



DRAFT

ENVIRONMENTAL IMPACT REPORT

FOR

THE RANCH PROJECT

(SCH: 2018072011)

AUGUST 2019

Prepared for:

City of Rancho Cordova
2729 Prospect Park Drive
Rancho Cordova, CA 95670
(916) 851-8700

Prepared by:

De Novo Planning Group
1020 Suncastr Lane, Suite 106
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(916) 580-9818

D e N o v o P l a n n i n g G r o u p

A Land Use Planning, Design, and Environmental Firm



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DRAFT EIR

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INTRODUCTION

The City of Rancho Cordova (City) has determined that a project-level environmental impact report (EIR) is required for the The Ranch project (Project) pursuant to the requirements of the California Environmental Quality Act (CEQA).

This EIR is a Project EIR as defined in Section 15161 of the State CEQA Guidelines. A Project EIR is an EIR which examines the environmental impacts of a specific development project. This type of EIR should focus primarily on the changes in the environment that would result from the development Project. The EIR shall examine all phases of the Project including planning, construction and operation. The Project EIR approach is appropriate for The Ranch Project because it allows comprehensive consideration of the reasonably anticipated scope of the Project, as described in greater detail in Chapter 2.0.

PROJECT DESCRIPTION

The following provides a brief summary and overview of the Project. Chapter 2.0 of this EIR includes a detailed description of the Project, including maps and graphics. The reader is referred to Chapter 2.0 for a more complete and thorough description of the components of the Project.

The Project site consists of approximately 530 acres located in the City of Rancho Cordova city limits. The Project site is bound by existing single-family residential uses and Douglas Road to the north, vacant land and Grant Line Road to the east, vacant land and Kiefer Boulevard to the south, and Rancho Cordova Parkway, single family residential, and vacant land on the west.

The Project site is currently vacant and has been previously used for agricultural uses (cattle grazing). The topography of the site exhibits low relief topography with elevations ranging between 170 and 210 feet above mean sea level (MSL). The slopes throughout the site range from approximately zero to eight percent. The site is characterized by moderate rolling hills and areas of extensive flatlands, with wetlands, vernal pools, and seasonal drainage courses scattered throughout the site. A headwater tributary of Morrison Creek traverses the Project site, entering at the northeast corner and flowing generally to the southwest. A total of 21.53 acres of jurisdictional aquatic resources have been mapped with the Project site, including: 2.92 acres of depression seasonal wetlands, 15.04 acres of vernal pools, 1.66 acres of riverine seasonal wetlands, 0.06 acres of riverine seasonal wet swales, 1.54 acres of intermittent drainages, and 0.30 acres of drainage basin outfalls.

The Project includes development of: 1,725 residential units, including 737 age restricted single-family units, 735 non-age restricted single-family units, and up to 253 multifamily units, 38 of which would be age-restricted multifamily units, with a club house for the age-restricted senior community, and other recreational opportunities; dedication of 5.16 net acres for commercial use; and dedication of 8.43 net acres for multi-family residential uses in accordance with the City of Rancho Cordova's Affordable Housing Plan. The Project would also preserve approximately 199.5 acres as a nature preserve that would be deeded to a third-party conservation entity.

On-site infrastructure associated with the Project would include the construction of internal and external access roads and a network of bicycle and pedestrian trails. Primary access would be from Rancho Cordova Parkway. The Project would provide for future connections to an extension of Chrysanthy Boulevard east of the Project site.

The Project site is currently designated Planning Area in the City's General Plan. The Project would require a City of Rancho Cordova General Plan Amendment to the Land Use Element to change land uses on the Project site. Changes to the Land Use Element would include changing the entire Project site from Planning Area to Low Density Residential, Medium Density Residential, High Density Residential, Commercial, Parks/Open Space, and Natural Resources. The Project would also include a rezone to Special Planning Area (SPA).

Refer to Chapter 2.0, Project Description, for a more complete description of the details of the Project.

AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

This Draft EIR addresses environmental impacts associated with the Project that are known to the City of Rancho Cordova, were raised during the Notice of Preparation (NOP) process, or raised during preparation of the Draft EIR. This Draft EIR discusses potentially significant impacts associated with aesthetics, air quality, biological resources, cultural and tribal resources, geology and soils, greenhouse gases and climate change, hazards and hazardous materials, hydrology and water quality, land use, noise, population and housing, public services and recreation, transportation/circulation, and utilities.

The City received seven comments on the NOP for the Project Draft EIR. A copy of each letter is provided in Appendix A of this Draft EIR. A public scoping meeting was held on July 26, 2018 to present the Project description to the public and interested agencies, and to receive comments from the public and interested agencies regarding the scope of the environmental analysis to be included in the Draft EIR.

Aspects of the Project that could be of public concern include the following:

- The size of the Project and the associated potential impacts related to air quality emission levels, without mitigation;
- The proposed park areas and the potential impacts related to the transmission lines, irrigation, operational noise, transportation facilities, and light and glare;
- The proposed uses which would lie beneath the on-site transmission lines;
- Concerns regarding the Project's traffic-related impacts to Sacramento County facilities;
- Concerns regarding the amount of park land provided.

ALTERNATIVES TO THE PROJECT

Section 15126.6 of the CEQA Guidelines requires an EIR to describe a reasonable range of alternatives to the project or to the location of the project which would reduce or avoid significant impacts, and which could feasibly accomplish the basic objectives of the Project. The alternatives analyzed in this EIR include the following three alternatives in addition to the Project:

- No Project Alternative
- Reduced Project Alternative #1
- Reduced Project Alternative #2

Alternatives are described in detail in Section 5.0, Alternatives to the Project, and are summarized in Table ES-1 below.

TABLE ES-1: COMPARISON OF PROJECT CHARACTERISTICS TO THE ALTERNATIVES

<i>COMPONENT</i>	<i>PROJECT</i>	<i>NO PROJECT ALTERNATIVE</i>	<i>REDUCED DENSITY ALTERNATIVE #1</i>	<i>REDUCED DENSITY ALTERNATIVE #2</i>
Single Family, Non-Age-Restricted (Units)	735	1,124	637	477
Single Family, Senior Age-Restricted (Units)	737	1,000	643	693
Multifamily, Non-Age-Restricted (Units)	215	400	268	268
Multifamily, Senior Age-Restricted (Units)	38	100	50	50
<i>Subtotal Dwelling Units</i>	<i>1,1725</i>	<i>2,624</i>	<i>1,598</i>	<i>1,488</i>
Senior Community Clubhouse (square feet)	27,000	27,000	27,000	27,000
Commercial Parcels (acres)	5.16	5.08	5.08	5.08
Parks and Recreation (acres)	19.24	19.24	19.24	19.24
Nature Preserve (acres)	199.5	136.8	212.0	221.1

A comparative analysis of the Project and each of the Project alternatives is provided in Table ES-2. The table includes a numerical scoring system, which assigns a score of “2,” “3,” or “4” to the Project and each of the alternatives with respect to how each alternative compares to the Project in terms of the severity of the environmental topics addressed in this EIR. A score of “2” indicates that the alternative would have a better (or lessened) impact when compared to the Project. A score of “3” indicates that the alternative would have the same (or equal) level of impact when compared to the proposed Project. A score of “4” indicates that the alternative would have a worse (or greater) impact when compared to the Project. The Project alternative with the lowest total score is considered the environmentally superior alternative.

TABLE ES-2: COMPARISON OF ALTERNATIVE PROJECT IMPACTS TO THE PROJECT

<i>ENVIRONMENTAL ISSUE</i>	<i>PROJECT</i>	<i>NO PROJECT ALTERNATIVE</i>	<i>REDUCED PROJECT ALTERNATIVE #1</i>	<i>REDUCED PROJECT ALTERNATIVE #2</i>
Aesthetics and Visual Resources	3 – Same	4 - Greater	2 – Less	2 – Less
Air Quality	3 – Same	4 – Greater	2 – Less	2 – Less
Biological Resources	3 – Same	4 - Greater	2 – Less	2 - Less
Cultural and Tribal Resources	3 – Same	3 – Same	3 – Same	3 – Same
Geology and Soils	3 – Same	3 - Same	3 - Same	3 - Same
Greenhouse Gas, Climate Change, and Energy	3 – Same	4 – Greater	4 – Greater	4 - Greater
Hazards and Hazardous Materials	3 – Same	3 – Same	3 – Same	3 – Same
Hydrology and Water Quality	3 – Same	3 – Same	3 – Same	3 – Same
Land Use	3 – Same	3 – Same	3 – Same	3 – Same
Noise and Vibration	3 – Same	4 – Greater	2 – Less	2 – Less
Population and Housing	3 – Same	3 - Same	2 – Less	2 – Less
Public Services and Recreation	3 – Same	4 – Greater	3 – Same	3 - Same
Transportation and Circulation	3 – Same	4 – Greater	2 – Less	2 – Less
Utilities	3 – Same	3 - Same	2 – Less	2 – Less
Summary	42	49	35	36

As shown in Table ES-2, the No Project Alternative would result in 49 points, Reduced Project Alternative #1 would result in 35 points, and Reduced Project Alternative #2 would result in 36 points. However, because Reduced Project Alternative #2 would reduce the extent of development, including the acreage and number of residential units and associated population, more than Reduced Project Alternative #1, impacts of Reduced Project Alternative #2 associated with air quality, noise, and traffic would be reduced more than Reduced Project Alternative #1. Therefore, Reduced Project Alternative #2 is the next environmentally superior alternative to the Project. It is noted that the superior alternative would depend on the City's local priorities (i.e., traffic impacts to the regional roadway system, maintenance of public services and utilities services, etc.), as well as the ability to meet the Project's objectives. It is noted, however, that this alternative would not eliminate the significant and unavoidable impact related to aesthetics that would occur under the Project.

SUMMARY OF IMPACTS AND MITIGATION MEASURES

The environmental impacts of the Project, the impact level of significance prior to mitigation, the proposed mitigation measures and/or adopted policies and standard measures that are already in place to mitigate an impact, and the impact level of significance after mitigation are summarized in Table ES-3.

TABLE ES-3: PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

<i>ENVIRONMENTAL IMPACT</i>	<i>LEVEL OF SIGNIFICANCE WITHOUT MITIGATION</i>	<i>MITIGATION MEASURE</i>	<i>RESULTING LEVEL OF SIGNIFICANCE</i>
AESTHETICS AND VISUAL RESOURCES			
Impact 3.1-1: Project implementation would result in substantial adverse effects on scenic vistas and resources or substantial degradation of visual character	PS	None feasible.	SU
Impact 3.1-2: Project implementation would not result in substantial light or glare which would adversely affect day or nighttime views in the area	LS	None required.	--
AIR QUALITY			
Impact 3.2-1: The Project has the potential to conflict with or obstruct implementation of the applicable air quality plan or to result in a cumulatively considerable net increase in criteria pollutants for which the region is in non-attainment	LS	None required.	--
Impact 3.2-2: The Project has the potential to generate carbon monoxide hotspot impacts as a result of increased traffic congestion that would exceed the applicable ambient air quality standards	LS	None required.	--
Impact 3.2-3: The Project has the potential for expose sensitive receptors to substantial toxic air contaminants	LS	None required.	--
Impact 3.2-4: The Project has the potential to result in other emissions (such as those leading to odors) that would adversely affect a substantial number of people	LS	None required.	--

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
BIOLOGICAL RESOURCES			
<p>Impact 3.3-1: The Project has the potential to, directly or indirectly, have a substantial adverse effect through habitat modifications or reductions, cause populations to drop below self-sustaining levels, substantially eliminate a community, or substantially reduce the number of, or restrict the range of, an endangered, rare or threatened species, including those considered candidate, sensitive, or special-status, in local or regional plans, policies, regulations, or by the CDFW or USFWS - Invertebrates</p>	<p>PS</p>	<p>Mitigation Measure 3.3-1: Prior to any ground disturbing activities, the Project proponent shall submit a South Sacramento Habitat Conservation Plan (SSHCP) permit application package to the City of Rancho Cordova (“Land Use Authority Permittee”) as a request that the incidental take coverage provided by City’s SSHCP Incidental Take Permit (ITP) be extended to the proposed activities. The City of Rancho Cordova shall review the SSHCP permit application for consistency with all of the SSHCP requirements and provide the South Sacramento Conservation Agency (“Implementing Entity) with a copy of the SSHCP requirements for tracking purposes. The Project proponent shall be responsible for paying all SSHCP development fees associated with obtaining coverage from the City of Rancho Cordova. Any proposal to provide land in fee title or provide a conservation easement in lieu of paying all or part of the required SSHCP development fees, shall include a consistency analysis in the application that sufficiently shows that the proposal is consistency with the SSHCP Conservation Strategy.</p> <p>Mitigation Measure 3.3-2: The Project proponent shall implement the following SSHCP Avoidance and Minimization Measures (AMMs) to the satisfaction of the City to avoid direct and indirect effects of Covered Activities on Covered Species:</p> <ul style="list-style-type: none"> • AMM SPECIES-1 (Litter Removal Program): A litter control program shall be instituted for the entire Project site. All workers shall ensure that their food scraps, paper wrappers, food containers, cans, bottles, and other trash are deposited in covered or closed trash containers. All garbage shall be removed from the Project site at the end of each work day, and construction personnel shall not feed or otherwise attract wildlife to the area where construction activities are taking place. • AMM SPECIES-2 (No Pets in Construction Areas): To avoid harm and harassment of native species, workers and visitors shall not bring pets onto a Project site. • AMM SPECIES-3 (Take Report): If accidental injury or death of any Covered Species occurs, workers shall immediately inform the approved biologist or on-site monitor and site supervisor. The approved biologist or on-site monitor shall phone the appropriate contact person at the Implementing Entity (i.e., the South Sacramento Conservation Agency). The Implementing Entity shall immediately contact the Wildlife Agencies (i.e., the USFWS and CDFW) by 	<p>LS</p>

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
		<p><i>telephone. A memorandum shall be provided to the Implementing Entity and Wildlife Agencies within 1 working day of the incident. The report shall provide the date and location of the incident, number of individuals taken, the circumstances resulting in the take, and any corrective measures taken to prevent additional take.</i></p> <ul style="list-style-type: none"> • <i>AMM SPECIES-4 (Post-Construction Compliance Report): A post-construction compliance report shall be submitted to the SSHCP Implementing Entity within 30 calendar days of completion of construction activities or within 30 calendar days of any break in construction activity that lasts more than 30 days. The report shall detail the construction start and completion dates, any information about meeting or failing to meet species take AMMs, effectiveness of each AMM that was applied at the Project site, and any known Project effects to Covered Species.</i> • <i>AMM LID-1 (Stormwater Quality): When the size of a Covered Activity Project exceeds the thresholds established by the State Water Resources Control Board (SWRCB) (see the most recent Stormwater Quality Design Manual for the Sacramento and South Placer Regions, or future SWRCB-approved design manuals applicable to the Plan Area), incorporate stormwater management into site design to satisfy the requirements outlined in the most recent Stormwater Quality Design Manual for the Sacramento and South Placer Regions. Stormwater management may include groundwater recharge (LID-2) and natural site features (LID-3).</i> • <i>AMM LID-3 (Natural Site Features): Incorporate preservation of a site's natural aquatic features (such as creeks and streams) into Project design to retain natural hydrologic patterns and to retain habitat that might be used by Covered Species.</i> • <i>AMM EDGE-1 (Compatible Land Uses): To the maximum extent practicable, development Project Covered Activities will locate compatible land uses (e.g., designated open space such as parks and ball fields, detention basins, and other land uses with less-intensive human activity) in areas immediately adjacent to existing or planned Preserve boundaries. The compatible land use will provide additional buffering of Preserves from potential indirect effects of adjacent urban development. The soil surfaces in a compatible land use area may be re-contoured provided that the soil restrictive layer remains</i> 	

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
		<p><i>undamaged and most of the soil profile above the restrictive layer remains intact. The Land Use Authority will determine when it is not practicable to locate a compatible land use adjacent to existing or planned Preserve boundaries.</i></p> <ul style="list-style-type: none"> • <i>AMM EDGE-2 (Single-Loaded Streets): To the maximum extent practicable, the design of Urban Development Covered Activities will locate single-loaded streets adjacent to existing or planned Preserve. The Land Use Authority will determine when single-loaded streets are not practicable.</i> • <i>AMM EDGE-3 (Preserve Setbacks): Urban Development Covered Activities constructed adjacent to existing or planned Preserves must establish a minimum 50-foot-wide setback outward from the boundary of any existing Preserve or planned SSHCP Preserve. This minimum 50-foot-wide setback will function as a transition between Urban Development and the Preserve, and must be managed to maintain the natural community of vegetation present in the adjacent Preserve. As much of the setback as possible should remain in the same natural habitat as the Preserve.</i> <i>However, as discussed in Section 5.2.5, Covered Activities in Preserve Setbacks in the UDA, where an existing or planned Preserve is adjacent to an existing roadway (e.g., collectors, arterials, thoroughfares), the 50-foot Preserve Setback will not be required, and any bicycle or pedestrian trail will be established in the road right-of-way. In addition, where a planned roadway crosses an existing or planned Preserve, no Preserve Setback will be required, and any bicycle or pedestrian trail will be established in the road right-of-way.</i> • <i>AMM EDGE-4 (Locate Stormwater Control Outside Preserves): Roads, sidewalks, and other impermeable surfaces of Urban Development Covered Activities adjacent to existing or planned Preserves will slope away from Preserves and Preserve Setbacks or intercept drainage with swales or curbs and gutters to preclude drainage from entering Preserves and Preserve Setbacks. Stormwater flows must be directed away from Preserves and Preserve Setbacks and directed into stormwater control facilities inside the development (outside Preserves and Preserve Setbacks) (see EDGE-6 for exception to EDGE-4 in certain SSHCP Linkage Preserves).</i> • <i>AMM EDGE-5 (Stormwater Control in Preserve Setbacks): If trails are established in any Preserve Setback in compliance with EDGE-3, the trail must</i> 	

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
		<p><i>be sloped away from the Preserve, and rainwater leaving the trail surface must flow into an adjacent low-velocity bio-retention swale or cell to keep rainwater runoff and trail contaminants from entering the Preserve. Low-velocity bio-retention swales or cells are typically small linear features placed on one or both sides of a trail. As required by EDGE-3, trails and their adjacent bio-retention swales or cells must be located on the side of the Preserve Setback nearest development.</i></p> <ul style="list-style-type: none"> • <i>AMM EDGE-7 (Hardpan/Duripan Protection): To protect the soil perched aquifer and the micro-watersheds supporting existing vernal pool hydrology, activities that have the potential to cut into, disrupt, or remove the soil's restrictive layer (hardpan or duripan) will not occur within Preserves or Preserve Setbacks. However, in certain circumstances, the Covered Activities defined in Section 5.2.6, Covered Activities in Stream Setbacks in the UDA, and Section 5.2.8, Covered Activities in the Laguna Creek Wildlife Corridor of the Preserve System, may result in punctures or other minor disruptions of the soil hardpan or duripan if approved by the Implementing Entity and the Technical Advisory Committee according to the process described in Chapter 9 of the SSHCP. If a Covered Activity on a Preserve or Preserve Setback results in a puncture or other disruption to the soil hardpan or duripan, the puncture will be sealed using bentonite clay or other material that maintains the functionality of the soil's restrictive layer and associated perched aquifer.</i> • <i>AMM EDGE-10 (Prevent Invasive Species Spread): Completed Covered Activities (including roads) will be maintained in a manner that avoids the spread of invasive species into Preserve and Open Space areas. Such maintenance measures will include the following:</i> <ul style="list-style-type: none"> ○ <i>To prevent the transport of non-native invasive species onto Preserves, before bringing any equipment onto an SSHCP Preserve or Preserve Setback, equipment must be cleaned of mud, dirt, and plant material. Cleaning will occur in the infested area or another appropriate location as approved by a Plan Permittee.</i> ○ <i>Mowing rotation will start in un-infested areas and move to infested areas.</i> ○ <i>Invasive plant prevention techniques will be incorporated into maintenance plans.</i> 	

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		<ul style="list-style-type: none"> ○ <i>The SSHCP Implementing Entity will survey road shoulders, ditches, and rights-of-way that border SSHCP Preserves for invasive weeds or other exotic plant species. Where roadside weed infestations have reached a critical control point, the Implementing Entity or Land Use Authority Permittee will apply the appropriate manual, mechanical, or chemical treatment.</i> ● <i>AMM BMP-9 (Soil Compaction): After construction is complete, all temporarily disturbed areas will be restored similar to pre-Project conditions, including impacts relating to soil compaction, water infiltration capacity, and soil hydrologic characteristics.</i> ● <i>AMM NATURE TRAIL-1 (Nature Trail Plan): A nature trail plan must be prepared for each Preserve where a trail is allowed by the Preserve Management Plan. Nature trails will be unpaved trails that vary in width depending on terrain and existing constraints, but will never exceed 4 feet in width. Where a trail crosses a swale, wooden walkways elevated to a height no greater than 2 feet will be installed. Trail improvements may include mowing vegetation to create or maintain a trail, minor grading to remove trip hazards, and signs providing directional and educational information. Public access to land acquired for preservation will be prohibited until a trail plan can be prepared by the Implementing Entity and approved by the Permitting Agencies. A trail plan will include the following:</i> <ul style="list-style-type: none"> ○ <i>Maps identifying areas that contain sensitive habitats or species occurrences.</i> ○ <i>Maps that show the location and footprint of proposed trails.</i> ○ <i>Methods used to control public access.</i> ○ <i>Trail and use monitoring methods, schedules, and responsibilities.</i> ○ <i>Trail operation and maintenance guidelines and responsibilities.</i> ○ <i>Clear triggers for use restrictions or closure based on sensitive biological indicators (e.g., seasonal closures of some trails on the basis of activity periods of Covered Species or sensitive species).</i> ● <i>AMM NATURE TRAIL-2 (Nature Trail Protection of Duripan): Nature trails will be sited and constructed so as not to interfere with existing soil duripan and the perched aquifer that support the existing hydrologic regime of the Vernal</i> 	

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
		<p><i>Pool-Grassland, and will not interfere with existing pool hydrology. Trails within Preserves will not be paved.</i></p> <ul style="list-style-type: none"> • <i>AMM NATURE TRAIL-3 (Nature Trail Location): Nature trails will be located away from sensitive natural resources (e.g., vernal pools, riparian habitat, woodland habitat, Covered Species occurrences, raptor nesting sites, tricolored blackbird (Agelaius tricolor) colony sites). The Wildlife Agencies will determine the distance necessary to avoid impacts to sensitive natural resources.</i> • <i>AMM NATURE TRAIL-4 (Biological Studies Prior to Nature Trail Design): Biological studies will be conducted within the area being considered for nature trail construction prior to Project design. The studies will include land cover type mapping and focused species surveys and/or wetland delineations. The biological studies will include assessments of potential effects of trail construction on Preserve System resources, and recommendations for avoidance and minimization that may be incorporated into Project siting, design, construction, and operation.</i> • <i>AMM NATURE TRAIL-5 (Monitoring of Nature Trail Impacts): Impacts that could result from use of a nature trail within a Preserve will be monitored according to the Preserve Management Plan (Chapter 8) to ensure that uses do not conflict with the individual Preserve Management Plan. If use of a trail is found to conflict with the individual Preserve Management Plan, use of that trail will be discontinued until adjustments in the use can be made to reduce or eliminate conflicts. The Implementing Entity will make decisions about discontinuing or modifying use of a trail in consultation with the Preserve Manager or other applicable Preserve management agency or organization.</i> • <i>AMM ROAD-1 (Road Project Location): Road projects will be located in the least environmentally sensitive area to avoid, to the maximum extent practicable, impacts on Covered Species, Covered Species habitat, and waters of the United States. Road project alignments will follow existing roads, road easements, and rights-of-way, or be sited in disturbed areas to minimize habitat loss and additional habitat fragmentation.</i> • <i>AMM ROAD-3 (Roadside Pesticide Use): If pesticide use is necessary along roadsides, the appropriate SSHCP Permittee will ensure that the pesticide application strictly complies with the pesticide label and all other applicable federal, state, and local authorities pertaining to the use, safety, storage,</i> 	

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
		<p><i>disposal, and reporting of the pesticide. Where roadside weed infestations have reached a critical control point, the Implementing Entity or a Land Use Authority Permittee will apply the appropriate manual, mechanical, or chemical treatment. In addition, the Implementing Entity or appropriate Land Use Authority Permittee will post signs along road shoulders adjacent to sensitive areas that are within the SSHCP Preserve System (e.g., California tiger salamander breeding ponds, endemic plant populations, vertebrates that rely on insects for part of their diet). The signs will identify pesticide use restrictions or other roadside maintenance restrictions.</i></p> <ul style="list-style-type: none"> • <i>AMM RE-ESTABLISHMENT/ESTABLISHMENT-1 (Vernal Pool): Re-establish or establish Vernal Pool Wetland according to the following guidelines:</i> <ul style="list-style-type: none"> ○ <i>Re-establishment will always take priority over establishment of vernal pools. Establishment will be permitted only after it has been determined that sites with the potential to re-establish vernal pools no longer exist in the Plan Area or cannot be acquired through a willing seller/buyer agreement.</i> ○ <i>When possible, re-established or established sites will be located adjacent to an existing Preserve(s) to maximize connectivity and Preserve area.</i> ○ <i>Re-establishment or establishment will not result in direct or indirect adverse impacts to the hydrologic regime of existing vernal pools. Vernal pool re-establishment or establishment actions will not remove more than 10% of any existing vernal pool watershed, as defined by the SSHCP LIDAR analysis (see Section 3.3 and Conservation Action VPI1.2 in Table 7.1).</i> ○ <i>Vernal pool re-establishment will attempt to restore the historical density and range of vernal pool sizes to the maximum extent feasible using historical aerial photography of the site, if available. Where aerial photography of the site’s historical conditions is not available, vernal pool re-establishment will include a range of pool sizes (area and depth) to accommodate the different habitat needs and life history characteristics of the vernal pool invertebrate Covered Species.</i> ○ <i>Established vernal pools must be located on sites with vernal pool</i> 	

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
		<p>soils, defined as any Plan Area soil type where vernal pools currently exist.</p> <ul style="list-style-type: none"> ○ Established vernal pool sites will include a range of pool sizes to accommodate the different habitat needs and life history characteristics of the three vernal pool invertebrate Covered Species. ○ The total density of vernal pools will not exceed 10% of the suitable soil areas in any vernal pool re-establishment and/or establishment site, unless it can be shown that the suitable areas of that site historically supported greater densities. ○ Re-establishment or establishment may include inoculation when it is likely that no seed or cyst bank of vernal pool species remains at a site. Vernal Pool inocula will come from nearby vernal pools that are on the same geologic formation and soil type. <ul style="list-style-type: none"> ● AMM UTILITY-2 (Utility Maintenance on Preserves): Utility maintenance inside SSHCP Preserves and SSHCP Preserve Setbacks containing vernal pools will occur only when vernal pools have been dry for 30 days, except in emergency situations related to human health and safety. ● AMM UTILITY-3 (Trenchless Construction Methods): Where a pipeline or conduit crosses an existing or planned Preserve or will be located between adjacent Preserves (e.g., under a roadway that has a Preserve on both sides), trenchless construction methods will be used to minimize impacts to the existing soil profile (including impacts to a hardpan or duripan) to maintain the perched aquifer in Vernal Pool Grassland land cover type. ● AMM UTILITY-4 (Siting of Entry and Exit Location): The entry and exit locations for the trenchless construction method (see Utility-3) will be sited to avoid impacts to vernal pools and Riparian Woodland, and to avoid direct take of SSHCP Covered Species. 	
Impact 3.3-2: The Project has the potential to, directly or indirectly, have a substantial adverse effect through habitat modifications or reductions, cause populations to drop below self-sustaining levels, substantially eliminate a community, or substantially	PS	<p>Mitigation Measure 3.3-3: The Project proponent shall implement the following SSHCP AMMs to the satisfaction of the City to avoid direct and indirect effects of Covered Activities on western spadefoot (<i>Spea hammondi</i>):</p> <ul style="list-style-type: none"> ● AMM WS-1 (Western Spadefoot Work Window): Ground-disturbing Covered Activities shall occur outside the breeding and dispersal season (after May 15 and before October 15), to the maximum extent practicable. 	LS

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
<p>reduce the number of, or restrict the range of, an endangered, rare or threatened species, including those considered candidate, sensitive, or special-status, in local or regional plans, policies, regulations, or by the CDFW or USFWS - Reptile and Amphibian</p>		<ul style="list-style-type: none"> • <i>AMM WS-2 (Western Spadefoot Exclusion Fencing): If Covered Activities must be implemented after October 15 and before May 15, exclusion fencing shall be installed around the Project footprint before October 15, and the Project site must be monitored by an approved biologist following rain events. Temporary high visibility construction fencing shall be installed along the edge of work areas, and silt fencing shall be installed immediately behind the temporary high-visibility construction fencing to exclude western spadefoot from entering the construction area. Fencing shall remain in place until all construction activities within the construction area are completed. No Project activities shall occur outside the delineated Project footprint. If a western spadefoot is encountered. If a western spadefoot is encountered, refer to WS-6, below.</i> • <i>AMM WS-3 (Western Spadefoot Monitoring): If Covered Activities must be implemented in the breeding and dispersal season (after October 15 and before May 15), an approved biologist experienced with western spadefoot identification and behavior shall monitor the Project site, including the integrity of any exclusion fencing. The approved biologist shall be on site daily while construction related activities are taking place, and shall inspect the Project site daily for western spadefoot prior to construction activities. The approved biologist shall also train construction personnel on the required avoidance procedures, exclusion fencing, and protocols in the event that a western spadefoot enters an active construction zone (i.e., outside the buffer zone). If a western spadefoot is encountered, refer to WS-6, below.</i> • <i>AMM WS-4 (Avoid Western Spadefoot Entrapment): If a Covered Activity occurs in western spadefoot modeled habitat (Figure 3-17), all excavated steep-walled holes and trenches more than 6 inches deep shall be covered with plywood (or similar material) or provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each work day or 30 minutes prior to sunset, whichever occurs first. All steep-walled holes and trenches shall be inspected by the approved biologist each morning to ensure that no wildlife has become entrapped. All construction pipes, culverts, similar structures, construction equipment, and construction debris left overnight within western spadefoot modeled habitat shall be inspected for western spadefoot by the approved biologist prior to being moved. If a western spadefoot is encountered, refer to WS-6, below.</i> 	

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
		<ul style="list-style-type: none"> • <i>AMM WS-5 (Erosion Control Materials in Western Spadefoot Habitat): If erosion control is implemented within western spadefoot modeled habitat, non-entangling erosion control material shall be used to reduce the potential for entrapment. Tightly woven fiber netting (mesh size less than 0.25 inch) or similar material shall be used to ensure that western spadefoots are not trapped (no monofilament). Coconut coir matting and fiber rolls containing burlap are examples of acceptable erosion control materials.</i> • <i>AMM WS-6 (Western Spadefoot Encounter Protocol): If Covered Activities must be implemented during the breeding and dispersal season (after October 15 and before May 15), and a western spadefoot is encountered during construction activities, the approved biologist shall notify the Wildlife Agencies immediately. Construction activities shall be suspended in a 100-foot radius of the animal until the animal leaves the Project site on its own volition. If necessary, the approved biologist shall notify the Wildlife Agencies (i.e., the USFWS and CDFW) to determine the appropriate procedures related to relocation. If the animal is handled, a report shall be submitted, including date(s), location(s), habitat description, and any corrective measures taken to protect the western spadefoot within 1 business day to the Wildlife Agencies. The biologist shall report any take of listed species to the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife immediately. Any worker who inadvertently injures or kills a western spadefoot or who finds dead, injured, or entrapped western spadefoot(s) must immediately report the incident to the approved biologist.</i> 	
Impact 3.3-3: The Project has the potential to, directly or indirectly, have a substantial adverse effect through habitat modifications or reductions, cause populations to drop below self-sustaining levels, substantially eliminate a community, or substantially reduce the number of, or restrict the range of, an endangered, rare or threatened species, including those considered candidate, sensitive, or special-status, in local or regional plans, policies, regulations, or by the CDFW or	LS	None required.	--

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
USFWS - Fish			
<p>Impact 3.3-4: The Project has the potential to, directly or indirectly, have a substantial adverse effect through habitat modifications or reductions, cause populations to drop below self-sustaining levels, substantially eliminate a community, or substantially reduce the number of, or restrict the range of, an endangered, rare or threatened species, including those considered candidate, sensitive, or special-status, in local or regional plans, policies, regulations, or by the CDFW or USFWS - Birds</p>	PS	<p>Mitigation Measure 3.3-4: <i>The Project proponent shall implement the following SSHCP AMMs to the satisfaction of the City to avoid direct and indirect effects of Covered Activities on tricolored blackbird:</i></p> <ul style="list-style-type: none"> • <i>AMM TCB-1 (Tricolored Blackbird Surveys): If modeled habitat for tricolored blackbird is present within a Covered Activity's Project footprint or within 500 feet of a Project footprint, then an approved biologist shall conduct a field investigation to determine if existing or potential nesting or foraging sites are present within the Project footprint and adjacent areas within 500 feet of the Project footprint. Adjacent parcels under different land ownership shall be surveyed only if access is granted or if the parcels are visible from authorized areas. Within the Plan Area, potential tricolor blackbird nest sites are often associated with freshwater marsh and seasonal wetlands, or in thickets of willow, blackberry, wild rose, thistle, and other thorny vegetation. Tricolored blackbirds are also known to nest in crops associated with dairy farms. Foraging habitat is associated with annual grasslands, wet and dry vernal pools and other seasonal wetlands, agricultural fields (such as large tracts of alfalfa and pastures with continuous haying schedules and recently tilled fields), cattle feedlots, and dairies. The Third-Party Project Proponent shall map all existing or potential nesting or foraging sites and provide these maps to the Local Land Use Permittees (i.e., City of Rancho Cordova) and Implementing Entity (i.e., the South Sacramento Conservation Agency). Nesting sites must also be noted on plans that are submitted to a Local Land Use Permittee. See Chapter 10 of the SSHCP for the process to conduct and submit survey information.</i> • <i>AMM TCB-2 (Tricolored Blackbird Pre-Construction Surveys): Pre-construction surveys shall be required to determine if active nests are present within a Project footprint or within 500 feet of a Project footprint if existing or potential nest sites were found during design surveys and construction activities shall occur during the breeding season (March 1 through September 15). An approved biologist shall conduct pre-construction 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 of nesting tricolored blackbird. Pre-construction</i> 	LS

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
		<p>surveys shall be conducted during the breeding season (March 1 through August 31). Surveys conducted in February (to meet pre-construction survey requirements for work starting in March) must be conducted within 14 days and 3 days in advance of ground-disturbing activities. If a nest is present, then TCB-3 and TCB-4 shall be implemented. The approved biologist shall inform the Land Use Authority Permittee and the Implementing Entity of species locations, and they in turn shall notify the Wildlife Agencies (i.e., the USFWS and CDFW).</p> <ul style="list-style-type: none"> • AMM TCB-3 (Tricolored Blackbird Nest Buffer): If active nests are found within the Project footprint or within 500 feet of any Project-related Covered Activity, the Third-Party Project Proponent shall establish a 500-foot temporary buffer around the active nest until the young have fledged. • AMM TCB-4 (Tricolored Blackbird Nest Buffer Monitoring): If nesting tricolored blackbirds are present within the Project footprint or within 500 feet of any Project-related Covered Activity, then an approved biologist experienced with tricolored blackbird behavior shall be retained by the Third-Party Project Proponent to monitor the nest throughout the nesting season and to determine when the young have fledged. The approved biologist shall be on site daily while construction-related activities are taking place near the disturbance buffer. Work within the nest disturbance buffer shall not be permitted. If the approved biologist determines that tricolored blackbirds 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 tricolored blackbirds. If the biologist determines that the colonies are at risk, a meeting with the Third-Party Project Proponent, Implementing Entity, and Wildlife Agencies shall be held to determine the best course of action to avoid nest abandonment or take of individuals. The approved biologist shall also train construction personnel on the required avoidance procedures, buffer zones, and protocols in the event that a tricolored blackbird flies into an active construction zone (i.e., outside the buffer zone). • AMM TCB-5 (Timing of Pesticide Use and Harvest Timing on Agricultural Preserves): On SSHCP Agricultural Preserves, pesticides (including herbicides) shall not be applied from January 1 through July 15. <p>Mitigation Measure 3.3-5: The Project proponent shall implement the following SSHCP</p>	

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
		<p>AMMs to the satisfaction of the City to avoid direct and indirect effects of Covered Activities on Swainson’s hawk:</p> <ul style="list-style-type: none"> • AMM SWHA-1 (Swainson’s Hawk Surveys): If modeled habitat for Swainson’s hawk (Figure 3-25) is present within a Covered Activity’s Project footprint or within 0.25 mile of a Project footprint, then an approved biologist shall conduct a survey to determine if existing or potential nesting sites are present within the Project footprint and adjacent areas within 0.25 mile of the Project footprint. Adjacent parcels under different land ownership shall be surveyed only if access is granted or if the parcels are visible from authorized areas. Nest sites are often associated with Riparian land cover, but also include lone trees in fields, trees along roadways, and trees around structures. Nest trees may include, but are not limited to, Fremont’s cottonwood (<i>Populus fremontii</i>), oaks (<i>Quercus spp.</i>), willows (<i>Salix spp.</i>), walnuts (<i>Juglans spp.</i>), eucalyptus (<i>Eucalyptus spp.</i>), pines (<i>Pinus spp.</i>), and Deodar cedar (<i>Cedrus deodara</i>). The Third-Party Project Proponent shall map all existing and potential nesting sites and provide these maps to the Local Land Use Permittees (i.e., City of Rancho Cordova) and Implementing Entity (i.e., the South Sacramento Conservation Agency). Nesting sites must also be noted on plans that are submitted to a Local Land Use Permittee. See Chapter 10 for the process to conduct and submit survey information. • AMM SWHA-2 (Swainson’s Hawk Pre-Construction Surveys): Pre-construction surveys shall be required to determine if active nests are present within a Project footprint or within 0.25 mile of a Project footprint if existing or potential nest sites were found during initial surveys and construction activities shall occur during the breeding season (March 1 through September 15). An approved biologist shall conduct pre-construction surveys within 30 days and 3 days of ground-disturbing activities to determine presence of nesting Swainson’s hawk. Pre-construction surveys shall be conducted during the breeding season (March 1 through September 15). If a nest is present, then SWHA-3 and SWHA-4 shall be implemented. The approved biologist shall inform the Land Use Authority Permittee and Implementing Entity of species locations, and they in turn shall notify the Wildlife Agencies (i.e., the USFWS and CDFW). • AMM SWHA-3 (Swainson’s Hawk Nest Buffer): If active nests are found within 	

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
		<p><i>the Project footprint or within 0.25 mile of any Project-related Covered Activity, the Third-Party Project Proponent shall establish a 0.25 mile disturbance buffer around the active nest until the young have fledged, with concurrence from the Wildlife Agencies.</i></p> <ul style="list-style-type: none"> <i>AMM SWHA-4 (Swainson’s Hawk Nest Buffer Monitoring): If nesting Swainson’s hawks are present within the Project footprint or within 0.25 mile of any Project-related Covered Activity, then an approved biologist experienced with Swainson’s hawk behavior shall be retained by the Third-Party Project Proponent to monitor the nest throughout the nesting season and to determine when the young have fledged. The approved biologist shall be on site daily while construction-related activities are taking place within the buffer. Work within the temporary nest disturbance buffer can occur with the written permission of the Implementing Entity and Wildlife Agencies. If nesting Swainson’s hawks begin to exhibit agitated behavior, such as defensive flights at intruders, getting up from a brooding position, or flying off the nest, the approved biologist shall have the authority to shut down construction activities. If agitated behavior is exhibited, the biologist, Third-Party Project Proponent, Implementing Entity, and Wildlife Agencies shall meet to determine the best course of action to avoid nest abandonment or take of individuals. The approved biologist shall also train construction personnel on the required avoidance procedures, buffer zones, and protocols in the event that a Swainson’s hawk flies into an active construction zone (i.e., outside the buffer zone).</i> <p>Mitigation Measure 3.3-6: <i>The Project proponent shall implement the following SSHCP AMMs to avoid direct and indirect effects of Covered Activities on western burrowing owl:</i></p> <ul style="list-style-type: none"> <i>AMM WBO-1 (Western Burrowing Owl Surveys): Surveys within modeled habitat are required for both the breeding and non-breeding season. If the Project site falls within modeled habitat, an approved biologist shall survey the Project site and map all burrows, noting any burrows that may be occupied. Occupied burrows are often (but not always) indicated by tracks, feathers, egg shell fragments, pellets, prey remains, and/or excrement. Surveying and mapping shall be conducted by the approved biologist while walking transects throughout the entire Project site plus all accessible areas within a 250-foot</i> 	

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
		<p>radius from the Project site. The centerline of these transects shall be no more than 50 feet apart and shall vary in width to account for changes in terrain and vegetation that can preclude complete visual coverage of the area. For example, in hilly terrain with patches of tall grass, transects shall be closer together, and in open areas with little vegetation, they can be 50 feet apart. This methodology is consistent with current survey protocols for this species (California Burrowing Owl Consortium 1993). Adjacent parcels under different land ownership shall be surveyed only if access is granted or if the parcels are visible from authorized areas. If suitable habitat is identified during the initial survey, and if the Project does not fully avoid the habitat, pre-construction surveys shall be required. Burrowing owl habitat is fully avoided if Project-related activities do not impinge on a 250foot buffer established by the approved biologist around suitable burrows. See Chapter 10 for the process to conduct and submit survey information.</p> <ul style="list-style-type: none"> • AMM WBO-2 (Western Burrowing Owl Pre-Construction Surveys): Prior to any Covered Activity ground disturbance, an approved biologist shall conduct pre-construction surveys in all areas that were identified as suitable habitat during the initial surveys. The purpose of the pre-construction surveys is to document the presence or absence of burrowing owls on the Project site, particularly in areas within 250 feet of construction activities. To maximize the likelihood of detecting owls, the pre-construction survey shall last a minimum of 3 hours. The survey shall begin 1 hour before sunrise and continue until 2 hours after sunrise (3 hours total), or begin 2 hours before sunset and continue until 1 hour after sunset. Additional time may be required for large project sites. A minimum of two pre-construction surveys shall be conducted (if owls are detected on the first survey, a second survey is not needed). All owls observed shall be counted and their location shall be mapped. Surveys shall conclude no more than 2 calendar days prior to construction. Therefore, the Third-Party Project Proponent must begin surveys no more than 4 days prior to construction (2 days of surveying plus up to 2 days between surveys and construction). To avoid last-minute changes in schedule or contracting that may occur if burrowing owls are found, the Third-Party Project Proponent may also conduct a preliminary survey up to 15 days before construction. This preliminary survey may count as the first of the two required surveys as long as the second survey concludes no more than 2 calendar days in advance of 	

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
		<p>construction.</p> <ul style="list-style-type: none"> • <i>AMM WBO-3 (Burrowing Owl Avoidance): If western burrowing owl or evidence of western burrowing owl is observed on the Project site or within 250 feet of the Project site during pre-construction surveys, then the following shall occur:</i> <p>During Breeding Season: <i>If the approved biologist finds evidence of western burrowing owls within a Project site during the breeding season (February 1 through August 31), all Project-related activities shall avoid nest sites during the remainder of the breeding season or while the nest remains occupied by adults or young (nest occupation includes individuals or family groups foraging on or near the site following fledging). Avoidance is establishment of a minimum 250-foot buffer zone around nests. Construction and other Project-related activities may occur outside of the 250-foot buffer zone. Construction and other Project-related activities may be allowed inside of the 250-foot non-disturbance buffer during the breeding season if the nest is not disturbed, and the Third-Party Project Proponent develops an avoidance, minimization, and monitoring plan that is approved by the Implementing Entity (i.e., the South Sacramento Conservation Agency) and Wildlife Agencies (i.e., the USFWS and CDFW) prior to Project construction based on the following criteria:</i></p> <ul style="list-style-type: none"> ○ <i>The Implementing Entity (i.e., the South Sacramento Conservation Agency) and Wildlife Agencies (i.e., the USFWS and CDFW) approve of the avoidance and minimization plan provided by the Project applicant.</i> ○ <i>An approved biologist monitors the owls for at least 3 days prior to construction to determine baseline nesting and foraging behavior (i.e., behavior without construction).</i> ○ <i>The same approved biologist monitors the owls during construction and finds no change in owl nesting and foraging behavior in response to construction activities.</i> <p><i>If there is any change in owl nesting and foraging behavior as a result of construction activities, the approved biologist shall have authority to shut down activities within the 250-foot buffer. Construction cannot resume within the 250-foot buffer until any owls present are no longer affected by nearby construction activities, and with written concurrence from the Wildlife</i></p> 	

