed Project. Furthermore, the industrial parcel is not located within either the 100- or 200-year floodplain.

Since the amount of development under Alternative 1 would be substantially reduced as compared to the proposed Project, hydrology and water quality impacts under Alternative 1 would be reduced as compared to the proposed Project.

ALTERNATIVE 2: REDUCED SIZE ALTERNATIVE

As with the proposed Project, development with industrial and commercial uses could affect long-term water quality due to increased impervious surfaces and urban stormwater runoff. Construction and grading activities have the potential to cause temporary and short-term increased erosion and sedimentation and increase pollutant loads in stormwater runoff. Development would involve substantial earth-disturbing activities over 385 acres (e.g., cut and fill, vegetation removal, grading, and trenching), plus the off-site drainage improvement areas, that could expose disturbed areas and stockpiled soils to winter rainfall and stormwater runoff.

Under Alternative 2, construction would occur on 385 acres of the Project site compared to 571 acres under the proposed Project. Construction in the off-site improvements areas would still be required. With the reduction in total development, the level of temporary, construction-related impacts would be reduced under Alternative 2 compared to the proposed Project. In addition, Alternative 2 would reduce the amount of impervious surfaces added on-site compared to the proposed Project and therefore would decrease the peak discharge flow and rate of stormwater runoff generated on the Project site.

Since agricultural activities would continue on 176 acres of the Project site, the potential for on-site groundwater recharge would increase as compared to the proposed Project. None of the development proposed under Alternative 2 would be located within a 100-year floodplain. Some of the industrial development would be within the 200-year floodplain, but this area would be subject to inundation depth that are 1 foot or less and therefore an Urban Level of Flood Protection is not required. With less overall development under Alternative 2, impacts related to hydrology and water quality would be reduced compared to the proposed Project.

5.4.10 LAND USE, POPULATION, HOUSING, EMPLOYMENT, ENVIRONMENTAL JUSTICE, AND UNINCORPORATED DISADVANTAGED COMMUNITIES

ALTERNATIVE 1: NO-PROJECT ALTERNATIVE

The continued use of the Project site for agricultural production would not impact land use and planning, population, housing, or employment. Industrial development on the 41-acre parcel and continuation of agricultural uses would be consistent with the Sacramento County General Plan's land use designation and the City's zoning of the project site. Alternative 1 would not displace people or housing, induce substantial population growth, or divide an established community. Alternative 1 land uses are consistent with the land uses identified in the Sacramento County General Plan and the City of Elk Grove General Plan Update (City of Elk Grove 2019). This alternative involves substantially less employment opportunity compared to the proposed Project. Alternative 1 would convert less open space than the proposed Project. Overall, impacts would be reduced compared to the proposed Project.

ALTERNATIVE 2: REDUCED SIZE ALTERNATIVE

Similar to the proposed Project, the portion of the Project site that is designated for agriculture in the Sacramento County General Plan would be annexed to the City and would be outside of the County's jurisdiction. LAFCo has already approved a Sphere of Influence amendment (with approval of the 2019 SOIA EIR) that placed the Project site in the City's planning area. The City's 2019 General Plan identified the Project site for planning and development. The Project site would be annexed into the City and therefore would be required to comply with the City of Elk Grove General Plan policies. The off-site drainage improvements would be operated by the City under an easement that would be executed with the off-site landowners.

No residential development would be constructed under Alternative 2; therefore, there would be no population growth generated by new housing. Although there would be less development, Alternative 2 would create a substantial number of new employment opportunities that could generate the need for new housing and result indirect and unplanned population growth. Developed associated with Alternative 2 was accounted for in the City's 2019 General Plan, but was not included in the SACOG 2020 MTP/SCS. Development of housing, infrastructure, and facilities and services to serve this growth could have significant environmental impacts through land conversions, commitment of resources, and other mechanisms. Overall, impacts would be reduced compared to the proposed Project.