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
		<p><i>Agencies.</i></p> <p><i>If monitoring by the approved biologist indicates that the nest is abandoned prior to the end of nesting season and the burrow is no longer in use, the non-disturbance buffer zone may be removed if approved by the Wildlife Agencies. The approved biologist shall excavate the burrow in accordance with the latest California Department of Fish and Wildlife guidelines for burrowing owl to prevent reoccupation after receiving approval from the Wildlife Agencies.</i></p> <p><i>The Implementing Entity and Wildlife Agencies shall respond to a request from the Third-Party Project Proponent to review the proposed construction monitoring plan within 21 days.</i></p> <p><i>During Non-Breeding Season:</i> <i>During the non-breeding season (September 1 through January 31), the approved biologist shall establish a minimum 250-foot non-disturbance buffer around occupied burrows. Construction activities outside of this 250-foot buffer shall be allowed. Construction activities within the non-disturbance buffer shall be allowed if the following criteria are met to prevent owls from abandoning overwintering sites:</i></p> <ul style="list-style-type: none"> <i>o An approved biologist monitors the owls for at least 3 days prior to construction to determine baseline foraging behavior (i.e., behavior without construction).</i> <i>o The same approved biologist monitors the owls during construction and finds no change in owl foraging behavior in response to construction activities.</i> <i>o If there is any change in owl foraging behavior as a result of construction activities, the approved biologist shall have authority to shut down activities within the 250foot buffer.</i> <i>o If the owls are gone for at least 1 week, the Third-Party Project Proponent may request approval from the Implementing Entity (i.e., the South Sacramento Conservation Agency) and Wildlife Agencies (i.e., the USFWS and CDFW) that an approved biologist excavate usable burrows and install one-way exclusionary devices to prevent owls from re-occupying the site. After all usable burrows are excavated, the buffer zone shall be removed and construction may continue.</i> <p><i>Monitoring must continue as described above for the non-breeding season as</i></p>	

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		<p><i>long as the burrow remains active.</i></p> <ul style="list-style-type: none"> • <i>AMM WBO-4 (Burrowing Owl Construction Monitoring): During construction of Covered Activities, 250-foot construction buffer zones shall be established and maintained around any occupied burrow. An approved biologist shall monitor the site to ensure that buffers are enforced and owls are not disturbed. The approved biologist shall also train construction personnel on avoidance procedures, buffer zones, and protocols in the event that a burrowing owl flies into an active construction zone.</i> • <i>AMM WBO-5 (Burrowing Owl Passive Relocation): Passive relocation is not allowed without the express written approval of the Wildlife Agencies. Passive owl relocation may be allowed on a case-by-case basis on Project sites during the non-breeding season (September 1 through January 31) with the written approval of the Wildlife Agencies if the other measures described in this condition preclude work from continuing. Passive relocation must be done in accordance with the latest California Department of Fish and Wildlife guidelines for burrowing owl. Passive relocation shall only be proposed if the burrow needing to be removed or with the potential to collapse from construction activities is the result of a Covered Activity. If passive relocation is approved by the Wildlife Agencies, an approved biologist can passively exclude birds from their burrows during the non-breeding season by installing one-way doors in burrow entrances. These doors shall be in place for 48 hours to ensure that owls have left the burrow, and then the biologist shall excavate the burrow to prevent reoccupation. Burrows shall be excavated using hand tools only. During excavation, an escape route shall be maintained at all times. This may include inserting an artificial structure into the burrow to avoid having materials collapse into the burrow and trap owls inside. Other methods of passive relocation, based on best available science, may be approved by the Wildlife Agencies over the 50-year Permit Term.</i> • <i>AMM WBO-6 (Burrowing Owl Timing of Maintenance Activities): All activities adjacent to existing or planned Preserves, Preserve Setbacks, or Stream Setback areas shall be seasonally timed, when safety permits, to avoid or minimize adverse effects on occupied burrows.</i> • <i>AMM WBO-7 (Rodent Control): Rodent control shall be allowed only in developed portions of a Covered Activity Project site within western burrowing</i> 	

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
		<p><i>owl modeled habitat. Where rodent control is allowed, the method of rodent control shall comply with the methods of rodent control discussed in the 4(d) Rule published in the U.S. Fish and Wildlife Service's (2004) final listing rule for tiger salamander.</i></p> <p>Mitigation Measure 3.3-7: <i>The Project proponent shall implement the following SSHCP AMMs to the satisfaction of the City to avoid direct and indirect effects on covered raptor species. This measure applies to loggerhead shrike (<i>Lanius ludovicianus</i>), northern harrier (<i>Circus cyaneus</i>), and white-tailed kite (<i>Elanus leucurus</i>). The following AMMs do not apply to ferruginous hawk (<i>Buteo regalis</i>), as they do not nest in the Plan Area. The following AMMs also do not apply to Swainson's hawk or burrowing owl, as specific AMMs have been developed for these covered raptor species and are included in separate mitigation measures.</i></p> <ul style="list-style-type: none"> • <i>AMM RAPTOR-1 (Raptor Surveys): An approved biologist shall conduct a field investigation to determine if existing or potential nesting sites are present within the Project footprint and adjacent areas within 0.25 mile of the Project footprint. Adjacent parcels under different land ownership shall be surveyed only if access is granted or if the parcels are visible from authorized areas. The Project proponent shall map all existing or potential nesting sites and provide these maps to the Local Land Use Permittees (i.e., City of Rancho Cordova) and Implementing Entity (i.e., the South Sacramento Conservation Agency). Nesting sites must also be noted on plans that are submitted to a Local Land Use Permittee. See Chapter 10 for the process to conduct and submit survey information.</i> • <i>AMM RAPTOR-2 (Raptor Pre-Construction Surveys): Pre-construction surveys shall be required to determine if active nests are present with a Project footprint or within 0.25 mile of a Project footprint if existing or potential nest sites are found during initial surveys and construction activities shall occur during the raptor breeding season. An approved biologist shall conduct pre-construction surveys within 30 days and 3 days of ground disturbing activities within the proposed Project footprint and within 0.25 mile of the proposed Project footprint to determine presence of nesting covered raptor species. Preconstruction surveys shall be conducted during the raptor breeding season. If a nest is present, then RAPTOR-3 and RAPTOR-4 shall be implemented. The approved biologist shall inform the Land Use Authority Permittee and</i> 	

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
		<p><i>Implementing Entity of species locations, and they in turn shall notify the Wildlife Agencies.</i></p> <ul style="list-style-type: none"> <i>AMM RAPTOR-3 (Raptor Nest/Roost Buffer): If active nests are found within the Project footprint or within 0.25 mile of any Project-related Covered Activity, the Third-Party Project Proponent shall establish a 0.25 mile temporary nest disturbance buffer around the active nest until the young have fledged.</i> <i>AMM RAPTOR-4 (Raptor Nest/Roost Buffer Monitoring): If Project-related Covered Activities within the temporary nest disturbance buffer are determined to be necessary during the nesting season, then an approved biologist experienced with raptor behavior shall be retained by the Third-Party Project Proponent to monitor the nest throughout the nesting season and to determine when the young have fledged. The approved biologist shall be on site daily while construction-related activities are taking place within the disturbance buffer. Work within the temporary nest disturbance buffer can occur with the written permission of the Implementing Entity and Wildlife Agencies. If nesting raptors begin to exhibit agitated behavior, such as defensive flights at intruders, getting up from a brooding position, or flying off the nest, the approved biologist/monitor shall have the authority to shut down construction activities. If agitated behavior is exhibited, the biologist, Third-Party Project Proponent, Implementing Entity, and Wildlife Agencies shall meet to determine the best course of action to avoid nest abandonment or take of individuals. The approved biologist shall also train construction personnel on the required avoidance procedures, buffer zones, and protocols in the event that a covered raptor species flies into an active construction zone (i.e., outside the buffer zone).</i> <p>Mitigation Measure 3.3-8: <i>The Project proponent shall implement the following measure to avoid or minimize impacts on other protected bird species that may occur on the site:</i></p> <ul style="list-style-type: none"> <i>Prior to any ground disturbance a pre-construction survey for protected bird species shall be completed. This survey shall be conducted in the morning or evening hours within 30 days prior to any construction activities. The entire site shall be surveyed for birds, nests and nesting behavior. Common nesting behavior by birds includes; collecting nesting materials, bringing food items to</i> 	

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
		<p>a nest and vocalizations from young or from adults to attract a mate and to establish or defend a nesting territory. A construction-free buffer of suitable dimensions must be established around any active migratory bird nests (up to 250 feet, depending on the location and species) for the duration of the Project or until it has been determined that the chicks have fledged and are independent of their parents.</p>	
<p>Impact 3.3-5: The Project has the potential to, directly or indirectly, have a substantial adverse effect through habitat modifications or reductions, cause populations to drop below self-sustaining levels, substantially eliminate a community, or substantially reduce the number of, or restrict the range of, an endangered, rare or threatened species, including those considered candidate, sensitive, or special-status, in local or regional plans, policies, regulations, or by the CDFW or USFWS - Mammals</p>	<p>PS</p>	<p>Mitigation Measure 3.3-9: The Project proponent shall implement the following SSHCP AMMs to the satisfaction of the City to avoid or minimize impacts on protected bat species that may occur on the site:</p> <ul style="list-style-type: none"> • AMM BAT-1 (Winter Hibernaculum Surveys): An approved biologist shall conduct a field investigation of the Project footprint and adjacent areas within 300 feet of a Project footprint to determine if a potential winter hibernaculum is present, and to identify and map potential hibernaculum sites. Adjacent parcels under different land ownership shall be surveyed only if access is granted or if the parcels are visible from authorized areas. If potential hibernaculum sites are found, the Project proponent shall note their locations on Project designs and shall design the Project to avoid all areas within a 300-foot buffer around the potential hibernaculum sites. Winter hibernaculum habitat is fully avoided if Project-related activities do not impinge on a 300-foot buffer established by the approved biologist around an existing or potential winter hibernaculum site. • AMM BAT-2 (Winter Hibernaculum Pre-Construction Surveys): If the Project proponent elects not to avoid potential winter hibernaculum sites within the Project footprint plus a 300-foot buffer, additional surveys are required. Prior to any ground disturbance related to Covered Activities, an approved biologist shall conduct a preconstruction survey within 3 days of ground-disturbing activities within the Project footprint and 300 feet of the Project footprint to determine the presence of winter hibernaculum sites. Pre-construction surveys shall be conducted during the winter hibernaculum season (November 1 through March 31). If a winter hibernaculum is present, then BAT-3 and BAT-4 shall be implemented. The approved biologist shall inform the City of Rancho Cordova and Implementing Entity (i.e., the South Sacramento Conservation Agency) of species locations, and they in turn shall notify the Wildlife Agencies (i.e., the USFWS and CDFW). 	<p>LS</p>

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
		<ul style="list-style-type: none"> • <i>AMM BAT-3 (Winter Hibernaculum Buffer): If active winter hibernaculum sites are found within the Project footprint or within 300 feet of the Project footprint, the Project proponent shall establish a 300-foot temporary disturbance buffer around the active winter hibernaculum site until bats have vacated the hibernaculum and the Implementing Entity and Wildlife Agencies concur.</i> • <i>AMM BAT-4 (Bat Eviction Methods): An approved biologist shall determine if non-maternity and non-hibernaculum day and night roosts are present on the Project site. If necessary, an approved biologist shall use safe eviction methods to remove bats if direct impacts to non-maternity and non-hibernaculum day and night roosts cannot be avoided. If a winter hibernaculum site is present, Covered Activities shall not occur until the hibernaculum is vacated, or, if necessary, safely evicted using methods acceptable to the Wildlife Agencies.</i> <p>Mitigation Measure 3.3-10: <i>The Project proponent shall implement the following measure to avoid or minimize impacts on American badger that may occur on the site:</i></p> <ul style="list-style-type: none"> • <i>A qualified biologist shall conduct a pre-construction survey for American badger within 14 days prior to the start of ground disturbance. If no American badgers are observed, then a letter report documenting the results of the survey shall be provided to the Project proponent for their records, and no additional measures are recommended. If construction does not commence within 14 days of the preconstruction survey, or halts for more than 14 days, a new survey is required. The results of the survey shall be submitted to the City's Planning Department.</i> • <i>If American badgers or their dens are found during the survey, additional avoidance measures shall be implemented, including having a qualified biologist conduct a pre-construction survey within 24 hours prior to commencement of construction activities, performing a Worker Awareness Training to all construction workers, and being present on the Project site during grading activities for the purpose of temporarily halting construction activities until the biologist determines that the badger has left the construction footprint on its own accord. The results of the survey shall be submitted to the City's Planning Department.</i> 	

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
<p>Impact 3.3-6: The Project has the potential to, directly or indirectly, have a substantial adverse effect through habitat modifications or reductions, cause populations to drop below self-sustaining levels, substantially eliminate a community, or substantially reduce the number of, or restrict the range of, an endangered, rare or threatened species, including those considered candidate, sensitive, or special-status, in local or regional plans, policies, regulations, or by the CDFW or USFWS - Plants</p>	<p>PS</p>	<p>Mitigation Measure 3.3-11: <i>The Project proponent shall implement the following measure to the satisfaction of the City to avoid or minimize impacts on special-status plants that may occur on the site:</i></p> <ul style="list-style-type: none"> • <i>AMM PLANT-1 (Rare Plant Surveys): The Project site shall be surveyed for rare plants, specifically including Ahart's dwarf rush (<i>Juncus leiospermus</i> var. <i>ahartii</i>), Dwarf downingia (<i>Downingia pusilla</i>), pincushion navarretia (<i>Navarretia myersii</i> ssp. <i>myersii</i>), and hoary navarretia (<i>Navarretia eriocephala</i>), by an approved biologist and following the CDFW rare plant survey protocols (CDF 2009) or the most recent CDFW rare plant survey protocols. An approved biologist will conduct the field surveys and will identify and map plant species occurrences according to the protocols.</i> • <i>AMM PLANT-2 (Rare Plant Protection): If a rare plant listed in AMM PLANT-1 is detected within an area proposed to be disturbed by a Covered Activity or is detected within 250 feet of the area proposed to be disturbed by a Covered Activity, the Implementing Entity (i.e., the South Sacramento Conservation Agency) will assure one unprotected occurrence of the species is protected within a SSHCP Preserve before any ground disturbance occurs at the Project site.</i> • <i>AMM ORCUTT-1 (Orcutt Grass Surveys): The Project site will be surveyed for Sacramento and slender Orcutt grass by an approved biologist following CDFW rare plant survey protocols (CDFG 2009) or most recent CDFW guidelines to determine if Sacramento and/or slender Orcutt grass is present. An approved biologist will conduct the field investigation to identify and map occurrences.</i> • <i>AMM ORCUTT-2 (Orcutt Grass Protection): Where known or new Sacramento or slender Orcutt grass occurrences are found, they will be protected within an SSHCP Preserve that is at least 50 acres. The occurrence will be located interior to the Preserve at a distance of no less than 300 feet from the edge of the Preserve boundary. If a Project proponent encounters a previously undiscovered occurrence of Sacramento or slender Orcutt grass on a Covered Activity Project site, the Project proponent will contact the Implementing Entity or City of Rancho Cordova with authority over the Project, who will coordinate with the Wildlife Agencies (i.e., the USFWS and CDFW) for written concurrence of avoidance to ensure that the Project does not cause take of the</i> 	<p>LS</p>

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
		species.	
<p>Impact 3.3-7: The Project has the potential to have substantial adverse effect on federally- or state-protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means</p>	PS	<p>Implement Mitigation Measure 3.5-1.</p> <p>Mitigation Measure 3.3-11: Prior to any construction activities that would disturb a jurisdictional feature, The Project proponent shall submit a wetland delineation, site plan, and mitigation methods to the City of Rancho Cordova and the SSHCP. The Project proponent shall submit a SSHCP permit application package to the City of Rancho Cordova (“Land Use Authority Permittee”) as a request that coverage provided by City’s SSHCP Aquatic Resources Program be extended to the proposed activities. The City of Rancho Cordova shall review the SSHCP permit application for consistency with all of the SSHCP requirements and provide the South Sacramento Conservation Agency (“Implementing Entity) with a copy of the SSHCP requirements for tracking purposes. The Project proponent shall be responsible for paying all SSHCP development fees associated with obtaining coverage from the City of Rancho Cordova.</p> <p>Additionally, the Project applicant shall participate in the SSHCP Aquatic Resources Program (ARP) by paying the applicable mitigation fee for the loss of jurisdictional aquatic features. Costs for the aquatic resources compensatory mitigation projects shall be covered through the Covered Activity project mitigation fees collected under the SSHCP. The SSHCP includes a fee structure that is distinguished by land cover type. This approach accounts for variations in costs associated with the particular requirements for each land cover type. The Project proponent shall pay fees based on the land cover types affected by the development Project and the fee schedule.</p> <p>Mitigation Measure 3.3-12: The Project proponent shall implement the following SSHCP Avoidance and Minimization Measures (AMMs) to the satisfaction of the City to avoid direct and indirect effects of Covered Activities on Aquatic land covers of the Verna Pool Ecosystem:</p> <ul style="list-style-type: none"> • AMM LID-1 (Stormwater Quality): When the size of a Covered Activity project exceeds the thresholds established by the State Water Resources Control Board (SWRCB) (see the most recent Stormwater Quality Design Manual for the Sacramento and South Placer Regions, or future SWRCB-approved design manuals applicable to the Plan Area), incorporate stormwater management into site design to satisfy the requirements outlined in the most recent 	LS

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
		<p><i>Stormwater Quality Design Manual for the Sacramento and South Placer Regions. Stormwater management may include groundwater recharge (LID-2) and natural site features (LID-3).</i></p> <ul style="list-style-type: none"> • <i>AMM LID-2 (Groundwater Recharge): When siting SSHCP Preserves containing Riparian, Open Water, or Freshwater Marsh SSHCP land cover types, the Implementing Entity (i.e., the South Sacramento Conservation Agency) will prioritize locations that are suitable for groundwater recharge.</i> • <i>AMM LID-3 (Natural Site Features): Incorporate preservation of a site's natural aquatic features (such as creeks and streams) into project design to retain natural hydrologic patterns and to retain habitat that might be used by Covered Species.</i> • <i>AMM BMP-1 (Construction Fencing): Orange construction fencing will be installed to ensure that ground disturbance does not extend beyond the allowed construction footprint (i.e., the limit of project construction plus equipment staging areas and access roads). Plan Permittees and Third-Party Project Proponents implementing ground-disturbing Covered Activities will mark the outer boundary of any Preserve Setback or Stream Setback adjacent to or within the project site with orange construction fencing prior to ground disturbance. This fencing will remain in place until project completion, as identified by the Plan Permittee.</i> • <i>AMM BMP-2 (Erosion Control): Plan Permittees and Third-Party Project Proponents implementing ground-disturbing Covered Activities will install temporary control measures for sediment, stormwater, and pollutant runoff as required by the Plan Permittee to protect water quality and species habitat. Silt fencing or other appropriate sediment control device(s) will be installed downslope of any Covered Activity that disturbs soils.</i> <p><i>Fiber rolls and seed mixtures used for erosion control will be certified as free of viable noxious weed seed. As discussed in Section 5.4.2, Covered Species Take Avoidance and Minimization Measures, erosion controls installed in or adjacent to Plan Area modeled habitat for giant gartersnake (<i>Thamnophis gigas</i>), western pond turtle (<i>Actinemys marmorata</i>), California tiger salamander (California tiger salamander), or western spadefoot (see Chapter 3) must be of appropriate design and materials that will not entrap the species (e.g., not contain mesh netting). Regular monitoring and maintenance of the</i></p>	

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
		<p><i>project's erosion control measures will be conducted until project completion to ensure effective operation of erosion control measures.</i></p> <ul style="list-style-type: none"> • <i>AMM BMP-3 (Equipment Storage and Fueling): Plan Permittees and Third-Party Project Proponents implementing ground-disturbing Covered Activities will ensure that equipment storage and staging will occur in the development footprint only (not sited in any existing on-site Preserve, planned on-site Preserve, Preserve Setback, Stream Setback, or aquatic land cover type). Fuel storage and equipment fueling will occur away from waterways, stream channels, stream banks, and other environmentally sensitive areas within the development footprint.</i> <p><i>However, certain equipment storage and fueling activities can be allowed on Preserves within habitat re-establishment/establishment sites (refer to Section 5.2.7) if no location outside of the site is available. If a Covered Activity results in a spill of fuel, hydraulic fluid, lubricants, or other petroleum products, the spill will be absorbed and waste disposed of in a manner to prevent pollutants from entering a waterway, Preserve, Preserve Setback, or Stream Setback.</i></p> <ul style="list-style-type: none"> • <i>AMM BMP-4 (Erodible Materials): Plan Permittees and Third-Party Project Proponents implementing Covered Activities must not deposit erodible materials into waterways. Vegetation clippings, brush, loose soils, or other debris material will not be stockpiled within stream channels or on adjacent banks. Erodible material must be disposed of such that it cannot enter a waterway, Preserve, Preserve Setback, Stream Setback, or aquatic land cover type. If water and sludge must be pumped from a subdrain or other structure, the material will be conveyed to a temporary settling basin to prevent sediment from entering a waterway.</i> • <i>AMM BMP-5 (Dust Control): Plan Permittees and Third-Party Project Proponents implementing ground-disturbing Covered Activities will water active construction sites regularly, if warranted, to avoid or minimize impacts from construction dust on adjacent vegetation and wildlife habitats. No surface water will be used from aquatic land covers; water will be obtained from a municipal source or existing groundwater well.</i> • <i>AMM BMP-6 (Construction Lighting): Plan Permittees and Third-Party Project Proponents implementing ground-disturbing Covered Activities will direct all temporary construction lighting (e.g., lighting used for security or nighttime</i> 	

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
		<p><i>equipment maintenance) away from adjacent natural habitats, and particularly Riparian and Wetland habitats and wildlife movement areas.</i></p> <ul style="list-style-type: none"> • <i>AMM BMP-7 (Biological Monitor): If a Covered Activity includes ground disturbance within Covered Species modeled habitat, an approved biologist will be on site during the period of ground disturbance, and may need to be on site during other construction activities depending on the Covered Species affected. After ground-disturbing project activities are complete, the approved biologist will train an individual to act as the on-site construction monitor for the remainder of construction, with the concurrence of the Permitting Agencies. The on-site monitor will attend the training described in BMP-8. The approved biologist and the on-site monitor will have oversight over implementation of Avoidance and Minimization Measures, and will have the authority to stop activities if any of the requirements associated with those measures are not met. If the monitor requests that work be stopped, the Wildlife Agencies Agencies (i.e., the USFWS and CDFW) will be notified within one working day by email. The approved biologist and/or on-site monitor will record all observations of listed species on California Natural Diversity Database field sheets and submit them to the California Department of Fish and Wildlife. The approved biologist or on-site monitor will be the contact source for any employee or contractor who might inadvertently kill or injure a Covered Species or who finds a dead, injured or entrapped individual. The approved biologist and on-site monitor's names and telephone numbers will be provided to the Wildlife Agencies prior to the initiation of ground-disturbing activities. Refer to species-specific measures for details on requirements for biological monitors.</i> • <i>AMM BMP-11 (Speed Limit): Project-related vehicles will observe the posted speed limits on paved roads and a 10-mile-per-hour speed limit on unpaved roads and during travel in project areas. Construction crews will be given weekly tailgate instruction to travel only on designated and marked existing, cross-country, and project-only roads.</i> • <i>AMM ROAD-1 (Road Project Location): Road projects will be located in the least environmentally sensitive area to avoid, to the maximum extent practicable, impacts on Covered Species, Covered Species habitat, and waters of the United States. Road project alignments will follow existing roads, road</i> 	

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
		<p><i>easements, and rights-of-way, or be sited in disturbed areas to minimize habitat loss and additional habitat fragmentation.</i></p> <ul style="list-style-type: none"> • <i>AMM UTILITY-4 (Siting of Entry and Exit Location): The entry and exit locations for the trenchless construction method (see Utility-3) will be sited to avoid impacts to vernal pools and Riparian Woodland, and to avoid direct take of SSHCP Covered Species.</i> • <i>AMM EDGE-4 (Locate Stormwater Control Outside Preserves): Roads, sidewalks, and other impermeable surfaces of Urban Development Covered Activities adjacent to existing or planned Preserves will slope away from Preserves and Preserve Setbacks or intercept drainage with swales or curbs and gutters to preclude drainage from entering Preserves and Preserve Setbacks. Stormwater flows must be directed away from Preserves and Preserve Setbacks and directed into stormwater control facilities inside the development (outside Preserves and Preserve Setbacks) (see EDGE-6 for exception to EDGE-4 in certain SSHCP Linkage Preserves).</i> • <i>AMM EDGE-5 (Stormwater Control in Preserve Setbacks): If trails are established in any Preserve Setback in compliance with EDGE-3, the trail must be sloped away from the Preserve, and rainwater leaving the trail surface must flow into an adjacent low-velocity bio-retention swale or cell to keep rainwater runoff and trail contaminants from entering the Preserve. Low-velocity bio-retention swales or cells are typically small linear features placed on one or both sides of a trail. As required by EDGE-3, trails and their adjacent bio-retention swales or cells must be located on the side of the Preserve Setback nearest development.</i> • <i>AMM EDGE-6 (Detention Basins in Linkage Preserves): Because planned SSHCP Linkage Preserves L1, L2, L4, L7, L8, L9, and L10 (see Section 7.5) surround natural creeks or streams that must receive stormwater from planned adjacent Urban Development Covered Activities, a limited number of stormwater detention basins will be allowed on those Linkage Preserves. Detention basins within Linkage Preserves (see Section 5.2.7) will be designed and constructed with fill material to build up the perimeter of the detention basin so as not to impact the soil restrictive layer (duripan or hardpan) and function of the soil perched aquifer. Detention basins within Linkage Preserves will capture stormwater flows and runoff, and will discharge water to the</i> 	

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
		<p><i>stream/creek or percolate collected water to the soil perched aquifer. Detention basin structures that collect stormwater entering the basin or convey stormwater leaving the basin must be designed to avoid and minimize effects to Covered Species habitat in the Linkage Preserve.</i></p> <ul style="list-style-type: none"> <i>• AMM EDGE-7 (Hardpan/Duripan Protection): To protect the soil perched aquifer and the micro-watersheds supporting existing vernal pool hydrology, activities that have the potential to cut into, disrupt, or remove the soil's restrictive layer (hardpan or duripan) will not occur within Preserves or Preserve Setbacks. However, in certain circumstances, the Covered Activities defined in Section 5.2.6, Covered Activities in Stream Setbacks in the UDA, and Section 5.2.8, Covered Activities in the Laguna Creek Wildlife Corridor of the Preserve System, may result in punctures or other minor disruptions of the soil hardpan or duripan if approved by the Implementing Entity and the Technical Advisory Committee according to the process described in Chapter 9 of the SSHCP. If a Covered Activity on a Preserve or Preserve Setback results in a puncture or other disruption to the soil hardpan or duripan, the puncture will be sealed using bentonite clay or other material that maintains the functionality of the soil's restrictive layer and associated perched aquifer.</i> 	
Impact 3.3-8: The Project has the potential to have substantial adverse effect on riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service	LS	None required	--
Impact 3.3-9: The Project has the potential to interfere substantially with the movement of native fish or wildlife species or with established wildlife corridors, or impede the use of native wildlife nursery sites	LS	None required	--
Impact 3.3-10: The Project may result in conflicts with local policies or ordinances protecting biological resources, such as a tree	LS	None required	--

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
preservation policy or ordinance			
Impact 3.3-11: The Project may result in conflicts with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	LS	None required	--
CULTURAL AND TRIBAL RESOURCES			
Impact 3.4-1: Project implementation has the potential to cause a substantial adverse change to a significant historical or archaeological resource, as defined in CEQA Guidelines §15064.5, or a significant tribal cultural resource, as defined in Public Resources Code §21074	PS	<p>Mitigation Measure 3.4-1: <i>Prior to any ground-disturbing activities on the Project site, a qualified archaeologist shall conduct pre-construction worker cultural resources sensitivity training. The training session shall focus on the recognition of the types of historical and cultural, including Native American, resources that could be encountered, procedures to be followed if resources are found, and pertinent laws protecting these resources. Representatives from the Shingle Springs Band of Miwok Indians and the United Auburn Indian Community shall be invited to attend the training.</i></p> <p><i>Representatives from the Shingle Springs Band of Miwok Indians and the United Auburn Indian Community shall be invited to monitor ground-disturbing activities during construction and shall be provided with any safety requirements that shall be followed during any ground-disturbing and construction activities.</i></p> <p><i>If any cultural resources, including prehistoric or historic artifacts, or other indications of archaeological resources or tribal cultural resources are found during grading and construction activities, all work shall be halted immediately within a 100-foot radius of the discovery until an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology, as appropriate, has evaluated the find(s) and until the Shingle Springs Band of Miwok Indians and the United Auburn Indian Community have been contacted and invited to review and document the find.</i></p> <p><i>Work shall not continue at the discovery site until the archaeologist conducts sufficient research and data collection to make a determination that the resource is either 1) not cultural in origin; or 2) not potentially significant or eligible for listing on the NRHP or CRHR; or 3) not a significant Public Trust Resource.</i></p>	LS

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
		<p><i>If a significant finding is made, a plan must be developed for this inadvertent finding. Measures to potentially address a subsurface finding could include one or more of the following depending upon the nature of the find: recordation of the finding; further efforts to define the extent and nature of the resource; preservation in place, and re-design to ensure long-term preservation of the resource; and/or data recovery excavations.</i></p> <p><i>If Native American resources are identified, a Native American monitor, following the Guidelines for Monitors/Consultants of Native American Cultural, Religious, and Burial Sites established by the Native American Heritage Commission, may also be required and, if required, shall be retained at the Applicant's expense. Additionally, if any of these resources are identified, the Shingle Springs Band of Miwok Indian shall be consulted to go over the process to protect any potentially important or sacred resources, particularly if located along the on-site aquatic resources.</i></p>	
<p>Impact 3.4-2: Project implementation has the potential to disturb human remains, including those interred outside of formal cemeteries</p>	<p>PS</p>	<p>Mitigation Measure 3.4-2: <i>If human remains are discovered during the course of construction during any phase of the Project, work shall be halted at the site and at any nearby area reasonably suspected to overlie adjacent human remains until the Sacramento County Coroner has been informed and has determined that no investigation of the cause of death is required. If the remains are of Native American origin, either of the following steps will be taken:</i></p> <ul style="list-style-type: none"> <i>• The coroner shall contact the Native American Heritage Commission in order to ascertain the proper descendants from the deceased individual. The coroner shall make a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods, which may include obtaining a qualified archaeologist or team of archaeologists to properly excavate the human remains.</i> <i>• The Shingle Springs Band of Miwok Indian shall be consulted to go over the process to protect any human remains, particularly if located along the on-site aquatic resources.</i> <i>• The landowner shall retain a Native American monitor, and an archaeologist, if recommended by the Native American monitor, and rebury the Native American human remains and any associated grave goods, with appropriate dignity, on the property and in a location that is not subject to further</i> 	<p>LS</p>

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
		<p><i>subsurface disturbance when any of the following conditions occurs:</i></p> <ul style="list-style-type: none"> ○ <i>The Native American Heritage Commission is unable to identify a descendent.</i> ○ <i>The descendant identified fails to make a recommendation.</i> ○ <i>The City of Rancho Cordova or its authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.</i> 	
GEOLOGY AND SOILS			
Impact 3.5-1: Project implementation would not directly or indirectly cause potential substantial adverse effects involving strong seismic ground shaking or seismic related ground failure	LS	None required.	--
Impact 3.5-2: Project construction and implementation has the potential to result in substantial soil erosion or the loss of topsoil	PS	<p>Mitigation Measure 3.5-1: <i>Prior to any site disturbance, the Project proponent shall submit a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) to the RWQCB in accordance with the NPDES General Construction Permit requirements. The SWPPP shall be designed to control pollutant discharges utilizing Best Management Practices (BMPs) and technology to reduce erosion and sediments. BMPs may consist of a wide variety of measures taken to reduce pollutants in stormwater runoff from the Project site. Measures shall include temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) that will be employed to control erosion from disturbed areas. Final selection of BMPs will be subject to approval by the City of Rancho Cordova and the RWQCB. The SWPPP will be kept on site during construction activity and will be made available upon request to representatives of the RWQCB.</i></p>	LS
Impact 3.5-3: The Project has the potential to be located on a geologic unit or soil that is unstable, or that would become unstable as a result of Project implementation, and potentially result in landslide, lateral	PS	<p>Mitigation Measure 3.5-2: <i>Prior to final design approval and issuance of building permits for each phase of the Project, the Project applicant shall submit to the City of Rancho Cordova Building and Safety Division, for review and approval, a design-level geotechnical engineering report produced by a California Registered Civil Engineer or Geotechnical Engineer. The design-level report shall address, at a minimum, the</i></p>	LS

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
spreading, subsidence, liquefaction or collapse		<p>following:</p> <ul style="list-style-type: none"> • <i>Compaction specifications and subgrade preparation for onsite soils;</i> • <i>Structural foundations, including concrete design that addresses potential soils corrosivity;</i> • <i>Grading practices; and</i> • <i>Expansive/unstable soils.</i> <p><i>The design-level geotechnical engineering report shall include a summary of the site, soil, and groundwater conditions, seismicity, laboratory test data, exploration data and a site plan showing exploratory locations and improvement limits. The report shall include borings/test pits for park sites and include recommendations for park site development, including the potential to amend soils, if necessary, during the preliminary grading of the Project site during the first phase of construction activities. The report shall be signed by a licensed California Geotechnical Engineer. Design-level recommendations shall be included in the foundation and improvement plans and approved by the City of Rancho Cordova Public Works Department prior to issuance of any building permits.</i></p>	
Impact 3.5-4: The Project would not be located on expansive soil creating substantial risks to life or property	LS	None required.	--
Impact 3.5-5: Project implementation has the potential to directly or indirectly destroy a unique paleontological resource	PS	<p>Mitigation Measure 3.5-3: <i>If any paleontological resources are found during grading and construction activities, all work shall be halted immediately within a 200-foot radius of the discovery until a qualified paleontologist has evaluated the find.</i></p> <p><i>Work shall not continue at the discovery site until the paleontologist evaluates the find and makes a determination regarding the significance of the resource and identifies recommendations for conservation of the resource, including preserving in place or relocating on the Project site, if feasible, or collecting the resource to the extent feasible and documenting the find with the University of California Museum of Paleontology.</i></p>	LS
GREENHOUSE GASES, CLIMATE CHANGE, AND ENERGY			
Impact 3.6-1: The Project has the potential to generate construction-related GHGs, either	PS	Implement Mitigation Measure 3.6-1.	LS

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE												
directly or indirectly, that may have a significant effect on the environment															
Impact 3.6-2: The Project has the potential to generate operation-related GHGs, either directly or indirectly, that may have a significant effect on the environment	PS	<p>Mitigation Measure 3.6-1: <i>The Project shall comply with the GHG Reduction Plan for The Ranch throughout all phases of Project construction and operation.</i></p> <p><u>The Ranch GHG Reduction Plan</u></p> <p><i>The Project shall implement all measures shown in the table below that are identified as “Incorporated into Project Design” or “Mitigation Measure” in order to reduce the Project’s net operational emissions, including amortized construction emissions, to an emissions level that meet the SMAQMD threshold for GHG emissions. It is noted that incorporation of the three SMAQMD-Recommended CalEEMod Measures to Reduce GHGs that are identified as “Mitigation Measures” in the below table would reduce the Project’s net operational emissions, including amortized construction emissions, to 5,336.3 MT CO_{2e}, as shown in Table 3.6-7 of the Draft EIR. Implementation of the required carbon offset purchase, as described in the below table, will ensure that the Project meets SMAQMD thresholds as it ensures the Project will purchase adequate carbon offsets to reduce all remaining emissions over SMAQMD thresholds to a level that meets the threshold.</i></p> <table border="1" data-bbox="865 935 1738 1395"> <thead> <tr> <th data-bbox="865 935 1094 1008">GHG REDUCTION MEASURE</th> <th data-bbox="1094 935 1457 1008">APPLICABILITY</th> <th data-bbox="1457 935 1738 1008">IMPLEMENTATION</th> </tr> </thead> <tbody> <tr> <td colspan="3" data-bbox="865 1008 1738 1062" style="text-align: center;">SMAQMD-RECOMMENDED CAL EEMOD MEASURE TO REDUCE GHGS¹</td> </tr> <tr> <td data-bbox="865 1062 1094 1187">LUT-1 Increase Density: Project more dense than typical developments</td> <td data-bbox="1094 1062 1457 1187">Not applicable. Project is under minimum density required (eight units per acre).</td> <td data-bbox="1457 1062 1738 1187">Not applicable.</td> </tr> <tr> <td data-bbox="865 1187 1094 1395">LUT-3 Increase Diversity of Land Uses: Different types of land uses are near each other</td> <td data-bbox="1094 1187 1457 1395">Incorporated into Project Description. Project provides single family residential, multifamily residential, commercial, senior community clubhouse, parks and recreation, and open space land uses.</td> <td data-bbox="1457 1187 1738 1395">Included in Project design as described in the Project Description. No additional implementation required.</td> </tr> </tbody> </table>	GHG REDUCTION MEASURE	APPLICABILITY	IMPLEMENTATION	SMAQMD-RECOMMENDED CAL EEMOD MEASURE TO REDUCE GHGS¹			LUT-1 Increase Density: Project more dense than typical developments	Not applicable. Project is under minimum density required (eight units per acre).	Not applicable.	LUT-3 Increase Diversity of Land Uses: Different types of land uses are near each other	Incorporated into Project Description. Project provides single family residential, multifamily residential, commercial, senior community clubhouse, parks and recreation, and open space land uses.	Included in Project design as described in the Project Description. No additional implementation required.	LS
GHG REDUCTION MEASURE	APPLICABILITY	IMPLEMENTATION													
SMAQMD-RECOMMENDED CAL EEMOD MEASURE TO REDUCE GHGS¹															
LUT-1 Increase Density: Project more dense than typical developments	Not applicable. Project is under minimum density required (eight units per acre).	Not applicable.													
LUT-3 Increase Diversity of Land Uses: Different types of land uses are near each other	Incorporated into Project Description. Project provides single family residential, multifamily residential, commercial, senior community clubhouse, parks and recreation, and open space land uses.	Included in Project design as described in the Project Description. No additional implementation required.													

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		LUT-9 Improve Walkability Design: Walkable street network	Incorporated into Project Description. Project is designed with a walkable street pattern, with 123.53 intersections per square mile, multiple bicycle/pedestrian connections, an off-street trail system, and bicycle lanes to encourage walkability.	Included in Project design as described in the Project Description. No additional implementation required.	
		LUT-4 Improve Destination Accessibility: Project close to regional employment or destination center	Incorporated into Project Description. Project is located 12.3 miles from a regional employment center.	Included in Project design as described in the Project Description. No additional implementation required.	
		LUT-5 Increase Transit Accessibility: Project near high-quality transit	Not applicable. While Project would provide a transit stop for the planned regional transit line, transit is currently limited in the area.	Not applicable.	
		LUT-6 Integrate Below Market Rate Housing: Incorporates affordable housing	Not applicable. The Project includes two multifamily components, but does not include affordable housing.	Not applicable.	
		SDT-1 Improve Pedestrian Network: On-site pedestrian access network links all of project internally and externally	Incorporated into Project Description. Project is designed with a walkable street pattern, with 123.53 intersections per square mile, multiple bicycle/pedestrian connections, an off-street trail system, and bicycle lanes to encourage walkability.	Included in Project design as described in the Project Description. No additional implementation required.	
		SDT-2 Provide Traffic Calming Measures: Projects streets and intersections feature traffic calming	Incorporated into Project Description. Project has been designed to include a range of traffic-calming street design features, such as narrower streets,	Included in Project design as described in the Project Description. No additional implementation required.	

<i>ENVIRONMENTAL IMPACT</i>	<i>LEVEL OF SIGNIFICANCE WITHOUT MITIGATION</i>	<i>MITIGATION MEASURE</i>			<i>RESULTING LEVEL OF SIGNIFICANCE</i>
		features	limited single-loaded streets, parking on both sides of the street, posted speed limit signs, planter strips with street trees, and horizontal shifts (lane centerline that curves or shifts), and intersection traffic calming features, including marked crosswalks, count-down signal timers where appropriate, curb extensions, channelization islands, median islands, and tight corner radii.		
		SDT-3 Implement a Neighborhood Electric Vehicle (NEV) Network: Project provides a viable NEV network	Incorporated into Project Design. While the Project does not include a traditional NEV, the Project would support electric vehicle use through installing EV charging stations throughout the Project site, such that at least 50% of single family residences and 5% of parking spaces within the commercial, park and recreation, and multi-family land uses will have EV charging stations to reduce reliance on gasoline-fueled vehicles.	Included in Project design as described in the Project Description. No additional implementation required.	
		PDT-1 Limit Parking Supply: Parking supply below Institute of Transportation Engineers (ITE) rates	Not applicable. The suburban context of the Project is not appropriate for this measure.	Not applicable.	
		PDT-2 Unbundle Parking Costs: Parking cost separate from property costs	Not applicable. Project design incorporates garages into the single family residential units and does not have significant opportunities	Not applicable.	

<i>ENVIRONMENTAL IMPACT</i>	<i>LEVEL OF SIGNIFICANCE WITHOUT MITIGATION</i>	<i>MITIGATION MEASURE</i>			<i>RESULTING LEVEL OF SIGNIFICANCE</i>
			for unbundled parking costs.		
		TST-1 Provide a Bus Rapid Transit (BRT) System: Establish a BRT line with permanent operational funding stream	Not applicable. While the Project will provide for an expanded transit system through providing a transit stop in accordance with the City's transit plan, it will not create an independent funding source for transit.	Not applicable.	
		TST-3 Expand Transit Network: Establishes or enhances bus line with permanent operational funding stream	Not applicable. While the Project will provide for an expanded transit system through providing a transit stop in accordance with the City's transit plan, it will not create an independent funding source for transit.	Not applicable.	
		TST-4 Increase Transit Frequency: Reduces headways of existing transit	Not applicable. While the Project will provide for an expanded transit system through providing a transit stop in accordance with the City's transit plan, it will not create an independent funding source for transit that would reduce headways.	Not applicable.	
		TRT-1&2 Implement Trip Reduction Program: Transportation Management Association (TMA) membership or other comprehensive services	Mitigation Measure. Mitigation Measure 3.6-1 requires the Project to join a Transportation Management Association (all employees located within the Project site to be eligible to participate).	Prior to issuance of occupancy permits for each construction phase of the Project, the Project applicant shall demonstrate that the residential, commercial, and parks and recreation uses associated with each phase have a permanent commitment, demonstrated through CC&Rs or comparable	

<i>ENVIRONMENTAL IMPACT</i>	<i>LEVEL OF SIGNIFICANCE WITHOUT MITIGATION</i>	<i>MITIGATION MEASURE</i>			<i>RESULTING LEVEL OF SIGNIFICANCE</i>
				<p>permanent mechanisms, have joined a Transportation Management Association and ensures payment of annual fees for on-going participation. The Transportation Management Association shall grant all employees located within the Project site eligibility to participate).</p>	
		<p>BE-1 Exceed Title 24 California Code of Regulations, known as the California Building Standards Code(Title 24): Use less energy than allowed by Title 24</p>	<p>Mitigation Measure. Mitigation Measure 3.6-1 requires the Project to exceed the 2016 Title 24 requirements by 2 percent</p>	<p>Prior to issuance of building permits for each construction phase of the Project, including all residential, commercial, and parks and recreation uses, the Project applicant shall demonstrate that the phase exceeds the 2016 Title 24 requirements for energy use and efficiency by a minimum of 2 percent. The documentation shall identify specific Project components, such as building materials and design, lighting improvements beyond the minimum required by LE-1, etc. and the associated reduction with each component beyond the Title 24 requirements.</p>	

<i>ENVIRONMENTAL IMPACT</i>	<i>LEVEL OF SIGNIFICANCE WITHOUT MITIGATION</i>	<i>MITIGATION MEASURE</i>			<i>RESULTING LEVEL OF SIGNIFICANCE</i>
		LE-1 Install High Efficiency Lighting: Make use of high-efficient outdoor and public lighting	Incorporated into Project Design. The Project proposes to install energy-efficient (i.e., LED or better) lighting for all outdoor lighting.	Included in Project design as described in the Project Description. No additional implementation required.	
		BE-4 Energy Efficient Appliances: Use appliances more energy efficient than standard models	Incorporated into Project Design. The Project proposes to install energy-efficient appliances.	Included in Project design as described in the Project Description. No additional implementation required.	
		AE-1 On-site Renewable Energy: Establish on-site renewable energy. (No Ozone Precursor reductions if NO _x intensity is higher than electric utility.)	Incorporated into Project Design. The Project would generate a minimum of 95% of electricity via renewable energy via either on-site energy generation and/or through a contract with SMUD.	Included in Project design as described in the Project Description. No additional implementation required.	
		WUW-2 Apply Water Conservation Strategy: Reduce indoor and outdoor water use	Incorporated into Project Design. The Project would	Included in Project design as described in the Project Description. No additional implementation required.	
		WSW-1 Use Reclaimed Water: Project utilizes non-potable water	Not applicable. Nonpotable water is not available to the Project site.	Not applicable.	
		WSW-2 Use Grey Water: Project reuses onsite water	Not applicable. The Project does not have significant opportunities to reuse onsite water.	Not applicable.	