5.4.11 NOISE AND VIBRATION

ALTERNATIVE 1: NO-PROJECT ALTERNATIVE

Noise associated with the use of agricultural equipment would continue on the Project site and could potentially increase or change in type, depending on any changes in agricultural activities, including a change in crops or farming techniques, or other activities that would be permitted under the current zoning and designations. The same types of construction equipment would be used for development on the 41-acre industrial parcel, but for less time compared to the proposed Project, given the substantially reduced area of development. In addition, operational noise impacts would be reduced since only 41 acres would be developed as compared to 571 acres. Thus, impacts from noise and vibration under Alternative 1 would be reduced as compared to the proposed Project.

ALTERNATIVE 2: REDUCED SIZE ALTERNATIVE

Under Alternative 2, construction could occur on 385 acres of the Project site compared to 571 acres under the proposed Project, as well as in the off-site improvement areas. The same types of construction equipment would be used for development of industrial and commercial land uses and the off-site drainage improvements, but for less time compared to the proposed Project, given the reduced area of development. This would lead to a reduction in potential temporary, short-term exposure of sensitive receptors to construction noise, groundborne noise, and vibration.

In addition, operational noise impacts would be reduced since there would be a smaller amount of development compared with the proposed Project. There would be less industrial commercial/office development, no mixed uses, and no stadium (the proposed Project could accommodate a sports complex and stadium under the City's conditional use permit process). Therefore, Alternative 2 would result in less long-term traffic noise levels at existing noise-sensitive receivers, improved land use compatibility of on-site sensitive receptors with future traffic noise levels, and improved land use compatibility of on-site sensitive receptors and improved generation of non-transportation noise levels in excess of local standards compared to the proposed project. Overall, noise and vibration impacts under Alternative 2 would be reduced compared to the proposed Project.

5.4.12 PUBLIC SERVICES AND RECREATION

ALTERNATIVE 1: NO-PROJECT ALTERNATIVE

Continuation of the existing agricultural land uses on most of the Project site would not result in increased demand on fire protection, emergency medical, or law enforcement services. Project applicant(s) on the 41-acre parcel would pay development impact fees to ensure fire and police protection personnel and equipment, school

facilities, and parks are provided to meet increased demand for these services. Since Alternative 1 would reduce the development potential on-site from 571 acres to 41 acres, the law enforcement, fire protection, public school services, and parks and recreational services needs would be substantially reduced compared with the proposed Project. Thus, impacts would be reduced compared to the proposed Project.

ALTERNATIVE 2: REDUCED SIZE ALTERNATIVE

Since Alternative 2 would reduce the development potential on-site from 571 acres to 385 acres, the law enforcement, fire protection, public school services, and parks and recreational services needs would be proportionally reduced compared with the proposed Project. Project applicants would pay development impact fees to ensure fire and police protection personnel and equipment, school facilities, and parks are provided to meet increased demand for these services. Because of the relatively large area that would still be developed and the likely increase in demand for public services that would still occur under Alternative 2, impacts would be similar compared to the proposed Project.

5.4.13 TRANSPORTATION AND TRAFFIC

ALTERNATIVE 1: NO-PROJECT ALTERNATIVE

Assuming that agricultural operations would continue consistent with existing operations, no increase in travel demand would occur and no conflicts with transportation-related policies would occur. Under Alternative 1, substantially less development would occur as compared to the proposed Project (41 acres compared to 571 acres). Since travel demand is typically determined based on the size and type of development proposed, the traffic and transportation effects would be substantially reduced under Alternative 1 as compared to the proposed Project.

ALTERNATIVE 2: REDUCED SIZE ALTERNATIVE

Under Alternative 2, commercial and industrial development would occur on approximately 385 acres. Therefore, Alternative 2 would result in increased generation of traffic and therefore potential conflicts with transportation-related policies could occur. Under Alternative 2, less development would occur (385 acres as compared to 571 acres). Since travel demand is typically determined based on the size and type of development proposed, the traffic and transportation effects would be reduced under Alternative 2 as compared to the proposed Project.

5.4.14 UTILITIES AND SERVICE SYSTEMS

ALTERNATIVE 1: NO-PROJECT ALTERNATIVE

For continued agricultural use, there would be no increased demand for utilities and services; agricultural water demands would be similar to existing conditions and septic systems would provide wastewater treatment. Under Alternative 1, development with urban uses would occur on 41 acres of the project site compared to 571 acres under the proposed Project. Development under Alternative 1 would have substantially less water supply demands, generate less wastewater, and generate less solid waste. Thus, impacts under Alternative 1 would be reduced compared to the proposed Project.

ALTERNATIVE 2: REDUCED SIZE ALTERNATIVE

Under Alternative 2, construction would occur on 385 acres of the SOIA Area compared to 571 acres under the proposed Project. Development under Alternative 2 would have less water supply demands, generate less wastewater, and generate less solid waste as compared to the proposed Project. Thus, impacts under Alternative 2 would be reduced compared to the proposed Project.

5.4.15 ENERGY

ALTERNATIVE 1: NO-PROJECT ALTERNATIVE

Under Alternative 1, construction would occur on 41 acres of the Project site compared to 571 acres under the proposed Project. Since development would be substantially reduced in size compared to the proposed Project, energy demands would also be similarly reduced. This development would be subject to the same State building energy efficiency requirements as would occur under the proposed Project. There would be substantially less construction-related, development-related, and transportation-related energy consumption. There would be substantially less demand for electricity and natural gas. Thus, energy impacts under Alternative 1 would be reduced compared to the proposed Project.

ALTERNATIVE 2: REDUCED SIZE ALTERNATIVE

Under Alternative 2, construction would occur on 385 acres of the Project site compared to 571 acres under the proposed Project. Construction of the off-site drainage improvements would still be required. Since development would be reduced in size compared to the proposed Project, energy demands would also be similarly reduced. This development would be subject to the same State building energy efficiency requirements as would occur under the proposed Project. There would be less industrial commercial/office development, and no stadium or development of mixed residential uses. There would be less construction-related, development-related, and transportation-related energy consumption. There would be less demand for electricity and natural gas. In addition, similar to the proposed Project, the scale of possible development under Alternative 2 could result in substantial energy consumption even with inclusion of energy conservation measures. Thus, energy impacts under Alternative 2 would be similar as compared to the proposed Project.

5.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Alternative 1 would have the greatest number of reduced impacts as shown in Table 5-1, therefore Alternative 1: No Project Alternative would be the Environmentally Superior Alternative. This alternative provides the greatest reduction in potential environmental effects of the proposed project. Other than the No-Project Alternative, Alternative 2: Reduced Size Alternative would provide the most benefit relative to reducing environmental effects compared to the proposed Project.

Table 5-1 Comparison of Significant Environmental Effects of the Alternatives to the Proposed Project		
Environmental Issue Area	Alternative 1: No-Project Alternative	Alternative 2: Reduced Size Alternative
Aesthetics	Reduced	Reduced
Agricultural Resources	Reduced	Reduced
Air Quality	Reduced	Reduced
Biological Resources	Reduced	Similar
Cultural and Tribal Cultural Resources	Reduced	Similar
Geology, Soils, Minerals, and Paleontological Resources	Reduced	Similar
Greenhouse Gas Emissions	Reduced	Reduced
Hazards, Hazardous Materials and Wildfire	Reduced	Reduced
Hydrology and Water Quality	Reduced	Reduced
Land Use and Planning and Population, Housing, Employment	Reduced	Reduced
Noise and Vibration	Reduced	Reduced
Public Services and Recreation	Reduced	Similar
Transportation and Traffic	Reduced	Reduced
Utilities and Service Systems	Reduced	Reduced
Energy	Reduced	Similar
Total Reduced Impact Topics	**11**	**10**
Note: Some environmental issue areas are split into subsections. In this case, if any of the subsections had reduced or increased impacts, the entire environmental issue is shown as reduced or increased (even if another subsection had similar impacts).		

6 OTHER CEQA CONSIDERATIONS

This chapter provides a summary of significant environmental impacts; significant and unavoidable impacts; significant irreversible environmental changes; and growth-inducing effects.