<i>ENVIRONMENTAL IMPACT</i>	<i>LEVEL OF SIGNIFICANCE WITHOUT MITIGATION</i>	<i>MITIGATION MEASURE</i>			<i>RESULTING LEVEL OF SIGNIFICANCE</i>
		<p>WUW-1 Install Low-Flow Bathroom Faucet, Install Low-Flow Kitchen Faucet, Install Low-flow Toilet, Install Low-flow Shower</p>	<p>Incorporated into Project Design. The Project proposes to install energy-efficient appliances.</p>	<p>Included in Project design as described in the Project Description. No additional implementation required.</p>	
		<p>WUW-5 Reduce Turf in Landscapes and Lawns: Use less turf than normal projects</p>	<p>Incorporated into Project Design. Minimize turf for residential uses to 70% less than the maximum allowed turf area to reduce water use.</p>	<p>Included in Project design as described in the Project Description. No additional implementation required.</p>	
		<p>WUW-4 Use Water-Efficient Irrigation Systems: Install a smart irrigation control system</p>	<p>Incorporated into Project Design. Use water-efficient irrigation systems (automatic rain shut-off, maximum gallon per minute restriction, WiFi connectivity) to reduce water waste.</p>	<p>Included in Project design as described in the Project Description. No additional implementation required.</p>	
		<p>WUW-3 Water Efficient Landscape: Plant native or drought-resistant trees and Vegetation</p>	<p>Mitigation Measure. Mitigation Measure 3.6-1 requires the Project to incorporate a minimum of 50 percent of native or drought-resistant trees and vegetation into the proposed landscaping, including landscaping lots, landscaping associated with parks and recreation facilities, and landscaping associated with residential uses. Project applicant shall demonstrate at least a 25% reduction in outdoor water use from implementation of this measure.</p>	<p>Prior to approval of improvement plans for each phase of construction, the Project applicant shall submit landscaping plans that demonstrate a minimum of 50 percent of of native or drought-resistant trees and vegetation are included in the non-turf component of proposed landscaping, including landscaping lots, parks and recreation lots and facilities, and residential uses.</p>	

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE			RESULTING LEVEL OF SIGNIFICANCE
		SW-1 Institute Recycling and Composting Services: Project Recycles, Reduces, and Reuses	Incorporated into Project Design. The Project will comply with the City's recycling requirements. Credit is not taken for this measure.	Not applicable.	
<i>ADDITIONAL MEASURES (NOT MODELED IN CALFEEMOD)</i>					
		Purchase Offsets.	Mitigation Measure. This Mitigation Measure 3.6-1 requires the Project applicant to purchase carbon offsets to reduce net project operational and amortized construction emissions to less than SMAQMD's adopted threshold for GHG emissions.	Prior to issuance of the project's first building permit, the project applicant shall develop a SMAQMD-approved commitment to purchase carbon offsets sufficient to reduce project operational emissions and amortized construction emissions to less than SMAQMD's adopted threshold for GHG emissions that is in place at the time of the offset purchase. The purchase of carbon offsets may be prorated so that the offsets are paid concurrent with the approval of each project phase (small lot subdivision maps, multifamily parcel, etc.).	
Impact 3.6-3: The Project has the potential to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases	PS	<i>Implement Mitigation Measure 3.6-1.</i>			LS

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
Impact 3.6-4: Project implementation has the potential to result in the inefficient, wasteful, or unnecessary use of energy resources, or conflict with or obstruct a state or local plan for renewable energy or energy efficiency	LS	None required.	--
HAZARDS AND HAZARDOUS MATERIALS			
Impact 3.7-1: Project implementation has the potential to create a significant hazard through the routine transport, use, or disposal of hazardous materials or through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment	PS	Mitigation Measure 3.7-1: Prior to commencement of grading, the applicant shall submit Construction Site Management Plan for review and approval by the City. The Construction Site Management Plan shall establish management practices for handling hazardous materials, including fuels, paints, cleaners, solvents, etc., during construction to reduce the potential for spills and to direct the safe handling of these materials if encountered. The City shall approve the Construction Site Management Plan prior to any earth moving.	LS
Impact 3.7-2: The Project is not located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would not create a significant hazard to the public or the environment	LS	None required.	--
Impact 3.7-3: Project implementation would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school	LS	None required.	--
Impact 3.7-4: Project implementation would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	LS	None required.	--
Impact 3.7-5: Project implementation would not expose people or structures to a risk of loss, injury or death from wildland fires	LS	None required.	--

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
HYDROLOGY AND WATER QUALITY			
Impact 3.8-1: The Project may violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality during construction	PS	<p>Mitigation Measure 3.5-1: Prior to any site disturbance, the Project proponent shall submit a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) to the RWQCB in accordance with the NPDES General Construction Permit requirements. The SWPPP shall be designed to control pollutant discharges utilizing Best Management Practices (BMPs) and technology to reduce erosion and sediments. BMPs may consist of a wide variety of measures taken to reduce pollutants in stormwater runoff from the Project site. Measures shall include temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) that will be employed to control erosion from disturbed areas. Final selection of BMPs will be subject to approval by the City of Rancho Cordova and the RWQCB. The SWPPP will be kept on site during construction activity and will be made available upon request to representatives of the RWQCB. (Note: This measure is also included in Section 3.5.)</p> <p>Mitigation Measure 3.8-1: Prior to the commencement of construction activities, the Project proponent shall submit, and obtain approval of, a Spill Prevention Countermeasure and Control Plan (SPCC) to the Sacramento County Environmental Management Department. The SPCC shall specify measures and procedures to minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during all construction activities, and shall meet the requirements specified in the Code of Federal Regulations, title 40, part 112.</p>	LS
Impact 3.8-2: The Project may violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality during post-construction	PS	<p>Mitigation Measure 3.8-2: Before approval of the final subdivision map for all Project phases, a detailed Best Management Practice (BMP) and water quality maintenance plan shall be prepared by a qualified engineer retained by the Project applicants that meets the standards of the City's NPDES Permit (No. CAS00853254) and shall document that stormwater runoff from the Project site is treated per the standards in the Stormwater Quality Design Manual for Sacramento and South Placer Regions. Drafts of the plan shall be submitted to the City of Rancho Cordova for review and approval concurrently with development of tentative subdivision maps for all Project phases. The plan shall finalize the water quality improvements and further detail the structural and nonstructural BMPs proposed for the Project. The plan shall include the elements described below.</p>	LS

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
		<ul style="list-style-type: none"> • <i>A quantitative hydrologic and water quality analysis of proposed conditions incorporating the proposed drainage design features.</i> • <i>Pre-development and post-development calculations demonstrating that the proposed water quality BMPs meet or exceed requirements established by the City of Rancho Cordova and including details regarding the size, geometry, and functional timing of storage and release pursuant to the "Stormwater Quality Design Manual for Sacramento and South Placer Regions".</i> • <i>Source control programs to control water quality pollutants on the Project site, which may include but are limited to recycling, street sweeping, storm drain cleaning, household hazardous waste collection, waste minimization, prevention of spills and illegal dumping, and effective management of public trash collection areas.</i> • <i>A pond management component for the proposed basins that shall include management and maintenance requirements for the design features and BMPs, and responsible parties for maintenance and funding.</i> • <i>Low Impact Development (LID) and Hydromodification control measures shall be integrated into the BMP and water quality maintenance plan. These may include, but are not limited to:</i> <ul style="list-style-type: none"> ○ <i>Bioretention planters;</i> ○ <i>surface swales;</i> ○ <i>replacement of conventional impervious surfaces with pervious surfaces (e.g., porous pavement, green roofs);</i> ○ <i>impervious surfaces disconnection; and</i> ○ <i>trees planted to intercept stormwater.</i> 	
Impact 3.8-3: The Project would not decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin	LS	None required.	--

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
Impact 3.8-4: The Project would not 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 result in substantial erosion, siltation, surface runoff, flooding, or polluted runoff	LS	None required.	--
Impact 3.8-5: The Project may conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan	LS	None required.	--
LAND USE			
Impact 3.9-1: Implementation of the Project would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project adopted to avoid or mitigate an environmental effect	PS	<p>Mitigation Measure 3.9-1: <i>The proposed open space areas located under the SMUD transmission line that traverses the site shall be designed and maintained in accordance with SMUD's Guide for Transmission Encroachment. According to the Guide, certain improvements, for safety and liability reasons, are typically not allowed within transmission corridors. These include, but not limited to the following:</i></p> <ul style="list-style-type: none"> • <i>Buildings or structures;</i> • <i>Covered parking;</i> • <i>Excavation, elevation or grade changes;</i> • <i>Light Standards over 15' tall;</i> • <i>Parallel Utilities;</i> • <i>Playground Equipment;</i> • <i>Stockpiling of materials;</i> • <i>Storage of combustibles;</i> • <i>Swimming pools, spas, gazebos, etc.;</i> • <i>Tall tree species (over 15' at maturity);</i> • <i>Trash enclosures; and</i> • <i>Water Detention and/or Retention Basins.</i> <p><i>The proposed open space areas located under the PG&E transmission line that traverses the site shall be designed and maintained in accordance with the PG&E Electric and Gas</i></p>	LS

<i>ENVIRONMENTAL IMPACT</i>	<i>LEVEL OF SIGNIFICANCE WITHOUT MITIGATION</i>	<i>MITIGATION MEASURE</i>	<i>RESULTING LEVEL OF SIGNIFICANCE</i>
		<p><i>Service Requirements.</i></p> <p><i>Future improvement plans that include the transmission lines shall be consistent with the items outlined in Chapter 5, Trails and Parks, of the Guide, as well as other applicable Chapters. This requirement shall be noted on the Project improvement plans, subject to review and approval by the City of Rancho Cordova.</i></p>	
NOISE			
Impact 3.10-1: The Project may result in exposure of persons to or generation of substantial temporary or permanent increase in ambient noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies – Project Operation	LS	None required.	--
Impact 3.10-2: The Project may result in exposure of persons to or generation of substantial temporary increase in ambient noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies – Project Construction	LS	None required.	--
Impact 3.10-3: The Project may result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels	LS	None required.	--
Impact 3.10-4: The Project would not expose people residing or working in the Project area to excessive noise levels as a result of nearby airstrips or airports	LS	None required.	--
POPULATION AND HOUSING			
Impact 3.11-1: Project implementation would not induce substantial population growth	LS	None required.	--

<i>ENVIRONMENTAL IMPACT</i>	<i>LEVEL OF SIGNIFICANCE WITHOUT MITIGATION</i>	<i>MITIGATION MEASURE</i>	<i>RESULTING LEVEL OF SIGNIFICANCE</i>
PUBLIC SERVICES AND RECREATION			
Impact 3.12-1: The Project is not anticipated to result in substantial adverse physical impacts associated with the provision of or need for new or physically altered police facilities	LS	None required.	--
Impact 3.12-2: The Project is not anticipated to result in substantial adverse physical impacts associated with the provision of or need for new or physically altered fire protection facilities	LS	None required.	--
Impact 3.12-3: The Project has the potential to require the new or physically altered school facilities, the construction of which may cause substantial adverse physical environmental impacts	LS	None required.	--
Impact 3.12-4: The Project has the potential to require the construction of park and recreational facilities which may cause substantial adverse physical environmental impacts	LS	None required.	--
Impact 3.12-5: The Project would not 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	LS	None required.	--
Impact 3.12-6: The Project is not anticipated to result in substantial adverse physical impacts associated with the provision of or need for new or physically altered other public facilities	LS	None required.	--

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
TRANSPORTATION AND CIRCULATION			
Impact 3.13-1: Under Existing (2017) Plus Project conditions, Project may conflict with an applicable program, plan, ordinance or policy addressing the circulation system – Roadway Segments and Intersections	PS	<p>Mitigation Measure 3.13-1: Intersection #3, Jackson Road at Eagles Nest Road: The intersection shall be converted from side street stop controlled to signalized. Prior to issuance of the occupancy permit for the 400th dwelling unit, the Project applicant shall fund its fair share of the improvement. The Project's fair share of the improvement is 1.69 percent.</p> <p>Mitigation Measure 3.13-2: Intersection #9, Grant Line Road at Sunrise Boulevard: The southbound approach shall be changed to include a right turn lane and an all-purpose lane. This would require restriping the southbound approach to move the bicycle lane from its existing location between the two travel lanes to the right shoulder and add hatching for the right turns, consistent with the Optional Through Right and Right-Turn-Only lane configuration included in Figure 9C-4a (CA) of the CaMUTCD¹. Prior to issuance of the occupancy permit for the 400th dwelling unit, the Project applicant shall fund its fair share of the improvement. The Project's fair share of the improvement is 2.46 percent .</p> <p>Mitigation Measure 3.13-3: Intersection #11, Douglas Road at Sunrise Boulevard: Signal timing optimization shall be completed at this intersection. Additionally, a right-turn overlap signal phase shall be added for the eastbound right-turn, overlapping with the northbound left-turn movement. The improvement shall be completed prior to issuance of the occupancy permit for the 400th dwelling unit.</p> <p>Mitigation Measure 3.13-4: Intersection #21, Sunrise Boulevard at White Rock Road: Signal timing optimization shall be completed at this intersection. The improvement shall be completed prior to issuance of the occupancy permit for the 400th dwelling unit.</p> <p>Mitigation Measure 3.13-5: Intersection #25, Sunrise Boulevard at Zinfandel Drive: The eastbound and westbound approaches shall be restriped to include a left turn lane and through-right lane. The improvement shall be completed prior to issuance of the occupancy permit for the 400th dwelling unit.</p>	SU

¹ California MUTCD 2014 Edition. Chapter 9C-Markings: Part 9 Traffic Control for Bicycle Facilities. November 2014

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
Impact 3.13-2: Under Cumulative (2040) Plus Project conditions, Project may conflict with an applicable program, plan, ordinance or policy addressing the circulation system – Roadway Segments and Intersections	PS	<p>Mitigation Measure 3.13-6: Intersection #10, Douglas Road at Zinfandel Drive: Prior to issuance of the occupancy permit for the 400th dwelling unit, the Project shall pay its fair-share for the westbound right turn to be converted from permitted to a free right turn with a receiving lane. The Project's fair share of the improvement is 10.61 percent.</p> <p>Mitigation Measure 3.13-7: Intersection #27, White Rock Road at Prairie City Road: A second southbound right-turn lane shall be added at this intersection, and a right-turn overlap signal phase shall be added for the southbound right-turn. The Project's fair share of the improvement is 4.77 percent. The improvement fair-share shall be paid prior to issuance of the occupancy permit for the 400th dwelling unit.</p> <p>Mitigation Measure 3.13-8: Roadway Segment #9, Douglas Road between Mather Boulevard and Sunrise Boulevard: Prior to issuance of the occupancy permit for the 400th dwelling unit, the Project shall pay its fair-share for the widening of Douglas Boulevard to six lanes. The Project's fair share of the improvement is 10.05 percent.</p> <p>Mitigation Measure 3.13-9: Rancho Cordova Parkway shall be widened from two to four lanes along the Project extents. The improvement shall be reflected on the Project's improvement plans. The improvement shall be completed before the 570th market rate single family detached unit and the 566th Active Adult Residential unit is constructed.</p>	SU
Impact 3.13-3: Project implementation would not conflict with an applicable program, plan, ordinance, or policy addressing the transit system	LS	None required.	--
Impact 3.13-4: Project implementation would not conflict with an applicable program, plan, ordinance, or policy addressing the bicycle and pedestrian system	LS	None required.	--
Impact 3.13-5: Project implementation would not substantially increase hazards due to geometric design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)	LS	None required.	--
Impact 3.13-6: Project implementation would result in adequate emergency vehicle access	LS	None required.	--

<i>ENVIRONMENTAL IMPACT</i>	<i>LEVEL OF SIGNIFICANCE WITHOUT MITIGATION</i>	<i>MITIGATION MEASURE</i>	<i>RESULTING LEVEL OF SIGNIFICANCE</i>
UTILITIES			
Impact 3.14-1: The Project would not result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the providers existing commitments, or require or result in the relocation or construction of new or expanded wastewater facilities, the construction or relocation of which could cause significant environmental effects	LS	None required.	--
Impact 3.14-2: The Project would not require or result in the relocation of new or expanded water facilities, and would have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years	LS	None required.	--
Impact 3.14-3: The Project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste, and would not 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	LS	None required.	--
OTHER CEQA-REQUIRED TOPICS			
Impact 4.1: The Project may contribute to cumulative impacts on known and undiscovered tribal cultural resources	LCC	None required.	--

<i>ENVIRONMENTAL IMPACT</i>	<i>LEVEL OF SIGNIFICANCE WITHOUT MITIGATION</i>	<i>MITIGATION MEASURE</i>	<i>RESULTING LEVEL OF SIGNIFICANCE</i>
Impact 4.2: The Project may contribute to cumulative impacts on greenhouse gases and climate change	LCC	None required.	--

This section summarizes the purpose of the Environmental Impact Report (EIR) for the proposed Project (the “Project”). The following discussion addresses the environmental procedures that are to be followed according to State law, the intended uses of the EIR, the Project’s relationship to the City’s General Plan, the EIR scope and organization, and a summary of the agency and public comments received during the public review period for the Notice of Preparation (NOP).

1.1 PURPOSE AND INTENDED USES OF THE EIR

The City of Rancho Cordova (City), as lead agency, determined that proposed Project is a "project" within the definition of the California Environmental Quality Act (CEQA). CEQA requires the preparation of an environmental impact report prior to approving any project that may have a significant impact on the environment. For the purposes of CEQA, the term "project" refers to the whole of an action, which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378[a]).

An EIR must disclose the expected environmental impacts, including impacts that cannot be avoided, growth-inducing effects, impacts found not to be significant, and significant cumulative impacts, as well as identify mitigation measures and alternatives to the proposed project that could reduce or avoid its adverse environmental impacts. CEQA requires government agencies to consider and, where feasible, minimize environmental impacts of proposed development. CEQA further requires public agencies to balance a variety of public objectives, including economic, environmental, and social factors in making a decision to approve a development project with significant and unavoidable environmental impacts.

The City has prepared this Draft EIR to provide the public and responsible and trustee agencies with an objective analysis of the potential environmental impacts resulting from construction and operation of proposed Project. The environmental review process enables interested parties to evaluate the proposed Project in terms of its environmental consequences, to examine and recommend methods to eliminate or reduce potential adverse impacts, and to consider a reasonable range of alternatives to the Project. While CEQA requires that consideration be given to avoiding adverse environmental effects, the lead agency must balance adverse environmental effects against other public objectives, including the economic and social benefits of a project, in determining whether a project should be approved.

This EIR will be used by the City to determine whether to approve, modify, or deny the proposed Project and associated approvals in light of the Project’s environmental effects. The EIR will be used as the primary environmental document to evaluate full project development, along with all associated infrastructure improvements, and permitting actions associated with The Ranch Project. All of the actions and components of the proposed project are described in detail in Section 2.0 of this Draft EIR.

1.2 TYPE OF EIR

This EIR is a Project EIR as defined in Section 15161 of the State CEQA Guidelines. A Project EIR is an EIR which examines the environmental impacts of a specific development project. This type of

EIR should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project including planning, construction and operation. The Project EIR approach is appropriate for The Ranch Project because it allows comprehensive consideration of the reasonably anticipated scope of the Project, as described in greater detail in Section 2.0.

1.3 CEQA STREAMLINING

CEQA Guidelines Section 15168

The City Council certified the Rancho Cordova General Plan EIR (General Plan EIR) on June 26, 2006 (State Clearinghouse Number 2005022137). The General Plan EIR was prepared as a Program EIR pursuant to State CEQA Guidelines Section 15168. According to Section 15168(a):

(a) General. A program EIR is an EIR which may be prepared on a series of actions that can be characterized as on large project and are related either:

(1) Geographically,

(2) As logical parts in the chain of contemplated actions,

(3) In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or

(4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.

The General Plan was intended to evaluate the environmental impacts of the General Plan to the greatest extent possible and is used as the primary environmental document to evaluate all subsequent planning and permitting actions associated with projects in the City. State CEQA Guidelines Section 15168(c) establishes the requirement that the Lead Agency (the City) determine if subsequent projects require additional environmental analysis.

According to State CEQA Guidelines Section 15168(c), additional review is required: (1) If a later activity would have effects that were not examined in the program EIR, a new initial study would need to be prepared leading to either an EIR or negative declaration. In addition to the rules governing the preparation and use of Program EIRs, other provisions of CEQA govern site-specific review of the proposed project.

Public Resources Code Section 21083.3

Public Resources Code Section 21083.3 limits CEQA review of certain projects consistent with an approved general plan, community plan, or zoning action for which an EIR was prepared to environmental effects that are "peculiar" to the parcel or to the project and which were not addressed as significant effects in a prior EIR, or which new information shows will be more significant than described in the prior EIR. The proposed project is a qualified project pursuant to Section 21083.3(b), which states *"(b) If a development project is consistent with the general plan of a local agency and an Environmental Impact Report was certified with respect to that general plan, the application of this division to the approval of that development project shall be limited to effects on the environment which are peculiar to the parcel or to the project and which were not addressed as significant effects in the prior Environmental Impact Report, or which substantial new information shows will be more significant than described in the prior Environmental Impact Report."*

The proposed Project was generally described in the General Plan EIR. However, specific information about the proposed Project was not known at the time of the preparation of the GP-EIR and the Project-specific impacts resulting from implementation of the proposed Project were not fully identified or mitigated in the General Plan EIR. Therefore, additional analysis and potential mitigation of the Project-specific environmental effects of the proposed Project are required. State CEQA Guidelines Section 15183 provides guidance as to the scope of this subsequent analysis.

CEQA Guidelines Section 15183 provides a streamlined environmental review process for projects that are consistent with the densities established by existing zoning, community plan, or general plan policies for which an EIR was certified. As discussed throughout this EIR, including Section 3.9, Land Use, the Project is consistent with the City's General Plan vision for the Project site and the policies and requirements of the General Plan that address the development density of the Project site. The impacts of development of the City's Planning Area, which includes the proposed Project site, are analyzed in the City's General Plan EIR (which was certified and adopted in 2006).

Under Section 15183 and the statute on which it is based, Public Resources Code Section 21083.3, additional environmental review for projects that are consistent with the development density established by a general plan for which an EIR was certified generally applies only to the project-specific impacts that are "peculiar to the project or its site" and have not been previously disclosed, except where "substantial new information" shows that previously identified impacts would be more significant than previously assumed. Notably, impacts are considered not to be "peculiar to the parcel or to the project" if they can be substantially mitigated pursuant to previously adopted, uniformly applied development policies or standards. Moreover, lead agencies need not revisit impacts previously addressed as significant effects in the prior EIR. The City has determined that, in light of the extensive coverage of particular topics in the General Plan EIR, this EIR need not revisit particular cumulative environmental topics. See Chapter 4.0.

The provisions contained in Section 15183 of the CEQA Guidelines are presented below.

15183. PROJECTS CONSISTENT WITH A COMMUNITY PLAN OR ZONING

(a) CEQA mandates that projects which are consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was certified shall not require additional environmental review, except as might be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site. This streamlines the review of such projects and reduces the need to prepare repetitive environmental studies.

(b) In approving a project meeting the requirements of this section, a public agency shall limit its examination of environmental effects to those which the agency determines, in an initial study or other analysis:

(1) Are peculiar to the project or the parcel on which the project would be located,

(2) Were not analyzed as significant effects in a prior EIR on the zoning action, general plan, or community plan, with which the project is consistent,

(3) Are potentially significant off-site impacts and cumulative impacts which were not discussed in the prior EIR prepared for the general plan, community plan or zoning action, or

(4) Are previously identified significant effects which, as a result of substantial new information which was not known at the time the EIR was certified, are determined to have a more severe adverse impact than discussed in the prior EIR.

(c) If an impact is not peculiar to the parcel or to the project, has been addressed as a significant effect in the prior EIR, or can be substantially mitigated by the imposition of uniformly applied development policies or standards, as contemplated by subdivision (e) below, then an additional EIR need not be prepared for the project solely on the basis of that impact.

(d) This section shall apply only to projects which meet the following conditions:

(1) The project is consistent with:

(A) A community plan adopted as part of a general plan,

(B) A zoning action which zoned or designated the parcel on which the project would be located to accommodate a particular density of development, or

(C) A general plan of a local agency, and

(2) An EIR was certified by the lead agency for the zoning action, the community plan, or the general plan.

(e) This section shall limit the analysis of only those significant environmental effects for which:

(1) Each public agency with authority to mitigate any of the significant effects on the environment identified in the planning or zoning action undertakes or requires others to

undertake mitigation measures specified in the EIR which the lead agency found to be feasible, and

(2) The lead agency makes a finding at a public hearing as to whether the feasible mitigation measures will be undertaken.

(f) An effect of a project on the environment shall not be considered peculiar to the project or the parcel for the purposes of this section if uniformly applied development policies or standards have been previously adopted by the City or county with a finding that the development policies or standards will substantially mitigate that environmental effect when applied to future projects, unless substantial new information shows that the policies or standards will not substantially mitigate the environmental effect. The finding shall be based on substantial evidence which need not include an EIR. Such development policies or standards need not apply throughout the entire City or county, but can apply only within the zoning district in which the project is located, or within the area subject to the community plan on which the lead agency is relying. Moreover, such policies or standards need not be part of the general plan or any community plan, but can be found within another pertinent planning document such as a zoning ordinance. Where a City or county, in previously adopting uniformly applied development policies or standards for imposition on future projects, failed to make a finding as to whether such policies or standards would substantially mitigate the effects of future projects, the decision-making body of the City or county, prior to approving such a future project pursuant to this section, may hold a public hearing for the purpose of considering whether, as applied to the project, such standards or policies would substantially mitigate the effects of the project. Such a public hearing need only be held if the City or county decides to apply the standards or policies as permitted in this section.

(g) Examples of uniformly applied development policies or standards include, but are not limited to:

(1) Parking ordinances.

(2) Public access requirements.

(3) Grading ordinances.

(4) Hillside development ordinances.

(5) Flood plain ordinances.

(6) Habitat protection or conservation ordinances.

(7) View protection ordinances.

(8) Requirements for reducing greenhouse gas emissions, as set forth in adopted land use plans, policies, or regulations.

(h) An environmental effect shall not be considered peculiar to the project or parcel solely because no uniformly applied development policy or standard is applicable to it.

(i) Where the prior EIR relied upon by the lead agency was prepared for a general plan or community plan that meets the requirements of this section, any rezoning action consistent with the general plan or community plan shall be treated as a project subject to this section.

(1) "Community plan" is defined as a part of the general plan of a City or county which applies to a defined geographic portion of the total area included in the general plan, includes or references each of the mandatory elements specified in Section 65302 of the Government Code, and contains specific development policies and implementation measures which will apply those policies to each involved parcel.

(2) For purposes of this section, "consistent" means that the density of the proposed project is the same or less than the standard expressed for the involved parcel in the general plan, community plan or zoning action for which an EIR has been certified, and that the project complies with the density-related standards contained in that plan or zoning. Where the zoning ordinance refers to the general plan or community plan for its density standard, the project shall be consistent with the applicable plan.

(j) This section does not affect any requirement to analyze potentially significant offsite or cumulative impacts if those impacts were not adequately discussed in the prior EIR. If a significant offsite or cumulative impact was adequately discussed in the prior EIR, then this section may be used as a basis for excluding further analysis of that offsite or cumulative impact.

This Draft EIR addresses Project-specific impacts that were not fully addressed in the General Plan EIR. Additionally, this Draft EIR summarizes the findings of the City relating to the General Plan EIR and how the criteria set forth in Guidelines Section 15183 have been met.

The General Plan EIR analyzed the environmental effects of the General Plan and the twelve policy elements and the Land Use Map "implementation element". The twelve policy elements concentrated on providing policy guidance in the following areas:

- Land Use
- Urban Design
- Economic Development
- Housing
- Circulation
- Open Space, Parks, and Trails
- Infrastructure, Services, and Finance
- Natural Resources
- Cultural and Historic Resources
- Safety
- Air Quality
- Noise

The "implementation element" concerned the General Plan Land Use Map for the City which combines specific land use designations in some areas of the City and more general descriptions of

land uses in special areas planned for future growth referred to as "Planning Areas". The proposed Project lies within one of these Planning Areas (SunCreek/Preserve Planning Area), which is described in the General Plan and specific assumptions for the Project site are detailed in the General Plan EIR, which anticipated 2,624 residential units on 303.5 acres, a village center, parks, and wetland preserve, as discussed under the impact analysis provided in Section 3.9, Land Use.

In adopting the General Plan and certifying the General Plan EIR as complete and adequate, the City Council adopted findings of fact and a statement of overriding considerations for those impacts that could not be mitigated to less than significant levels. Impacts deemed in the General Plan EIR to be significant and unavoidable:

- Conflicts with applicable land use plans.
- Various impacts on agricultural land.
- Conflicts with Williamson Act contracts.
- Substantial population, housing, and employment growth.
- Deficient traffic level of service by 2030.
- Worsening of already unacceptable operations on US-50.
- Conflicts with the Regional Ozone Attainment Plan.
- Significant construction-based pollutant emissions.
- Significant operational pollutant emissions.
- Significant emissions of Toxic Air Contaminants.
- Creation of construction, traffic, and operational noise above standards.
- Creation of new noise-sensitive land uses within airport noise areas.
- Loss of availability of aggregate resources.
- Impacts on water supply (both availability of water and infrastructure required).
- Impacts to habitat and individuals of special status species.
- Impacts to raptors, migratory birds, and other wildlife.
- Impacts to jurisdictional waters of the U.S.
- Impacts to animal movement corridors.
- Loss of native and landmark trees.
- Disturbance of cultural resources and human remains.
- Environmental impacts resulting from the need for more wastewater infrastructure.
- Degradation of the existing visual character of the area.

The General Plan EIR also identified cumulative impacts that would be cumulatively considerable and significant and unavoidable. Those impacts included:

- Conflicts with area land use plans.
- Conversion of farmland to other uses and agricultural/urban interface conflicts.
- Substantial population, housing, and employment growth.
- Significant impacts to area traffic level of service.
- Increases in regional ozone and particulate matter emissions.
- Increases in regional traffic and operational noise.

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- Cumulative loss of mineral resources.
- Increased regional demand for water supply and need for water infrastructure.
- Cumulative loss of biological resources.
- Cumulative loss of cultural resources.
- Increases in wastewater treatment capacity and infrastructure.
- Changes in area visual character and landscape.

Detailed information regarding both the General Plan’s project impacts and cumulative impacts identified above is included in the General Plan EIR. The General Plan EIR is available online at <https://www.cityofranhocordova.org/government/planning/general-plan> and on request at the City at the following address:

City of Rancho Cordova Planning Department
2729 Prospect Park Drive
Rancho Cordova, CA 95670

This EIR hereby incorporates the General Plan EIR by reference.

1.4 KNOWN RESPONSIBLE AND TRUSTEE AGENCIES

As required by CEQA, this EIR defines lead, responsible, and trustee agencies. The City of Rancho Cordova is the “Lead Agency” for the Project because it holds principal responsibility for approving the Project. The term “Responsible Agency” includes all public agencies other than the Lead Agency that have discretionary approval power over the Project or an aspect of the Project (CEQA Guidelines Section 15381). For the purpose of CEQA, a “Trustee” agency has jurisdiction by law over natural resources that are held in trust for the people of the State of California (CEQA Guidelines Section 15386).

The following agencies are considered Responsible or Trustee Agencies for this Project, and may be required to issue permits or approve certain aspects of the proposed Project:

- Take permits from the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) under the Federal and State Endangered Species Acts;
- Water quality permitting (NPDES and water quality certifications) under the Clean Water Act by the Central Valley Regional Water Quality Control Board;
- Wetland fill permits under Section 404 of the Clean Water Act by the U.S. Army Corps of Engineers;
- Approval of infrastructure details for water supply facilities by the Sacramento County Water Agency; and
- Approval of infrastructure details for wastewater collection facilities by Sacramento Area Sanitation District.

1.5 ENVIRONMENTAL REVIEW PROCESS

The review and certification process for the EIR has involved, or will involve, the following general procedural steps:

NOTICE OF PREPARATION AND INITIAL STUDY

The City circulated an Initial Study and NOP of an EIR for the proposed Project on July 6, 2018 to trustee agencies, the State Clearinghouse, and the public. A public scoping meeting was held on July 26, 2018 to present the Project description to the public and interested agencies, and to receive comments from the public and interested agencies regarding the scope of the environmental analysis to be included in the Draft EIR. Concerns raised in response to the NOP were considered during preparation of the Draft EIR. The NOP and responses to the NOP by interested parties are presented in Appendix A.

DRAFT EIR

This document constitutes the Draft EIR. The Draft EIR contains a description of the Project, description of the environmental setting, identification of Project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of Project alternatives, identification of significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. This Draft EIR identifies issues determined to have no impact or a less than significant impact, and provides detailed analysis of potentially significant and significant impacts. Comments received in response to the NOP were considered in preparing the analysis in this EIR. Upon completion of the Draft EIR, the City has filed the Notice of Completion (NOC) with the State Clearinghouse of the Governor's Office of Planning and Research to begin the public review period.

PUBLIC NOTICE/PUBLIC REVIEW

The City has provided a public notice of availability for the Draft EIR, and invites comment from the general public, agencies, organizations, and other interested parties. Consistent with CEQA, a forty-five (45) day review period is required for this Draft EIR. Public comment on the Draft EIR will be accepted in written form. All comments or questions regarding the Draft EIR should be addressed to:

June Cowles, Senior Planner
City of Rancho Cordova
Planning Department
2729 Prospect Park Drive
Rancho Cordova, CA 95670
jcowles@cityofranchocordova.org

RESPONSE TO COMMENTS/FINAL EIR

Following the public review period, a Final EIR will be prepared. The Final EIR will respond to written comments received during the public review period and to oral comments received at a public hearing during such review period.

CERTIFICATION OF THE EIR/PROJECT CONSIDERATION

The City will review and consider the Final EIR. If the City finds that the Final EIR is "adequate and complete", the City Council may certify the Final EIR in accordance with CEQA. The rule of adequacy generally holds that an EIR can be certified if:

- 1) The EIR shows a good faith effort at full disclosure of environmental information; and
- 2) The EIR provides sufficient analysis to allow decisions to be made regarding the proposed project in contemplation of environmental considerations.

The level of detail contained throughout this EIR is consistent with Section 15151 of the CEQA Guidelines and recent court decisions, which provide the standard of adequacy on which this document is based. The Guidelines state as follows:

An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of the environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.

Following review and consideration of the Final EIR, the City may take action to approve, modify, or reject the Project. A Mitigation Monitoring and Reporting Program, as described below, would also be adopted in accordance with Public Resources Code Section 21081.6(a) and CEQA Guidelines Section 15097 for mitigation measures that have been incorporated into or imposed upon the Project to reduce or avoid significant effects on the environment. This Mitigation Monitoring and Reporting Program will be designed to ensure that these measures are carried out during Project implementation, in a manner that is consistent with the EIR.

1.6 ORGANIZATION AND SCOPE

Sections 15122 through 15132 of the State CEQA Guidelines identify the content requirements for Draft and Final EIRs. An EIR must include a description of the environmental setting, an environmental impact analysis, mitigation measures, alternatives, significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. Discussion of the environmental issues addressed in the Draft EIR was established through review of environmental and planning documentation developed for the Project, environmental and planning

documentation prepared for recent projects located within the City of Rancho Cordova, applicable local and regional planning documents, and responses to the NOP.

This Draft EIR is organized in the following manner:

EXECUTIVE SUMMARY

This Executive Summary summarizes the characteristics of the proposed Project, known areas of controversy and issues to be resolved, and provides a concise summary matrix of the Project's environmental impacts and possible mitigation measures. This chapter identifies alternatives that reduce or avoid at least one significant environmental effect of the proposed Project.

CHAPTER 1.0 – INTRODUCTION

Chapter 1.0 briefly describes the purpose of the environmental evaluation, identifies the lead, trustee, and responsible agencies, summarizes the process associated with preparation and certification of an EIR, and identifies the scope and organization of the Draft EIR.

CHAPTER 2.0 – PROJECT DESCRIPTION

Chapter 2.0 provides a detailed description of the proposed Project, including the location, intended objectives, background information, the physical and technical characteristics, including the decisions subject to CEQA, related infrastructure improvements, and a list of related agency action requirements.

CHAPTER 3.0 – ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

Chapter 3.0 contains an analysis of environmental topic areas as identified below. Each subchapter addressing a topical area is organized as follows:

Environmental Setting. A description of the existing environment as it pertains to the topical area.

Regulatory Setting. A description of the regulatory environment that may be applicable to the Project.

Impacts and Mitigation Measures. Identification of the thresholds of significance by which impacts are determined, a description of Project-related impacts associated with the environmental topic, identification of appropriate mitigation measures, and a conclusion as to the significance of each impact after the incorporation of mitigation measures.

The following environmental topics are addressed in this section:

- Aesthetics and Visual Resources
- Air Quality
- Biological Resources
- Cultural and Tribal Resources
- Geology and Soils

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- Greenhouse Gases, Climate Change, and Energy
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use
- Noise
- Population and Housing
- Public Services and Recreation
- Transportation and Circulation
- Utilities

CHAPTER 4.0 – OTHER CEQA-REQUIRED TOPICS

Chapter 4.0 evaluates and describes the following CEQA required topics: impacts considered less-than-significant, significant and irreversible impacts, growth-inducing effects, cumulative, and significant and unavoidable environmental effects.

CHAPTER 5.0 – ALTERNATIVES TO THE PROJECT

State CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the Project, which could feasibly attain the basic objectives of the Project and avoid and/or lessen any significant environmental effects of the Project. Chapter 5.0 provides a comparative analysis between the environmental impacts of the Project and the selected alternatives.

CHAPTER 6.0 – REPORT PREPARERS

This section lists all authors and agencies that assisted in the preparation of the EIR, by name, title, and company or agency affiliation.

CHAPTER 7.0 – REFERENCES

This section lists all source documents used in the preparation of the EIR.

APPENDICES

This section includes all notices and other procedural documents pertinent to the EIR, as well as technical material prepared to support the analysis. The EIR appendices are available in electronic format. The appendices can be viewed online at:

<https://www.cityofranchocordova.org/government/planning/environmental-review/environmental-documents>

1.7 SIGNIFICANCE CRITERIA

In general, CEQA Guidelines define a significant effect on the environment as “a substantial, or potentially substantial” adverse change in the physical environment. A potential impact is considered significant if a project would substantially degrade the environmental quality of land,

air, water, minerals, flora, fauna, ambient noise, and objects of historic and aesthetic significance (CEQA Guidelines §§15360, 15382).

Definitions of significance vary with the physical condition affected and the setting in which the change occurs. The CEQA Guidelines set forth physical impacts that trigger the requirement to make “mandatory findings of significance” (CEQA Guidelines §15065).

This CEQA document relies on three levels of impact significance:

1. Less-than-significant impact, for which no mitigation measures are warranted;
2. Significant impact that can be mitigated to a level that is less than significant; and
3. Significant impact that cannot be mitigated to a level that is less than significant. Such impacts are significant and unavoidable.

Each resource area uses a distinct set of significance criteria. For example, a proposed project resulting in an exposure of persons to noise levels in excess of standards established in the local general plan or community plan would be considered a significant impact. If existing levels, without the proposed project, already exceed the standards, an increase in noise levels of 3 dB attributable to the proposed would be considered significant. Construction of appropriate sound walls could reduce the impact to a less-than-significant level. If criteria for determining significance relative to a specific environmental resource impact are not identified in the Guidelines, criteria were developed for this Draft EIR consistent with the past pattern and practice of the City of Rancho Cordova.

The significance criteria are identified at the beginning of the impacts discussion for each resource area. These significance criteria promote consistent evaluation of impacts for all alternatives considered, even though significance criteria are necessarily different for each resource considered.

1.8 COMMENTS RECEIVED ON THE NOTICE OF PREPARATION

The City received seven comments on the NOP for the proposed Project Draft EIR. A brief summary of each comment letter is provided in the list below. A copy of each letter is provided in Appendix A of this Draft EIR. A public scoping meeting was held on July 26, 2018 to present the project description to the public and interested agencies, and to receive comments from the public and interested agencies regarding the scope of the environmental analysis to be included in the Draft EIR.

1. California Department of Fish and Wildlife (August 6, 2018);
2. Central Valley Regional Water Quality Control Board (July 30, 2018);
3. Cordova Recreation & Park District (August 3, 2018);
4. County of Sacramento, Department of Transportation (July 8, 2018);
5. Sacramento Area Sewer District (August 6, 2018);
6. Sacramento Metropolitan Air Quality Management District (July 13, 2018); and
7. Sacramento Municipal Utilities District (August 6, 2018).

1.9 AREAS OF CONTROVERSY

Aspects of the proposed project that could be of public concern include the following:

- The size of the proposed project and the associated potential impacts related to air quality emission levels, without mitigation;
- The proposed park areas and the potential impacts related to the transmission lines, irrigation, operational noise, transportation facilities, and light and glare;
- The proposed uses which would lie beneath the on-site transmission lines;
- Concerns regarding the project's traffic-related impacts to Sacramento County facilities;
- Concerns regarding the amount of park land provided.

This chapter provides a comprehensive description of The Ranch Project (Project), including proposed land uses, infrastructure improvements, off-site improvements, requested entitlements, and Project objectives.

Figures referenced throughout this section are located at the end of the chapter.

2.1 PROJECT LOCATION AND ENVIRONMENTAL SETTING

PROJECT LOCATION

The Project site consists of approximately 530 acres located in the City of Rancho Cordova city limits. The Project site is bound by existing single-family residential uses to the north, vacant land to the east, vacant land to the south, and Rancho Cordova Parkway, single family residential, and vacant land on the west. The Project parcel is Sacramento County Assessor's Parcel Number (APN) 067-004-0008. The Project's regional location is shown in Figure 2.0-1 and the Project area and site boundary are shown in Figure 2.0-2.

PROJECT SITE AND SURROUNDING LAND USES

The Project site is currently vacant and has been previously used for agricultural uses (cattle grazing). The topography of the site exhibits low relief topography with elevations ranging between 170 and 210 feet above mean sea level (MSL). The slopes throughout the site range from approximately zero to eight percent. The site is characterized by moderate rolling hills and areas of extensive flatlands, with wetlands, vernal pools, and seasonal drainage courses scattered throughout the site. A headwater tributary of Morrison Creek traverses the Project site, entering at the northeast corner and flowing generally to the southwest. A total of 21.53 acres of jurisdictional aquatic resources have been mapped with the Project site, including: 2.92 acres of depressional seasonal wetlands, 15.04 acres of vernal pools, 1.66 acres of riverine seasonal wetlands, 0.06 acres of riverine seasonal wet swales, 1.54 acres of intermittent drainages, and 0.30 acres of drainage basin outfalls. An aerial view of the site is shown in Figure 2.0-3.

The property is traversed by a 275-foot-wide utility easement occupied by a 230-kV Pacific Gas and Electric (PG&E) transmission line, one 230-kV Sacramento Municipal Utility District (SMUD) transmission line, and one 69-kV SMUD sub-transmission line. No other public utilities (water, sewer, drainage) are located on site.

The Project site is bound by the Sunridge Specific Plan to the north, east, and west, and by the SunCreek Specific Plan to the south and east. Land uses anticipated to the east and south of the Project site by the Sunridge Specific Plan and the SunCreek Specific Plan include low, medium, and high density residential uses, commercial mixed uses (retail, office, and retail professional), and neighborhood parks. Other land uses located nearby include new elementary, junior and senior high schools.

2.2 PROJECT BACKGROUND

The Project site has been the subject of previous environmental review. The Project site is located within the Sunrise Douglas Community Plan and Sunridge Specific Plan areas, which were approved by Sacramento County prior to the incorporation of the City.

In 2006, the City certified the Preserve at Sunridge EIR and subsequently approved entitlements for the Preserve at Sunridge project. The Preserve at Sunridge project was proposed on the same site as the currently proposed The Ranch Project. The Preserve at Sunridge included 2,703 dwelling units (both single family and multi-family residential) commercial and office, neighborhood parks, an elementary school, detention/water quality basins, an open space/wetland preserve, pedestrian facilities, bikeways, and parkways/drainage corridors. This previous project included a 92.4-acre wetland preserve located at the southwest corner of the site. On September 5, 2006 following the City's approval of the Preserve at Sunridge project, the California Native Plant Society (CNPS) filed a petition for writ of mandate in Sacramento County Superior Court seeking to set aside the City's actions. The case was litigated in Superior Court and appealed to the Court of Appeal, Third Appellate District. On March 24, 2009, the Third Appellate District filed an opinion upholding the judgment of the Superior Court with respect to the determination of the Preserve at Sunridge project's inconsistency with the City's General Plan regarding interconnection of preserved habitat areas that support special-status plant and animal species, and regarding mitigation on such species. The case was sent back to the Sacramento County Superior Court, which entered final judgment issuing a peremptory writ of mandate on September 28, 2009. The writ of mandate nullified all of the City's approvals for the Preserve at Sunridge project, including certification of the EIR.

During the course of the court proceedings, ownership of the Project site was transferred to K. Hovnanian Communities. The Preserve at Sunridge project was redesigned and resubmitted as The Ranch at Sunridge to the City in 2010. In 2011, the City issued a Notice of Preparation for an Environmental Impact Report/Environmental Impact Statement. The Environmental Impact Report/Environmental Impact Statement (EIR/EIS) was not completed.

The Project Applicant Team has submitted an application to the U.S. Army Corps of Engineers for a Clean Water Act (CWA) Section 404 permit associated with discharges of fill material into waters of the United States for fill of 6.37 acres of waters of the United States and temporary impacts to approximately 0.01 acres of waters of the United States. The permit is being processed by the U.S. Army Corps of Engineers.

2.3 PROJECT GOALS, OBJECTIVES, AND ENTITLEMENT REQUESTS

GOALS AND OBJECTIVES

Consistent with California Environmental Quality Act (CEQA) Guidelines Section 15124(b), a clear statement of objectives and the underlying purpose of the Project shall be discussed. The principal objective of the Project is the approval and subsequent implementation of The Ranch Project. The quantifiable objectives of the Project include development of the approximately 530-acre site

with: 1,725 residential units, including 737 age restricted single-family units, 735 non-age restricted single-family units, and up to 253 multifamily units, 38 of which would be age-restricted multifamily units, with a club house for the age-restricted senior community, and other recreational opportunities; dedication of 5.16 net acres for commercial use for development of a neighborhood-serving shopping center of approximately 32,000 square feet (s.f.); and dedication of 8.43 net acres for multi-family residential uses in accordance with the City of Rancho Cordova's Affordable Housing Plan.