Comments received on the Notice of Preparation (NOP) were reviewed during preparation of this SEIR. A comment letter was submitted by the Sacramento Local Agency Formation Commission (LAFCo) expressing concern regarding project effects on growth inducement. The City reviewed and considered this information during preparation of this chapter.

6.1 SIGNIFICANT AND UNAVOIDABLE ADVERSE IMPACTS

Section 15226.2(b) of the CEQA Guidelines requires EIRs to include a discussion of any significant environmental impacts that cannot be avoided if the proposed project is implemented.

Chapter 3 of this SEIR provides a detailed analysis of significant and potentially significant environmental impacts related to approval of the proposed project; identifies feasible mitigation measures, where available, that could avoid or reduce these significant and potentially significant impacts; and presents a determination whether these mitigation measures would reduce these impacts to less-than-significant levels.

Following is a listing of significant and unavoidable impacts associated with implementation of the proposed project. Cumulative impacts associated with the proposed project, including significant impacts, are summarized in Chapter 4 of this SEIR.

SECTION 3.2, AESTHETICS

- **Impact 3.2-1:** Substantial degradation of existing visual character.

SECTION 3.3, AGRICULTURAL RESOURCES

- **Impact 3.3-1:** Direct and indirect loss of agricultural land, including Farmland of Statewide Importance.
- **Impact 3.3-2:** Potential conflict with existing on-site and off-site Williamson Act contracts.

SECTION 3.4, AIR QUALITY

- **Impact 3.4-2:** Generation of long-term operational emissions of criteria pollutants and precursors.

SECTION 3.5, BIOLOGICAL RESOURCES

- **Impact 3.5-3:** Loss of nesting and foraging habitat for special-status and other protected raptors. (Swainson's Hawk).

SECTION 3.6, CULTURAL AND TRIBAL CULTURAL RESOURCES

- **Impact 3.6-2:** Substantial adverse change to unknown historical resources or unique archeological resources.
- **Impact 3.6-3:** Substantial adverse change to a Tribal Cultural Resource.

SECTION 3.8, GREENHOUSE GAS EMISSIONS

- **Impact 3.8-1:** Generation of greenhouse gas emissions or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

SECTION 3.11, LAND USE, POPULATION, HOUSING, EMPLOYMENT, ENVIRONMENTAL JUSTICE, AND UNINCORPORATED DISADVANTAGED COMMUNITIES

- ▸ **Impact 3.11-4:** Conversion of open space.

SECTION 3.12, NOISE AND VIBRATION

- **Impact 3.12-1:** Temporary, short-term exposure of sensitive receptors to construction noise.
- **Impact 3.12-3:** Temporary, short-term exposure of sensitive receptors to potential groundborne noise and vibration from Project construction.
- **Impact 3.12-4:** Long-term traffic noise levels at existing noise-sensitive receivers.
- **Impact 3.12-5:** Land use compatibility of on-site sensitive receptors with future traffic noise levels.
- **Impact 3.12-6:** Land use compatibility of on-site sensitive receptors to or generation of non-transportation noise levels in excess of local standards.

SECTION 3.16 ENERGY

- **Impact 3.16-1:** Result in the wasteful, inefficient, or unnecessary consumption of energy resources.

6.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

CEQA requires an EIR to address significant irreversible environmental changes. Specifically, the EIR must consider whether "uses of nonrenewable resources during the initial and continued phases of the Project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely" (CEQA Guidelines Section 15126.2[c]). Nonrenewable resources, as used in this discussion, refer to the physical features of the natural environment: land, air, and waterways.

Development of the Project site would result in commitment of land to a mix of urban uses instead of the agricultural uses that exist today. Proposed development would use both renewable and nonrenewable natural resources during both construction and operational phases—both within the Project site and also to construct required off-site improvements. Nonrenewable fossil fuels would be used primarily during construction, but also during Project operation. Other nonrenewable and slowly-renewable resources consumed as a result of development of the Project site would include, but not necessarily be limited to, lumber and other forest products, sand and gravel, asphalt, petrochemical construction materials, steel, copper, and water. Proposed development would consume energy for multiple purposes including, but not limited to, building heating and cooling, lighting, appliances, electronics, office equipment, and commercial machinery. Energy could also be consumed during each vehicle trip associated with these proposed uses. It is important to note that actual energy usage could vary substantially, depending upon factors such as the type of uses that would occupy the buildings, actual miles driven

by future residents and employees, and the degree to which energy conservation measures are incorporated into the design of the various facilities.

Irreversible changes would likely occur as a result of future excavation, grading, and construction activities. Proposed development would also generate additional transportation demand, construction, energy demand, and other activities that would increase emissions of greenhouse gases and other air pollutants, as well as generation of noise. Different air pollutants and different greenhouse gas emissions remain in the atmosphere for different amounts of time, ranging from a few years to thousands of years.

Operation of projects in the vicinity could include the use of hazardous materials, which could increase the risk of an accidental spill or release.

During construction, equipment would be using various types of fuel and material classified as hazardous. In the State of California, the storage and use of hazardous substances are strictly regulated. The enforcement of these existing regulations would preclude credible significant impacts related to environmental accidents.

Detailed assessments for each of the above-mentioned topics are provided throughout Chapter 3 of this SEIR. Cumulative impacts associated with each of these topics are additionally addressed in detail in Chapter 4.

6.3 GROWTH-INDUCING IMPACTS

According to Section 15126.2(d) of the CEQA Guidelines, an EIR should:

> [d]iscuss 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 that 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 the construction of new facilities that could cause significant environmental effects. Also discuss characteristics of some projects that 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.

A project has the potential to induce growth both directly and indirectly. Direct growth inducement would result if a project involved construction of new housing. Indirect growth inducement would result, for instance, if implementing a project resulted in substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises); or a construction effort with substantial short-term employment opportunities that indirectly stimulates the need for additional housing and services to support the new employment demand; and/or removal of an obstacle to additional growth and development, such as improving the capacity of a public utility or service (e.g., construction of a major sewer line with excess capacity through an undeveloped area).

Growth inducement itself is not an environmental effect but may lead to environmental effects. These environmental effects may include increased demand on other services and infrastructure, increased traffic and

noise, degradation of air or water quality, degradation or loss of plant or animal habitats, conversion of agricultural and open space land to urban uses, or other adverse impacts.

6.3.1 GROWTH-INDUCING IMPACTS OF THE PROJECT

The Project site is located outside of the existing City limits; however, the proposed Project site would ultimately be annexed to the City and was considered as part of the recently updated Elk Grove General Plan, adopted in 2019.

In addition to residential development in the mixed-use area that could occur in the future, the proposed regional commercial, and light and heavy industrial development would generate a substantial amount of employment-generating land uses. As described in Chapter 2, "Project Description," of this SEIR, the Project site could accommodate a broad range of uses that could generate approximately 8,000 jobs. SACOG estimates the City of Elk Grove would have approximately 60,070 jobs by 2036 and 122,160 jobs at buildout of the City.

Development of the Project site would require construction workers. Because construction workers typically do not change where they live each time they are assigned to a new construction site, it is not anticipated that there would be any substantial relocation of construction workers to Elk Grove or Sacramento County associated with the proposed Project

The additional population associated with the proposed Project could spur an increase in demand for goods and services in the surrounding area, which could potentially result in additional development to satisfy this demand. In this respect, the proposed Project would be growth inducing. It would be speculative to attempt to predict where and when any such new services would be developed, and whether or not existing and future planned industrial and commercial development would satisfy additional demand for goods and services created by the project.

In summary, the proposed Project may indirectly induce population growth because the increased population and employment opportunities associated with the future development could increase demand for goods and services, thereby fostering population and economic growth in the City and surrounding unincorporated Sacramento County and other nearby communities. It is possible that the proposed Project could place pressure on adjacent areas to seek development entitlements or annexation applications. However, the proposed Project, along with other areas planned for development of the City's General Plan, would provide sufficient acreage to accommodate population and employment growth. Therefore, the proposed Project would likely not induce substantial growth outside of the Project site.

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