The Project also identifies the following objectives:

- Create a high-quality development that implements the vision of the General Plan, which designates the Project site for development with a local town center, a mix of residential densities, and a natural resources preserve;
- Respect the Project site's existing natural features through preservation of 199.5 acres of wetlands, vernal pools, and open space;
- Provide a residential development that would assist the City in meeting its housing needs, including a range of housing types to serve the senior population;
- Provide a residential development that would assist the City in meeting its affordability goals providing housing at many price points and attract residents from different areas;
- Create a unique age-restricted community that provides a mix of housing types and amenities, including a club house and recreation facility;
- Accommodate neighborhood-serving commercial uses as part of the town center;
- Implement the City's Bicycle and Pedestrian Master Plans through providing an on-site bicycle and pedestrian network that is accessible by the general public and provides opportunities for connectivity with bicycle and pedestrian facilities on adjacent properties; and
- Implement the City's Transit Master Plan through providing a Signature Transit Station and accommodating the Signature Transit Route along Rancho Cordova Parkway.

ENTITLEMENT REQUESTS AND OTHER APPROVALS

The City of Rancho Cordova is the Lead Agency for the Project, pursuant to the State Guidelines for Implementation of the CEQA, Section 15050.

Implementation of the Project would require the following entitlements and approvals from the City of Rancho Cordova:

- Certification of the EIR;
- Adoption of the Mitigation Monitoring and Reporting Program;
- Approval of the General Plan Amendment from Planning Area to Low Density Residential (LDR), Medium Density Residential (MDR), Residential Mixed Use (RMU), Commercial Mixed Use (CMU), Parks and Open Space (P/OS), and Natural Resources (NR);
- Approval of the Community Plan Amendment from UDA to LDR, MDR, RMU, CMU, P/OS, and NR;

2.0 PROJECT DESCRIPTION

- Approval of the Rezone from Agriculture, 80-Acre Minimum (AG-80) (County) to The Ranch Special Planning Area (SPA) (City);
- Approval of The Ranch Special Planning Area regulatory document;
- Approval of a Large Lot Map;
- Approval of the Tentative Subdivision Map; and
- Approval of design review, improvement plans, and building permits.

Other discretionary approvals that may be required by other governmental agencies may include, but are not limited to, the following:

- Participation in the South Sacramento Habitat Conservation Plan (SSHCP) and issuance of incidental take under the SSHCP;
- Take permits from the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) under the Federal and State Endangered Species Acts;
- Water quality permitting (NPDES and water quality certifications) under the CWA by the Central Valley Regional Water Quality Control Board;
- Wetland fill permits under Section 404 of the CWA by the U.S. Army Corps of Engineers;
- Approval of infrastructure details for water supply facilities by the Sacramento County Water Agency; and
- Approval of infrastructure details for wastewater collection facilities by Sacramento Area Sanitation District.

2.4 PROJECT DESCRIPTION

PROJECT OVERVIEW

The Project proposes an approximately 530-acre residential community. Development would include approximately 1,725 residential units, including 737 age restricted single-family units, 735 non-age restricted single-family units, and up to 253 multifamily units (38 of which would be age-restricted), two commercial parcels totaling 5.16 net acres, a community clubhouse, a park and trail system, open space, and supporting infrastructure. Figure 2.0-4 depicts the Project characteristics and Table 2.0-1 summarizes the proposed uses.

TABLE 2.0-1: LAND USE SUMMARY

PROPOSED USE	GROSS ACRES	NET ACRES	DWELLING UNITS	NON-RESIDENTIAL (SQUARE FEET)	GROSS DENSITY (DU/AC)	NET ACREAGE AS % OF TOTAL
Single Family Residential – Non-Age Restricted						
Village 1 (60x105)	19.58	14.10	86	-	4.4	2.7%
Villages 2, 3 (50x105)	22.48	15.99	114	-	5.1	3.0%
Village 4 (45x105)	19.05	14.57	116	-	6.1	2.7%
Villages 5, 6, 7 (45x85)	16.57	10.98	113	-	6.8	2.1%
Village 8 (36x78.5)	14.11	8.47	132	-	9.4	1.6%
Villages 9, 10, 11 (35x78)	23.62	13.76	174	-	7.4	2.6%
<i>Subtotal</i>	<i>115.41</i>	<i>77.87</i>	<i>735</i>	<i>-</i>	<i>6.4</i>	<i>14.7%</i>
Single Family Residential – Age Restricted						
Village 12 (60x105)	31.98	19.27	112	-	3.5	3.6%
Village 13 (varying lot sizes)	11.41	7.32	43	-	3.8	1.4%
Villages 14, 15, 17, 19 (50x105)	43.98	32.2	256	-	5.8	6.1%
Village 16 (40x105)	7.96	6.37	64	-	8.0	1.2%
Villages 18 (40x110)	5.37	4.34	43	-	8.0	0.8%
Village 20 (56x70)	7.80	5.78	55	-	7.1	1.1%
Village 21 (35x110)	7.93	6.25	68	-	8.6	1.2%
Village 22 (56x70)	14.5	9.38	96	-	6.6	1.8%
<i>Subtotal</i>	<i>130.93</i>	<i>90.91</i>	<i>737</i>	<i>-</i>	<i>5.6</i>	<i>17.1%</i>
Multifamily Residential						
Village 23	7.17	7.17	215	-	30.0	1.4%
Lot A (Multifamily)	1.26	1.26	38	-	30.0	0.2%
<i>Subtotal</i>	<i>8.43</i>	<i>8.43</i>	<i>253</i>	<i>-</i>	<i>30.0</i>	<i>1.6%</i>
Commercial						
Villages 24, 25	5.41	5.16	-	32,000	-	1.0%
<i>Subtotal</i>	<i>5.41</i>	<i>5.16</i>	<i>-</i>	<i>32,000</i>	<i>-</i>	<i>1.0%</i>
Parks and Community Facilities						
Park and Recreation Center (Lot A)	5.17	4.19	-	21,000	-	0.8%
Private Park (Lots B-C)	3.30	2.98	-	-	-	0.6%
Public Park (Lot D)	10.96	10.78	-	-	-	2.0%
Passive Park/Open Space (Lot T)	2.10	2.10	-	-	-	0.2%
<i>Subtotal</i>	<i>21.53</i>	<i>20.05</i>	<i>-</i>	<i>21,000</i>	<i>-</i>	<i>3.6%</i>
Open Space						
Protected Areas (Lots E-F)	199.50	199.50	-	-	-	37.6%
Protected Area / Landscape (Lots G-O)	10.70	26.37	-	-	-	5.0%
Water Quality / Detention (Lots P)	6.11	5.98	-	-	-	1.1%
Open Space (Lots Q-S, U)	14.74	14.18	-	-	-	2.8%
Public Landscape Lot (Lots V-GGG)	-	7.75	-	-	-	1.5%
Private Landscape Lot (Lots HHH-XXX)	-	2.57	-	-	-	0.5%
<i>Subtotal</i>	<i>231.05</i>	<i>256.35</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>48.5%</i>
Roads						
Private Drive (Lots 1-25)	-	1.10	-	-	-	0.2%
Private Right-of-Way (Lots 26-27)	-	32.30	-	-	-	6.1%
Minor Right-of-Way	-	20.59	-	-	-	3.9%
Major Right-of-Way	17.34	17.34	-	-	-	3.3%
<i>Subtotal</i>	<i>17.34</i>	<i>71.33</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>13.7%</i>
TOTAL	530.10	530.10	1,725 (1,472 SF, 253 MF)	53,000	6.77	100.0%

NOTE: THE GROSS ACREAGES SHOWN HERE EXCLUDE RANCHO CORDOVA PARKWAY AND CHRYSANTHY BOULEVARD ONLY. VILLAGE NET ACREAGE EXCLUDES THE PROTECTED AREA/LANDSCAPE LOTS, PRIVATE AND PUBLIC LANDSCAPE LOTS, PRIVATE DRIVES, AND PRIVATE AND PUBLIC RIGHT-OF-WAYS.

RESIDENTIAL

The Project includes three primary residential components: an unrestricted single-family community, an age-restricted community with both single family and multifamily components, and a non-age restricted multifamily parcel.

Single Family – Unrestricted

The single-family community, comprised of Villages 1 through 11, is located in the northwest area of the Project site, abutting residential neighborhoods to the north and Rancho Cordova Parkway to the west. This area would include 735 single family residences within 11 residential neighborhoods. Village 1 would have 86 residential lots with a typical dimension of 60' by 105'. Villages 2 and 3 would have 114 residential lots with a typical dimension of 50' by 105'. Village 4 would have 116 residential lots with a typical dimension of 45' by 105'. Villages 5, 6, and 7 would have 113 residential lots with a typical dimension of 45' by 85'. Village 8 would have 132 residential lots with a typical dimension of 36' by 78.5'. Villages 9, 10, and 11 would have 174 residential lots with a typical dimension of 35' by 78'.

Multifamily – Unrestricted

An 7.17-acre multifamily lot (Village 23) is designated High Density Residential and would accommodate approximately 215 multifamily units.

Single Family and Multifamily – Four Seasons Age-Restricted

The Four Seasons age-restricted single-family community is located in the southeast portion of the Project site, and borders the approved Sunridge Specific Plan to the south and east. The Four Seasons community is separated from the unrestricted single-family community by the wetlands preserve that traverses the Project site from the northeast to the southwest. Village 12 would have 112 residential lots with a typical dimension of 60' by 105'. Village 13 would have 43 residential lots with varying lot sizes. Villages 14, 15, 17, and 19 would have 256 residential lots with a typical dimension of 50' by 105'. Village 16 would have 64 residential lots with a typical dimension of 40' by 105'. Village 18 would have 43 residential lots with a typical dimension of 40' by 110'. Village 20 would have 55 residential lots with a typical dimension of 56' by 70'. Village 21 would have 68 residential lots with a typical dimension of 35' by 110'. Village 22 would have 96 residential lots with a typical dimension of 56' by 70'. Additionally, a 21,000 s.f. community clubhouse would be developed in this area. Lot A near the community clubhouse would also allow for 38 multifamily residential units.

COMMERCIAL

Two commercial parcels (Villages 24 and 25) are located in the northwest portion of the site along Rancho Cordova Parkway, near the entrances to the unrestricted single-family community with primary access from from Rancho Cordova Parkway. The parcels are approximately 1.00 and 4.16 net acres and would accommodate approximately 32,000 s.f. of commercial uses.

POPULATION AND EMPLOYMENT

The Project would accommodate a population of approximately 4,319 residents and 106 employees. The Project residents estimate was calculated using the following persons per housing unit rates: 2.84 persons per non-age restricted single-family unit, 2.89 persons per non-age-restricted multifamily unit, 2.08 persons per age-restricted single-family units, and 2.05 persons per age-restricted multifamily units.¹The Project employees estimate was calculated using a rate of one employee per 500 s.f.²

OPEN SPACE

The Project would preserve approximately 199.5 acres as a nature preserve that would be deeded to a third-party conservation entity. The Project includes approximately 14.8 acres of existing aquatic resources, including 1.85 acres of depressional seasonal wetlands, 9.97 acres of vernal pools, 1.15 acres of riverine seasonal wetlands, 1.53 acres of intermittent drainages, and 0.30 acres of drainage basin outfalls. The Project applicant would incorporate protections for the preservation of wetland resources within the preserve, including preserve fencing, long-term funding and management of the preserve in perpetuity, and protection of the preserve from drainage and runoff generated from development areas through the construction of several detention basins throughout the site.

RECREATION

Park and recreation facilities totaling 20.05 acres (7.17 net acres of private facilities provided in Lots A, B, and C and 12.88 net acres of public parks provided in Lots D and T) would be provided by the Project. The Project would use a combination of land dedication and in-lieu fees to comply with the requirements of Chapter 22.40 of the City of Rancho Zoning Ordinance. In addition to the proposed park lots, the Project would provide parks and recreation facilities on approximately 0.2575 acres within Village 23 to serve the proposed multifamily use.

Approximately 2.5 miles of public trails would be developed throughout the Project site, as described below under Pedestrian and Bicycle Connectivity. Trails along the preserve boundaries would be designed in accordance with the South Sacramento Habitat Conservation Plan (SSHCP) standards.

¹ The persons per housing unit rates are based on the persons per household rates from the 2013-2017 American Community Survey 5-Year Estimates data for the City of Rancho Cordova, California, Table S0102. The American Community Survey includes average household size based on tenure for both the general population and the 60+ year old cohort.

² Table LU-6 of the General Plan projects 15,026 employees associated with 7,513,133 s.f. of commercial uses under General Plan buildout conditions; these projections yield a rate of 1 employee per 500 s.f. (15,026 divided by 7,513,133 s.f.).

As part of the public recreational facilities, a public park (10.78 net acres) would be provided within the single family (unrestricted) community. The utility corridor would be located along the eastern boundary of the park and would provide an additional 7.86 net acres of public open space that would include passive uses that would complement the park site. A 2.1-acre passive park (Lot T) would also be developed in the single family (unrestricted) community.

Within the age-restricted portion of the Project, approximately 7.17 acres would be dedicated for recreational purposes. The recreation center (4.19 net acres) would include a clubhouse serving as a recreation, community gathering, activity, and information hub for residents. A separate 1.58-acre community garden (Lot B) and a 1.4-acre linear park (Lot C) would be provided within the age-restricted community. In addition, multiple paseos would be provided throughout the age-restricted community to provide connectivity and off-road walkability.

CIRCULATION

The proposed vehicular, pedestrian, and bicycle circulation improvements are discussed in detail below.

Vehicular Circulation

On-site infrastructure associated with the Project would include the construction of internal and external access roads and a network of bicycle and pedestrian trails. Primary access would be from Rancho Cordova Parkway. The Project would provide for future connections to an extension of Chrysanthy Boulevard east of the Project site.

Rancho Cordova Parkway would be constructed as a minor arterial roadway with an exception along existing and proposed nature preserves. Portions of the roadway along existing and proposed nature preserves would be constructed with an attached sidewalk, as is currently constructed at the western side of the road, and an eight-foot-wide divided median landscaped with trees and shrubs. The primary entrance to the Project site at the intersection of Chrysanthy Boulevard and Rancho Cordova Parkway would be controlled by a four-way stop or traffic signal. A second right-in, right-out entrance from Rancho Cordova Parkway would be located to the south of the primary entrance.

Chrysanthy Boulevard would be constructed as a minor arterial with 74-foot right-of-way, with a 12-foot travel lane, 11-foot travel lane, 4-foot bike lane, and 3-foot gutter in each direction separated by a 14-foot landscaped median, and a 15- to 25-foot landscape corridor for landscaping and sidewalks. At the Preserve crossing, Chrysanthy Boulevard's 14' median would be replaced by a 10' turn pocket and 1- to 3-foot hardscape median, and the landscaping and sidewalks would be reduced to 10 feet on each side of the road, as shown on Figure 2.0-4.

North Campus Road, located along the southern boundary of the age-restricted community, would include one travel lane and frontage improvements along the residential portion of the Project site.

Interior streets serving the residential communities would have attached sidewalks and rolled curbs along residential frontages.

Pedestrian and Bicycle Circulation

A bicycle/pedestrian trail located along the existing utility corridor would connect to an existing trail located north of the site and would provide connections to the two trails located along the preserve. On the northern side of Chrysanthy Boulevard, a preserve trail would extend from the bike/pedestrian trail located within the utility corridor along Chrysanthy Boulevard, then would follow the northern boundary of the age-restricted community to the eastern border of the Project site. A southern preserve trail would extend along Rancho Cordova Parkway, south of the entrances to the Project site, and would cross the Project site south of the unrestricted community, connecting with Chrysanthy Boulevard in two locations, then following the western edge of the age-restricted community to the south.

In addition, the Project will include sidewalks, stop signs, standard pedestrian crossing warning signs, lane striping to provide a bicycle lane along applicable roadways, bicycle parking, signs to identify pedestrian and bicycle paths, pedestrian signal heads, and a tunnel crossing for the Class I trail at Chrysanthy Boulevard. Sidewalks will be constructed as part of the frontage improvements along all new roadway construction for Jaeger Road/Rancho Cordova Parkway and Chrysanthy Boulevard in conformance with applicable design standards.

Traffic calming features incorporated into the Project include street design features, such as narrower streets, limited single-loaded streets, parking on both sides of the street, posted speed limit signs, planter strips with street trees, and horizontal shifts (lane centerline that curves or shifts), and intersection traffic calming features, including marked crosswalks, count-down signal timers where appropriate, curb extensions, channelization islands, median islands, and tight corner radii.

Parking and Other Paved Areas

The Project is anticipated to include approximately 1.0 acres of paved parking areas associated with proposed parks and recreation uses and is anticipated to have approximately 1.0 acres of paved trail surfaces.

SUSTAINABILITY FEATURES

The Project proposes a number of sustainability features to reduce water consumption, reduce energy and natural gas consumption, and reduce greenhouse gas emissions. These features include:

- **Tree Planting:** A minimum of 2,240 new trees would be planted as part of the residential, commercial, multifamily, park, and trail uses.
- **Lighting:** All outdoor lighting will be energy-efficient (i.e., LED or better).
- **Renewable Energy:** Generate 95% of electricity via renewable energy via either on-site energy generation and/or through a contract with SMUD.

- All-Electric. 306 units will be all-electric homes, with no natural gas.
- Energy-efficient Appliances: Install energy-efficient (i.e., Energy Star) appliances.
- Low-Flow Appliances: Install low-flow kitchen and bathroom appliances to reduce water consumption.
- Irrigation: Use water-efficient irrigation systems (automatic rain shut-off, maximum gallon per minute restriction, WiFi connectivity) to reduce water waste.
- Turf: Minimize turf for residential uses to 70% less than the maximum allowed turf area to reduce water use.
- Electric Vehicle: Install EV charging stations throughout the Project site, such that at least 50% of single family residences and 5% of parking spaces within the commercial, park and recreation, and multi-family land uses will have EV charging stations to reduce reliance on gasoline-fueled vehicles.

UTILITIES INFRASTRUCTURE

The proposed water, sewer, and drainage improvements are discussed in detail below.

Water System

The Project is located within the Sacramento County Water Agency (SCWA) Zone 40 water service area. The Project would connect to SCWA existing water supply infrastructure located at the intersection of Rancho Cordova Parkway and Chrysanthy Boulevard. New water distribution pipelines and valves would be provided within the Project site, primarily within the roadway right-of-ways, to serve the proposed development. The Project would use water-efficient irrigation systems.

Sewer System

The Project is located within the Sacramento Area Sewer District (SASD) and Sacramento Regional County Sanitation District (Regional San) service areas. New sewer conveyance pipelines would be provided within the Project site, primarily within the roadway right-of-ways, to serve the proposed development. Project sewer infrastructure included 8-inch in-tract gravity sewer pipes that will collect Project sewer flows from individual lots and convey the flows to a 12- to 21-inch trunk main sewer pipe in Chrysanthy Boulevard extending from the eastern Project boundary to the western boundary of the Project, and a 24-inch gravity sewer that will connect the trunk main in Chrysanthy Boulevard to the existing trunk main in Rancho Cordova Parkway, located at the intersection of Rancho Cordova Parkway and Chrysanthy Boulevard. Sewer flows from the Project would be conveyed by SASD facilities to Regional San interceptor, collector, and trunk facilities and would then be conveyed to the Sacramento Regional Wastewater Treatment Plant for treatment.

Off-site improvements may include upgrades, such as replacement of pumps, electrical equipment, and the diesel generator, to the existing sewer pump station, SASD S-1114-32, located southwest of Chrysanthy Boulevard and Anatolia Drive, that serves the eastern part of Rancho Cordova.

Storm Drainage System

The Project would include development of on-site drainage and water quality basins to accommodate post-construction peak stormwater flows and provide for water quality treatment. The on-site system would connect to the City's stormwater drainage system.

PUBLIC SERVICES

The public services which would serve the Project are described below.

Electricity, Natural Gas, and Solid Waste

Electricity would be provided by SMUD. The residential portion of the Project's electricity demand would be provided by either on-site renewable energy or supplied via a contract with SMUD for purchase of renewable energy. Additionally, all of the on-site lighting would be LED, high-efficiency lighting. Natural gas would be provided by PG&E. Solid waste collection would be provided by Republic Services.

Public Services

Police services would be provided by the City of Rancho Cordova. Fire protection would be provided by Sacramento Metropolitan Fire District. Public school services would be provided by Elk Grove Unified School District.

GENERAL PLAN AMENDMENT

The Project site is currently designated Planning Area by the General Plan Land Use Map and is identified as part of the Suncreek/Preserve Planning Area by the City's General Plan. Table 2.0-2 summarizes the proposed General Plan land use designations:

TABLE 2.0-2: GENERAL PLAN LAND USE DESIGNATIONS

<i>LAND USE DESIGNATION</i>	<i>EXISTING</i>	<i>PROPOSED</i>
Planning Area	530.1	--
Low Density Residential (LDR)	--	31.97
Medium Density Residential (MDR)	--	223.85
High Density Residential (HDR)	--	8.81
Commercial (C)	--	10.16
Parks and Open Space (P/OS)	--	38.03
Natural Resources (NR)	--	199.5
Right-of-Way	--	17.8

The existing and proposed land use designations are shown in Figure 2.0-5.

REZONE

The Project site is currently zoned Agriculture, 80-Acre Minimum (AG-80). The entire Project site would be rezoned from AG-80 to Special Planning Area (SPA). The Ranch SPA zoning will establish development standards and design guidelines to ensure quality and consistency in the design and implementation of the Project. The SPA document is regulatory in nature and will serve as zoning

for the Project site. Development plans, subdivision maps, and site plans for the Project must be consistent with both the SPA and the City of Rancho Cordova General Plan.

SPECIAL PLANNING AREA HANDBOOK

The purpose of The Ranch SPA Handbook is to guide future development within The Ranch Project site and allow for a more creative implementation of the General Plan. Chapter 2, Regulatory Framework, describes the Project's relationship to the existing regulatory framework, including the City's General Plan and Zoning Code. Sections 3.1 and 3.2 address land use designations and zoning, respectively. Section 3.3 addresses permitted land uses, density, and establishing design requirements for each neighborhood area (Gateway Neighborhood, Parkview Neighborhood, and Four Seasons Neighborhood). Section 3.4, Architectural Styles, describes architectural styles permitted by the SPA Handbook. Section 3.5, Development Standards, addresses lot size, width, depth, and coverage, coverage, building heights, and setbacks for single family, multifamily, and commercial uses. Section 3.6, Circulation Design Standards, establishes the circulation plan, including street sections, transit, and sections. The Parks + Open Space Design Program, Section 3.7, establishes the overall park and open space plan, as well as addressing requirements and design for public and private parks, landscape standards, and signage and entry monumentation. Section 3.8, Wetland Preserve, establishes standards and requirements related to the open space and wetland area proposed for preservation. Section 3.9, Infrastructure, addresses provision of sanitary sewer, water service, and drainage, and phasing of the SPA.

PROJECT CONSTRUCTION

The Project Applicant Team has indicated that the Project will be constructed in a series of five phases, with construction anticipated to commence in January 2020 and conclude in December 2035.

Phase 1 (January 2020 – August 2023)

- Site preparation for Phase 1 and 2 components: January 1, 2020 – March 30, 2020
- Grading for Phase 1 and 2 and improvements for Chrysanthy Boulevard and Phase 1: April 1, 2020 – November 1, 2020.
- Paving backbone infrastructure and Phase 1: November 1, 2020 – January 30, 2020
- Building construction: February 1, 2021 – May 1, 2023
- Architectural coating: May 1, 2021 – August 1, 2023
- This phase includes the following:
 - Phase 1 Clubhouse and associated landscaping (Lot A) – 7,000 s.f. of the clubhouse complex and approximately 1/3 of lot improvements
 - 270 single family residential units
 - 232 single family residential units – age restricted

Phase 2 (April 2022 – November 2025):

- Improvements for Phase 2: April 2021 – September 2022

- Paving: October 2022 – December 2022
- Building Construction: April 2023 – July 2025
- Architectural Coating: August 2023 – November 2025
- This phase includes the following:
 - 197 single family residential units
 - 210 single family residential units – age restricted
 - Phase 2 Clubhouse and associated landscaping (Lot A) – 7,000 s.f. of the clubhouse complex and approximately 1/3 of lot improvements
 - Park (Lot C) – 1.4 acres
 - Open Space (Lot Q) – 2.1 acres

Phase 3 (March 2025 – April 2029):

- Site Preparation for Phase 3: February 2025 – April 2025
- Grading: April 2025 – October 1, 2025
- Paving: October 1, 2025 – December 31, 2025
- Building Construction: January 2026 – September 2028
- Architectural Coating: April 2026 – December 2028
- Site Preparation for Rancho Cordova widening: January 2027-October 2027
- Paving for Rancho Cordova widening: October 2027-January 2028
- This phase includes the following:
 - 2656 single family residential units
 - 298 single family residential units – age restricted
 - 16 senior multifamily residential units
 - Phase 3 Clubhouse and associated landscaping (Lot A) – 7,000 s.f. of the clubhouse complex and approximately 1/3 of lot improvements
 - Park (Lot D) - 10.78 acres
 - Park (Lot B) – 1.9 acres
 - Passive Park (Lot T) – 1.2 acres

Phase 4 (March 2030 – June 2033):

- Site preparation for multifamily residential (7.2 acres): March 2030 – April 2030
- Grading and improvements: April 2030 – August 2030
- Paving: August 2030 – October 2030
- Building Construction: April 2031 – January 2033
- Architectural Coating: January 2033 – May 2033
- This phase includes the following:
 - 215 multifamily residential units
 - 22 senior multifamily residential units

2.0 PROJECT DESCRIPTION

Phase 5 (March 2034 – December 2035):

- Site preparation for commercial (5.2 acres): March 2034 – April 2034
- Grading and improvements: April 2034 – July 2034
- Paving: August 2034 –September 2034
- Building Construction: April 2034 – August 2035
- Architectural Coating: September 2035 – December 2035
- This phase includes the following:
 - Commercial center

Project construction would export approximately 152,708 net cubic yards of soil (The Ranch Preliminary Grading & Drainage Plan, cta Engineering & Surveying, 2019). Table 2.0-3 identifies the off-road construction equipment anticipated for each phase of Project construction.

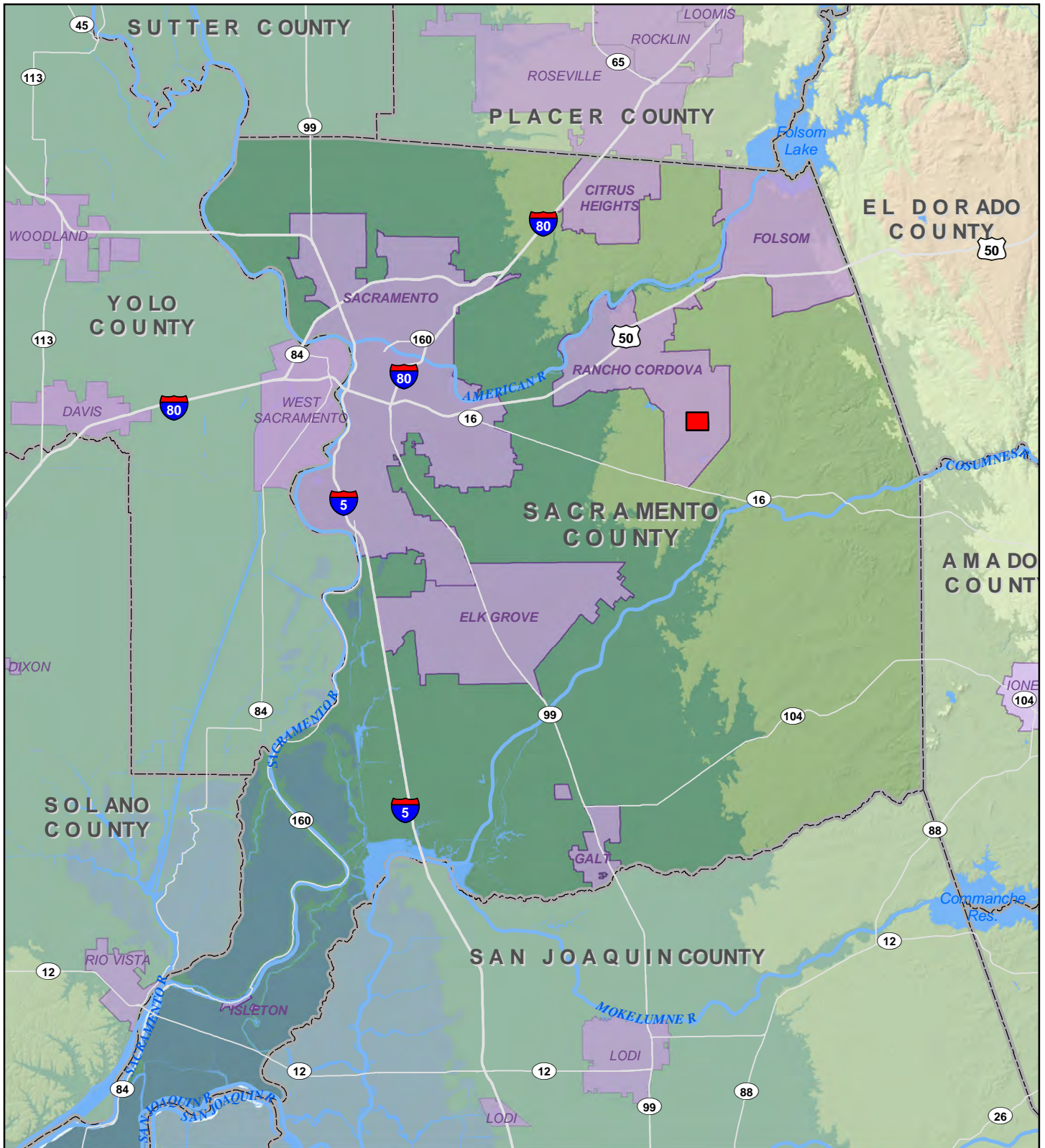
TABLE 2.0-3: PROPOSED OFF-ROAD CONSTRUCTION EQUIPMENT

<i>PHASE</i>	<i>OFFROAD EQUIPMENT TYPE</i>	<i>AMOUNT</i>	<i>USAGE HOURS PER DAY (5 DAYS PER WEEK)</i>
<i>PHASE 1</i>			
Site Preparation	Rubber Tired Dozers	3	8
Site Preparation	Tractors/Loaders/Backhoes	4	8
Grading	Excavators	2	8
Grading	Graders	1	8
Grading	Rubber Tired Dozers	1	8
Grading	Scrapers	2	8
Grading	Tractors/Loaders/Backhoes	2	8
Building Construction	Cranes	1	7
Building Construction	Forklifts	2	8
Building Construction	Generator Sets	1	8
Building Construction	Tractors/Loaders/Backhoes	1	7
Building Construction	Welders	1	8
Paving	Pavers	2	8
Paving	Paving Equipment	2	8
Paving	Rollers	2	8
Architectural Coating	Air Compressors	1	6
<i>PHASE 2</i>			
Building Construction	Cranes	1	7
Building Construction	Forklifts	3	8
Building Construction	Generator Sets	1	8
Building Construction	Tractors/Loaders/Backhoes	3	7
Building Construction	Welders	1	8
Paving	Pavers	2	8
Paving	Paving Equipment	2	8
Paving	Rollers	2	8
Architectural Coating	Air Compressors	1	6

<i>PHASE</i>	<i>OFFROAD EQUIPMENT TYPE</i>	<i>AMOUNT</i>	<i>USAGE HOURS PER DAY (5 DAYS PER WEEK)</i>
<i>PHASE 3</i>			
Site Preparation	Rubber Tired Dozers	3	8
Site Preparation	Tractors/Loaders/Backhoes	4	8
Grading	Excavators	2	8
Grading	Graders	1	8
Grading	Rubber Tired Dozers	1	8
Grading	Scrapers	2	8
Grading	Tractors/Loaders/Backhoes	2	8
Building Construction	Cranes	1	7
Building Construction	Forklifts	3	8
Building Construction	Generator Sets	1	8
Building Construction	Tractors/Loaders/Backhoes	3	7
Building Construction	Welders	1	8
Paving	Pavers	2	8
Paving	Paving Equipment	2	8
Paving	Rollers	2	8
Architectural Coating	Air Compressors	1	6
<i>PHASE 4</i>			
Building Construction	Cranes	1	7
Building Construction	Forklifts	3	8
Building Construction	Generator Sets	1	8
Building Construction	Tractors/Loaders/Backhoes	3	7
Building Construction	Welders	1	8
Paving	Pavers	2	8
Paving	Paving Equipment	2	8
Paving	Rollers	2	8
Architectural Coating	Air Compressors	1	6

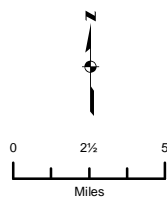
SOURCE: K. HOVNANIAN, 2019

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Legend

- Project Location
- City Areas
- County Boundary

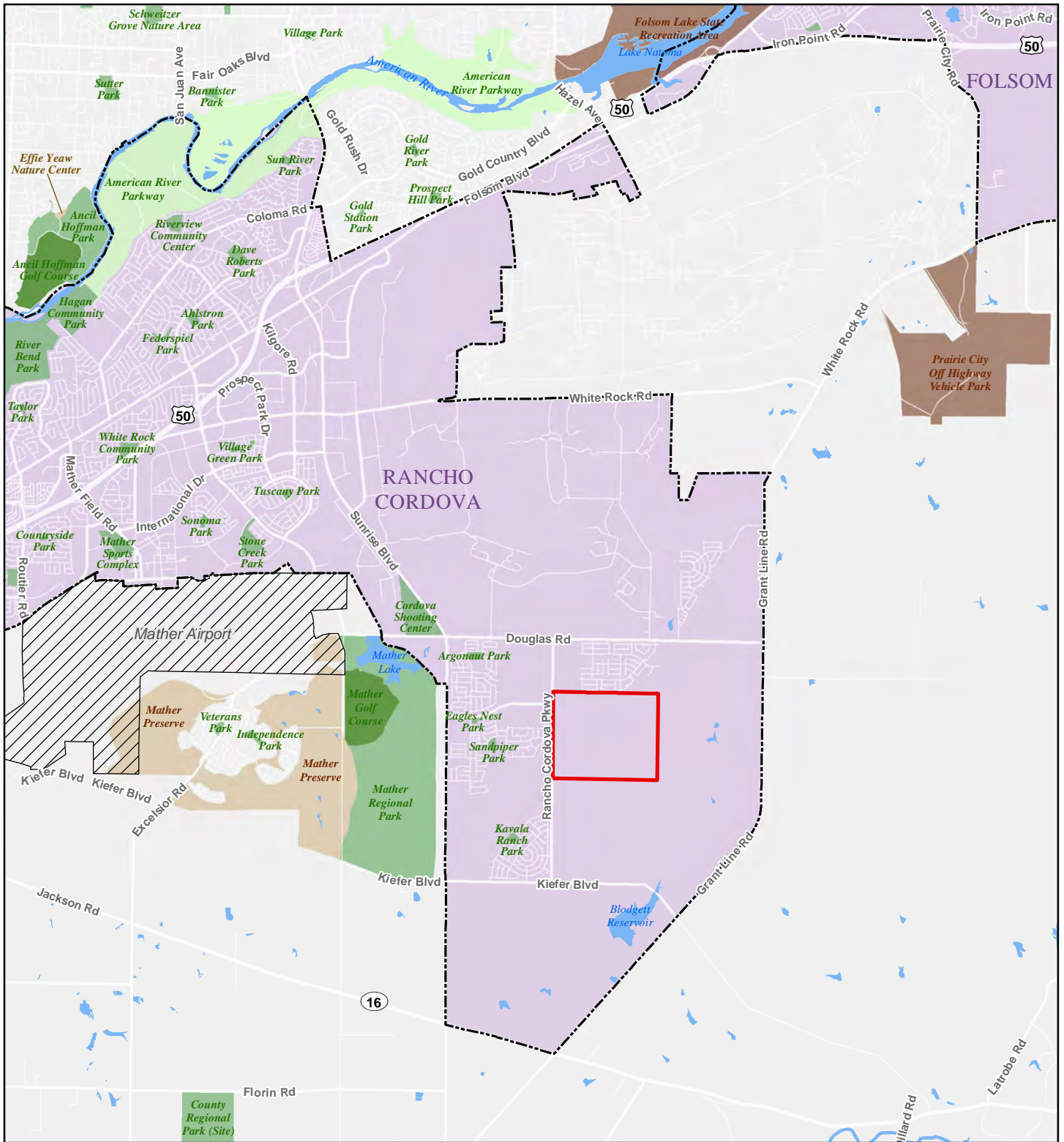


THE RANCH

Figure 2.0-1. Regional Location Map

Sources: CalAtlas; Yolo County; Sacramento County; Solano County; Placer County; San Joaquin County. Map date: April 23, 2018.

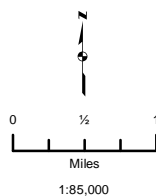
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Legend

- Project Location (APN 067-004-0008)
- City Area
- Airport
- Park
- Parkway
- Golf Course
- Ecological Preserve/Nature Area
- State Recreation Area

Data sources: Sacramento County GIS; Map date: April 25, 2018.



THE RANCH

Figure 2.0-2. Project Vicinity Map

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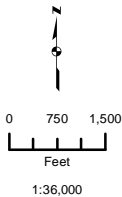


THE RANCH

Figure 2.0-3. Aerial View of Project Site

Legend

- Project Location (APN 067-004-0008)
- Rancho Cordova City Boundary




Data sources: Sacramento County GIS; ArcGIS Online
World Imagery Map Service. Map date: April 25, 2018.

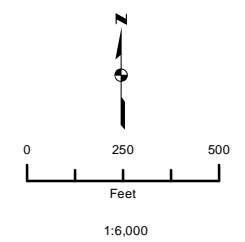
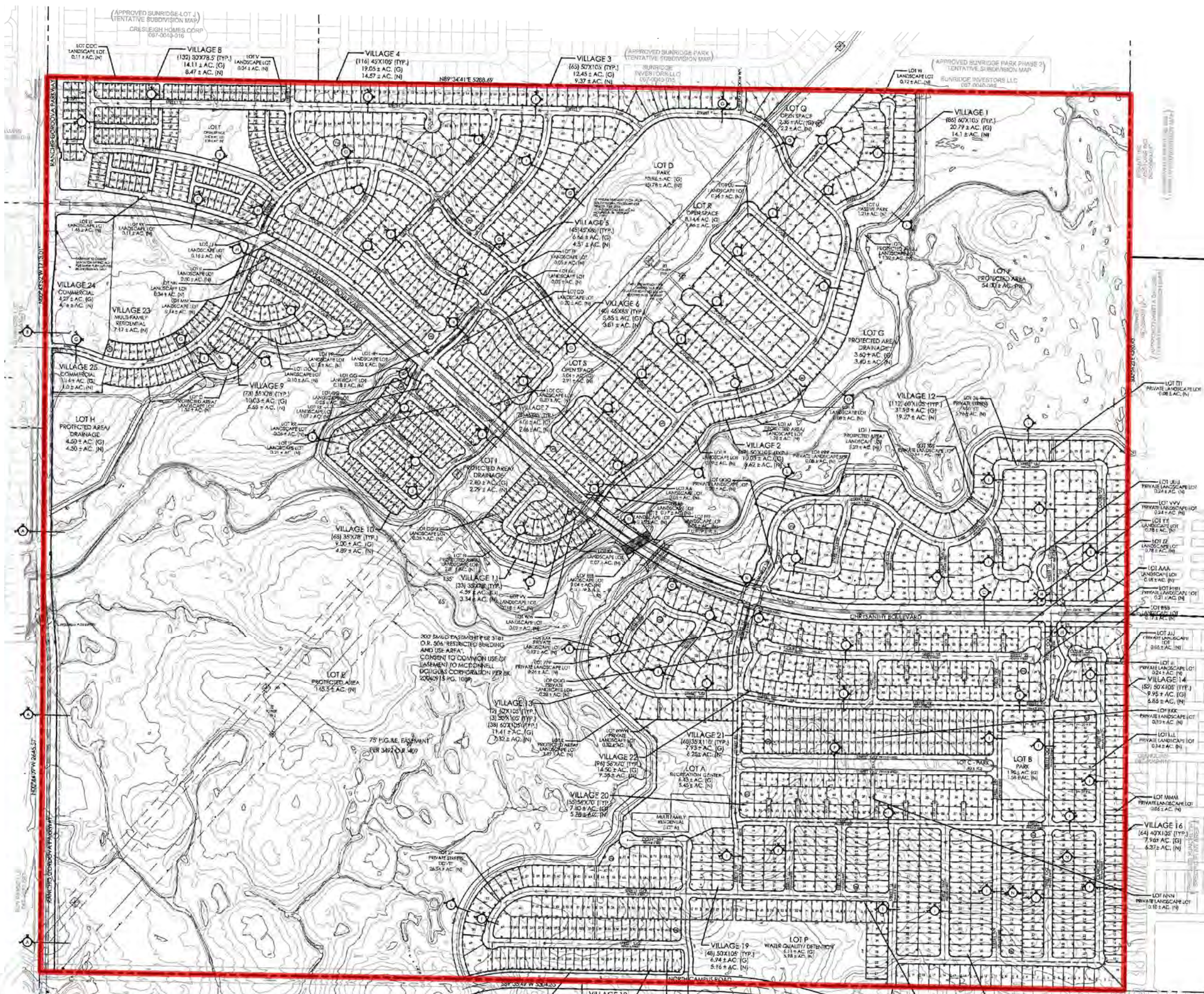
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**THE RANCH
SACRAMENTO COUNTY,
CALIFORNIA**

**Figure 2.0-4.
Tentative Subdivision Map**

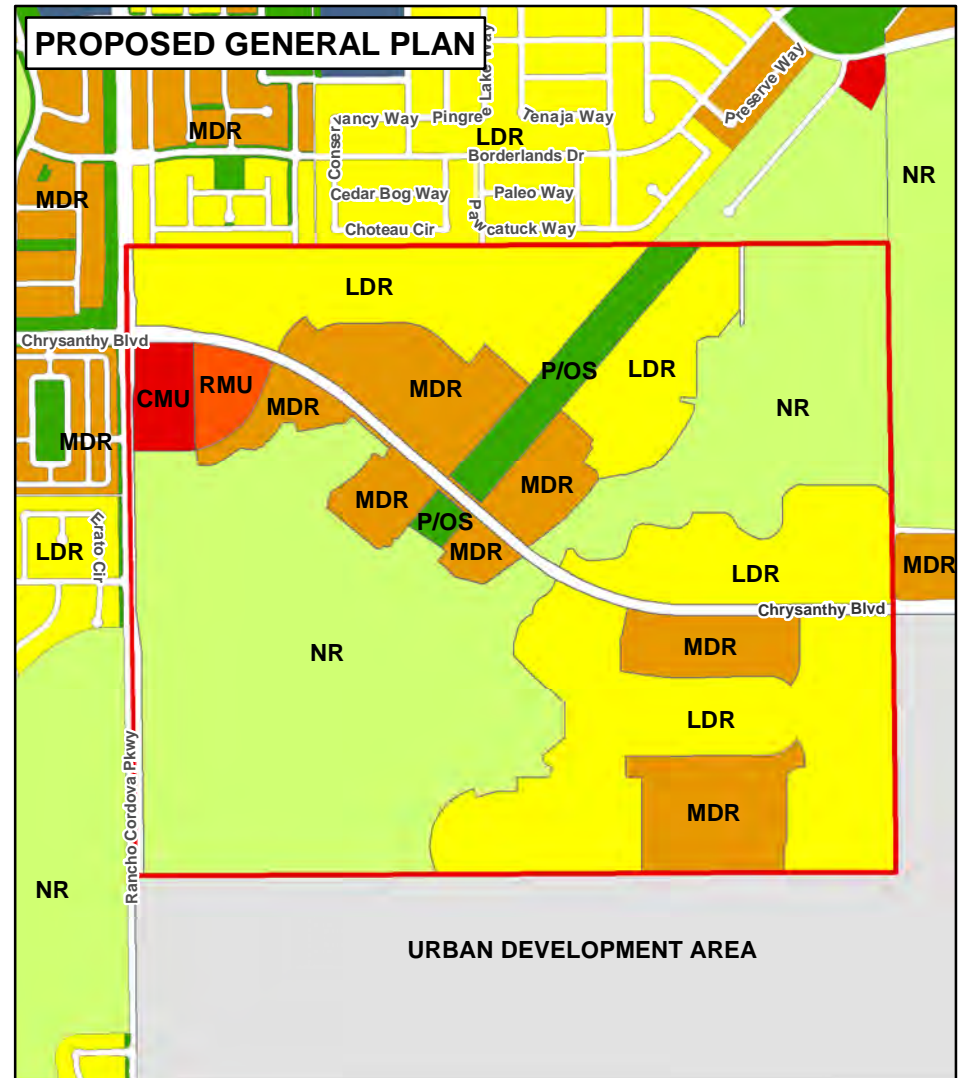
Legend

 Project Location (APN 067-004-0008)



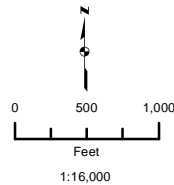
Data sources: Sacramento County Wood Rogers, The Ranch, Small Lot Tentative Subdivision Map, June 2018, revised May 2019. Map date: August 2019. (APN 067-004-0008) SPECIFIC PLAN AREA

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Legend

	Project Location (APN 067-004-0008)
	LDR Low Density Residential (2.1-6.0 du/acre)
	MDR Medium Density Residential (6.1-18.0 du/acre)
	RMU Residential Mixed Use
	CMU Commercial Mixed Use
	P/QP Public/Quasi-Public
	P/OS Parks and Open Space
	NR Natural Resources
	Urban Development Area



THE RANCH

Figure 2.0-5. Existing and Proposed General Plan

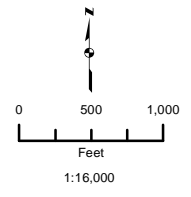
Sources: Sacramento County; City of Rancho Cordova; Wood Rogers. Date: April 23, 2018.

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Legend

AG-80 (Agricultural 80)	LC (SDSP) (Limited Commercial)
RD-4 (Residential 4)	P/QP (SCSP)
LDR (SCSP)	POS (Parks and Open Space)
RD-5 (Residential 5)	POS (SCSP)
RD-7 (Residential 7)	NR (SCSP)
CMDR (SCSP)	POS (Habitat)
RD-10 (Residential 10)	SPA (See SPA for designations)
HDR (SCSP)	Project Boundary



THE RANCH

Figure 2.0-6. Existing and Proposed Zoning

Sources: Sacramento County; City of Rancho Cordova; Wood Rogers. Date: April 23, 2018.

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This section provides an overview of the visual character, scenic resources, views, scenic highways, and sources of light and glare that are encountered on the Project site and the surrounding area. This section concludes with an evaluation of the impacts and recommendations for mitigating impacts. Information in this section is derived primarily from the following:

- *Rancho Cordova General Plan* (City of Rancho Cordova, Adopted June 26, 2006);
- *Rancho Cordova General Plan Draft Environmental Impact Report* (City of Rancho Cordova, March 2006);
- *Rancho Cordova Municipal Code, Chapter 725* (current through February 4, 2019);
- *Cordova Recreation & Park District (CRPD) Design & Construction Standards Manual; and*
- *The Ranch Special Planning Area Handbook (SPA Handbook)* (K Hovnanian Homes, March 2019).

A comment was received during the public review period for the Notice of Preparation regarding this topic from the following: Cordova Recreation & Park District (CRPD) (August 3, 2018). The portion of the comment related to this topic is addressed within this section.

3.1.1 ENVIRONMENTAL SETTING

REGIONAL SETTING

In general, the dominant visual characteristics within the City's General Plan Planning Area are the open sections of the valley floor, urbanized land uses, agricultural land uses, rivers and creeks, and various species of trees. Because the entire Planning Area consists of relatively flat terrain, views of these resources are available from roadways throughout the City.

Oak trees, streams, creeks, and the American and Cosumnes Rivers are among the most significant natural visual features in the City's Planning Area. Distant views of the Sierra Nevada and Coastal ranges can be visible under clear conditions.

There are several rivers, creeks, and waterways located within or adjacent to the General Plan Planning Area that serve as a visual transition from natural scenic corridors to the City's urbanized development areas. The most prominent waterways in the vicinity of the Planning Area include: the American River, Cosumnes River, Morrison Creek, Laguna Creek, and Elder Creek.

The American River makes up the Planning Area's northern boundary and flows westward from the crest of the Sierra Nevada above Lake Tahoe to its confluence with the Sacramento River near downtown Sacramento. The American River corridor through the planning area is a part of the American River Parkway, which is an open space greenbelt that extends approximately 29 miles from the Folsom Dam to its confluence with the Sacramento River. The Cosumnes River is located approximately two miles southeast of the Planning Area's southeastern boundary. The Cosumnes River corridor contains thousands of acres of wetlands and adjacent uplands that provide critical habitat to a diverse group of plants and animal species.

3.1 AESTHETICS AND VISUAL RESOURCES

Many portions of the Rancho Cordova Planning Area south of US 50 are currently being developed. The undeveloped areas of the City south of US 50 are characterized by large areas of grazing and pasture land, which reinforces the existing uniform rural visual character of the area. These areas provide panoramic views of open space and distant views of the Sierra Nevada range and the foothills of El Dorado County.

The Planning Area has no officially designated scenic highways, corridors, vistas, or viewing areas.

PROJECT SITE AND SURROUNDING AREA

The Project site consists of approximately 530 acres located in the city limits. The Project site is bound by existing single-family residential uses and Douglas Road to the north, vacant land and Grant Line Road to the east, vacant land and Kiefer Boulevard to the south, and Rancho Cordova Parkway, single family residential, and vacant land on the west.

The Project site is currently vacant and has been previously used for agricultural uses (cattle grazing). The topography of the site exhibits low relief topography with elevations ranging between 170 and 210 feet above mean sea level (MSL). The slopes throughout the site range from approximately zero to eight percent. The site is characterized by moderate rolling hills and areas of extensive flatlands, with wetlands, vernal pools, and seasonal drainage courses scattered throughout the site. A headwater tributary of Morrison Creek traverses the Project site, entering at the northeast corner and flowing generally to the southwest. A total of 21.53 acres of jurisdictional aquatic resources have been mapped with the Project site, including: 2.92 acres of depressional seasonal wetlands, 15.04 acres of vernal pools, 1.66 acres of riverine seasonal wetlands, 0.06 acres of riverine seasonal wet swales, 1.54 acres of intermittent drainages, and 0.30 acres of drainage basin outfalls.

The property is traversed by a 275-foot-wide utility easement occupied by a 230-kV Pacific Gas and Electric (PG&E) transmission line, one 230-kV Sacramento Municipal Utility District (SMUD) transmission line, and one 69-kV SMUD sub-transmission line. No other public utilities (water, sewer, drainage) are located on site.

The Project site is bound by the Sunridge Specific Plan to the north, east, and west, and by the SunCreek Specific Plan to the south and east. Land uses anticipated to the east and south of the Project site by the Sunridge Specific Plan and the SunCreek Specific Plan include low, medium, and high density residential uses, commercial mixed uses (retail, office, and retail professional), and neighborhood parks. Other land uses located nearby include new elementary, junior and senior high schools.

LIGHT AND GLARE

There are two typical types of light intrusion. First, light emanates from the interior of structures and passes out through windows. Secondly, light projects from exterior sources such as street lighting, security lighting, balcony lighting, and landscape lighting. "Light spill" is typically defined as the presence of unwanted and/or misdirected light on properties adjacent to the property being illuminated.

Glare is the sensation produced by luminance within the visual field that is significantly greater than the luminance to which the eyes are adapted, which causes annoyance, discomfort, or loss in visual performance and visibility.

The Project site currently has minimal sources of light and glare. Street lighting exists on the west side of Rancho Cordova Parkway immediately west of the Project site. Street lighting is also provided along the local residential roadways in the development to the north of the Project site. Sources of daytime glare include direct beam sunlight and reflections from windows, architectural coatings, glass and other shiny reflective surfaces. Nighttime light illumination and associated glare can be divided into stationary and mobile sources. Stationary sources of nighttime light include structure illumination, decorative landscape lighting, lighted signs, sports field lighting and streetlights. The source of mobile nighttime light is primarily headlights of motor vehicles. During winter nighttime hours, the ambient light in the Planning Area can be accentuated during periods of low cloudiness or fog, which reflects light, resulting in intensification of the amount of light.

Existing sources of light or glare are not currently located on the Project site, although existing parking lot lighting, building lighting, and street lighting are located in the vicinity of the site. Specifically, the existing residential developments to the north, west, and southwest result in significant light and glare. Additionally, street lighting currently exists along Rancho Cordova Parkway.

3.1.2 REGULATORY SETTING

STATE

California Scenic Highway Program

The intent of the California Scenic Highway Program is “to protect and enhance California’s natural scenic beauty and to protect the social and economic values provided by the State’s scenic resources.” Caltrans administers the program, which was established in 1963 and is governed by the California Streets and Highways Code (§260 et seq.). The goal of the program is to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of the adjacent land. Caltrans has compiled a list of state highways that are designated as scenic and county highways that are eligible for designation as scenic.

As described above, there are no designated Scenic Highway Corridors in the vicinity of the Project site.

LOCAL

Rancho Cordova General Plan

The Rancho Cordova General Plan contains the following goals and policies that are relevant to aesthetics and visual resources:

3.1 AESTHETICS AND VISUAL RESOURCES

LAND USE ELEMENT

Goal LU.1: Achieve a balanced and integrated land use pattern throughout the community.

Policy LU.1.4: Promote high quality, efficient, and cohesive land utilization that minimizes negative impacts (e.g., traffic congestion and visual blight) and environmental hazards (e.g. flood, soil instability) on adjacent neighborhoods and infrastructure and preserve existing and future residential neighborhoods from encroachment of incompatible activities and land uses.

NATURAL RESOURCES ELEMENT

Goal NR.3: Preserve and maintain creek corridors and wetland preserves with useable buffer zones throughout the new development areas as feasible.

Policy NR.3.1: Coordinate with groups such as the Sacramento Urban Creeks Council to restore, enhance, and preserve creeks in Rancho Cordova.

Policy NR.3.2: Create or retain the natural topographic relief and meandering alignment of natural creek corridors in the construction of new channels and the modification of existing channels, and discourage the placement of concrete within creeks and channels.

Policy NR.3.3: Encourage the creation of secondary flood control channels where the existing channel supports extensive riparian vegetation.

Policy NR.3.4: Encourage projects that contain wetland preserves or creeks, or are located adjacent to wetland preserves or creeks, to be designed for maximum visibility and, as appropriate, access.

Goal NR.4: Encourage the planting and preservation of high-quality trees throughout the City.

Policy NR.4.1: Conserve native oak and landmark tree resources for their historic, economic, aesthetic, and environmental value.

Policy NR.4.2: Improve overall landscaping quality and sustainability in all areas visible to the public.

Policy NR.4.3: Promote trees as economic and environmental resources for the use, education, and enjoyment of current and future generations.

URBAN DESIGN ELEMENT

Goal UD.1: Development in keeping with the building block concepts of neighborhoods, villages, and districts.

Policy UD.1.1: Promote the design of residential neighborhoods in accordance with the desired character of the village and district in which it is located. All City codes and

regulations shall be updated to reflect the City's vision for Urban Design neighborhoods, villages, and districts as the building blocks of the City.

Goal UD.2: Redefine the Identity for Rancho Cordova through community and district design.

Policy UD.2.3: Transition the density and intensity of uses from an urban to rural character with a clear City edge and establish a sense of entry and arrival to the City.

Goal UD.4: Ensure that projects are designed in keeping with the context of surrounding areas and overall community.

Policy UD.4.2: Design new development to be compatible with surrounding development in ways that contribute to the desired character of the City and District.

City of Rancho Cordova Zoning Code

Chapter 23.716, Landscaping, of the Municipal Code establishes minimum landscape standards to enhance the appearance of developments, reduce heat and glare, control soil erosion, conserve water, ensure the ongoing maintenance of landscape areas, and ensure that landscape installations do not create hazards for motorists or pedestrians. This chapter of the code required a landscape plan and irrigation plan for new development (and existing development as identified in Section 23.716.020). This plan would conceptually show locations for trees, shrubs, ground cover, etc. Additionally, this would also include a list of tree species and size and the location of any required purple pipe system. Section 23.716.100 and 23.716.110 outline the landscape care, maintenance, and tree pruning requirements.

Chapter 23.725, Outdoor Lighting, of the Municipal Code regulates lighting to balance the safety and security needs for lighting with the City's desire to preserve dark skies and to ensure that light trespass and glare have negligible impact on surrounding property (especially residential) and roadways. This chapter of the code contains prohibited lighting types, as well as general lighting standards. The lighting standards include requirements to prevent nuisance lighting, through requiring lighting to be designed, installed, directed, shielded, and maintained to prevent glare, light trespass, and light pollution. With the exception of exempt lights, such as holiday, special event, and emergency lighting, outdoor lighting must be fully shielded or recessed to reduce light trespass from adjoining properties and generally must be designed to illuminate the minimum level necessary for safety and security.

CRPD Design and Construction Standards

The CRPD's Design & Construction Standards Manual contains the following general standards for lighting:

- A. All lighting design shall be compliant with 2013 Energy Efficiency standards set by the California Energy Commission.
- B. Park security lighting shall be provided in all park settings.
- C. Activity nodes such as playgrounds and picnic areas shall be lit at an average of 1/4 foot-candle.

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- D. City and County requirements for parking lot lighting shall prevail.
- E. Penetration of unwanted light into adjacent neighborhoods shall be mitigated as much as possible.
- F. Parking lot lighting shall comply with all applicable codes including the California Energy Commission Standards.
- G. When possible, lighting standards shall comply with the Model Lighting Ordinance (MLO).

3.1.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, except as provided in Public Resources Code Section 21099, the Project will have significant impact on aesthetics if it will:

- 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;
- In non-urbanized areas, 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; and/or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

As discussed in the Initial Study, the Project site is not located adjacent to or in the vicinity of a state scenic highway. The Project would have no impact related to the potential to substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, within a state scenic highway. Therefore, this impact would be *less than significant*. This issue will not be addressed further.

IMPACTS AND MITIGATION MEASURES

Impact 3.1-1: Project implementation would result in substantial adverse effects on scenic vistas and resources or substantial degradation of visual character (Significant and Unavoidable)

Development of the Project would convert the site from its existing use as undeveloped land with a corridor of multiple power lines, poles and tall towers and previously used for agricultural uses to developed residential housing (age-restricted and unrestricted), a commercial mixed-use area, a residential mixed use area, a continuing care retirement community, protected natural areas, and park/trail areas.

The Project site is not designated as a scenic vista by the City of Rancho Cordova General Plan, nor does it contain any unique or distinguishing features that would qualify the site for designation as a scenic vista.

While the Project site is not designated as a scenic vista, it does provide public views of open grasslands and some public views across the site include the Sierra Nevada mountain range in the background. These rural, open views are generally considered to be visually pleasing. The Project site is highly visible from Rancho Cordova Parkway; views from Rancho Cordova Parkway are of the open grasslands of the site with the Sierra Nevada mountain range in the background. The site is visible in the background in views of the site from Douglas Road and lends to the open character of views from this vantage point. There are also limited public views of the site from the Sunridge development to the north, primarily from Big Meadow Way where it dead-ends at the Project site. Implementation of the Project would change the existing visual character of the site from an undeveloped, open grasslands to an urban residential neighborhood.

Impacts related to a change in visual character are largely subjective and very difficult to quantify. People have different reactions to the visual quality of a project or a project feature, and what is considered “attractive” to one viewer may be considered “unattractive” to other viewers. The Project site currently consists of undeveloped grassland previously used for agricultural purposes. Agricultural and vacant lands provide visual relief from urban and suburban developments, and help to define the character of a region.

Upon development of the Project site, views from Rancho Cordova Parkway for the northern portion of the site would include proposed landscaping and ornamental trees, proposed single-family homes, the proposed commercial mixed use area. Views from Rancho Cordova Parkway in the central and southern portions of the Project site would continue to have views of expansive open and aquatic areas; however, views in the background would be of the proposed residential communities. The proposed urban areas would be landscaped upon development of the Project site, and the Project includes approximately 225.87 acres of protected areas, including 199.5 acres of open space preserve that would remain in the existing condition, 10.39 acres of protected/drainage uses, and 15.98 acres of protected/landscape uses. In total, protected areas represent 43 percent of the total Project site.

In addition to the preservation of a substantial amount of open space, the Project would include visual components that would assist in enhancing the appearance of the site following site development. These improvements would include building design and site layout consistent with the City’s Design Guidelines and landscaping improvements such as new street trees and other vegetation landscaping, and multi-use trails.

The Project’s SPA Handbook includes Architectural + Site Design Guidelines for multi-family parcels and commercial parcels which create a framework within which developers, builders, and designers can have flexibility to create unique and desirable design opportunities. The Guidelines cover circulation, building placement and orientation, public spaces and pedestrian amenities, massing scale and form, and general style and design.

3.1 AESTHETICS AND VISUAL RESOURCES

While implementation of the Project would change the existing visual character of the site, it would not result in substantial adverse effects on a designated scenic vista. The Project would result in the conversion of undeveloped open grassland to urban uses, which would contribute to changes in the regional landscape and visual character of the area. In order to reduce visual impacts, development within the Project site is required to be consistent with the General Plan and the Rancho Cordova Design Guidelines which includes design standards in order to ensure quality and cohesive design of the Project site. The Rancho Cordova General Plan includes goals and policies designed to protect visual resources and promote quality design in urban areas. As noted previously, these provisions provide a framework to evaluate new development projects against the City's adopted vision and are intended to reflect the City's desires relative to land planning, as well as individual site design and architecture. The guidelines and standards set forth in Chapter 2, Community Design, are applicable to all project types and cover a wide range of topics from general circulation and project signage to landscaping and sustainable development. The subsequent chapters provide additional provisions that are applicable to unique project types, including commercial and commercial mixed use, office and office mixed use, residential (all types from single family detached to residential mixed use), community facilities, and industrial.

Various temporary visual impacts could occur as a result of construction activities as the Project develops, including grading, equipment and material storage, and staging. Though temporary, some of these impacts could last for several weeks or months during any single construction phase. These construction-related impacts would be temporary and viewer sensitivity in the majority of cases would be slight to moderate.

Nevertheless, the loss of the visual appearance of the existing views, primarily of open grassland, on the site will change the visual character of the Project site in perpetuity. Compliance with the City's General Plan and design review process, implemented through the SPA Handbook, would reduce visual impacts to the greatest extent feasible; however, the Project would permanently convert the undeveloped site to urbanized uses. This is considered a **significant and unavoidable** impact. There is no additional feasible mitigation available that would reduce this impact to a less than significant level.

Impact 3.1-2: Project implementation would not result in substantial light or glare which would adversely affect day or nighttime views in the area (Less than Significant)

Implementation of the Project would introduce new sources of light and glare into the Project area.

GLARE

New sources of glare would occur primarily from the windshields of vehicles travelling to and from the Project site and from vehicles parked at the site. Glare associated with lighting is discussed under Lighting below. Parking areas would be provided for the commercial and high density residential parcels (Villages 22, 23, and 24), for the public park (Lot D), and for the age-restricted clubhouse (Lot A) and adjacent multifamily housing. The majority of the on-site residential parking

would be located throughout the northern, central, and southeastern portions of the Project site. Headlights and windshields would be shielded by the proposed residential and mixed use structures.

The Project includes plans for extensive landscaping and protected open space areas throughout the site, which would provide visual screening and block potential windshield glare to areas surrounding the Project site. The SPA Handbook also requires that use of reflective materials be avoided for the residential, commercial, and parks and recreation uses. Due to the distance between the sources of windshield glare and the nearest sensitive receptors and that use of reflective materials is not allowed for the residential, commercial, and parks uses, impacts from glare would be *less than significant*.

LIGHTING

The Project would introduce new sources of lighting, including sources which may result in increased nighttime lighting or glare in the Project vicinity. A detailed lighting plan has not been prepared for the Project, but for the purposes of this analysis, it has been conservatively assumed that exterior lighting would be located throughout most of the outdoor areas of the Project site, including in the commercial, residential, and parks lots, and along the landscaped sidewalks and trails, with the exception of the trails within the preserve and associated protected buffer areas which will not be lit or landscaped. This includes, but is not necessarily limited to: street lighting in the residential areas; exterior lighting on the buildings; lighting for the bicycle and pedestrian paths; courtyard lighting; parking lot lighting for guest parking in the multifamily areas, and lighting of park and recreation facilities. Lighting at the park and recreation facilities may include nighttime, stadium-style lighting associated with sports fields or other similar uses to allow for night games and activities. It is assumed that nighttime field lighting will be installed in association with potential sports fields and recreation uses at Lot D, for up to two sports fields or similar uses. It is also assumed that security lighting will be installed within the various parking areas and the exterior of restrooms within Lot D. Light sources from the proposed development may have a significant adverse impact on the surrounding areas, by introducing nuisance light into the area and decreasing the visibility of nighttime skies. Additionally, on-site light sources may create light spillover impacts on surrounding land uses in the absence of mitigation. However, the Project's residential, commercial, private parks, and landscaping uses will be required to comply with the City's Outdoor Lighting Ordinance and the public parks will be required to comply with the CRPD lighting requirements, identified in Chapter 6, Lighting, of the CRPD Design & Construction Standards Manual.

Compliance with the Outdoor Lighting Ordinance would ensure that all exterior lighting associated with the Project, including the residential, multi-family, commercial, and private parks and recreation components, is properly shielded and directed downward in order to eliminate light spillage onto adjacent properties and avoids excessive illumination, and reduces impacts to "dark skies" to the greatest extent feasible. While compliance with the Outdoor Lighting Ordinance and submittal of an outdoor lighting plan will ensure that potential impacts would be less than significant associated with the residential, commercial, landscaping, and private parks and recreation facilities, there is the potential for the public park and potential sports fields to result in

3.1 AESTHETICS AND VISUAL RESOURCES

excessive lighting. The CRPD's standards reduce the potential for impacts, but do not provide adequate detail to ensure that potential impacts associated with lighting at the public park and recreation facilities are less than significant. However, the SPA Handbook requires that lighting associated with the parks and recreation facilities facilities, including any sports field uses, would be designed to minimize light trespass off the Project site and requires that a lighting plan be prepared for each park site that demonstrates the lighting has been designed to minimize light spillage onto adjacent properties and to minimize light pollution that would affect the night sky. Implementation of the City's Outdoor Lighting Ordinance, the CRPD lighting requirements, and the SPA Handbook would reduce the impact to ***less than significant***.

This section describes the regional air quality, current attainment status of the air basin, local sensitive receptors, emission sources, and impacts that are likely to result from Project implementation. Following this discussion is an assessment of consistency of the Project with applicable policies and local plans. The Greenhouse Gases, Climate Change, and Energy analysis is located in Section 3.6.

This section is based in part on the following resources:

- *Air Quality and Land Use Handbook: A Community Health Perspective* (California Air Resources Board, 2005);
- *Guide to Air Quality Assessment in Sacramento County* (Sacramento Metropolitan Air Quality Management District [SMAQMD], 2009, Revised September 2018);
- *California Emissions Estimator Model* (CalEEMod), v.2016.3.2 (California Air Pollution Control Officers Association [CAPCOA], 2017);
- *Friant Ranch Interim Recommendation* (SMAQMD, 2019);
- *Recommended Guidance for Land Use Emission Reductions Version 4 (for Operational Emissions)* (SMAQMD, 2017).

Comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from the Sacramento Metropolitan Air Quality Management District (SMAQMD) (July 13, 2018) and the Sacramento Municipal Utility District (SMUD) (August 6, 2018). Each of the comments related to this topic are addressed within this section.

3.2.1 ENVIRONMENTAL SETTING

SACRAMENTO VALLEY AIR BASIN

The City of Rancho Cordova is located within the Sacramento Valley Air Basin (SVAB). The SVAB encompasses eleven counties including all of Shasta, Tehama, Glenn, Colusa, Butte, Sutter, Yuba, Sacramento, and Yolo Counties, the westernmost portion of Placer County and the northeastern half of Solano County. The SVAB is the northern half of California's Great Valley and is bordered on three sides (west, north, and east) by mountain ranges, with peaks in the eastern range above 9,000 feet. The SVAB is bounded by the North Coast Ranges on the west and Northern Sierra Nevada Mountains on the east. The SVAB is approximately 13,700 square miles and essentially a smooth valley floor with elevations ranging from 40 to 500 feet. The rolling valley is interrupted by the Sutter Buttes, an area of 80 square miles in northern Sutter County, which rise abruptly to more than 2,100 feet above the valley floor.

Topography and Meteorology

Hot dry summers and mild rainy winters characterize the Mediterranean climate of the SVAB. During the year the temperature may range from 20 to 115 degrees Fahrenheit with summer highs usually in the 90s and winter lows occasionally below freezing. Average annual rainfall is about 19 inches, and the rainy season generally occurs from November through March. The prevailing winds

are moderate in strength and vary from moist clean breezes from the south to dry land flows from the north.

The mountains surrounding the SVAB create a barrier to airflow, which can trap air pollutants under certain meteorological conditions. The highest frequency of air stagnation occurs in the autumn and early winter when large high-pressure cells collect over the Sacramento Valley. The lack of surface wind during these periods and the reduced vertical flow caused by less surface heating reduces the influx of outside air and allows air pollutants to become concentrated in a stable volume of air. The surface concentrations of pollutants are highest when these conditions are combined with temperature inversions that trap pollutants near the ground.

The ozone season (May through October) in the Sacramento Valley is characterized by stagnant morning air or light winds, with the delta sea breeze arriving in the afternoon out of the southwest. Usually the evening breeze transports the airborne pollutants to the north out of the Sacramento Valley. During about half of the days from July to September, however, a phenomenon called the "Schultz Eddy" prevents this from occurring. Instead of allowing for the prevailing wind patterns to move north carrying the pollutants out, the Schultz Eddy causes the wind pattern to circle back to the south. This phenomenon has the effect of exacerbating the pollution levels in the area and increases the likelihood of violating federal or state standards.

CRITERIA POLLUTANTS

All criteria pollutants can have human health and environmental effects at certain concentrations. The United States Environmental Protection Agency (USEPA) uses six "criteria pollutants" as indicators of air quality, and has established for each of them a maximum concentration above which adverse effects on human health may occur. These threshold concentrations are called National Ambient Air Quality Standards (NAAQS). In addition, California establishes ambient air quality standards, called California Ambient Air Quality Standards (CAAQS). California law does not require that the CAAQS be met by a specified date as is the case with NAAQS.

The ambient air quality standards for the six criteria pollutants (as shown in Table 3.2-1) are set to public health and the environment within an adequate margin of safety (as provided under Section 109 of the Federal Clean Air Act). Epidemiological, controlled human exposure, and toxicology studies evaluate potential health and environmental effects of criteria pollutants, and form the scientific basis for new and revised ambient air quality standards. Principal characteristics and possible health and environmental effects from exposure to the six primary criteria pollutants generated by the Project are discussed below.

Ozone (O₃) is a photochemical oxidant and the major component of smog. While O₃ in the upper atmosphere is beneficial to life by shielding the earth from harmful ultraviolet radiation from the sun, high concentrations of O₃ at ground level are a major health and environmental concern. O₃ is not emitted directly into the air but is formed through complex chemical reactions between precursor emissions of volatile organic compounds (VOC)¹ and oxides of nitrogen (NO_x) in the

¹ The CARB uses the term "Reactive Organic Gases" (ROG) in place of "Volatile Organic Compounds" (VOC).

presence of sunlight. These reactions are stimulated by sunlight and temperature so that peak O₃ levels occur typically during the warmer times of the year. Both VOCs and NO_x are emitted by transportation and industrial sources. VOCs are emitted from sources as diverse as autos, chemical manufacturing, dry cleaners, paint shops and other sources using solvents.

The reactivity of O₃ causes health problems because it damages lung tissue, reduces lung function and sensitizes the lungs to other irritants. Scientific evidence indicates that ambient levels of O₃ not only affect people with impaired respiratory systems, such as asthmatics, but healthy adults and children as well. Exposure to O₃ for several hours at relatively low concentrations has been found to significantly reduce lung function and induce respiratory inflammation in normal, healthy people during exercise. This decrease in lung function generally is accompanied by symptoms including chest pain, coughing, sneezing and pulmonary congestion.

Studies show associations between short-term ozone exposure and non-accidental mortality, including deaths from respiratory issues. Studies also suggest long-term exposure to ozone may increase the risk of respiratory-related deaths (U.S. Environmental Protection Agency 2019a). The concentration of ozone at which health effects are observed depends on an individual's sensitivity, level of exertion (i.e., breathing rate), and duration of exposure. Studies show large individual differences in the intensity of symptomatic responses, with one study finding no symptoms to the least responsive individual after a 2-hour exposure to 400 parts per billion of ozone and a 50 percent decrement in forced airway volume in the most responsive individual. Although the results vary, evidence suggest that sensitive populations (e.g., asthmatics) may be affected on days when the 8-hour maximum ozone concentration reaches 80 parts per billion (U.S. Environmental Protection Agency 2019b). The average background level of ozone in the California and Nevada is approximately 48.3 parts per billion, which represents approximately 77 percent of the total ozone in the western region of the U.S. (NASA, 2015).

In addition to human health effect, ozone has been tied to crop damage, typically in the form of stunted growth, leaf discoloration, cell damage, and premature death. O₃ can also act as a corrosive and oxidant, resulting in property damage such as the degradation of rubber products and other materials.

Ozone concentrations tend to be highest in summer and lowest in winter. In 2018, the lowest and highest daily average ozone concentrations at the highest site in Sacramento County were 8 parts per billion (on January 30th) and 62 parts per billion (on August 9th), respectively (California Air Resources Board, 2019a). According to the California Air Resources Board (CARB) Almanac, ozone concentrations in Sacramento have remained relatively steady from 1992 to 2012. However, over longer-term timeframes, ozone concentrations in Sacramento County have decreased (California Air Resources Board, 2019b).

Carbon monoxide (CO) is a colorless, odorless and poisonous gas produced by incomplete burning of carbon in fuels. Carbon monoxide is harmful because it binds to hemoglobin in the blood, reducing the ability of blood to carry oxygen. This interferes with oxygen delivery to the body's organs. The most common effects of CO exposure are fatigue, headaches, confusion, and dizziness due to inadequate oxygen delivery to the brain. For people with cardiovascular disease, short-term

CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress. Inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance. Unborn babies whose mothers experience high levels of CO exposure during pregnancy are at risk of adverse developmental effects (California Air Resources Board, 2019c). Exposure to CO at high concentrations can also cause fatigue, headaches, confusion, dizziness, and chest pain. There are no ecological or environmental effects to ambient CO (California Air Resources Board, 2019d).

Very high levels of CO are not likely to occur outdoors. However, when CO levels are elevated outdoors, they can be of particular concern for people with some types of heart disease. These people already have a reduced ability for getting oxygenated blood to their hearts in situations where the heart needs more oxygen than usual. They are especially vulnerable to the effects of CO when exercising or under increased stress. In these situations, short-term exposure to elevated CO may result in reduced oxygen to the heart accompanied by chest pain also known as angina (USEPA, 2016). Such acute effects may occur under current ambient conditions for some sensitive individuals, while increases in ambient CO levels increases the risk of such incidences.

CO concentrations tend to be highest in fall and winter and lowest in spring and summer. In 2018, the lowest and highest daily average carbon monoxide concentrations at the highest site in Sacramento County were 151 parts per billion (on March 1st) and 2,153 parts per billion (on November 15th), respectively (California Air Resources Board, 2019a). Over the long-term, CO concentrations have decreased throughout the United States, including the Sacramento region. Average concentrations of CO have reduced from approximately 333 parts per billion in 2000 to approximately 132 parts per billion in 2017, in California and Nevada (i.e. the West region, as defined by the USEPA) (USEPA, 2018).

Nitrogen dioxide (NO₂) is a brownish, highly reactive gas that is present in all urban atmospheres. The main effect of increased NO₂ is the increased likelihood of respiratory problems. Under ambient conditions, NO₂ can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections. Nitrogen oxides are an important precursor both to ozone (O₃) and acid rain, and may affect both terrestrial and aquatic ecosystems. Longer exposures to elevated concentrations of NO₂ may contribute to the development of asthma and potentially increase susceptibility to respiratory infections. People with asthma, as well as children and the elderly, are generally at greater risk for the health effects of NO₂.

NO₂ is a member of a family of chemicals comprised of nitrogen and oxygen that are collectively known as nitrogen oxides (NO_x). The major mechanism for the formation of NO₂ in the atmosphere is the oxidation of the air pollutant nitric oxide (NO). NO_x plays a major role, together with VOCs, in the atmospheric reactions that produce O₃. NO_x forms when fuel is burned at high temperatures. The two major emission sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers.

NO₂ concentrations tend to be highest in winter and lowest in summer. In 2018, the lowest and highest daily average NO₂ concentrations at the highest site in Sacramento County were 3 parts per billion (on May 13th and May 20th) and 40 parts per billion (on November 20th), respectively

(California Air Resources Board, 2019a). Over the long-term, nitrogen dioxide concentrations have generally been decreasing throughout the United States, including the Sacramento region (USEPA, 2018). Average concentrations of NO₂ have reduced from approximately 69 parts per billion in 2000 to approximately 48 parts per billion in 2017, in California and Nevada (i.e. the West region, as defined by the USEPA) (USEPA, 2018). The most recent forecast from the California Air Resources Board suggests that NO_x levels in the Sacramento metropolitan area will decrease over time, with the region experiencing a decrease in emissions from an average of approximately 187 tons per day in 2000 and 118 tons per day in 2010 to 54 tons per day in 2035 (California Air Resources Board, 2014).

Sulfur dioxide (SO₂) is one of the multiple gaseous oxidized sulfur species and is formed during the combustion of fuels containing sulfur, primarily coal and oil. The largest anthropogenic source of SO₂ emissions in the U.S. is fossil fuel combustion at electric utilities and other industrial facilities. SO₂ is also emitted from certain manufacturing processes and mobile sources, including locomotives, large ships, and construction equipment.

SO₂ affects breathing and may aggravate existing respiratory and cardiovascular disease in high doses. Sensitive populations include asthmatics, individuals with bronchitis or emphysema, children and the elderly. SO₂ is also a primary contributor to acid deposition, or acid rain, which causes acidification of lakes and streams and can damage trees, crops, historic buildings and statues. In addition, sulfur compounds in the air contribute to visibility impairment in large parts of the country. This is especially noticeable in national parks. Ambient SO₂ results largely from stationary sources such as coal and oil combustion, steel mills, refineries, pulp and paper mills and from nonferrous smelters.

Short-term exposure to ambient SO₂ has been associated with various adverse health effects. Multiple human clinical studies, epidemiological studies, and toxicological studies support a causal relationship between short-term exposure to ambient SO₂ and respiratory morbidity. The observed health effects include decreased lung function, respiratory symptoms, and increased emergency department visits and hospitalizations for all respiratory causes. These studies further suggest that people with asthma are potentially susceptible or vulnerable to these health effects. In addition, SO₂ reacts with other air pollutants to form sulfate particles, which are constituents of fine particulate matter (PM_{2.5}). Inhalation exposure to PM_{2.5} has been associated with various cardiovascular and respiratory health effects (USEPA, 2017). Increased ambient SO₂ levels would lead to increased risk of such effects.

SO₂ emissions that lead to high concentrations of SO₂ in the air generally also lead to the formation of other sulfur oxides (SO_x). SO_x can react with other compounds in the atmosphere to form small particles. These particles contribute to particulate matter (PM) pollution. Small particles may penetrate deeply into the lungs and in sufficient quantity can contribute to health problems.

In 2018, the lowest and highest daily average SO₂ concentrations at the highest site in Sacramento County ranged from approximately 0 parts per billion to 1 part per billion (California Air Resources Board, 2019a). Over the long-term, nitrogen dioxide concentrations have decreased throughout the United States, including the Sacramento region (USEPA, 2018). Average concentrations of SO₂

have reduced from approximately 17.6 parts per billion in 2000 to approximately 6.2 parts per billion in 2017 at monitoring sites in California and Nevada (i.e. the West region, as defined by the USEPA) (USEPA, 2018). The most recent forecast from the California Air Resources Board suggests that SO_x concentrations in the Sacramento metropolitan area will not increase over time (emissions were an average of approximately 3 tons per day in 2000 and 2 tons per day in 2010, and are projected to remain at approximately 2 tons per day 2035) (California Air Resources Board, 2014).

Particulate matter (PM) includes dust, dirt, soot, smoke and liquid droplets directly emitted into the air by sources such as factories, power plants, cars, construction activity, fires and natural windblown dust. Particles formed in the atmosphere by condensation or the transformation of emitted gases such as SO₂ and VOCs are also considered particulate matter. PM is generally categorized based on the diameter of the particulate matter: PM₁₀ is particulate matter 10 micrometers or less in diameter (known as respirable particulate matter), and PM_{2.5} is particulate matter 2.5 micrometers or less in diameter (known as fine particulate matter).

Based on studies of human populations exposed to high concentrations of particles (sometimes in the presence of SO₂) and laboratory studies of animals and humans, there are major effects of concern for human health. These include effects on breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular disease, alterations in the body's defense systems against foreign materials, damage to lung tissue, carcinogenesis and premature death. Small particulate pollution has health impacts even at very low concentrations – indeed no threshold has been identified below which no damage to health is observed.

Respirable particulate matter (PM₁₀) consists of small particles, less than 10 microns in diameter, of dust, smoke, or droplets of liquid which penetrate the human respiratory system and cause irritation by themselves, or in combination with other gases. Particulate matter is caused primarily by dust from grading and excavation activities, from agricultural uses (as created by soil preparation activities, fertilizer and pesticide spraying, weed burning and animal husbandry), and from motor vehicles, particularly diesel-powered vehicles. PM₁₀ causes a greater health risk than larger particles, since these fine particles can more easily penetrate the defenses of the human respiratory system.

Fine particulate matter (PM_{2.5}) consists of small particles, which are less than 2.5 microns in size. Similar to PM₁₀, these particles are primarily the result of combustion in motor vehicles, particularly diesel engines, as well as from industrial sources and residential/agricultural activities such as burning. It is also formed through the reaction of other pollutants. As with PM₁₀, these particulates can increase the chance of respiratory disease, and cause lung damage and cancer. In 1997, the EPA created new Federal air quality standards for PM_{2.5}.

The major subgroups of the population that appear to be most sensitive to the effects of particulate matter include individuals with chronic obstructive pulmonary or cardiovascular disease or influenza, asthmatics, the elderly and children. Particulate matter also soils and damages materials, and is a major cause of visibility impairment.

Numerous studies have linked PM exposure to premature death in people with preexisting heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms. Studies show that every 1 microgram per cubic meter reduction in PM_{2.5} results in a one percent reduction in mortality rate for individuals over 30 years old (Bay Area Air Quality Management District, 2017). Long-term exposures, such as those experienced by people living for many years in areas with high PM levels, have been associated with problems such as reduced lung function and the development of chronic bronchitis – and even premature death. Additionally, depending on its composition, both PM₁₀ and PM_{2.5} can also affect water quality and acidity, deplete soil nutrients, damage sensitive forests and crops, affect ecosystem diversity, and contribute to acid rain (U.S. Environmental Protection Agency 2019c).

PM concentrations tend to be highest in winter and spring and lowest in summer. In 2018, the lowest and highest daily average PM₁₀ concentrations at the highest site in Sacramento County were 5.1 µg/m³ (on November 29th) and 309.6 µg/m³ (on November 15th), respectively (California Air Resources Board, 2019a). In 2018, the lowest and highest daily average PM_{2.5} concentrations at the highest site in Sacramento County were 1.0 ug/m³ (on March 26th) and 263.4 ug/m³ (on November 15th), respectively (California Air Resources Board, 2019a). The most recent forecast from the California Air Resources Board projects that that PM_{2.5} concentrations in the Sacramento metropolitan area will remain relatively constant from historical levels, with emissions reducing from an average of 32 tons/day in 2000 to 24 tons per day in 2010, while increasing from this level to 27 tons per day in 2035 (California Air Resources Board, 2014).

Lead (Pb) exposure can occur through multiple pathways, including inhalation of air and ingestion of Pb in food, water, soil or dust. Once taken into the body, lead distributes throughout the body in the blood and is accumulated in the bones. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems and the cardiovascular system. Lead exposure also affects the oxygen carrying capacity of the blood. Excessive Pb exposure can cause seizures, mental retardation and/or behavioral disorders. Low doses of Pb can lead to central nervous system damage. Recent studies have also shown that Pb may be a factor in high blood pressure and subsequent heart disease.

Lead is persistent in the environment and can be added to soils and sediments through deposition from sources of lead air pollution. Other sources of lead to ecosystems include direct discharge of waste streams to water bodies, and mining. Elevated lead in the environment can result in decreased growth and reproductive rates in plants and animals, and neurological effects in vertebrates.

Lead exposure is typically associated with industrial sources; major sources of lead in the air are ore and metals processing and piston-engine aircraft operating on leaded aviation fuel. Other sources are waste incinerators, utilities, and lead-acid battery manufacturers. The highest air concentrations of lead are usually found near lead smelters. As a result of the USEPA's regulatory efforts, including the removal of lead from motor vehicle gasoline, levels of lead in the air decreased by 98 percent between 1980 and 2014 (USEPA, 2019d). Based on this reduction of lead in the air over this period, and since most new developments do not generate an increase in lead

exposure, the health impacts of ambient lead levels are not typically monitored by the California Air Resources Board.

ODORS

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another.

It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air.

When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

SENSITIVE RECEPTORS

A sensitive receptor is a location where human populations, especially children, seniors, and sick persons, are present and where there is a reasonable expectation of continuous human exposure to pollutants. Examples of sensitive receptors include residences, hospitals and schools. The Project would include residences with sensitive receptors. Additionally, there are existing sensitive receptors located in the immediate vicinity of the Project to the north and west. Future sensitive receptors will also be located to the south and east of the Project site.

AMBIENT AIR QUALITY

Both the USEPA and the California Air Resources Board have established ambient air quality standards for common pollutants. These ambient air quality standards represent safe levels of

contaminants that avoid specific adverse health effects associated with each pollutant. Each pollutant is measured over several standardized timeframes (called the averaging times), which provide a standard to compare monitored levels of pollutants to the federal and state standards. Each criteria pollutant has more than one average time – for example, the state ambient air quality standard for ozone is monitored over both a 1-hour and 8-hour periods.

The federal and California state ambient air quality standards are summarized in Table 3.2-1 for important pollutants. The federal and state ambient standards were developed independently, although both processes attempted to avoid health-related effects. As a result, the federal and state standards differ in some cases. In general, the California state standards are more stringent. This is particularly true for ozone and PM₁₀.

TABLE 3.2-1: FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS

POLLUTANT	AVERAGING TIME	FEDERAL PRIMARY STANDARD	STATE STANDARD
Ozone	1-Hour	--	0.09 ppm
	8-Hour	0.070 ppm	0.070 ppm
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.53 ppm	0.03 ppm
	1-Hour	0.100 ppm	0.18 ppm
Sulfur Dioxide	Annual	0.03 ppm	--
	24-Hour	0.14 ppm	0.04 ppm
	1-Hour	0.075 ppm	0.25 ppm
PM ₁₀	Annual	--	20 ug/m ³
	24-Hour	150 ug/m ³	50 ug/m ³
PM _{2.5}	Annual	15 ug/m ³	12 ug/m ³
	24-Hour	35 ug/m ³	--
Lead	30-Day Avg.	--	1.5 ug/m ³
	Calendar Quarter	1.5 ug/m ³	--

NOTES: PPM = PARTS PER MILLION, PPB = PARTS PER BILLION, UG/M³ = MICROGRAMS PER CUBIC METER
 SOURCES: CALIFORNIA AIR RESOURCES BOARD, 2019E.

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TACs) are another group of pollutants of concern. TACs are injurious in small quantities and are regulated despite the absence of criteria documents. The identification, regulation and monitoring of TACs is relatively recent compared to that for criteria pollutants. Unlike criteria pollutants, TACs are regulated on the basis of risk rather than specification of safe levels of contamination.

Existing air quality concerns within the Project site are related to increases of regional criteria air pollutants (e.g., ozone and particulate matter), exposure to toxic air contaminants, and odors. The primary source of ozone (smog) pollution is motor vehicles which account for 70 percent of the ozone in the region. Particulate matter is caused by dust, primarily dust generated from construction and grading activities, and smoke which is emitted from fireplaces, wood-burning stoves, and agricultural burning.

Attainment Status

In accordance with the California Clean Air Act (CCAA), the CARB is required to designate areas of the state as attainment, nonattainment, or unclassified with respect to applicable standards. An “attainment” designation for an area signifies that pollutant concentrations did not violate the

3.2 AIR QUALITY

applicable standard in that area. A “nonattainment” designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria.

Depending on the frequency and severity of pollutants exceeding applicable standards, the nonattainment designation can be further classified as serious nonattainment, severe nonattainment, or extreme nonattainment, with extreme nonattainment being the most severe of the classifications. An “unclassified” designation signifies that the data do not support either an attainment or nonattainment status. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The USEPA designates areas for ozone, CO, and NO₂ as “does not meet the primary standards,” “cannot be classified,” or “better than national standards.” For SO₂, areas are designated as “does not meet the primary standards,” “does not meet the secondary standards,” “cannot be classified,” or “better than national standards.” However, the CARB terminology of attainment, nonattainment, and unclassified is more frequently used.

Sacramento County has a state designation of Nonattainment for ozone and PM₁₀, and a state designation of either Unclassified or Attainment for all other criteria pollutants. Sacramento County has a national designation of Nonattainment for ozone and PM_{2.5} and a national designation of either Attainment or Unclassified for all other criteria pollutants. Table 3.2-2 presents the state and national attainment status for Sacramento County.

TABLE 3.2-2: STATE AND NATIONAL ATTAINMENT STATUS (SACRAMENTO COUNTY)

<i>CRITERIA POLLUTANTS</i>	<i>STATE DESIGNATIONS</i>	<i>NATIONAL DESIGNATIONS</i>
Ozone	Nonattainment	Nonattainment
PM ₁₀	Nonattainment	Attainment
PM _{2.5}	Attainment	Nonattainment
Carbon Monoxide	Attainment	Unclassified/Attainment
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Sulfur Dioxide	Attainment	Unclassified/Attainment
Sulfates	Attainment	N/A
Lead	Attainment	Unclassified/Attainment
Hydrogen Sulfide	Unclassified	N/A
Visibility Reducing Particles	Unclassified	N/A

SOURCE: CALIFORNIA AIR RESOURCES BOARD, 2018.

NOTE: N/A = NO FEDERAL STANDARD

Sacramento County Monitoring

The maintains numerous air quality monitoring sites throughout Sacramento County to measure ozone and PM_{2.5}. The CARB also maintains numerous air quality monitoring site throughout the SVAB to monitor PM₁₀. It is important to note that the federal ozone 1-hour standard was revoked by the USEPA and is no longer applicable for federal standards. The latest data obtained from the monitoring sites in Sacramento County between (available for year 2015 through 2017) is summarized in Tables 3.2-3 and 3.2-4, and data in the SVAB is summarized in Table 3.2-5.

TABLE 3.2-3: SACRAMENTO COUNTY AMBIENT AIR QUALITY MONITORING DATA SUMMARY - OZONE

YEAR	DAYS > STANDARD				1-HOUR OBSERVATIONS			8-HOUR AVERAGES				YEAR COVERAGE	
	STATE		NATIONAL		MAX.	STATE D.V. ¹	NAT'L D.V. ²	STATE		NATIONAL			
	1-Hr	8-Hr	1-Hr	8-Hr				MAX.	D.V. ¹	MAX.	D.V. ¹	MAX.	D.V. ²
2017	6	21	0	18	0.121	0.11	0.107	0.092	0.089	0.091	0.082	20	98
2016	10	33	0	33	0.111	0.11	0.107	0.095	0.093	0.094	0.083	87	100
2015	6	20	0	20	0.122	0.10	0.101	0.094	0.088	0.094	0.080	88	99

NOTES: ALL CONCENTRATIONS EXPRESSED IN PARTS PER MILLION. THE NATIONAL 1-HOUR OZONE STANDARD WAS REVOKED IN JUNE 2005 AND IS NO LONGER IN EFFECT. STATISTICS RELATED TO THE REVOKED STANDARD ARE SHOWN IN ITALICS. D.V. ¹ = STATE DESIGNATION VALUE. D.V. ² = NATIONAL DESIGN VALUE.

SOURCE: CARB AEROMETRIC DATA ANALYSIS AND MANAGEMENT SYSTEM (ADAM) AIR POLLUTION SUMMARIES.

TABLE 3.2-4: SACRAMENTO COUNTY AMBIENT AIR QUALITY MONITORING DATA SUMMARY - PM_{2.5}

YEAR	EST. DAYS > NAT'L '06 STD.	ANNUAL AVERAGE		NAT'L ANN. STD. D.V. ¹	STATE ANNUAL D.V. ²	NAT'L '06 STD. 98TH PERCENTILE	NAT'L '06 24-Hr STD. D.V. ¹	HIGH 24-HOUR AVERAGE		YEAR COVERAGE	
		NAT'L	STATE					NAT'L	STATE	MIN.	MAX
2017	6.2	9.7	14.0	9.6	14	34.9	34	46.9	46.9	94	98
2016	3.3	8.8	9.8	9.3	12	28.2	31	46.8	57.5	8	96
2015	8.7	10.4	12.3	10.2	12	37.8	35	54.5	54.5	91	99

NOTES: ALL CONCENTRATIONS EXPRESSED IN PARTS PER MILLION. STATE AND NATIONAL STATISTICS MAY DIFFER FOR THE FOLLOWING REASONS: STATE STATISTICS ARE BASED ON CALIFORNIA APPROVED SAMPLERS, WHEREAS NATIONAL STATISTICS ARE BASED ON SAMPLERS USING FEDERAL REFERENCE OR EQUIVALENT METHODS. STATE AND NATIONAL STATISTICS MAY THEREFORE BE BASED ON DIFFERENT SAMPLERS. STATE CRITERIA FOR ENSURING THAT DATA ARE SUFFICIENTLY COMPLETE FOR CALCULATING VALID ANNUAL AVERAGES ARE MORE STRINGENT THAN THE NATIONAL CRITERIA. D.V. ¹ = STATE DESIGNATION VALUE. D.V. ² = NATIONAL DESIGN VALUE

SOURCE: CARB AEROMETRIC DATA ANALYSIS AND MANAGEMENT SYSTEM (ADAM) AIR POLLUTION SUMMARIES.

TABLE 3.2-5: SVAB AMBIENT AIR QUALITY MONITORING DATA SUMMARY - PM₁₀

YEAR	EST. DAYS > STD.		ANNUAL AVERAGE		3-YEAR AVERAGE		HIGH 24-Hr AVERAGE		YEAR COVERAGE
	NAT'L	STATE	NAT'L	STATE	NAT'L	STATE	NAT'L	STATE	
2017	6.1	19.3	26.4	22.0	24	23	237.7	242.0	0-100
2016	*	12.2	24.2	20.6	23	25	88.5	88.9	0-100
2015	0.0	25.2	27.0	24.9	20	25	114.6	118.0	0-100

NOTES: THE NATIONAL ANNUAL AVERAGE PM₁₀ STANDARD WAS REVOKED IN DECEMBER 2006 AND IS NO LONGER IN EFFECT. AN EXCEEDANCE IS NOT NECESSARILY A VIOLATION. STATISTICS MAY INCLUDE DATA THAT ARE RELATED TO AN EXCEPTIONAL EVENT. STATE AND NATIONAL STATISTICS MAY DIFFER FOR THE FOLLOWING REASONS: STATE STATISTICS ARE BASED ON CALIFORNIA APPROVED SAMPLERS, WHEREAS NATIONAL STATISTICS ARE BASED ON SAMPLERS USING FEDERAL REFERENCE OR EQUIVALENT METHODS. STATE AND NATIONAL STATISTICS MAY THEREFORE BE BASED ON DIFFERENT SAMPLERS. NATIONAL STATISTICS ARE BASED ON STANDARD CONDITIONS. STATE CRITERIA FOR ENSURING THAT DATA ARE SUFFICIENTLY COMPLETE FOR CALCULATING VALID ANNUAL AVERAGES ARE MORE STRINGENT THAN THE NATIONAL CRITERIA.

SOURCE: CARB AEROMETRIC DATA ANALYSIS AND MANAGEMENT SYSTEM (ADAM) AIR POLLUTION SUMMARIES.

3.2.2 REGULATORY SETTING

FEDERAL

Clean Air Act

The Federal Clean Air Act (CAA) was first signed into law in 1970. In 1977, and again in 1990, the law was substantially amended. The CAA is the foundation for a national air pollution control effort, and it is composed of the following basic elements: NAAQS for criteria air pollutants,

hazardous air pollutant standards, state attainment plans, motor vehicle emissions standards, stationary source emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

The USEPA is responsible for administering the FCAA. The FCAA requires the USEPA to set NAAQS for several problem air pollutants based on human health and welfare criteria. Two types of NAAQS were established: primary standards, which protect public health (with an adequate margin of safety, including for sensitive populations such as children, the elderly, and individuals suffering from respiratory diseases), and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction.

NAAQS standards define clean air and represent the maximum amount of pollution that can be present in outdoor air without any harmful effects on people and the environment. Existing violations of the ozone and PM_{2.5} ambient air quality standards indicate that certain individuals exposed to these pollutants may experience certain health effects, including increased incidence of cardiovascular and respiratory ailments.

NAAQS standards have been designed to accurately reflect the latest scientific knowledge and are reviewed every five years by a Clean Air Scientific Advisory Committee (CASAC), consisting of seven members appointed by the USEPA administrator. Reviewing NAAQS is a lengthy undertaking and includes the following major phases: Planning, Integrated Science Assessment (ISA), Risk/Exposure Assessment (REA), Policy Assessment (PA), and Rulemaking. The process starts with a comprehensive review of the relevant scientific literature. The literature is summarized and conclusions are presented in the ISA. Based on the ISA, USEPA staff perform a risk and exposure assessment, which is summarized in the REA document. The third document, the PA, integrates the findings and conclusions of the ISA and REA into a policy context, and provides lines of reasoning that could be used to support retention or revision of the existing NAAQS, as well as several alternative standards that could be supported by the review findings. Each of these three documents is released for public comment and public peer review by the CASAC. Members of CASAC are appointed by the USEPA Administrator for their expertise in one or more of the subject areas covered in the ISA. The committee's role is to peer review the NAAQS documents, ensure that they reflect the thinking of the scientific community, and advise the Administrator on the technical and scientific aspects of standard setting. Each document goes through two to three drafts before CASAC deems it to be final.

Although there is some variability among the health effects of the NAAQS pollutants, each has been linked to multiple adverse health effects including, among others, premature death, hospitalizations and emergency department visits for exacerbated chronic disease, and increased symptoms such as coughing and wheezing. NAAQS standards were last revised for each of the six criteria pollutants as listed below, with detail on what aspects of NAAQS changed during the most recent update:

- Ozone: On October 1, 2015, the U.S. EPA lowered the national eight-hour standard from 0.075 ppm to 0.070 ppm, providing for a more stringent standard consistent with the current California state standard.

- CO: In 2011, the primary standards were retained from the original 1971 level, without revision. The secondary standards were revoked in 1985.
- NO₂: The national NO₂ standard was most recently revised in 2010 following an exhaustive review of new literature pointing to evidence for adverse effects in asthmatics at lower NO₂ concentrations than the existing national standard.
- SO₂: On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb.
- PM: the national annual average PM_{2.5} standard was most recently revised in 2012 following an exhaustive review of new literature that pointed to evidence for increased risk of premature mortality at lower PM_{2.5} concentrations than the existing standard.
- Lead: The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. In 2016, the primary and secondary standards were retained.

The law recognizes the importance for each state to locally carry out the requirements of the FCAA, as special consideration of local industries, geography, housing patterns, etc. are needed to have full comprehension of the local pollution control problems. As a result, the USEPA requires each state to develop a State Implementation Plan (SIP) that explains how each state will implement the FCAA within their jurisdiction. A SIP is a collection of rules and regulations that a particular state will implement to control air quality within their jurisdiction. The CARB is the state agency that is responsible for preparing and implementing the California SIP.

Transportation Conformity

Transportation conformity requirements were added to the FCAA in the 1990 amendments, and the EPA adopted implementing regulations in 1997. See §176 of the FCAA (42 U.S.C. §7506) and 40 CFR Part 93, Subpart A. Transportation conformity serves much the same purpose as general conformity: it ensures that transportation plans, transportation improvement programs, and projects that are developed, funded, or approved by the United States Department of Transportation or that are recipients of funds under the Federal Transit Act or from the Federal Highway Administration (FHWA), conform to the SIP as approved or promulgated by EPA.

Currently, transportation conformity applies in nonattainment areas and maintenance areas (maintenance areas are those areas that were in nonattainment that have been redesignated to attainment, under the FCCA). Under transportation conformity, a determination of conformity with the applicable SIP must be made by the agency responsible for the project, such as the Metropolitan Planning Organization, the Council of Governments, or a federal agency. The agency making the determination is also responsible for all the requirements relating to public participation. Generally, a project will be considered in conformance if it is in the transportation improvement plan and the transportation improvement plan is incorporated in the SIP. If an action

is covered under transportation conformity, it does not need to be separately evaluated under general conformity.

Transportation Control Measures

One particular aspect of the SIP development process is the consideration of potential control measures as a part of making progress towards clean air goals. While most SIP control measures are aimed at reducing emissions from stationary sources, some are typically also created to address mobile or transportation sources. These are known as transportation control measures (TCMs). TCM strategies are designed to reduce vehicle miles traveled and trips, or vehicle idling and associated air pollution. These goals are achieved by developing attractive and convenient alternatives to single-occupant vehicle use. Examples of TCMs include ridesharing programs, transportation infrastructure improvements such as adding bicycle and carpool lanes, and expansion of public transit.

STATE

California Clean Air Act

The CCAA was first signed into law in 1988. The CCAA provides a comprehensive framework for air quality planning and regulation, and spells out, in statute, the state's air quality goals, planning and regulatory strategies, and performance. The CARB is the agency responsible for administering the CCAA. The CARB established ambient air quality standards pursuant to the California Health and Safety Code (CH&SC) [§39606(b)], which are similar to the federal standards.

California Air Quality Standards

Although NAAQS are determined by the USEPA, states have the ability to set standards that are more stringent than the federal standards. As such, California established more stringent ambient air quality standards. Federal and state ambient air quality standards have been established for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, suspended particulates (PM₁₀) and lead. In addition, California has created standards for pollutants that are not covered by federal standards. Although there is some variability among the health effects of the CAAQS pollutants, each has been linked to multiple adverse health effects including, among others, premature death, hospitalizations and emergency department visits for exacerbated chronic disease, and increased symptoms such as coughing and wheezing. The existing state and federal primary standards for major pollutants are shown in Table 3.2-1.

Air quality standard setting in California commences with a critical review of all relevant peer reviewed scientific literature. The Office of Environmental Health Hazard Assessment (OEHHA) uses the review of health literature to develop a recommendation for the standard. The recommendation can be for no change, or can recommend a new standard. The review, including the OEHHA recommendation, is summarized in a document produced CARB staff called the draft Initial Statement of Reasons (ISOR), which is released for comment by the public, and also for public peer review by the Air Quality Advisory Committee (AQAC). AQAC members are appointed by the President of the University of California for their expertise in the range of subjects covered

in the ISOR, including health, exposure, air quality monitoring, atmospheric chemistry and physics, and effects on plants, trees, materials, and ecosystems. The Committee provides written comments on the draft ISOR. The CARB staff next revises the ISOR based on comments from AQAC and the public. The revised ISOR is then released for a 45-day public comment period prior to consideration by the Board at a regularly scheduled Board hearing.

In June of 2002, the CARB adopted revisions to the PM₁₀ standard and established a new PM_{2.5} annual standard. The new standards became effective in June 2003. Subsequently, staff reviewed the published scientific literature on ground-level ozone and nitrogen dioxide and the CARB adopted revisions to the standards for these two pollutants. Revised standards for ozone and nitrogen dioxide went into effect on May 17, 2006 and March 20, 2008, respectively. These revisions reflect the most recent changes to the CAAQS.

CARB Mobile-Source Regulation

The State of California is responsible for controlling emissions from the operation of motor vehicles in the state. Rather than mandating the use of specific technology or the reliance on a specific fuel, the CARB's motor vehicle standards specify the allowable grams of pollution per mile driven. In other words, the regulations focus on the reductions needed rather than on the manner in which they are achieved. Towards this end, the CARB has adopted regulations which required auto manufacturers to phase in less polluting vehicles.

CARB Air Quality and Land Use Handbook

The CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* addresses the importance of considering health risk issues when siting sensitive land uses, including residential development, in the vicinity of intensive air pollutant emission sources including freeways or high-traffic roads, distribution centers, ports, petroleum refineries, chrome plating operations, dry cleaners, and gasoline dispensing facilities. The CARB Handbook draws upon studies evaluating the health effects of traffic traveling on major interstate highways in metropolitan California centers within Los Angeles (Interstate [I] 405 and I-710), the San Francisco Bay, and San Diego areas. The recommendations identified by the CARB, including siting residential uses a minimum distance of 500 feet from freeways or other high-traffic roadways, are consistent with those adopted by the State of California for location of new schools. Specifically, the CARB Handbook recommends, "Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day" (CARB, 2005).

Tanner Air Toxics Act

California regulates TACs primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for the CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before the CARB can designate a substance as a TAC. To date, the CARB has identified more than 21 TACs and has adopted EPA's list of HAPs as TACs. Most recently, diesel PM was added to the CARB list of TACs. Once a TAC is identified, the CARB then adopts an Airborne Toxics Control Measure (ATCM) for sources that emit that particular TAC. If

there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate Best Available Control Technology (BACT) to minimize emissions.

The AB 2588 requires that existing facilities that emit toxic substances above a specified level prepare a toxic-emission inventory, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures. The CARB has adopted diesel exhaust control measures and more stringent emission standards for various on-road mobile sources of emissions, including transit buses and off-road diesel equipment (e.g., tractors, generators). In February 2000, the CARB adopted a new public-transit bus-fleet rule and emission standards for new urban buses. These rules and standards provide for (1) more stringent emission standards for some new urban bus engines, beginning with 2002 model year engines; (2) zero-emission bus demonstration and purchase requirements applicable to transit agencies; and (3) reporting requirements under which transit agencies must demonstrate compliance with the urban transit bus fleet rule. Other recent milestones include the low-sulfur diesel-fuel requirement, and tighter emission standards for heavy-duty diesel trucks (2007) and off-road diesel equipment (2011) nationwide.

LOCAL

Sacramento Metropolitan Air Quality Management District

At the county level, air quality is managed through land use and development planning practices that are implemented by Sacramento County and the incorporated Cities and through permitted source controls that are implemented by the Sacramento County Air Quality Management District (SMAQMD).

The SMAQMD is responsible for (1) implementing air quality regulations, including developing plans and control measures for stationary sources of air pollution to meet the NAAQS and CAAQS, (2) implementing permit programs for the construction, modification, and operation of sources of air pollution, and (3) enforcing air pollution statutes and regulations governing stationary sources. With CARB oversight, the SMAQMD administers local regulations.

The following SMAQMD rules that may relate to Project construction activities or building design may include, but are not limited to:

- **Rule 201: General Permit Requirements.** Any project that includes the use of equipment capable of releasing emissions to the atmosphere may require permit(s) from SMAQMD prior to equipment operation. The applicant, developer, or operator of a project that includes an emergency generator, boiler, or heater should contact the SMAQMD early to determine if a permit is required, and to begin the permit application process. Other general types of uses that require a permit include, but are not limited to, dry cleaners, gasoline stations, spray booths, and operations that generate airborne particulate emissions. Portable construction equipment (e.g. generators, compressors, pile drivers,

lighting equipment, etc.) with an internal combustion engine over 50 horsepower is required to have a SMAQMD permit or a CARB portable equipment registration (PERP).

- **Rule 402: Nuisance.** A person shall not discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause or have natural tendency to cause injury or damage to business or property.
- **Rule 403: Fugitive Dust.** The responsible person or entity is required to implement every reasonable method to control dust emissions from any construction, handling or storage activity, or any wrecking, excavation, grading, clearing of land or solid waste disposal operation to prevent fugitive dust generated through those activities from escaping the project site. Actions include but are not limited to application of water or chemicals, asphalt, and/or oil depending on the dust-generating activity.
- **Rule 442: Architectural Coatings.** The responsible person or entity may not use a coating with a VOC content in excess of the corresponding limits specified in this rule.
- **Rule 453: Cutback and Emulsified Asphalt Paving Materials.** Asphalt paving operations that may be associated with implementation of the project would be subject to Rule 453. This rule applies to the manufacture and use of cutback asphalt and emulsified asphalt for paving and maintenance operation.
- **Rule 460: Adhesives and Sealants.** The developer or contractor is required to use adhesives and sealants that comply with the volatile organic compound content limits specified in the rule.

Air Quality Attainment Plans

Each of the attainment plans currently in effect for the SVAB are discussed in further detail below.

2017 REVISIONS TO THE SACRAMENTO REGIONAL 8-HOUR OZONE ATTAINMENT AND REASONABLE FURTHER PROGRESS PLAN

The Sacramento region is classified as a severe-15 nonattainment area for the 2008 NAAQS (the USEPA states that the severe-15 classification refers to an area that has a design value for 8-hour ozone of up to 0.105 up to less than 0.111 ppm). The Sacramento Air Quality Management District, along with the other air districts in the region, prepared the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan in December 2008. The CARB determined that the Plan met CAA requirements and approved the plan on March 26, 2009 as a revision to the SIP. An update to the plan, 2017 Revisions to the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan (*2017 Ozone Attainment Plan*), has been prepared and was approved and adopted by the CARB on November 16, 2017. A further update to the plan, *2018 Updates to the California State Implementation Plan*, was adopted by the CARB on October 25, 2018.

PM_{2.5} IMPLEMENTATION/MAINTENANCE PLAN AND RE-DESIGNATION REQUEST FOR SACRAMENTO PM_{2.5} NONATTAINMENT AREA

The USEPA promulgated a new 24-hour standard for PM_{2.5} in October 2006, which strengthened the daily standard from 65 µg/m³ to 35 µg/m³ to protect the general public from health effects caused by exposure to fine particulate matter. Although the Sacramento area had attained the prior PM_{2.5} standards, the area did not meet the new standards and the USEPA Administrator established PM_{2.5} nonattainment designations for the 2006 standard, which became effective on December 14, 2009. In the USEPA's final designation, a multi-county PM_{2.5} nonattainment area was created in the Sacramento region.

However, the Sacramento federal PM_{2.5} nonattainment area attained the federal PM_{2.5} health standards on December 31, 2011. To be re-designated, the area must, among other things, show that attainment was achieved by permanent and enforceable reductions and that the area would remain below the standard for 10 years after accounting for emissions growth. The PM_{2.5} Implementation/Maintenance Plan and Re-designation Request for Sacramento PM_{2.5} Nonattainment Area (*PM_{2.5} Implementation/Maintenance Plan*) was prepared to show that the region has met the requirements and requests that the USEPA re-designate the area to attainment. The U.S EPA issued a final rule for Determination of Attainment for the Sacramento Nonattainment Area effective August 14, 2013. The *PM_{2.5} Implementation/Maintenance Plan* would be adopted by the air districts within the nonattainment area, as well as the CARB, as a revision to the SIP. Contents of the *PM_{2.5} Implementation/Maintenance Plan* include demonstration that the NAAQS was met and that all requirements have been met for a re-designation to attainment, specification of actions to be taken if the standards are violated in the future, and establishment of regional motor vehicle emission budgets.

The CCAA also requires that air districts assess their progress toward attaining the CAAQS once every three years. The triennial assessment is to report the extent of air quality improvement and the amounts of emission reductions achieved from control measures for the preceding three-year period. The SMAQMD reviews and revises the AQAP, if necessary, to correct for deficiencies in meeting progress, to incorporate new data or projections, to mitigate ozone transport, and to pursue the expeditious adoption of all feasible control measures. The most recent triennial assessment is the 2009 Triennial Report and Plan Revision. SMAQMD rules included in the Triennial Reports and AQAP Revisions are intended to limit emissions from stationary sources. Programs are also proposed to provide incentives for mobile heavy-duty vehicles/engines, CEQA mitigation for construction and land use development, and a Spare the Air program to reduce vehicle trips. Additional rules include, but may not be limited to, rules that would reduce emissions from degreasing and solvent cleaning operations, adhesives and sealants, solvents and unspecified coatings.

PM₁₀ IMPLEMENTATION/MAINTENANCE PLAN AND REDESIGNATION REQUEST FOR SACRAMENTO COUNTY

The Sacramento region was classified as attainment for the 1997 PM₁₀ 24-hour NAAQS of 150 µg/m³. In October 2010, the SMAQMD prepared the PM₁₀ *Implementation/Maintenance Plan and*

Redesignation Request for Sacramento County (2010). The USEPA approved the PM₁₀ Plan, which allowed the USEPA to proceed with the redesignation of Sacramento County as attainment for the PM₁₀ NAAQS. The first Maintenance Plan showed maintenance from 2012 through 2022.

A second plan must provide for maintenance of the NAAQS for 10 more years after expiration of the first 10-year maintenance period. The SMAQMD will prepare and submit a second maintenance plan in 2020 to demonstrate maintenance of the PM₁₀ standard through 2032.

Sacramento Area Council of Governments (SACOG) Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS)

SACOG is designated by the state and federal governments as the MPO for the region and is responsible for developing a regional transportation plan in coordination with Sacramento, Yolo, Yuba, Sutter, El Dorado and Placer counties and the 22 cities within those counties (excluding the Tahoe Basin). The SACOG MTP/SCS is required to cover at least a 20-year planning horizon, and be updated at least every four years.

The MTP/SCS links land use, air quality, and transportation needs within the region. If a city, county, or public agency in the Sacramento region wants to use federal transportation funding for transportation projects or programs, those projects must be included in the MTP/SCS project list. The MTP/SCS includes transportation improvements and investments that will serve the Sacramento region's projected land use pattern and population growth. All transportation projects that are regionally significant for potential air quality impacts must also be included in the MTP/SCS.

Rancho Cordova General Plan

The Rancho Cordova General Plan contains the following goals and policies that are relevant to air quality:

AIR QUALITY ELEMENT

Goal AQ.1: Ensure a healthy community by participating in local and regional efforts to meet or exceed all state and federal air quality standards.

Policy AQ.1.1: Coordinate with responsible agencies and other jurisdictions to improve air quality within Rancho Cordova and the greater Sacramento region.

Policy AQ.1.2: Evaluate projects for compliance with State and federal ambient air quality standards and the Sacramento Metropolitan Air Quality Management District's (SMAQMD) thresholds of significance.

Policy AQ.1.3: The City shall prohibit wood-burning open masonry fireplaces in all new development. Fireplaces with EPA-approved inserts, EPA-approved stoves, and fireplaces burning natural gas will be allowed.

Policy AQ.1.4: The City shall develop an incentive program to encourage homeowners to replace high-pollution emitting non-EPA-certified wood stoves that were installed before the effective date of the applicable EPA regulation with newer cleaner-burning EPA-certified wood stoves.

Policy AQ.1.5: Require odor impact analyses be conducted for evaluating new development requests that either could generate objectionable odors that may violate SMAQMD Rule 402 or any subsequent rules and regulations regarding objectionable odors near sensitive receptors or locate new sensitive receptors near existing sources of objectionable odors. Should objectionable odor impacts be identified, odor mitigation shall be required in the form of setbacks, facility improvements or other appropriate measures.

Goal AQ.2: Support land use patterns and densities that lessen air quality impacts.

Policy AQ.2.1: Promote strategic land use patterns for businesses that reduce the number and length of motor vehicle trips and that encourage multiple forms of transportation for employees and patrons.

Policy AQ.2.2: Encourage mixed-use developments that put residences in close proximity to services, employment, transit, schools, and civic facilities/services.

Policy AQ.2.3: Encourage infill development as a way to reduce vehicle trips and improve air quality.

Policy AQ.2.4: Maximize air quality benefits through selective use of landscaping vegetation that is low in emission of volatile organic compounds, and through revegetation of appropriate areas.

Goal AQ.3: Support multiple forms of transportation and a circulation system design that reduces vehicle trips and emissions.

Policy AQ.3.1: Promote walking and bicycling as viable forms of transportation to services, shopping, and employment.

Policy AQ.3.2: Promote mass transit as an alternative to single-occupant motor vehicle travel.

Policy AQ.3.3: Involve local businesses in creating, maintaining, or promoting mass transit opportunities and reducing vehicle emissions.

Policy AQ.3.4: Emphasize “demand management” strategies that seek to reduce single-occupant vehicle use in order to achieve state and federal air quality plan objectives.

Goal AQ.4: Support energy conservation, the use of alternative fuels, clean vehicles and industries to reduce air quality impacts.

Policy AQ.4.1: Promote improved air quality benefits through energy conservation measures for new and existing development.

Policy AQ.4.2: Support vehicle improvements and the use of clean vehicles that reduce emissions and improve air quality.

Policy AQ.4.4: Support SMAQMD's program of retrofitting construction equipment.

LAND USE ELEMENT

Goal LU.1: Achieve a balanced and integrated land use pattern throughout the community.

Policy LU.1.4: Promote high quality, efficient, and cohesive land utilization that minimizes negative impacts (e.g., traffic congestion and visual blight) and environmental hazards (e.g. flood, soil instability) on adjacent neighborhoods and infrastructure and preserve existing and future residential neighborhoods from encroachment of incompatible activities and land uses.

3.2.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE FOR CRITERIA POLLUTANTS

Consistent with Appendix G of the CEQA Guidelines and the SMAQMD thresholds of significance, the Project will have a significant impact on the environment associated with air quality if it will:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard;
- Expose sensitive receptors to substantial pollutant concentrations; and/or
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Impacts related to greenhouse gases, climate change, and energy are addressed in Section 3.6.

The SMAQMD provides project-level thresholds of significance for: particulate matter less than 10 micrometers in diameter (PM_{10}) and less than 2.5 micrometers in diameter ($PM_{2.5}$), and the precursors to ozone, which are reactive organic gases (ROG) and nitrogen oxides (NO_x). The SMAQMD developed these project-level thresholds based on the emissions amount that would exceed a CAAQS or contribute substantially to an existing or projected violation of a CAAQS. A substantial contribution is considered an emission that is equal to or greater than 5% of a CAAQS. The SMAQMD automatically adopts revisions to the CAAQS as revisions to the thresholds. The current thresholds are provided in Table 3.2-6, below.

3.2 AIR QUALITY

TABLE 3.2-6: THRESHOLDS OF SIGNIFICANCE FOR CRITERIA POLLUTANTS OF CONCERN

POLLUTANT	THRESHOLDS OF SIGNIFICANCE	
	CONSTRUCTION	OPERATIONAL
ROG	None	65 pounds/day
NO _x	85 pounds/day	65 pounds/day
PM ₁₀	If all feasible Best Available Control Technology/Best Management Practices (BACT/BMP) are applied, then 80 pounds/day and 14.6 tons/year	If all feasible BACT/BMPs are applied, then 80 pounds/day and 14.6 tons/year
PM _{2.5}	If all feasible BACT/BMPs are applied, then 82 pounds/day and 15 tons/year	If all feasible BACT/BMPs are applied, then 82 pounds/day and 15 tons/year

SOURCE: SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT, 2015.

Impacts related to Project-generated Pollutants of Human Health Concern

In December 2018, the California Supreme Court issued its decision in *Sierra Club v. County of Fresno* (226 Cal.App.4th 704) (hereafter referred to as the Friant Ranch Decision). The case reviewed the long-term, regional air quality analysis contained in the EIR for the proposed Friant Ranch development. The Friant Ranch project is a 942-acre master-plan development in unincorporated Fresno County within the San Joaquin Valley Air Basin, an air basin currently in nonattainment for the ozone and PM_{2.5} NAAQS and CAAQS. The Court found that the air quality analysis was inadequate because it failed to provide enough detail “for the public to translate the bare [criteria pollutant emissions] numbers provided into adverse health impacts or to understand why such a translation is not possible at this time.” The Court’s decision clarifies that environmental documents must connect a project’s air quality impacts to specific health effects or explain why it is not technically feasible to perform such an analysis.

All criteria pollutants that would be generated by the Project are associated with some form of health risk (e.g., asthma). Criteria pollutants can be classified as either regional or localized pollutants. Regional pollutants can be transported over long distances and affect ambient air quality far from the emissions source. Localized pollutants affect ambient air quality near the emissions source. Ozone is considered a regional criteria pollutant, whereas CO, NO₂, SO₂, and lead (Pb) are localized pollutants. PM can be both a local and a regional pollutant, depending on its composition. As discussed above, the primary criteria pollutants of concern generated by the Project are ozone precursors (ROG and NO_x) and PM (including diesel PM).

The SMAQMD does not currently have a methodology that would correlate the expected air quality emissions of projects to the likely health consequences of the increased emissions. The SMAQMD is in the process of developing a methodology to assess these impacts, and anticipates releasing it in the fall of 2019. In the interim, the SMAQMD advises lead agencies to follow the Friant Court’s advice to explain in meaningful detail why this analysis is not yet feasible (SMAQMD, 2019).

REGIONAL PROJECT-GENERATED CRITERIA POLLUTANTS (OZONE PRECURSORS AND REGIONAL PM)

Adverse health effects induced by regional criteria pollutant emissions generated by the Project (ozone precursors and PM) 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]). For these reasons, ozone precursors (ROG and NO_x) contribute to the formation of ground-borne ozone on a regional scale, where emissions of ROG and NO_x generated in one area may not equate to a specific ozone concentration in that same area. Similarly, some types of particulate pollutants may be transported over long-distances or formed through atmospheric reactions. As such, the magnitude and locations of specific health effects from exposure to increased ozone or regional PM concentrations are the product of emissions generated by numerous sources throughout a region, as opposed to a single individual project.

Models and tools have been developed to correlate regional criteria pollutant emissions to potential community health impacts. Appendix B.4 summarizes many of these tools, identifies the analyzed pollutants, describes their intended application and resolution, and analyzes whether they could be used to reasonably correlate project-level emissions to specific health consequences. As provided in Appendix B.4, while there are models capable of quantifying ozone and secondary PM formation and associated health effects, these tools were developed to support regional planning and policy analysis and have limited sensitivity to small changes in criteria pollutant concentrations induced by individual projects. Therefore, translating project generated criteria pollutants to the locations where specific health effects could occur or the resultant number of additional days of nonattainment cannot be estimated with a high degree of accuracy.

Technical limitations of existing models to correlate project-level regional emissions to specific health consequences are recognized by air quality management districts throughout the state, including the San Joaquin Valley Air Pollution Control District (SJVAPCD) and South Coast Air Quality Management District (SCAQMD), who provided amici curiae briefs for the Friant Ranch legal proceedings. In its brief, SJVAPCD (2015) acknowledges that while health risk assessments for localized air toxics, such as DPM, are commonly prepared, “it is not feasible to conduct a similar analysis for criteria air pollutants because currently available computer modeling tools are not equipped for this task.” The air district further notes that emissions solely from the Friant Ranch project (which equate to less than one-tenth of one percent of the total NO_x and VOC in the Valley) is not likely to yield valid information,” and that any such information should not be “accurate when applied at the local level.” SCAQMD presents similar information in their brief, stating that “it takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels”².

As discussed above, air districts develop region-specific CEQA thresholds of significance in consideration of existing air quality concentrations and attainment or nonattainment designations

² For example, SCAQMD’s analysis of their 2012 Air Quality Attainment Plan showed that modeled NO_x and ROG reductions of 432 and 187 tons per day, respectively, only reduced ozone levels by 9 parts per billion. Analysis of SCAQMD’s Rule 1315 showed that emissions of NO_x and ROG of 6,620 and 89,180 pounds per day, respectively, contributed to 20 premature deaths per year and 89,947 school absence (South Coast Air Quality Management District, 2015).

under the NAAQS and CAAQS. The NAAQS and CAAQS are informed by a wide range of scientific evidence that demonstrates there are known safe concentrations of criteria pollutants. While recognizing that air quality is a cumulative problem, air districts typically consider projects that generate criteria pollutant and ozone precursor emissions below these thresholds to be minor in nature and would not adversely affect air quality such that the NAAQS or CAAQS would be exceeded. Emissions generated by the Project could increase photochemical reactions and the formation of tropospheric ozone and secondary PM, which at certain concentrations, could lead to increased incidence of specific health consequences. Although these health effects are associated with ozone and particulate pollution, the effects are a result of cumulative and regional emissions. As such, a project's incremental contribution cannot be traced to specific health outcomes on a regional scale, and a quantitative correlation of project-generated regional criteria pollutant emissions to specific human health impacts is not included in this analysis.

LOCALIZED CARBON MONOXIDE CONCENTRATIONS

Heavy traffic congestion can contribute to high levels of CO, and individuals exposed to such hot spots may have a greater likelihood of developing adverse health effects. The SMAQMD has adopted screening criteria that provide a conservative indication of whether Project-generated traffic would cause a potential CO hotspot. If the screening criteria are not met, a quantitative analysis through site-specific dispersion modeling of Project-related CO concentrations would not be necessary, and the Project would not cause localized violations of the CAAQS for CO. Projects that do not generate CO concentrations in excess of the health-based CAAQS would not contribute a significant level of CO such that localized air quality and human health would be substantially degraded.

MODELS AND TOOLS TO CORRELATE PROJECT-GENERATED CRITERIA POLLUTANT EMISSIONS TO HEALTH IMPACTS

Several models and tools capable of translating mass emissions of criteria pollutants to various health endpoints have been developed. The table provided in Appendix B.4 summarizes key tools, identifies the analyzed pollutants, describes their intended application and resolution, and analyzes whether they could be used to reasonably correlate project-level emissions to specific health consequences. As shown in the table provided in Appendix B.4, almost all tools were designed to be used at the national, state, regional, and/or city-levels. Several of the methods and have additional problems related to their applicability for translating mass emissions of criteria pollutants to various health endpoints. These tools are not well suited to analyze small or localized changes in pollutant concentrations associated with individual projects. Accordingly, they are generally not recommended for CEQA analyses.

ANALYSIS METHODOLOGY

Potential air quality impacts associated with short-term construction and long-term operations were evaluated in accordance with SMAQMD-recommended and the CARB-approved methodologies. Construction and operational emissions of criteria air pollutants were compared with the applicable thresholds of significance (described below) to determine potential impacts. SMAQMD's significance thresholds are used to determine whether the Project would result in a

cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment, and also serve a proxy to determine the potential for the Project to conflict with or obstruct implementation of any applicable air quality plan.

Construction-related emissions were modeled using the California Emissions Estimator Model California Emission Estimator Model (CalEEMod)TM (v.2016.3.2) (California Air Pollution Control Officers, 2018). Project-specific construction parameters were used as inputs in the air quality analysis (to the extent information was available). Construction is assumed to begin in January 2020 and end in December 2035, and would be developed over five phases. Where Project-specific information was not available, default parameters provided by each model were used. It should be noted that default assumptions in the models are typically conservative to avoid underestimating emissions when project-specific information is not available. Modeled construction-related emissions are compared with the applicable SMAQMD thresholds to determine significance.

Following construction, operation of the Project would generate air pollutant emissions. CalEEMod was also used to estimate these long-term operational emissions, as well as emissions associated with area and energy sources (i.e., natural gas combustion, landscape maintenance, periodic architectural coating, and consumer products). Operational emissions associated with day-to-day activities of the Project were quantified using CalEEMod and trip generation rates were based upon the traffic study prepared for the project (Kimley Horn, 2019). Mobile sources involve vehicle trips, including construction trucks and passenger cars. The analysis of mobile-source emissions compares the gross mobile-source emissions with the SMAQMD thresholds of significance for project operations. CO impacts were evaluated using the screening-level procedures provided by SMAQMD (2018).

The impact analysis does not directly evaluate airborne lead. Neither construction nor future operations would generate quantifiable lead emissions because of regulations that require unleaded fuel and that prohibit lead in new building materials.

TAC emissions associated with Project construction that could affect surrounding areas are evaluated qualitatively. The potential for the Project operations to expose residents to TAC emissions that would exceed applicable health standards is also discussed qualitatively.

Lastly, SMAQMD recommends that odor impacts be addressed in a qualitative manner. Such an analysis must determine if the Project would result in excessive nuisance odors, as defined under California Code of Regulations, Health and Safety Code Section 41700, Air Quality Public Nuisance.

CALEEMOD METHODOLOGY

Operational Emissions

Full buildout of the Project is expected to occur by 2035. The land use inputs for CalEEMod were derived from the Project Description (see Chapter 2.0), which includes information provided by the Project Applicant³. The CalEEMod land use inputs include:

- Retail:
 - Regional Shopping Center (32,000 square feet) (5.16 acres)
- Residential:
 - Apartments Mid Rise (215 Dwelling Units) (7.17 acres)
 - Retirement Community (38 dwelling units) (1.26 acres)
 - Retirement Community (737 dwelling units) (90.91 acres)
 - Single Family Housing (735 dwelling units) (77.87 acres)
- Recreational:
 - City Park (9.1 acres) (including an 8,000 square foot restroom) (9.28 acres)
 - City Park (3.07 acres) (including a 21,000 square foot clubhouse) (3.69 acres)
 - City Park (0.5 acres)
 - Parking – Other Asphalt Surfaces (3.5 acres)
 - Parking – Parking Lot (1.5 acres)

Vegetation change was modeled to estimate the reduction in carbon accumulation provided by the existing biomass (e.g. grasses) that would be removed upon Project buildout. It was assumed that, out of the approximately 530.1 acres within the project site, approximately 278.76 acres within the Project site would remain undeveloped upon project buildout. The Grassland vegetation land use subtype was used a proxy for the current land type within the Project site.

Carbon sequestration was also modeled from the planting of new trees within the Project site. Based on information provided by the Project applicant, it was assumed that 2,240 new trees would be planted within the project site.

Separately, minor adjustments were made to several of the default emission factors provided by CalEEMod. These are as follows:

- Consumer products:
 - The “general category” emission factor was adjusted from default value (reduced by a total of 29.10%), based on the following differences between Project attributes and the inputs used to develop the default value (the default value utilizes statewide factors from year 2008):

³ Passive park uses are treated as open space and therefore and not modeled.

- The Project is estimated to have a persons per dwelling unit (persons/du) value of 2.504, versus the current statewide average of 2.97⁴. This is a difference of 18.60%
 - The CARB estimated total statewide year 2016 ROG emissions of 208.71 tons/year, which is 12.89% less than the amount estimated for year 2008 (239.6 tons/year).
- Architectural Coatings:
 - The residential interior and non-residential interior emission factors were reduced from 100 g/L to 50 g/L, based on the SMAQMD Rule 442 that provides a maximum VOC limit of 50 g/L for flat coatings. It was assumed that flat coatings are used for interior coatings.

There are three types of emission sources modeled for the Project: area, energy, and mobile sources. These collectively make up the Project's operational emissions. The California Emission Estimator Model (CalEEMod)TM (v.2016.3.2) was used to estimate area source emissions. The methodology used in this analysis to address each source is presented below.

AREA SOURCES

The term area source emissions refer to equipment or devices operating within a project that individually emit small quantities of air pollutants, but when considered collectively, represent large quantities of emissions. Examples include fireplaces, wood burning heaters, lawn maintenance equipment, application of paints and lacquers, and use of consumer products.

MOBILE SOURCES

The term mobile source emissions refer to vehicle emissions generated by a project. Mobile source emissions are dependent on a large number of variables including trip length, average speed, trip generation rates, vehicle fleet mix, starting conditions, temperature, year, and other factors.

CalEEMod was used to estimate mobile source emissions. The traffic inputs were derived from the traffic analysis. The traffic inputs include trip generation rates as included within the Traffic Impact Analysis provided by Kimley Horn (2019).

ENERGY SOURCES

Energy generated by the Project is accounted for within this category. Examples include building electricity and natural gas consumption.

⁴ California Department of Finance, Table 2: E-5 City/County Population and Housing Estimates (1/1/2018).

Construction Emissions

Construction activities can generate a substantial amount of air pollution. In some cases, the emissions from construction represent the largest air quality impact associated with a project. While construction-related emissions are considered temporary, these short-term impacts can contribute to the pollution load recorded at monitoring stations. Emissions from construction are assessed in this document to determine whether the thresholds of significance established by the SMAQMD would be exceeded.

Construction activities would include: site preparation, grading, building construction, paving, and architectural coatings. The emissions generated from these common construction activities include fugitive dust from soil disturbance, fuel combustion from mobile heavy-duty diesel and gasoline-powered equipment, portable auxiliary equipment, and worker commute trips.

As provided by the Project applicant, approximately 152,708 cubic yards of soil (net) would be exported from the Project site. Additionally, it was assumed that 278.76 acres of the Project site would be graded (this includes all of the residential and commercial portions of the Project site, as well as right-of-way).

The Project is anticipated to be developed in approximately five phases, according to the Project applicant, as follows:

- Phase 1 (January 2020 – August 2023):
 - Phase I Clubhouse and associated landscaping (Lot A) – 1/3 of the building complex (about 7000 sf);
 - 270 single family residential units;
 - 232 single family residential units – age restricted.
- Phase 2 (April 2022 – November 2025):
 - 197 single family residential units
 - 210 single family residential units – age restricted.
 - Neighborhood Park 2.2 ac (lot Q)
 - Liner Park Lot C (1.4ac)
 - Phase 2 Clubhouse building (~7000 sf)
- Phase 3 (February 2025 – April 2029):
 - 268 single family residential units
 - 295 single family residential units – age restricted
 - 16 senior multi-family residential units
 - Open Space (Lot T) – 1.2 acres
 - Rancho Cordova Parkway Widening
 - Phase 3 clubhouse (~7000 sf)
 - Lot B (Park)
- Phase 4 (March 2030 – June 2033):
 - 215 multi-family residential units
 - 22 senior multi-family residential units

- Phase 5 (March 2034 – December 2035)
 - Commercial Center

CalEEMod was used to estimate the construction emissions from construction activities. Based on construction phasing and schedule, the default off-road construction equipment types, amount, and characteristics provided by CalEEMod were used to model Project off-road construction equipment.

IMPACTS AND MITIGATION MEASURES

Impact 3.2-1: The Project has the potential to conflict with or obstruct implementation of the applicable air quality plan or to result in a cumulatively considerable net increase in criteria pollutants for which the region is in non-attainment (Less than Significant)

The Project is consistent with all applicable planning documents, including each of the attainment plans currently in effect for the SVAB, including the State SIP. The Project was also planned for within the SACOG MTP/SCS. Therefore, the Project's consistency with the SMAQMD's emissions thresholds are used as a proxy to determine the potential for the Project to conflict with or obstruct implementation of any applicable air quality plan.

PROJECT OPERATIONS

The Project would be a direct and indirect source of air pollution, in that it would generate and attract vehicle trips in the region (mobile source emissions), require the use of grid energy (natural gas and electricity), and generate area source emissions. The mobile source emissions would be entirely from vehicles, while the area source emissions would be primarily from landscape fuel combustion, consumer products, and architectural coatings.

CalEEMod was used to estimate operational emissions for the Project. Full buildout was estimated occur by 2035, based on the construction schedule provided by the Project applicant. Tables 3.2-8 through 3.2-10 show the Project's approximate unmitigated operational emissions under the annual, winter, and summer scenarios. Operational emissions include emissions of criteria pollutants that would result from mobile, energy, and area sources. CalEEMod model only allows some Project characteristics to be modeled as "mitigation" for the purposes of the model. Nevertheless, since Project characteristics represent the unmitigated scenario, the incorporation of these results into the model represent unmitigated results.

Specifically, the Project would include the following operational project characteristics that would reduce Project operational emissions below the applicable thresholds as provided in Table 3.2-7 through Table 3.2-9. As stated, these represent Project characteristics rather than mitigation. For further detail, see the list of sustainability features and other Project details as provided in Chapter 2.0: Project Description. A summary of the Project characteristics is provided below (note: the associated CalEEMod measure is provided in brackets below):

3.2 AIR QUALITY

- Density to 6.86 dwelling units per acre [Traffic Mitigation, LUT-1];
- Increase diversity through single family residential, multi-family residential, commercial, parks and recreation, and senior uses [Traffic Mitigation, LUT-3];
- Improve walkability design (123.53 intersections per square miles) [Traffic Mitigation, LUT-9];
- Improve destination accessibility (12.3 miles) [Traffic Mitigation LUT-4];
- Increase transit accessibility (Project site would include transit facilities for the City's Signature Transit Route) – average distance to transit for Project residents would be approximately 0.25 miles) [Traffic Mitigation, LUT-5];
- Improve pedestrian network (Project site and connecting off-site) [Traffic Mitigation, SDT-1];
- Provide traffic calming measures (50% of streets and intersections with improvements) [Traffic Mitigation, SDT-2];
- Install electric vehicle (EV) charging stations throughout the Project site, such that at least 50% of single-family residences and 5% of parking spaces within the commercial, park and recreation, and multi-family land uses will have EV charging stations [Traffic Mitigation SDT-3];
- Expand transit network [Traffic Mitigation, TST-3];
- Plant a minimum of 2,240 new trees throughout the Project site [4.11.2-Sequestration];
- No hearths [Area Mitigation];
- Use low-VOC paint (50 EF g/L);
- Install energy efficient (i.e. LED or better lighting) for all outdoor lighting (for outdoor lighting) [Energy Mitigation, LE-1];
- Generate 95% or more of electricity via renewable energy (on-site energy generation and/or contract with SMUD) [Energy Mitigation, AE-1, AE-2, AE-3];
- Install energy efficient (i.e. *Energy Star*) appliances [Energy Mitigation, BE-4];
- Install low-flow appliances (bathroom faucet, kitchen faucet, toilet, and shower) [Water Mitigation, WUW-1];
- Use water-efficient irrigation systems (automatic rain shut-off, maximum gallon per minute restriction, WiFi connectivity) [Water Mitigation, WUW-4]; and
- Minimize turf for residential uses to 70% less than the maximum allowed turf area [Water Mitigation, WUW-5].

Furthermore, the Project would implement all feasible SMAQMD BMPs for particulate matter emissions from land use development projects. The SMAQMD BMPs are required by existing regulations. The following list identifies the BMPs for operational PM emissions for land use development projects:

- Compliance with District rules that control operational PM and NO_x emissions, including SMAQMD Rule 403 (Fugitive Dust). Rule 403 requires the Project applicant to implement every reasonable method to control dust emissions. Actions include but are not limited to application of water or chemicals, asphalt, and/or oil depending on the dust-generating activity.

- Compliance with the mandatory measures in the California Building Energy Efficiency Standards (Title 24, Part 6) that pertain to efficient use of natural gas for space and water heating and other uses at residential or non-residential land uses.
- Compliance with mandatory measures in the California Green Building Code (Title 24, Part 11). Current mandatory measures related to operational PM include requirements for bicycle parking, parking for fuel-efficient vehicles, electric vehicle charging, and fireplaces for non-residential projects. Residential project measures include requirements for electric vehicle charging and fireplaces.
- Compliance with anti-idling regulations for diesel-powered commercial motor vehicles (greater than 10,000 gross vehicular weight rating). This BMP focuses on non-residential land use projects (retail and industrial) that would attract these vehicles.

The Project would comply with each of the operational BMPs as promulgated by the SMAQMD for land use development projects.

Since the SMAQMD operational thresholds for ROG and NOx are only provided in pounds per day, annual operational emissions for these pollutants are provided for informational purposes only. Detailed CalEEMod emissions calculations are presented in Appendix B.

TABLE 3.2-7: PROJECT OPERATIONAL EMISSIONS (TONS/YEAR) - ANNUAL

EMISSIONS ^(A)	ROG	NOX	PM ₁₀	PM _{2.5}
Area	8.0	0.2	0.1	0.1
Energy	0.2	1.4	0.1	0.1
Mobile	1.5	7.8	8.6	2.3
Total	9.7	9.4	8.8	2.5
Threshold	N/A	N/A	14.5	15
Above Threshold?	N/A	N/A	No	No

NOTE: ^(A) NUMBERS PROVIDED HERE MAY NOT ADD UP EXACTLY TO TOTAL DUE TO ROUNDING. ^(B) MAXIMUM VALUE.

SOURCE: CAL EEMOD (v.2016.3.2)

TABLE 3.2-8: PROJECT OPERATIONAL EMISSIONS (POUNDS/DAY) - SUMMER

EMISSIONS ^(A)	ROG	NOX	PM ₁₀	PM _{2.5}
Area	45.4	1.6	0.8	0.8
Energy	0.9	7.7	0.6	0.6
Mobile	10.6	41.9	48.8	13.1
Total	57.0	51.3	50.2	14.6
Threshold	65	65	80	82
Above Threshold?	No	No	No	No

NOTE: ^(A) NUMBERS PROVIDED HERE MAY NOT ADD UP EXACTLY TO TOTAL DUE TO ROUNDING. ^(B) MAXIMUM VALUE.

SOURCE: CAL EEMOD (v.2016.3.2)

3.2 AIR QUALITY

TABLE 3.2-9: PROJECT OPERATIONAL EMISSIONS (POUNDS/DAY) - WINTER

EMISSIONS ^(A)	ROG	NO _x	PM ₁₀	PM _{2.5}
Area	45.4	1.6	0.8	0.8
Energy	0.9	7.7	0.6	0.6
Mobile	17.6	43.3	48.8	13.2
Total	53.9	52.7	50.2	14.6
Threshold	65	65	80	82
Above Threshold?	No	No	No	No

NOTE: ^(A) NUMBERS PROVIDED HERE MAY NOT ADD UP EXACTLY TO TOTAL DUE TO ROUNDING. ^(B) MAXIMUM VALUE.

SOURCE: CALFEEMOD (v.2016.3.2)

The SMAQMD has established operational emissions thresholds of significance of 65 pounds/day for the ozone precursors ROG and NO_x, and 80 pounds/day for PM₁₀ and 82 pounds/day for PM_{2.5} (if all feasible BACT/BMPs are applied for PM emissions⁵). As shown in the above tables, Project-generated emissions would not exceed the SMAQMD thresholds for any pollutant under any of the scenarios. As such, Project operational emissions would not be expected to contribute a significant level of air pollution such that regional air quality within the SVAB would be degraded. Therefore, Project operational emissions would result in a *less than significant* impact.

PROJECT CONSTRUCTION

Construction activities associated with construction and implementation of the Project would result in temporary short-term emissions associated with vehicle trips from construction workers, operation of construction equipment, and the dust generated during construction activities. These temporary and short-term emissions would generate additional ozone precursors (ROG and NO_x) as well as PM₁₀ and PM_{2.5}. Below is an estimated phasing construction schedule for the Project, broken down into five phases (as provided by the Project applicant)⁶:

- Phase 1:
 - Site Preparation: 1/1/2020 – 3/30/2020
 - Grading: 4/1/2020 – 11/1/2020
 - Paving: 11/1/2020 – 1/30/2021
 - Building Construction: 2/1/2021 – 5/1/2023
 - Architectural Coating: 5/2/2021 – 8/1/2023
- Phase 2:
 - Building Construction: 4/1/2022 – 9/30/2022
 - Paving: 10/1/2022 – 12/31/2022
 - Building Construction: 4/1/2023 – 7/31/2025

⁵ Note: Best Available Control Technologies (BACT) only apply to stationary source emissions. Since the Project does not include any stationary sources, they are not applicable to the Project (SMAQMD, 2016).

⁶ Note: Site preparation and grading activities for Phases 1 and 2 are anticipated to be conducted during Phase 1, as provided by the Project applicant.

- Architectural Coating: 8/1/2023 – 11/30/2025
- Phase 3:
 - Site Preparation: 2/1/2025 – 4/27/2025
 - Grading: 4/28/2025 – 10/1/2025
 - Paving: 10/2/2025 – 12/31/2025
 - Building Construction: 1/1/2026 – 9/30/2028
 - Architectural Coating: 4/1/2026 – 12/31/2028
 - Site Preparation and grading for Rancho Cordova widening: 1/1/2027 – 10/1/2027
 - Paving for Rancho Cordova widening: 10/2/2027 – 01/31/2028
 - Site Prep (note: for park – Lot D): 4/1/2028 – 4/1/2029
- Phase 4:
 - Site Preparation for Commercial and MFR: 3/1/2030 – 4/27/2030
 - Grading and Improvements: 4/28/2030 – 8/1/2030
 - Paving: 8/2/2030 – 10/31/2030
 - Building Construction: 4/1/2031 – 1/1/2033
 - Architectural Coating: 1/2/2033 – 6/1/2033
- Phase 5:
 - Site Preparation for commercial center: 3/1/2034 – 4/27/2034
 - Grading and Improvements: 4/28/2034 – 7/31/2034
 - Paving: 8/1/2034 – 9/1/2034
 - Building Construction: 10/1/2034 – 8/31/2035
 - Architectural Coating: 9/1/2035 – 12/31/2035

SMAQMD advises that projects incorporate best management practices, regardless of whether emissions would be above the applicable thresholds. Below is a list of the best management practices that are recommended by the SMAQMD.

- Water all active construction sites at least three times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover or maintain at least two feet of free board space on haul trucks transportation soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.
- Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Limit vehicle speeds on unpaved roads to 15 miles per hour (mph).
- All roadways, driveways, sidewalks, parking lots to be paved should 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 off equipment when not in use or reducing the time of idling to 5 minutes. Provide clear signage that posts this requirement for workers at the entrance to the site.

3.2 AIR QUALITY

- 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.

CalEEMod allows the inclusion of measures that would reduce project-related construction emissions consistent with the SMAQMD construction-related best management practices (as provided above). To reflect the SMAQMD best management practices within the modeling, the following CalEEMod measures were used within CalEEMod to calculate the reduction in construction emissions due to implementation of these best management practices, per SMAQMD guidance:

- Water Exposed Area two times daily (55% Fugitive Dust PM reduction);
- Clean Paved Road (9% Fugitive Dust PM reduction).
- Unpaved Road Mitigation: Limit on-site construction vehicle speeds to 15 mph.

Table 3.2-10 shows the maximum daily and annual construction emissions that would result from the Project. The emissions provided in Table 3.2-10 represent emissions inclusive of the above-specified measures that would reduce Project-related construction emissions consistent with the SMAQMD construction-related best management practices.

The SMAQMD has established construction emissions threshold of significance of 85 pounds per day for NO_x, 80 pounds per day and 14.6 tons per year for PM₁₀, and 82 pounds per day and 15 tons per year for PM_{2.5}. The SMAQMD utilizes a screening process and separate model for CO impacts. There is no construction threshold for ROG. As shown in Table 3.2-10, construction emissions of NO_x would be at its maximum in year 2020, with a maximum of approximately 68.2 pounds per day, which is below the 85 pounds per day threshold for NO_x. Year 2027 would be the peak years for PM₁₀ and PM_{2.5}. However, emissions for PM would also be below the applicable daily and annual thresholds for PM as provided by the SMAQMD. As such, Project construction emissions would not be expected to contribute a significant level of air pollution such that regional air quality within the SVAB would be degraded. Therefore, Project construction emissions would result in a ***less than significant*** impact.

TABLE 3.2-10: SUMMARY OF MAXIMUM CONSTRUCTION DAILY AND ANNUAL EMISSIONS

YEAR	ROG (LBS/DAY)	NOX (LBS/DAY)	PM ₁₀ (LBS/DAY)	PM _{2.5} (LBS/DAY)	PM ₁₀ (TONS/YEAR)	PM _{2.5} (TONS/YEAR)
<i>PHASE 1</i>						
2020	5.0	68.3	10.5	6.5	0.8	0.5
2021	14.7	39.0	8.9	3.5	1.0	0.4
2022	14.2	34.9	8.7	3.2	1.1	0.4
2023	13.9	31.6	8.5	3.1	0.4	0.1
Maximum	14.7	68.2	10.5	6.5	1.1	0.5
Threshold	None	85	80	82	14.6	15
Above Threshold?	N	N	N	N	N	N
<i>PHASE 2</i>						
2022	1.8	15.7	1.1	0.8	0.1	0.1
2023	10.5	22.1	3.6	1.5	0.2	0.1
2024	10.3	20.9	3.5	1.4	0.5	0.2
2025	10.1	19.7	3.4	1.3	0.3	0.1
Maximum	10.5	22.1	3.6	1.5	0.5	0.2
Threshold	None	85	80	82	14.6	15
Above Threshold?	N	N	N	N	N	N
<i>PHASE 3</i>						
2025	3.9	36.6	9.8	5.6	0.5	0.3
2026	17.6	25.8	5.9	2.0	0.7	0.2
2027	20.0	50.8	15.3	7.5	1.7	0.8
2028	19.9	50.6	15.3	7.5	1.5	0.7
2029	2.5	25.3	9.3	5.5	0.3	0.2
Maximum	20.0	50.8	15.3	7.5	1.7	0.8
Threshold	None	85	80	82	14.6	15
Above Threshold?	N	N	N	N	N	N
<i>PHASE 4</i>						
2030	3.1	14.9	8.7	4.9	0.3	0.2
2031	1.7	9.9	1.5	0.5	0.1	<0.1
2032	1.7	9.9	1.5	0.5	0.2	0.1
2033	17.4	0.9	0.3	0.1	<0.1	<0.1
Maximum	17.4	14.9	8.7	4.9	0.3	0.2
Threshold	None	85	80	82	14.6	15
Above Threshold?	N	N	N	N	N	N
<i>PHASE 5</i>						
2034	2.5	13.7	8.7	4.9	0.6	0.3
2035	3.5	8.3	0.2	0.1	<0.1	<0.1
Maximum	3.5	13.7	8.7	4.9	0.6	0.3
Threshold	None	85	80	82	14.6	15
Above Threshold?	N	N	N	N	N	N

SOURCE: CALEEMOD (v.2016.3.2)

PROJECT EFFECTS ON PUBLIC HEALTH

Sacramento County has a state designation of Nonattainment for ozone and PM₁₀, and a national designation of Nonattainment for ozone and PM_{2.5}. As shown in Table 3.2-7 through Table 3.2-10, construction and operation of the Project would not generate ozone precursors (ROG and NO_x) or PM exhaust in excess of the SMAQMD's numeric thresholds. The SMAQMD developed these project-level thresholds based on the emissions amount that would exceed a CAAQS or contribute substantially to an existing or projected violation of a CAAQS, as described in the *Thresholds of Significance for Criteria Pollutants* discussion. Ambient levels of these criteria pollutants are likely to decrease in the future, based on current and future implementation of federal and/or state regulatory requirements, such as improvements to the statewide vehicle fleet over time (including the long-term replacement of internal combustion engine vehicles with electric vehicles in coming decades).

As shown in the table provided in Appendix B.4, almost all tools available to measure criteria pollutant emissions were designed to be used at the national, state, regional, and/or city-levels. These tools are not well suited to analyze small or localized changes in pollutant concentrations associated with individual projects. Accordingly, they are not recommended by the SMAQMD for CEQA analyses (SMAQMD, 2019).

Ozone

O₃ is not emitted directly into the air but is formed through complex chemical reactions between precursor emissions of volatile organic compounds (VOC) (also known as ROG) and oxides of nitrogen (NO_x) in the presence of sunlight. The reactivity of O₃ causes health problems because it damages lung tissue, reduces lung function and sensitizes the lungs to other irritants. Scientific evidence indicates that ambient levels of O₃ not only affect people with impaired respiratory systems, such as asthmatics, but healthy adults and children as well. Exposure to O₃ for several hours at relatively low concentrations has been found to significantly reduce lung function and induce respiratory inflammation in normal, healthy people during exercise. This decrease in lung function generally is accompanied by symptoms including chest pain, coughing, sneezing and pulmonary congestion.

Studies show associations between short-term ozone exposure and non-accidental mortality, including deaths from respiratory issues. Studies also suggest long-term exposure to ozone may increase the risk of respiratory-related deaths (U.S. Environmental Protection Agency 2019a). The concentration of ozone at which health effects are observed depends on an individual's sensitivity, level of exertion (i.e., breathing rate), and duration of exposure. Studies show large individual differences in the intensity of symptomatic responses, with one study finding no symptoms to the least responsive individual after a 2-hour exposure to 400 parts per billion of ozone and a 50 percent decrement in forced airway volume in the most responsive individual. Although the results vary, evidence suggest that sensitive populations (e.g., asthmatics) may be affected on days when the 8-hour maximum ozone concentration reaches 80 parts per billion (U.S. Environmental Protection Agency 2019b).

The Project would generate emissions of ROG and NOx during Project operational and construction activities, as shown in Table 3.2-7 through Table 3.2-10. Although the exact effect of such emissions on local health are not known, it is likely that the increases in ROG and NOx generated by the proposed Project would especially affect people with impaired respiratory systems, but also healthy adults and children. However, the increases of these pollutants generated by the proposed Project are not on their own likely to generate an increase in the number of days exceeding the NAAQS or CAAQS standards, based on the size of the proposed Project in comparison to Sacramento County as a whole.

Particulate Matter

Based on studies of human populations exposed to high concentrations of particles (sometimes in the presence of SO₂) and laboratory studies of animals and humans, PM can cause major effects of concern for human health. These include effects on breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular disease, alterations in the body's defense systems against foreign materials, damage to lung tissue, carcinogenesis and premature death. Small particulate pollution has health impacts even at very low concentrations – indeed no threshold has been identified below which no damage to health is observed. The major subgroups of the population that appear to be most sensitive to the effects of particulate matter include individuals with chronic obstructive pulmonary or cardiovascular disease or influenza, asthmatics, the elderly and children. Particulate matter also soils and damages materials, and is a major cause of visibility impairment.

Numerous studies have linked PM exposure to premature death in people with preexisting heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms. Studies show that every 1 microgram per cubic meter reduction in PM_{2.5} results in a one percent reduction in mortality rate for individuals over 30 years old (Bay Area Air Quality Management District, 2017). Long-term exposures, such as those experienced by people living for many years in areas with high particle levels, have been associated with problems such as reduced lung function and the development of chronic bronchitis – and even premature death. Additionally, depending on its composition, both PM₁₀ and PM_{2.5} can also affect water quality and acidity, deplete soil nutrients, damage sensitive forests and crops, affect ecosystem diversity, and contribute to acid rain (U.S. Environmental Protection Agency 2019c).

The Project would generate emissions of PM during Project operational and construction activities, as shown in Table 3.2-7 through Table 3.2-10. Although the exact effect of such emissions on local health are not known, it is likely that the increases in PM generated by the proposed Project would especially affect people with impaired respiratory systems, but also healthy adults and children located in the immediate vicinity of the Project site. However, the increases of these pollutants generated by the proposed Project are not on their own likely to generate an increase in the number of days exceeding the NAAQS or CAAQS standards, based on the size of the Project in comparison the Sacramento County as a whole.

Discussion

As previously discussed, the magnitude and locations of any potential changes in ambient air quality, and thus health consequences, from these additional emissions cannot be quantified with a high level of certainty due to the dynamic and complex nature of pollutant formation and distribution (e.g., meteorology, emissions sources, sunlight exposure). However, it is known that public health will continue to be affected in the City of Rancho Cordova and the surrounding region so long as the region does not attain the CAAQS or NAAQS. However, the increases of these pollutants generated by the proposed Project are not on their own likely to generate an increase in the number of days exceeding the NAAQS or CAAQS standards, based on the size of the Project in comparison the Sacramento County as a whole.

CONCLUSION

As shown in Tables 3.2-11 through 3.2-13, modeled Project characteristics demonstrate that the Project's operational emissions to levels would be below the SMAQMD thresholds. The Project would have a ***less than significant*** impact relative to project operational emissions. Additionally, as shown in Table 3.2-11, implementation of the SMAQMD construction-related best management practices (as required) would reduce Project-related construction emissions during the construction timeframe and emissions would be below SMAQMD thresholds. Therefore, Project construction emissions would have a ***less than significant*** impact. Lastly, the Project would not generate significant health impacts associated with exposure to increases in criteria pollutant levels, based on the tools that are currently available and SMAQMD's interim guidance. This Project would have a ***less than significant*** impact relative to this topic.

Impact 3.2-2: The Project has the potential to generate carbon monoxide hotspot impacts as a result of increased traffic congestion that would exceed the applicable ambient air quality standards (Less than Significant)

Very high levels of CO are not likely to occur outdoors. However, when CO levels are elevated outdoors, they can be of particular concern for people with some types of heart disease. These people already have a reduced ability for getting oxygenated blood to their hearts in situations where the heart needs more oxygen than usual. They are especially vulnerable to the effects of CO when exercising or under increased stress. In these situations, short-term exposure to elevated CO may result in reduced oxygen to the heart accompanied by chest pain also known as angina (USEPA, 2016). Such acute effects may occur under current ambient conditions for some sensitive individuals, while increases in ambient CO levels could increase the risk of such incidences.

Project traffic would increase concentrations of carbon monoxide along streets providing access to the Project site. Carbon monoxide is a local pollutant (i.e., high concentrations are normally only found very near sources). The major source of carbon monoxide, a colorless, odorless, poisonous gas, is automobile traffic. Elevated concentrations (i.e. hotspots), therefore, are usually only found near areas of high traffic volume and congestion.

Long-distance transport of CO is extremely limited because it disperses rapidly with distance from the source under normal meteorological conditions. Under specific meteorological conditions and traffic conditions, CO concentrations at receptors located near roadway intersections may reach unhealthy levels, when combined with background CO level.

Emissions and ambient concentrations of CO have decreased dramatically in the SVAB with the introduction of the catalytic converter emission control technology for on-road motor vehicles in 1975 and reformulated fuels required by the 1990 Clean Air Act amendments. No exceedances of the CAAQS or NAAQS for CO have been recorded at a monitoring station in Sacramento County since 1993. Both the CARB and the USEPA have redesignated the Sacramento Valley Air Basin as an attainment area for CO, for the CAAQS in 1997 and the NAAQS on June 1, 1998, respectively. However, elevated localized concentrations of CO still warrant consideration in the environmental review process. Occurrences of localized CO concentrations (i.e., “hotspots”) are often associated with heavy traffic congestion, which most frequently occur at signalized intersections of high-volume roadways.

The preliminary screening methodology provided by the SMAQMD provides lead agencies with a conservative indication of whether Project-generated vehicle trips will result in the generation of CO emissions that contribute to an exceedance of the thresholds of significance. The SMAQMD’s recommended screening criteria are divided into two tiers. The screening criteria have been developed to help lead agencies analyze potential CO impacts and identify when site-specific CO dispersion modeling is not necessary.

According to the SMAQMD, a Project will result in a less than significant impact to air quality for local CO if:

- Traffic generated by the Project will not result in deterioration of intersection level of service (LOS) to LOS E or F; and
- The project will not contribute to additional traffic to an intersection that already operates at LOS of E or F.

The Project would not satisfy this first tier of screening criteria. As identified in Section 3.13: Transportation and Circulation, there are several intersections that would be affected by the Project such that the Project would contribute additional traffic to some intersections that already operate at LOS of E or F. There would also be an intersection (Intersection #9 as identified in Section 3.13: Transportation and Circulation) that would result in a deterioration of intersection LOS to E during the PM peak hour. Therefore, the Project would not satisfy the first tier of the SMAQMD’s recommended screening criteria.

The SMAQMD guidance states that, if the first tier of screening criteria is not met, then a second tier of screening criteria shall be examined. The second tier of screening criteria is listed below. According to the SMAQMD, the Project would result in a less than significant impact to air quality for local CO if all of the following criteria are met:

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

The Project meets each of these three criteria. The Project does not result in an affected intersection experiencing more than 31,600 vehicles per hour, would not contribute traffic at a location where horizontal or vertical mixing of air will be substantially limited, and the mix of vehicles types at the intersection would not be substantially different than the County average.

The SMAQMD does not maintain a mass emissions threshold for carbon monoxide. Therefore, since the Project passes the SMAQMD screening criteria for Carbon monoxide hotspots, the potential for a carbon monoxide hotspot impact represents a *less than significant* impact.

Impact 3.2-3: The Project has the potential for expose sensitive receptors to substantial toxic air contaminants (Less than Significant)

A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air. However, their high toxicity or health risk may pose a threat to public health even at very low concentrations. In general, for those TACs that may cause cancer, there is no concentration that does not present some risk. This contrasts with the criteria pollutants for which acceptable levels of exposure can be determined and for which the state and federal governments have set ambient air quality standards.

The CARB published the *Air Quality and Land Use Handbook: A Community Health Perspective* (2007) to provide information to local planners and decision-makers about land use compatibility issues associated with emissions from industrial, commercial and mobile sources of air pollution. The CARB Handbook indicates that mobile sources continue to be the largest overall contributors to the State's air pollution problems, representing the greatest air pollution health risk to most Californians. The most serious pollutants on a statewide basis include diesel exhaust particulate matter (diesel PM), benzene, and 1,3-butadiene, all of which are emitted by motor vehicles. These mobile source air toxics are largely associated with freeways and high traffic roads. Non-mobile source air toxics are largely associated with industrial and commercial uses. Table 3.2-11 provides the California Air Resources Board minimum separation recommendations on siting sensitive land uses.

The CARB recommends avoiding placing new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles per day. The Project site is not within 500 feet of any highway or interstate (the closest highway, CA-16, is located more than 2.5 miles to the south of the Project site). Moreover, the Project site is not located adjacent to any major roadways, and Project sensitive receptors would not be located within 500 feet of

roadways with traffic volumes of 50,000 vehicles/day or greater. Therefore, the site lies beyond the CARB-recommended buffer area, and future receptors would not be negatively affected by toxic air contaminants generated on nearby roadways. The Project is primarily a residential development, with some light commercial and recreation land uses. These land uses are not typically known to expose the public to substantial concentrations of TACs. In addition, there are no distribution centers, rail yards, ports, refineries, chrome platers, dry cleaners, or gasoline dispensing facilities located in the vicinity of the Project site. There are no major stationary sources of toxic air contaminants identified in the vicinity of the development site that could potentially affect future on-site sensitive receptors, and the Project would not be a large generator of diesel truck trips during Project operation. Therefore, development of the Project would not cause a substantial increase in exposure of sensitive receptors to localized concentrations of TACs. This Project would have a *less than significant* relative to this topic.

TABLE 3.2-11: CARB MINIMUM SEPARATION RECOMMENDATIONS ON SITING SENSITIVE LAND USES

SOURCE CATEGORY	ADVISORY RECOMMENDATIONS
Freeways and High-Traffic Roads	<ul style="list-style-type: none"> • Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
Distribution Centers	<ul style="list-style-type: none"> • Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). • Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	<ul style="list-style-type: none"> • Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. • Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	<ul style="list-style-type: none"> • Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the CARB on the status of pending analyses of health risks.
Refineries	<ul style="list-style-type: none"> • Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	<ul style="list-style-type: none"> • Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloro-ethylene	<ul style="list-style-type: none"> • Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. • Do not site new sensitive land uses in the same building with perc dry cleaning operations.
Gasoline Dispensing Facilities	<ul style="list-style-type: none"> • Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50 foot separation is recommended for typical gas dispensing facilities.

SOURCE: AIR QUALITY AND LAND USE HANDBOOK: A COMMUNITY HEALTH PERSPECTIVE” (CARB, 2007)

DIESEL PARTICULATE MATTER

The Project requires earthmoving during the Project’s construction phase. Construction activity can result in emissions from particulate matter from diesel exhaust (diesel PM). CalEEMod was used to estimate construction PM₁₀ emissions for the Project. Construction emissions are discussed in more detail under Impact 3.2-2 (detailed CalEEMod emissions calculations are presented in Appendix B). An estimated Project construction schedule, quantity and types of diesel-powered equipment, and number of hours of equipment operated per day is provided under the “CalEEMod Methodology” discussion provided above. Residential receptors are located

surrounding the Project site to the north, northwest, southeast, and east of the Project site. Wind direction varies by time of the year, but typically comes from the south in late winter/early spring and from mid-summer through late fall, while the wind is most often from west from during late spring/early summer, and from the north during the winter. Construction staging areas would be located adjacent to Project construction activities throughout the duration of Project construction.

The SMAQMD has not established a quantitative threshold of significance for construction-related TAC emissions. SMAQMD construction-related best management practices require the implementation of construction dust mitigation measures to reduce overall PM emissions during construction, consistent with the recommendations of the SMAQMD in their *Guide to Air Quality Assessment in Sacramento County (CEQA Guide)* (2018). The Project does not contain any land uses or construction activities that would generate an unusual amount of diesel PM, in comparison to projects of a similar kind. The Project would have a ***less than significant*** impact with regard to diesel PM.

Impact 3.2-4: The Project has the potential to result in other emissions (such as those leading to odors) that could adversely affect a substantial number of people (Less than Significant)

In addition to criteria pollutants and TACs, other emissions that have the potential to affect a substantial number of people are offensive odors. While offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and the SMAQMD. The general nuisance rule (Heath and Safety Code §41700 and SMAQMD Rule 402) is the basis for the SMAQMD threshold. In addition, Policy AQ.1.5 of the City of Rancho Cordova General Plan requires an odor impact analysis for new development that could generate objectionable odors near sensitive receptors or locate new sensitive receptors near existing sources of objectionable odors. A project may reasonably be expected to have a significant adverse odor impact where it “generates odorous emissions in such quantities as to cause detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which may endanger the comfort, repose, health, or safety of any such person or the public, or which may cause, or have a natural tendency to cause, injury or damage to business or property.”

As discussed under Impact 3.2-4, implementation of the Project would not place sensitive receptors adjacent to TACs above the applicable standards and thresholds. Similarly, implementation of the Project would not directly create or generate objectionable odors to a significant degree. The Project would also not place sensitive receptors near objectionable odors. Trash in enclosed areas from the commercial uses would be separated at a sufficient distance from nearby residences, and enclosed in industry-standard containers, such that odors from trash would not generally generate noticeable odors for nearby residential receptors.

Examples of facilities that are known producers of odors include: Wastewater Treatment Facilities, Chemical Manufacturing, Sanitary Landfill, Fiberglass Manufacturing, Transfer Station, Painting/Coating Operations (e.g. auto body shops), Food Processing Facility, Petroleum Refinery,

Asphalt Batch Plant, and Rendering Plant. The Project would not develop any of these known producers of odors.

Separately, Project construction activities have the potential to generate objectionable odors on nearby existing residential receptors during Project construction activities (such as those to the west and north of the Project site, or those within the project site itself). Diesel-fueled construction equipment and heavy-duty trucks can generate odorous diesel particulate matter (diesel PM) exhaust emissions that could adversely affect nearby receptors. However, the Project would be developed in phases over several years. Since only small portions of the Project site would be developed on a given day, odors from Project construction activities are expected to be minimal. In addition, the Project site is relatively flat, which would help to disperse odors for construction activities. Furthermore, as provided under Impact 3.2-2, the Project would be required to implement the SMAQMD's Basic Construction Emissions Control Practices (Best Management Practices), which would reduce PM emissions, thereby reducing the potential for project construction activities to generate odors that would affect a substantial number of people.

It should be noted that the California Supreme Court decision in the case of *California Building Industry Association v. Bay Area Air Quality Management District (2015) 62 Cal. 4th 369* clarified that lead agencies are not required by CEQA to analyze the impact of existing environmental conditions on a project's future users or residents unless the project will exacerbate the existing environmental hazards or conditions. This limits the CEQA analysis of existing odor source impacts on new receptors from a project (SMAQMD, 2018).⁷ The Project would not exacerbate existing environmental odors. Therefore, the Project would have a **less than significant** impact with regard to the potential for odors.

⁷ See Sacramento Metropolitan Air Quality Management District CEQA Guide, page 7-2.

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This section describes the regulatory setting, regional biological resources, and impacts that are likely to result from Project implementation. This section is based in part on the following:

- *Rancho Cordova General Plan* (City of Rancho Cordova, Adopted June 26, 2006);
- *Rancho Cordova General Plan Draft Environmental Impact Report* (City of Rancho Cordova, March 2006);
- *South Sacramento Habitat Conservation Plan* (February 2018);
- *Special-Status Plan Survey for The Ranch (Jaeger 530) Project located in the City of Rancho Cordova, Sacramento County, California* (Foothill Associates, 2017);
- *Aquatic Resources Delineation Report* (Foothill Associates, 2017);
- *Biological Resources Assessment* (Foothill Associates, 2017);
- Site visit by De Novo Planning Group staff biologist, Steve McMurtry (August 2018).

The analysis contained in this section is intended to be at a Project -level, and covers impacts associated with development of the entire site, with the exception of the parcels designated as protected areas for preservation (Lots E and F), to an urban use.

Comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from the following: California Department of Fish and Wildlife (CDFW, August 2018), and Central Valley Regional Water Quality Control Board (RWQCB, July 2018). Each of the comments related to this topic are addressed within this section.

3.3.1 ENVIRONMENTAL SETTING

REGIONAL SETTING

The Project site is located within the southern portion of the Sacramento Valley bioregion, and just north of the Bay/Delta bioregion. The Sacramento Valley bioregion is a watershed of the Sierra Nevada that encompasses the northern end of the great Central Valley, stretching from Redding to Yolo and Sacramento counties. The bioregion is generally flat, and is rich in agriculture. The bioregion has a climate that is characterized by hot dry summers and cool wet winters. Historically, oak woodlands, riparian forests, vernal pools, freshwater marshes, and grasslands have been the major natural vegetation of the bioregion; however, much of the region has been converted to agricultural uses. This bioregion is the most prominent wintering area for waterfowl, attracting significant numbers of ducks and geese to its seasonal marshes along the Pacific Flyway. Species include northern pintails, snow geese, tundra swans, sandhill cranes, mallards, grebes, peregrine falcons, heron, egrets, and hawks. Black-tailed deer, coyotes, river otters, muskrats, beavers, ospreys, bald eagles, salmon, steelhead, and swallowtail butterflies are some of the wildlife that are common in this bioregion.

CALIFORNIA WILDLIFE HABITAT RELATIONSHIPS SYSTEM

The California Wildlife Habitat Relationships (CWHR) habitat classification scheme has been developed to support the CWHR System, a wildlife information system and predictive model for California's regularly-occurring birds, mammals, reptiles and amphibians. When first published in 1988, the classification scheme had 53 habitats. At present, there are 59 wildlife habitats in the

3.3 BIOLOGICAL RESOURCES

CWHR System: 27 tree, 12 shrub, 6 herbaceous, 4 aquatic, 8 agricultural, 1 developed, and 1 non-vegetated.

The Sacramento Valley region is considered to have low biological diversity due to the conversion of native habitat to agricultural and urban uses. As shown in Figure 3.3-1, the CWHR shows the entire Project site as having Annual Grassland habitat. In addition, although not found on the Project site, the following CWHR wildlife habitats exist in the Project vicinity: Fresh Emergent Wetland, Riverine, and Urban. Below is a brief description of these CWHR habitats.

Annual Grassland habitats occurs mostly on flat plains to gently rolling foothills. Annual Grassland habitats are open grasslands composed primarily of annual plant species. Introduced annual grasses are the dominant plant species in this habitat. These include wild oats, soft chess, riggut brome, red brome, wild barley, and foxtail fescue. Common forbs include broadleaf filaree, redstem filaree, turkey mullein, true clovers, bur clover, popcorn flower, and many others.

Many wildlife species use Annual Grasslands for foraging, but some require special habitat features such as cliffs, caves, ponds, or habitats with woody plants for breeding, resting, and escape cover. Characteristic reptiles that breed in Annual Grassland habitats include the western fence lizard, common garter snake, and western rattlesnake. Mammals typically found in this habitat include the black-tailed jackrabbit, California ground squirrel, Botta's pocket gopher, western harvest mouse, California vole, badger, and coyote. Common birds known to breed in Annual Grasslands include the burrowing owl, short-eared owl, horned lark, and western meadowlark. This habitat also provides important foraging habitat for the turkey vulture, northern harrier, American kestrel, black-shouldered kite, and prairie falcon. The entire Project site contains the Annual Grassland wildlife habitat type.

Riverine habitats can occur in association with many terrestrial habitats. Riverine habitats are found adjacent to many rivers and streams. Riverine habitats are also found contiguous to lacustrine and fresh emergent wetland habitats. This habitat requires intermittent or continually running water generally originating at some elevated source, such as a spring or lake, and flows downward at a rate relative to slope or gradient and the volume of surface runoff or discharge. Velocity generally declines at progressively lower altitudes, and the volume of water increases until the enlarged stream finally becomes sluggish. Over this transition from a rapid, surging stream to a slow, sluggish river, water temperature and turbidity will tend to increase, dissolved oxygen will decrease, and the bottom will change from rocky to muddy. Riverine habitat is located west of the Project site.

Fresh Emergent Wetland habitats occur on virtually all exposures and slopes, provided a basin or depression is saturated or at least periodically flooded. They are most common on level to gently rolling topography. They are found in various depressions or at the edge of rivers or lakes. Soils are predominantly silt and clay, although coarser sediments and organic material may be intermixed. In some areas organic soils (peat) may constitute the primary growth medium. Climatic conditions are highly variable and range from the extreme summer heat to winter temperatures well below freezing. Fresh Emergent Wetland habitats are located to the west and south of the Project site.

Urban habitats are not limited to any particular physical setting. Three urban categories relevant to wildlife are distinguished: downtown, urban residential, and suburbia. The heavily-developed downtown is usually at the center, followed by concentric zones of urban residential and suburbs. There is a progression outward of decreasing development and increasing vegetative cover. Species richness and diversity is extremely low in the inner cover. The structure of urban vegetation varies, with five types of vegetative structure defined: tree grove, street strip, shade tree/lawn, lawn, and shrub cover. A distinguishing feature of the urban wildlife habitat is the mixture of native and exotic species. Urban habitats are located to the north, west, and south of the Project site.

SOUTH SACRAMENTO HABITAT CONSERVATION PLAN COVER TYPES

The South Sacramento Habitat Conservation Plan (SSHCP) Conservation Strategy provides for conservation of 28 Covered Species and 17 Land Cover types, avoids or minimizes impacts of Covered Activities, mitigates for the impacts of Covered Activities on the Covered Species and their habitats on the basis of species and habitat needs, provides a regional approach to the mitigation of impacts and the conservation of species and their habitats, protects wetlands and waters of the SSHCP Plan Area, and conserves natural communities in the SSHCP Plan Area.

Seventeen of the SSHCP land cover types are classified by the SSHCP as “Natural Land Covers,” which includes 10 Aquatic land cover types and 7 Terrestrial land cover types. Agricultural lands that provide Covered Species habitat are included in the “Natural Land Covers” grouping.

The SSHCP land cover types for the Project site are shown in Figure 3.3-2. As shown, the Project site contains two SSHCP land cover types: Vernal Pool and Valley Grassland. Below is a brief description of these SSHCP land cover types.

Vernal Pool habitats support unique assemblages of highly specialized plants and animals that are adapted to the annual cycle of winter inundation and summer drought. Consequently, vernal pools are one of the few habitats in California still dominated by native plant and animal species. Vernal pools provide habitat for rare and endangered animals such as vernal pool tadpole shrimp (*Lepidurus packardii*), vernal pool fairy shrimp (*Branchinecta lynchi*), conservancy fairy shrimp, Ricksecker’s water scavenger beetle (*Hydrochara rickseckeri*), and several amphibians (e.g., western spadefoot toad (*Spea hammondi*), California tiger salamander (*Ambystoma californiense*), and vernal pools support a number of migratory birds in the winter.

Valley Grassland habitats are the most common land cover type in the SSHCP. Valley Grassland is an annual herbaceous plant community now characterized mostly by naturalized annual grasses. Valley Grassland supports numerous wildlife species, including several Covered Species. Covered Species associated with Valley Grassland included California tiger salamander, western spadefoot toad, giant gartersnake (*Thamnophis gigas*), western pond turtle (*Emys marmorata*), all of the bird Covered Species (except Cooper’s hawk (*Accipiter cooperii*)), American badger (*Taxidea taxus*), and western red bat (*Lasiurus blossevillii*).

LOCAL SETTING

The Project site consists of approximately 530 acres located in the Rancho Cordova city limits. The Project site is bound by existing single-family residential uses and Douglas Road to the north, vacant land and Grant Line Road to the east, vacant land and Kiefer Boulevard to the south, and Rancho Cordova Parkway, single family residential, and vacant land on the west.

The Project site is currently vacant and has been previously used for agricultural uses (cattle grazing). The topography of the site exhibits low relief topography with elevations ranging between 170 and 210 feet above mean sea level (MSL). The slopes throughout the site range from approximately zero to eight percent. The site is characterized by moderate rolling hills and areas of extensive flatlands, with wetlands, vernal pools, and seasonal drainage courses scattered throughout the site. A headwater tributary of Morrison Creek traverses the Project site, entering at the northeast corner and flowing generally to the southwest. A total of 21.53 acres of jurisdictional aquatic resources have been mapped with the Project site, including: 2.92 acres of depressional seasonal wetlands, 15.04 acres of vernal pools, 1.66 acres of riverine seasonal wetlands, 0.06 acres of riverine seasonal wet swales, 1.54 acres of intermittent drainages, and 0.30 acres of drainage basin outfalls.

The property is traversed by a 275-foot-wide utility easement occupied by a 230-kV Pacific Gas and Electric (PG&E) transmission line, one 230-kV Sacramento Municipal Utility District (SMUD) transmission line, and one 69-kV SMUD sub-transmission line. No other public utilities (water, sewer, drainage) are located on site.

The Project site is bound by the Sunridge Specific Plan to the north, east, and west, and by the SunCreek Specific Plan to the south and east. Land uses anticipated to the east and south of the Project site by the Sunridge Specific Plan and the SunCreek Specific Plan include low, medium, and high density residential uses, commercial mixed uses (retail, office, and retail professional), and neighborhood parks. Other land uses located nearby include new elementary, junior and senior high schools.

SPECIAL-STATUS SPECIES

Special-status species are generally defined as: 1) species listed as a candidate, threatened, or endangered under the federal or state Endangered Species Act; 2) species considered rare or endangered under the California Environmental Quality Act; 3) plants considered "rare, threatened, or endangered in California" by the California Native Plant Society (CNPS) (Lists 1B); 4) animal listed as "species of special concern" by the state; and 5) animals fully protected in California by the Fish and Game Code.

The following discussion is based on a background search of special-status species that are documented in the California Natural Diversity Database (CNDDB), the CNPS Inventory of Rare and Endangered Plants, the U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPAC) endangered and threatened species list, and observations from local experts. The background search was regional in scope and focused on the documented occurrences within the 9-quadrangle radius of the Project site, which includes the following USGS quadrangles: Citrus

Heights, Folsom, Clarksville, Carmichael, Buffalo Creek, Folsom Southeast, Elk Grove, Sloughouse, and Carbondale.

The search revealed 50 special-status species within the region: 23 plants, and 27 animals. Figure 3.3-3 illustrates the general location of these records maintained by the CNDDDB. Table 3.3-1 provides a list of special-status plant species that are documented in the region, their habitat, potential for Project site occurrence, and current protective status. Potential for occurrence is based on the findings of Foothill Associates identified in 1) the Biological Resources Assessment dated October 13, 2017, which included a field survey to determine potential for species, and 2) the Special-Status Plant Survey dated October 20, 2017 which included a focused field survey conducted on June 12 and 13, 2017 to identify the presence of rare plants associated with vernal pool and riverine wetland features present on the Project site with a blooming period in June. Table 3.3-2 provides a list of special-status wildlife species that are documented in the region, their habitat, potential for Project site occurrence, and current protective status.

TABLE 3.3-1: SPECIAL-STATUS PLANTS WITHIN 9-QUADRANGLE REGION FOR PROJECT SITE

PLANT	STATUS (FED; CA; CNPS)	HABITAT ASSOCIATION	BLOOMING PERIOD	POTENTIAL FOR OCCURRENCE
Ahart's dwarf rush <i>Juncus leiospermus</i> <i>var. ahartii</i>	--;--;1B.2	Valley and foothill grassland. Restricted to the edges of vernal pools in grassland. 30-100 m.	March to May	High Potential. Not observed. Site supports habitat in the seasonal wetlands and drainages. There are two occurrences of this species within five miles of the site.
Bisbee Peak rush-rose <i>Crocanthemum</i> <i>suffrutescens</i>	--;--;3.2	Chaparral. Often on serpentine, gabbroic, or lone formation soils; in openings in chaparral. 45-840 m.	April to August	Absent. Site does not contain the required soil types.
Boggs Lake hedge-hyssop <i>Gratiola</i> <i>heterosepala</i>	--;CE;1B.2	Marshes and swamps (freshwater), vernal pools. Clay soils; usually in vernal pools, sometimes on lake margins. 4-2410 m.	April to August	Absent. Though the vernal pools within the Project site provide habitat for this species, this species was not observed during the June 12 and 13, 2017 rare plant survey.
Brandegee's clarkia <i>Clarkia biloba</i> ssp. <i>brandegeae</i>	--;--;4.2	Chaparral, cismontane woodland, lower montane coniferous forest. Often in roadcuts. 75-915 m.	May to July	Absent. Not observed. Lacks potential suitable habitat.
Dwarf downingia <i>Downingia pusilla</i>	--;--;2B.2	Annual herb found in vernal pools and valley and foothill grasslands (mesic). At elevations of 1-445 meters.	March to May	Low Potential. Not observed. There is a low potential for this species to occur within the non-native annual grassland and vernal pools within the Project site.
El Dorado bedstraw <i>Galium</i> <i>californicum</i> ssp. <i>sierrae</i>	FE;CR; 1B.2	Cismontane woodland, chaparral, lower montane coniferous forest. In pine-oak woodland or chaparral. Restricted to gabbroic or serpentine soils. 130-585 m.	May to June	Absent. Not observed. Lacks potential suitable habitat.

3.3 BIOLOGICAL RESOURCES

PLANT	STATUS (FED; CA; CNPS)	HABITAT ASSOCIATION	BLOOMING PERIOD	POTENTIAL FOR OCCURRENCE
El Dorado County mule ears <i>Wyethia reticulata</i>	--;;1B.2	Chaparral, cismontane woodland, lower montane coniferous forest. Stony red clay and gabbroic soils; often in openings in gabbro chaparral. 120-630 m.	April to August	Absent. Not observed. Lacks potential suitable habitat.
Hoary navarretia <i>Navarretia eriocephala</i>	--;;4.3	Annual herb found in pine and oak woodlands and grasslands from 30 to 1,300 feet above sea level.	May to June	Low Potential. Not observed. The grassland of the Project site provides habitat for this species. There are no documented CNDDDB records of this species occurring within five miles of the Project site.
Ione buckwheat <i>Eriogonum apricum var. apricum</i>	FE;CE; 1B.1	Chaparral. In gravelly openings on Ione formation soil. 85-150 m.	July to October	Absent. Not observed. Lacks potential suitable habitat.
Ione manzanita <i>Arctostaphylos myrtifolia</i>	FT;;1B.2	Chaparral, cismontane woodland. On Ione clay with chaparral associates. Often comprises 50-80% cover. 90- 560 m.	November to March	Absent. Not observed. Lacks potential suitable habitat.
Irish Hill buckwheat <i>Eriogonum apricum var. prostratum</i>	FE;CE; 1B.1	Chaparral. Gravelly openings on Ione formation soils. 90-100 m.	June to July	Absent. Not observed. Lacks potential suitable habitat.
Layne's ragwort <i>Packera layneae</i>	FT;CR; 1B.2	Chaparral, cismontane woodland. Ultramafic soil (serpentine or gabbro); occasionally along streams. 200-1085 m.	April to August	Absent. Not observed. Lacks potential suitable habitat.
Legenere <i>Legenere limosa</i>	--;;1B.1	Vernal pools. In beds of vernal pools. 1-880 m.	April to June	Absent. Though the vernal pools within the Project site provide habitat for this species, this species was not observed during the June 12 and 13, 2017, rare plant survey. There are 13 CNDDDB occurrences within five miles of the site.
Parry's horkelia <i>Horkelia parryi</i>	--;;1B.2	Chaparral, cismontane woodland. Openings in chaparral or woodland; especially known from the Ione formation in Amador County. 85- 1115 m.	April to September	Absent. Not observed. Lacks potential suitable habitat.
pincushion navarretia <i>Navarretia myersii ssp. myersii</i>	--;;1B.1	Vernal pools. Clay soils within non- native grassland. 45-100 m.	April to May	Low Potential. Not observed. There is a low potential for this species to occur within the vernal pools within the Project site. There are no documented CNDDDB records of this species occurring within five miles of the Project site.
Pine Hill ceanothus <i>Ceanothus</i>	FE;CR; 1B.1	Chaparral, cismontane woodland. Gabbroic or serpentine soils; often in	April to June	Absent. Not observed. Lacks potential suitable

PLANT	STATUS (FED; CA; CNPS)	HABITAT ASSOCIATION	BLOOMING PERIOD	POTENTIAL FOR OCCURRENCE
<i>roderickii</i>		"historically disturbed" areas with an ensemble of other rare plants. 260-630 m.		habitat.
Pine Hill flannelbush <i>Fremontodendron decumbens</i>	FE;CR; 1B.2	Chaparral, cismontane woodland. Rocky ridges; gabbro or serpentine endemic; often among rocks and boulders. 425-765 m.	April to June	Absent. Not observed. Lacks potential suitable habitat.
Red Hills soaproot <i>Chlorogalum grandiflorum</i>	--;--;1B.2	Cismontane woodland, chaparral, lower montane coniferous forest. Occurs frequently on serpentine or gabbro, but also on non-ultramafic substrates; often on "historically disturbed" sites. 265-1695 m.	May to June	Absent. Not observed. Lacks potential suitable habitat.
Sacramento Orcutt grass <i>Orcuttia viscida</i>	FE;CE; 1B.1	Vernal pools. 15-85 m.	April to September	Absent. The vernal pools within the Project site provide habitat for this species. This species was not observed during the June 12 and 13, 2017, plant survey.
Sanford's arrowhead <i>Sagittaria sanfordii</i>	--;--;1B.2	Marshes and swamps. In standing or slow-moving freshwater ponds, marshes, and ditches. 0-605 m.	May to November	Absent. Not observed. Lacks potential suitable habitat.
slender Orcutt grass <i>Orcuttia tenuis</i>	FT;CE; 1B.1	Vernal pools. Often in gravelly substrate. 25-1755 m.	May to October	Absent. Though the vernal pools within the Project site provide habitat for this species, this species was not observed during the June 12 and 13, 2017, rare plant survey.
stinkbells <i>Fritillaria agrestis</i>	--;--;4.2	Cismontane woodland, chaparral, valley and foothill grassland, pinyon and juniper woodland. Sometimes on serpentine; mostly found in nonnative grassland or in grassy openings in clay soil. 10-1555 m.	March to June	Absent. Not observed. Lacks potential suitable habitat.
Tuolumne button-celery <i>Eryngium pinnatisectum</i>	--;--;1B.2	Vernal pools, cismontane woodland, lower montane coniferous forest. Volcanic soils; vernal pools and mesic sites within other natural communities. 70-915 m.	May to August	Absent. Though the vernal pools and grassland within the Project site provide habitat for this species, this species was not observed during the June 12 and 13, 2017, rare plant survey.

¹RARE PLANT SURVEY CONDUCTED FOR SACRAMENTO ORCUTT GRASS, SLENDER ORCUTT GRASS, AND BOGGS LAKE HEDGE HYSSOP. SOURCE: FOOTHILL ASSOCIATES, 2017; CDFW, 2018; CNDDDB 2018.

ABBREVIATIONS:

FEDERAL LISTS

FE FEDERAL ENDANGERED
FT FEDERAL THREATENED

STATE LISTS

CE CALIFORNIA ENDANGERED SPECIES
CR CALIFORNIA RARE

CALIFORNIA RARE PLANT RANKS (FORMERLY CNPS LISTS)

1B RARE, THREATENED, OR ENDANGERED
2B RARE, THREATENED, OR ENDANGERED IN CALIFORNIA, BUT MORE COMMON ELSEWHERE
3 REVIEW LIST: PLANTS WHICH MORE INFORMATION IS NEEDED
4 WATCH LIST: PLANTS OF LIMITED DISTRIBUTION

TABLE 3.3-2: SPECIAL-STATUS ANIMALS WITHIN 9-QUADRANGLE REGION FOR PROJECT SITE

<i>ANIMAL</i>	<i>STATUS (FED; CA)</i>	<i>HABITAT ASSOCIATION</i>	<i>POTENTIAL FOR OCCURRENCE</i>
MAMMALS			
American badger <i>Taxidea taxus</i>	--;SSC	This species prefers dry open fields, grasslands, and pastures. From high alpine meadows to sea level.	Low Potential. There are no CNDDDB records for this species within five miles of the Project site. The annual grassland and burrows provide marginal habitat for this species given the lack of sandy soils within the Project site. No American badgers were observed during the biological surveys.
pallid bat <i>Antrozous pallidus</i>	--;SSC	Roosts in rock outcrops, hollow trees, abandoned mines, barns, and attics.	Low Potential. There are no CNDDDB records for this species within five miles of the Project site. No bat species were observed roosting during previous site visits. The sparse man-made structures, including utility towers and a utility shed in the center of the Project site, provide marginal day roosting habitat and the annual grassland provides foraging habitat for this species.
BIRDS			
bald eagle <i>Haliaeetus leucocephalus</i>	MBTA;CE	Breeding range includes the Sierra Nevada, Cascade Range and portions of the Coast Ranges; winter range expands to include most of the state. Forages primarily in large inland fish-bearing waters with adjacent large trees or snags and occasionally in uplands with abundant rabbits, other small mammals, or carrion.	Absent. No potential to occur. Habitat not present.
bank swallow <i>Riparia Riparia</i>	MBTA;CT	Prefer to nest along banks or bluffs alone rivers or coastal areas. Prefer low gradient and meandering rivers or bodies of water.	Absent. No potential to occur. Habitat not present.
burrowing owl <i>Athene cunicularia</i>	MBTA; SSC	Nests in abandoned ground squirrel burrows associated with open grassland habitats. Found in areas with sparse vegetation and few trees.	High Potential. There are 12 CNDDDB records for this species within five miles of the Project site, though no western burrowing owls were observed during site visits. The Project site contains suitable burrows to support this species.
California black rail <i>Laterallus jamaicensis coturniculus</i>	MBTA;CT	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	Low Potential. Site supports habitat in the seasonal wetlands and drainages.
Cooper's hawk <i>Accipiter cooperii</i>	MBTA;--	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	High Potential. Suitable habitat present. The annual grassland on and surrounding the Project site may provide nesting and foraging habitat.
double-crested cormorant <i>Phalacrocorax auritus</i>	MBTA;--	Colonial nester on coastal cliffs, offshore islands, and along lake margins in the interior of the state. Nests along coast on sequestered islets, usually on ground with sloping	Absent. No potential to occur. Habitat not present.

<i>ANIMAL</i>	<i>STATUS (FED; CA)</i>	<i>HABITAT ASSOCIATION</i>	<i>POTENTIAL FOR OCCURRENCE</i>
		surface, or in tall trees along lake margins.	
ferruginous hawk <i>Buteo regalis</i>	MBTA; WL	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	High Potential. Suitable habitat present. The annual grassland on and surrounding the Project site may provide nesting and foraging habitat.
golden eagle <i>Aquila chrysaetos</i>	MBTA;FP	Winter range spans most of California; breeding range excludes the Central Valley floor. Nests in cliffs, rocky outcrops and large trees. Forages in a variety of open habitats, including grassland, shrubland, and cropland.	High Potential. Suitable habitat present. There is one CNDDDB record of golden eagle documented within five miles of the Project site. No golden eagles were observed during previous site visits. Although the Project site does not provide suitable nesting trees, the non-native annual grassland provides foraging habitat for this species.
great egret <i>Ardea alba</i>	MBTA;--	Colonial nester in large trees. Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.	Absent. The grassland of the Project site provides foraging habitat for this species. There is no nesting habitat within the Project site.
great blue heron <i>Ardea herodias</i>	MBTA;--	Colonial nester in tall trees, cliffsides, and sequestered spots on marshes. Rookery sites in close proximity to foraging areas: marshes, lake margins, tide-flats, rivers and streams, wet meadows.	Absent. The grassland of the Project site provides foraging habitat for this species and this species was observed flying over the Project site during the June 12, 2017, rare plant survey. However, there is no nesting habitat within the Project site.
grasshopper sparrow <i>Ammodramus savannarum</i>	MBTA; SSC	Prefer open grasslands with barren ground for foraging. Tend to be found in areas with vegetation and scrub cover especially in grasslands and prairies.	High Potential. Suitable habitat present. The annual grassland on and surrounding the Project site may provide nesting and foraging habitat.
merlin <i>Falco columbarius</i>	MBTA; WL	It is not known to nest in California, but it is a winter transient throughout most of California with wintering populations in the Central Valley. Avoid dense forests and inhabit fairly open land.	High Potential. Suitable habitat present. The annual grassland on and surrounding the Project site may provide nesting and foraging habitat.
Swainson's hawk <i>Buteo Swainsoni</i>	MBTA;CT	Nests in tall cottonwoods, valley oaks or willows. Forages in fields, cropland, irrigated pasture, and grassland often near riparian corridors.	High Potential. Suitable habitat present. The annual grassland on and surrounding the Project site may provide nesting and foraging habitat.
tricolored blackbird <i>Agelaius tricolor</i>	MBTA;CE	Colonial nester in cattails, bulrush, or blackberries associated with wetland or drainage habitats. Also need foraging areas such as grasslands or agricultural pastures.	Low Potential. The SSHCP tricolored blackbird modeled habitat map (SSHCP Figure 3-26) shows that modeled habitat for tricolored blackbird is present within the Project footprint. The annual grassland on the Project site provides suitable foraging habitat for this species. The aquatic habitat on the Project site does not provide suitable nesting habitat for this species.
white-tailed kite <i>Elanus leucurus</i>	MBTA;FP	Nests in riparian corridors along streams and rivers, and forages in nearby grasslands and fields.	High Potential. Suitable habitat present.

3.3 BIOLOGICAL RESOURCES

<i>ANIMAL</i>	<i>STATUS (FED; CA)</i>	<i>HABITAT ASSOCIATION</i>	<i>POTENTIAL FOR OCCURRENCE</i>
AMPHIBIANS & REPTILES			
California red-legged frog <i>Rana draytonii</i>	FT;SSC	Along the coast and coastal mountain ranges of California from Marin County to San Diego County and in the Sierra Nevada from Tehama County to Fresno County. Permanent and semi-permanent aquatic habitats, such as creeks and cold-water ponds, with emergent and submergent vegetation; may estivate in rodent burrows or cracks during dry periods.	Absent. No potential to occur. The Project site is outside of the known extant range for this species.
California tiger salamander <i>Ambystoma californiense</i>	FT;CT	Breeds in ponds or other deeply ponded wetlands, and uses gopher holes and ground squirrel burrows in adjacent grasslands for upland refugia/foraging.	Absent. Though the grassland, burrows, and detention basin outfall of the Project site provide habitat for this species, the Project site is outside of the known range for this species and this species has not been observed during previous focused surveys.
foothill yellow-legged frog <i>Rana boylei</i>	--;SSC	Found in most of northern California west of the Cascade crest and along the western Sierra Nevada foothills up to approximately 6,370 feet. Rocky streams in a variety of habitats including valley-foothill hardwood, conifer, and riparian forests, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral and wet meadow.	Absent. The Project site is outside of the known range for this species and this species has not been observed during previous focused surveys. There are no CNDDDB occurrences within five miles of the Project site.
giant garter snake <i>Thamnophis gigas</i>	FT;CT	Rivers, canals, irrigation ditches, rice fields, and other aquatic habitats with slow moving water and heavy emergent vegetation.	Absent. The Project site does not provide habitat for this species.
western pond turtle <i>Emys marmorata</i>	--;SSC	Occupies ponds, marshes, rivers, streams, and irrigation canals with muddy or rocky bottoms and with watercress, cattails, water lilies, or other aquatic vegetation in woodlands, grasslands, and open forests.	Absent. The Project site does not provide habitat for this species.
western spadefoot <i>Spea hammondi</i>	--;SSC	Sierra Nevada foothills, Central Valley, Coast Ranges, coastal counties in southern California. Shallow streams with riffles and seasonal wetlands, such as vernal pools in annual grasslands and oak woodlands	High Potential. Suitable habitat present. The vernal pools and depressional seasonal wetlands in the Project site provide breeding habitat and there is one known occurrence within five miles of the Project site.
FISH			
steelhead - Central Valley DPS <i>Oncorhynchus mykiss irideus</i>	FT;--	Populations in the Sacramento and San Joaquin Rivers and their tributaries. Free of heavy sedimentation with adequate flow and cool, clear water. Gravel that is between 0.5 to 6.0 inches in diameter, dominated by 2 to 3-inch gravel. Escape cover such as logs, undercut banks, and deep pools for spawning adults.	Absent. No potential to occur. Habitat not present.

<i>ANIMAL</i>	<i>STATUS (FED; CA)</i>	<i>HABITAT ASSOCIATION</i>	<i>POTENTIAL FOR OCCURRENCE</i>
INVERTEBRATES			
vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT;--	Vernal pools or other seasonal wetlands. Central Valley, central and south Coast Ranges from Tehama County to Santa Barbara County. Isolated populations also in Riverside County.	High Potential. Suitable habitat present.
valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT;--	Dependent upon elderberry plant (<i>Sambucus mexicana</i>) as primary host species. Riparian and oak savanna habitats with elderberry shrubs; elderberries are the host plant. Stream side habitats below 3,000 feet throughout the Central Valley.	Absent. The Project site does not provide habitat for this species. There are five CNDDB occurrences within five miles of the Project site.
vernal pool tadpole shrimp <i>Lepidurus packardii</i>	FE;--	Vernal pools and ephemeral stock ponds. Shasta County south to Merced County.	High Potential. Suitable habitat present.

SOURCE: CDFW CNDDB 2018.

ABBREVIATIONS:

FEDERAL LISTS

- FE FEDERAL ENDANGERED
- FT FEDERAL THREATENED
- MBTA PROTECTED BY MIGRATORY BIRD TREATY ACT

STATE LISTS

- CE CALIFORNIA ENDANGERED SPECIES
- CT CALIFORNIA THREATENED
- SSC CDFW SPECIES OF SPECIAL CONCERN/CDFW SPECIAL ANIMALS
- WL WATCH LIST
- FP FULLY PROTECTED

3.3.2 REGULATORY SETTING

There are a number of regulatory agencies whose responsibility includes the oversight of the natural resources of the state and nation including the CDFW, USFWS, U.S. Army Corps of Engineers (USACE), and the National Marine Fisheries Service (NMFS). These agencies often respond to declines in the quantity of a particular habitat or plant or animal species by developing protective measures for those species or habitat type. The following is an overview of the federal, state and local regulations that are applicable to the Project.

FEDERAL

Federal Endangered Species Act

The Federal Endangered Species Act (FESA), administered by the USFWS and NMFS, provides protection to plant and wildlife species listed as endangered or threatened. In general, USFWS has jurisdiction over terrestrial and fresh-water species, while NMFS has jurisdiction over ocean-going species.

Section 9 of FESA generally prohibits all persons from causing the "take" of any member of a listed species. (16 U.S.C. Section 1538.) This prohibition applies mainly to animals; it only extends to plants in areas "under federal jurisdiction" and plants already protected under state law. (Id., subd. (a)(2)(B); see also Northern Cal. River Watch v. Wilcox (9th Cir. 2010) 620 F.3d 1075.)

“Take” is defined in statute as, “... to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” (16 U.S.C. Section 1532(19).) Harass is defined in regulation as “...an intentional or negligent act or omission that creates the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt normal behavior patterns that include, but are not limited to, breeding, feeding, or sheltering.” (See 50 CFR Section 17.3.) Harm is defined in regulation as “...significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering.” (Id.) Despite the general prohibition against take, FESA in some circumstances permits “incidental take,” which means take that is incidental to, but not the purpose of, the carrying out of an otherwise lawful activity. (16 U.S.C. Section 1539(a).) Under section 10 of FESA, persons seeking permission to engage in actions that could result in such incidental take can obtain such permission through the approval of a habitat conservation plan (HCP) by either USFWS or NMFS. (16 U.S.C., Section 1539(a).)

Proposed federal actions that would result in take of a federal-listed or proposed species require consultation with USFWS or NMFS under section 7 of FESA. (Id., Section 1536.) The objective of consultation is to determine whether the proposed federal action would jeopardize the continued existence of a listed species or destroy or adversely modify critical habitat. Where such an outcome would not occur, USFWS or NMFS must still impose reasonable and prudent measures to minimize the effects of the incidental taking. Where such an outcome could occur, USFWS or NMFS must propose reasonable and prudent alternatives that, if implemented, would avoid such an outcome. (Id.)

Compliance with FESA can be achieved under Section 7 or 10 of FESA depending on the involvement of the federal government. Section 7 requires federal agencies to make a finding on all federal actions, including the approval by an agency of a public or private action, such as the issuance of a “404 permit” for filling wetlands by the USACE, on the potential of the action to jeopardize the continued existence of any listed species impacted by the action or to result in the destruction or adverse modification of such species’ critical habitat. Provisions of Section 10 are implemented when there is no federal involvement in a project except compliance with FESA. A take not specifically allowed by federal permit under Section 7 or Section 10(a)(1)(B) of the FESA is subject to enforcement through civil or criminal proceedings under Section 11 of the FESA.

Migratory Bird Treaty Act

To kill, possess, or trade a migratory bird, bird part, nest, or egg is a violation of the Federal Migratory Bird Treaty Act (MBTA: 16 U.S.C., Section 703, Supp. I, 1989), unless it is in accordance with the regulations that have been set forth by the Secretary of the Interior.

Federal Bald and Golden Eagle Protection Act

The Federal Bald and Golden Eagle Protection Act provide regulations to protect bald and golden eagles as well as their nests and eggs from willful damage or injury.

Clean Water Act - Section 404

Section 404 of the Clean Water Act (CWA) regulates all discharges of dredged or fill material into waters of the U.S. Discharges of fill material includes the placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes and subaqueous utility lines [33 C.F.R. Section 328.2(f)]. Waters of the U.S. include lakes, rivers, streams, intermittent drainages, mudflats, sandflats, wetlands, sloughs, and wet meadows. Wetlands are defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” [33 C.F.R. Section 328.3(b)]. Waters of the U.S. exhibit a defined bed and bank and ordinary high-water mark (OHWM). The OHWM is defined by the USACE as “that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” [33 C.F.R. Section 328.3(e)].

Clean Water Act - Section 401

Section 401 of the CWA (33 U.S.C. 1341) requires an applicant who is seeking a 404 permit to first obtain a water quality certification from the RWQCB. To obtain the water quality certification, the Central Valley RWQCB must indicate that the proposed fill would be consistent with the standards set forth by the state.

Rivers and Harbors Act of 1899

The Rivers and Harbors Act prohibits the obstruction or alteration of any navigable water of the United States. The Act requires authorization from the USACE for any excavation or deposition of materials into these waters or for any work that could affect the course, location, condition, or capacity of rivers or harbors.

STATE

Fish and Game Code Sections 2050-2097 - California Endangered Species Act

The CDFW administers a number of laws and programs designed to protect fish and wildlife resources. Principal of these is the California Endangered Species Act (CESA) of 1984 (California Fish and Game Code Section 2050 et seq.), which regulates the listing and take of state endangered and threatened species, as well as candidate species. Under Section 2081 of CESA, CDFW may authorize take of an endangered and/or threatened species, or candidate species, by an incidental take permit (ITP) or Memorandum of Understanding (MOU) for scientific, educational, or management purposes. In approving an incidental permit, CDFW must ensure, among other things, that “[t]he impacts of the authorized take shall be minimized and fully mitigated.” Further, “[t]he measures required to meet this obligation shall be roughly proportional

in extent to the impact of the authorized taking on the species. Where various measures are available to meet this obligation, the measures required shall maintain the applicant's objectives to the greatest extent possible. All required measures shall be capable of successful implementation." To be consistent with Federal regulations, CESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals into the Act as threatened species, but did not do so for rare plants, as previously designated under the California Native Plant Protection Act (discussed below). Thus, there are three listing categories for plants in California: rare, threatened, and endangered. Under State law, plant and animal species may be formally designated by official listing by the California Fish and Game Commission.

Fish and Game Code Sections 2800-2835 - Natural Communities Conservation Planning Act

The Natural Communities Conservation Planning Act is set forth in Fish and Game Code Sections 2800–2835. The intent of the legislation is to provide for conservation planning as an officially recognized policy that can be used as a tool to eliminate conflicts between the protection of natural resources and the need for growth and development. In addition, the legislation promotes conservation planning as a means of coordination and cooperation among private interests, agencies, and landowners, and as a mechanism for multispecies and multi-habitat management and conservation. The development of Natural Community Conservation Plans (NCCPs) is an alternative to obtaining take authorization under Section 2081 of the Fish and Game Code.

Fish and Game Code Sections 1900-1913 - California Native Plant Protection Act

In 1977 the State Legislature passed the Native Plant Protection Act (NPPA) in recognition of rare and endangered plants of the state. The intent of the law was to preserve, protect, and enhance endangered plants. The NPPA gave the California Fish and Wildlife Commission the power to designate native plants as endangered or rare, and to require permits for collecting, transporting, or selling such plants. The NPPA includes provisions that prohibit the taking of plants designated as "rare" from the wild, and a salvage mandate for landowners, which requires notification of the CDFW 10 days in advance of approving a building site.

Fish and Game Code Sections 3503, 3503.5, 3800 - Predatory Birds

Under the California Fish and Game Code, all predatory birds in the order Falconiformes or Strigiformes in California, generally called "raptors," are protected. The law indicates that it is unlawful to take, possess, or destroy the nest or eggs of any such bird unless it is in accordance with the code. Any activity that would cause a nest to be abandoned or cause a reduction or loss in a reproductive effort is considered a take. This generally includes construction activities.

Fish and Game Code Sections 1601-1603 - Streambed Alteration

Under the California Fish and Game Code, CDFW has jurisdiction over any proposed activities that would divert or obstruct the natural flow or change the bed, channel, or bank of any lake or stream. Private landowners or project proponents must obtain a "Streambed Alteration

Agreement” from CDFW prior to any alteration of a lake bed, stream channel, or their banks. Through this agreement, the CDFW may impose conditions to limit and fully mitigate impacts on fish and wildlife resources. These agreements are usually initiated through the local CDFW warden and will specify timing and construction conditions, including any mitigation necessary to protect fish and wildlife from impacts of the work.

Fish and Game Code Sections 3511, 3513, 4700, and 5050 - Fully Protected Species

Fish and Game Code Sections 3511, 3513, 4700, and 5050 pertain to fully protected wildlife species (birds in Sections 3511 and 3513, mammals in Section 4700, and reptiles and amphibians in Section 5050) and strictly prohibit the take of these species. CDFW cannot issue a take permit for fully protected species, except under narrow conditions for scientific research or the protection of livestock, or if an NCCP has been adopted.

California Environmental Quality Act Guidelines Section 15380 – Endangered, Rare or Threatened Species

The CEQA Guidelines provide that a species that is not listed on the federal or state endangered species list may nevertheless be considered rare or endangered if the species meets certain criteria. (CEQA Guidelines Section 15380) Species that are not listed under FESA or CESA, but are otherwise eligible for listing (i.e. candidate, or proposed) may be protected by the local government until the opportunity to list the species arises for the responsible agency.

Species that may be considered for review are included on a list of “Species of Special Concern,” developed by the CDFW. Additionally, the CNPS, a nongovernmental organization, maintains a list of plant species native to California that have low populations, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. List 1A contains plants that are believed to be extinct. List 1B contains plants that are rare, threatened, or endangered in California and elsewhere. List 2 contains plants that are rare, threatened, or endangered in California, but more numerous elsewhere.

California Wetlands Conservation Policy

In August 1993, the Governor announced the "California Wetlands Conservation Policy." The goals of the policy are to establish a framework and strategy that will:

- Ensure no overall net loss and to achieve a long-term net gain in the quantity, quality, and permanence of wetland acreage and values in California in a manner that fosters creativity, stewardship, and respect for private property.
- Reduce procedural complexity in the administration of State and federal wetland conservation programs.
- Encourage partnerships to make landowner incentive programs and cooperative planning efforts the primary focus of wetland conservation and restoration.

The Governor also signed Executive Order W-59-93, which incorporates the goals and objectives contained in the new policy and directs the Resources Agency to establish an Interagency Task Force to direct and coordinate administration and implementation of the policy.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Water Code Section 13000 et seq.) is California's primary water quality control statute. But its protections extend to wetlands, and in some instances wetlands that are not subject to federal jurisdiction under the Clean Water Act. Under the Porter-Cologne Act definition, waters of the state are "any surface water or groundwater, including saline waters, within the boundaries of the state." (Water Code Section 13050[e].) Although all waters of the United States that are within the borders of California are also waters of the state, the reverse is not necessarily true. Therefore, California retains authority to regulate discharges of waste into any waters of the state, discharges to receiving waters more broadly than the CWA does.

Waters of the state fall under the jurisdiction of the nine RWQCBs. Under Porter-Cologne, each RWQCB must prepare and periodically update water quality control basin plans. Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control nonpoint and point sources of pollution. California Water Code Section 13260 requires any person discharging waste, or proposing to discharge waste, in any region that could affect the waters of the state to file a report of discharge (an application for waste discharge requirements [WDRs]) with the applicable RWQCB. Construction activities that may discharge wastes into the waters of the state must meet the discharge control requirements of the Porter-Cologne Act.

LOCAL

South Sacramento Habitat Conservation Plan

The SSHCP is a regional effort that provides development and infrastructure projects with streamlined, predictable federal and state permitting processes while creating a Preserve System to protect habitat, open space, and agricultural lands. The SSHCP allows project proponents within the SSHCP Area to simplify and expedite the state and federal Endangered Species Act (ESAs) permitting process. In addition to streamlining the ESAs permitting processes, a separate but parallel multi-tiered permitting program has been developed to streamline Clean Water Act Section 404 and 401 permitting process and a Master Streambed Alteration Agreement will be prepared to address Section 1602 of the California Fish and Game Code. The SSHCP allows Sacramento County (the County), the City of Rancho Cordova, City of Galt, Sacramento County Water Agency, and the Southeast Connector Joint Powers Authority (collectively referred to as the Plan Permittees) to receive an Incidental Take Permit (ITP) for activities and projects they conduct. In addition, the three local Land Use Authority Permittees (the County, Galt, and Rancho Cordova) have the ability to extend incidental take coverage provided by the SSHCP ITPs to activities and projects implemented by Third-Party Project Proponents that are under the jurisdiction of that Land Use Authority Permittee. This will allow Third-Party Project Proponents to avoid the

extensive negotiation and processing currently required to obtain individual project permits under the CESA from the CDFW and project ESA compliance from the USFWS.

In most cases, an individual Covered Activity project or activity would trigger CEQA and require preparation of a CEQA document that analyzes the proposed project or activity. The final SSHCP EIS/EIR can be used to simplify and streamline preparation of individual project CEQA documents for future Covered Activity projects that they directly implement over the proposed 50-year term of the SSHCP. The SSHCP EIS/EIR provides regional-scale comprehensive analyses of environmental impacts of all planned urban development within the Planning Area over a 50-year period.

The three local Land Use Authority Permit Applicants (Sacramento County, Galt, and Rancho Cordova) would also have the ability to extend the species incidental take coverage provided by the SSHCP ITPs to the Covered Activities implemented by third-party project proponents under their jurisdiction. The SSHCP term “third-party project proponents” refers to individuals or organizations that implement a SSHCP Covered Activity under the jurisdiction of a Land Use Authority Permit Applicant (i.e., Sacramento County, Galt, or Rancho Cordova). An example would be a developer (the third-party project proponent) who proposes a development project that is consistent with the requirements of an SSHCP urban development Covered Activity, and the proposed project’s approvals or entitlements are subject to the jurisdiction of Sacramento County (a Land-use Authority Permit Applicant). Third-party project proponent uses of the Final EIS/EIR are discussed in Section 1.6.5.

The SSHCP Area (317,655 acres) is located in the southern portion of Sacramento County. The SSHCP Area includes portions of unincorporated Sacramento County, Galt, and the southern half of Rancho Cordova. Parts of southern Sacramento County, including the community of Rancho Murieta, the sovereign lands of the Miwok Tribe, and a majority of the Delta are not included within the SSHCP Area. The SSHCP Area was defined using political and ecological factors and is the area in which all conservation actions will be implemented and where all incidental take will occur.

The SSHCP Conservation Strategy mitigates to the maximum extent practicable the impacts of Covered Activities, including all direct and indirect impacts on Covered Species and their habitats. The SSHCP Conservation Strategy provides for conservation of 28 Covered Species and 17 land cover types, avoids or minimizes impacts of Covered Activities, mitigates for the impacts of Covered Activities on the Covered Species and their habitats on the basis of species and habitat needs, provides a regional approach to the mitigation of impacts and the conservation of species and their habitats, protects wetlands and waters of the Plan Area, conserves natural communities in the Plan Area, and provides take authorization for the 28 Covered Species, with the exception that direct injury or mortality of white-tailed kite and greater sandhill crane is not covered by the ITP and the SSHCP plans for full avoidance and protection of all slender Orcutt grass and Sacramento Orcutt grass occurrences.

The SSHCP includes Avoidance and Minimization Measures (AMMs) as conditions on Covered Activities. Each condition contains several AMMs that are intended to eliminate or reduce direct or indirect effects to species that could result from implementation of a Covered Activity. In addition,

3.3 BIOLOGICAL RESOURCES

the SSHCP provides species-specific take and avoidance measures to avoid or minimize effects of Covered Activities on specific SSHCP Covered Species. Species-specific AMMs include species surveys, preconstruction surveys, and construction monitoring.

SSHCP Figure 2-2 identifies the area where the Project site is located as the Preserve Planning Unit 1 (PPU 1), which is an Urban Development Area planned for urbanization, and shows that a Linkage Preserve is planned for a portion of the Project site.

The Rancho Cordova City Council adopted the SSHCP in October 2018.

Rancho Cordova General Plan

The Rancho Cordova General Plan contains the following goals and policies that are relevant to biological resources:

NATURAL RESOURCES ELEMENT

GOAL NR.1: Protect and preserve diverse wildlife and plant habitats, including habitat for special status species.

Policy NR 1.1: Protect rare, threatened, and endangered species and their habitats in accordance with State and federal law.

Policy NR 1.2: Conserve Swainson's hawk habitat consistent with State policies and Department of Fish and Game guidelines.

Policy NR 1.3: Promote educational programs that inform the public about natural resources.

Policy NR 1.4: Discourage the planting of invasive species.

Policy NR 1.5: Ensure the protection of wildlife through the establishment of programs to control feral pet populations.

Policy NR 1.6: Participate in the development of a habitat conservation plan to address the unique biological resources in Rancho Cordova.

Policy NR 1.7: Prior to project approval, the City shall require a biological resources evaluation for private and public development projects in areas identified to contain or possibly contain listed plant and/or wildlife species based upon the City's biological resource mapping provided in the General Plan EIR or other technical materials.

Policy NR 1.8: The City shall encourage creation of habitat preserves that are immediately adjacent to each other in order to provide interconnected open space areas for animal movement.

Policy NR 1.9: The City shall require that impacts to riparian habitats be mitigated at a no net loss of existing function and value based on field survey and analysis of the riparian habitat to be impacted. No net loss may be accomplished by avoidance of the habitat, restoration of existing habitat, or creation of new habitat, or through some combination of the above.

Policy NR 1.10: The placement of new roadways within habitat preserves shall be discouraged, but is not prohibited. This Policy shall not apply to roadways shown in the Circulation Element or needed to meet goals or policies of the Circulation Element.

Policy NR 1.11: In such cases where a new roadway crosses a habitat preserve or separates two adjacent preserves, the roadway shall include design features, where feasible and appropriate, to allow for the movement of wildlife across or beneath the road without causing a hazard for vehicles, bicycles and pedestrians on the roadway.

GOAL NR.2: Preserve the City's rich and diverse natural wetlands.

Policy NR 2.1: Require mitigation that provides for "no net loss" of wetlands consistent with current State and federal policies.

Policy NR 2.2: Ensure that direct and indirect effects to wetland habitats are mitigated to the extent feasible by environmentally sensitive project siting and design or other measures.

Policy NR 2.3: Work with private and non-profit conservation organizations to ensure competitive pricing for mitigation bank credits by allowing government agencies, non-profit organizations, and private landowners to establish vernal pool preserves, designate mitigation areas, create and restore vernal pools, and sell credits to developers for off-site mitigation.

Policy NR 2.4: Educate the public on the importance and benefit of wetlands areas.

Policy NR 2.5: The City shall require that drainage improvements that discharge into areas of wetlands to be preserved are, to the maximum extent feasible, designed to mimic the undeveloped surface water flow conditions of the area in terms of seasonality, volume, and flow velocity.

GOAL NR.3: Preserve and maintain creek corridors and wetland preserves with useable buffer zones throughout the new development areas as feasible.

Policy NR.3.1: Coordinate with property owners and local interest groups, such as the Sacramento Urban Creeks Council, to restore, enhance, and preserve creeks in Rancho Cordova.

Policy NR.3.2: In general, the City will encourage the preservation of existing location, topography, and meandering alignment of natural creeks. The modification, re-creation and realignment of creek corridors shall recreate the character of the natural creek corridor to the extent feasible, appropriate and consistent with other City policies. Channelization and the use of concrete within creek corridors shall be discouraged, but is not prohibited.

Policy NR.3.3: Encourage the creation of secondary flood control channels where the existing channel supports extensive riparian vegetation.

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Policy NR.3.4: Encourage projects that contain wetland preserves or creeks, or are located adjacent to wetland preserves or creeks, to be designed for visibility and, as appropriate, access.

GOAL NR.4: Encourage the planting and preservation of high-quality trees throughout the City.

Policy NR.4.1: Conserve native oak and landmark tree resources for their historic, economic, aesthetic, educational, and environmental value.

Policy NR.4.2: Improve overall landscaping quality and sustainability in all areas visible to the public.

Policy NR.4.3: Promote trees as economic and environmental resources for the use, education, and enjoyment of current and future generations.

Policy NR.4.4: Prior to the approval of any public or private development project in areas identified or assumed to contain trees, the City shall require that a determinate survey of trees species and size be performed. If any native oaks or other native trees six inches or more in diameter at breast height (dbh), multitrunk native oaks or native trees of 10 inches or greater dbh, or non-native trees of 18 inches or greater dbh that have been determined by a certified arborist to be in good health are found to occur, such trees shall be avoided if feasible. If such trees cannot be avoided, the project applicant shall do one of the following:

- All such trees shall be replaced at an inch-for-inch ratio. A replacement tree planting plan shall be prepared by a certified arborist or licensed landscape architect and shall be submitted to the City of Rancho Cordova for approval prior to removal of trees; or,
- The project applicant shall submit a mitigation plan that provides for complete mitigation of the removal of such trees in coordination with the City of Rancho Cordova. The mitigation plan shall be subject to the approval of the City.
- If the City of Ranch Cordova adopts a tree preservation ordinance at any time in the future, any future development activities shall be subject to that ordinance instead.

GOAL NR.5: Protect the quantity and quality of the City's water resources.

Policy NR.5.1: Promote water conservation within existing and future urban uses.

Policy NR.5.2: Encourage the use of treated wastewater to irrigate parks, golf courses, and landscaping.

Policy NR.5.3: Protect surface and ground water from major sources of pollution, including hazardous materials contamination and urban runoff.

Policy NR.5.4: Prevent contamination of the groundwater table and surface water, and remedy existing contamination to the extent practicable.

Policy NR.5.5: Minimize erosion to stream channels resulting from new development in urban areas consistent with State law.

Policy NR.5.6: Incorporate Storm Water, Urban Runoff, and Wetland Mosquito Management Guidelines and Best Management Practices into the design of water retention structures, drainage ditches, swales, and the construction of mitigated wetlands in order to reduce the potential for mosquito-borne disease transmission.

Policy NR.5.7: Continue to cooperate and participate with the County, other cities, and the Regional Water Quality Control Board regarding compliance with the joint National Pollutant Discharge Elimination System Permit (NPDES No. CAS082597) or any subsequent permit and support water quality improvement projects in order to maintain compliance with regional, state and federal water quality requirements.

Policy NR.5.8: The City shall require groundwater impact evaluations be conducted for the Grant Line West, Westborough, Aerojet, Glenborough, Mather and Jackson Planning Areas to determine whether urbanization of these areas would adversely impact groundwater remediation activities associated with Mather and Aerojet prior to the approval of large-scale development. Should an adverse impact be determined, a mitigation program shall be developed in consultation with applicable local, state, and federal agencies to ensure remediation activities are not impacted. This may include the provision of land areas for groundwater remediation facilities, installation/extension of necessary infrastructure, or other appropriate measures.

City of Rancho Cordova Municipal Code

Chapter 16.94, Aquatic Resources Protection, of the City's Municipal Code outlines the purpose, definitions, applicability, impact permit and delineation requirements, avoidance, minimization, and compensation standards, and other provisions pertaining to aquatic resources. All proposed projects within the City's plan area that permanently and/or temporarily impact an aquatic resource shall require an aquatic resources impact permit from the city. There are aquatic resources located on the Project site.

Chapter 19.12, Preservation and Protection of Private Trees, of the City's Municipal Code outlines the purpose, definitions, tree permit requirements, and other related provisions pertaining to tree preservation. Native oak trees grow naturally in Rancho Cordova. There are no trees on the Project site.

3.3.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Appendix G of the CEQA Guidelines contains a sample Initial Study checklist that includes a number of factual inquiries related to the subject of biological resources, as it does on a whole series of additional environmental topics. Notably, lead agencies are under no obligation to use these inquiries in fashioning thresholds of significance on the subject of air quality impacts, or indeed on

3.3 BIOLOGICAL RESOURCES

any subject addressed in the checklist. (*Save Cuyama Valley v. County of Santa Barbara* (2013) 213 Cal.App.4th 1059, 1068.) Rather, with few exceptions, “CEQA grants agencies discretion to develop their own thresholds of significance.” (*Ibid.*) Even so, it is a common practice for lead agencies to take the language from the inquiries set forth in Appendix G and to use that language in fashioning thresholds. The City has done so here, though it has exercised its discretion to modify the language of the Appendix G threshold as described below.

Although CEQA generally gives agencies considerable discretion in fashioning significance thresholds, there are some thresholds that must, as a matter of law, be used by public agencies. Many of these relate to biological resources, and are found in CEQA Guidelines Section 15065 (“Mandatory Findings of Significance”).

Finally, the City is aware that neither Appendix G nor Section 15065 sets forth language directly addressing potential effects on birds of prey or nesting birds due to violation of laws (described earlier) intended to protect them. The City has, therefore, exercised its discretion to formulate a threshold to address this particular category of impact.

In light of the foregoing, for purposes of this EIR, a significant impact would occur if implementation of the Project would:

- 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;
- Substantially reduce the number or restrict the range of an endangered, rare or threatened species;
- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan;
- Result in the take or destruction of any nesting birds or birds of prey or the nest or eggs of such birds.

METHODOLOGY

Aquatic Resources Delineation Report

As part of the *Aquatic Resources Delineation Report*, Foothill Associates completed a wetland delineation for the Project site. The Delineation Report is included as Appendix C.1 of this Draft EIR. The delineation utilized the USACE's 1987 three-parameter (vegetation, hydrology, and soils) methodology to delineate aquatic resources. The USACE's Arid West Regional Supplement (Supplement) (USACE 2008) was also used in conjunction with the USACE Manual for applications in the Arid West Region. Where differences in the two documents occur, the Supplement takes precedence over the USACE Manual. The three-parameter methodology requires the collection of data on soils, vegetation, and hydrology at several locations to establish the jurisdictional boundary of wetlands. Additional methods to identify and delineate other waters of the U.S. (e.g., streams, drainages, lakes) were used as applicable. The method typically used for delineation of non-wetland waters of the U.S. is the delineation of the Ordinary High Water Mark (OHWM). The OHWM was identified based on soils, vegetation, slope, and other indicators such as debris and high water marks.

As part of the delineation efforts, a review of historic and recent aerial photographs, topographic maps, and soils survey data was conducted by Foothill Associates before delineating the Project site in December 2003, and January through April 2004. Revisions were made in the field with Justin Cutler and/or Will Ness of the USACE in April and June in 2005 and a reverification was conducted in October 2014. Biologists visually inspected the entire site and collected representative data at points within potential wetland areas and corresponding uplands. The on-site soils were examined for hydric indicators. Observations were made and recorded for both primary and secondary wetland hydrology indicators, if present. Boundaries of wetlands and other waters of the U.S. within the site were surveyed and mapped with a Trimble GeoXT Global Positioning System (GPS) hand-held unit.

Biological Resources Assessment

Foothill Associates also prepared a *Biological Resources Assessment* for the Project site. The Assessment is included as Appendix C.2 of this Draft EIR. Prior to conducting a survey of the Project site, existing information, including *The Ranch at Sunridge Project: Section 7 Biological Assessment* (Foothill Associates 2012), *Jaeger ±530-Acre Study Area: Wetland Delineation Report* (Foothill Associates 2005), *Special Status Plant Report ±530-Acre Peery Arrillaga Sunrise Douglas Site* (North Fork Associates 2002), and rare plant survey letter reports prepared by Foothill Associates in 2009 and 2017 for the Project site were reviewed by Foothill Associates. The results of the special-status species records search and five-mile radius CNNDDB query are summarized in Appendix B of Appendix C.2. As part of the *Biological Resources Assessment* efforts, the most recent field surveys of the Project site were conducted on June 12 and 13, 2017. The Project site was systematically surveyed on foot with binoculars to ensure total search coverage, with special attention given to identifying those portions of the Project site with the potential for supporting special-status species and sensitive habitats. During the field surveys, biologists recorded plant and animal species observed (Appendix C of Appendix C.2), as well as characterized biological communities

occurring within the Project site. As noted above, wetland features were previously delineated within the Project site and verified by the USACE in 2014. Wetland polygons along the eastern boundary of Rancho Cordova Parkway were remapped in 2017 to address impacts that may have occurred during expansion of Rancho Cordova Parkway.

Following the Project site survey, the potential for each species identified in the records search to occur in the Project site was determined based within the Project site surveys, soils, and species-specific information, as shown in Appendix B of Appendix C.2.

Special-Status Plant Survey for The Ranch

Focused botanical surveys for special-status plant species were also performed by two Foothill Associates biologists on June 12 and 13, 2017. The surveys were completed within the identified blooming period of the potentially occurring special-status plant species listed in the *Special-Status Plant Survey for The Ranch*. The Plant Survey is included as Appendix C.3 of this Draft EIR. The survey was conducted in accordance with and subject to guidelines provided by the CDFW and the CNPS. The purpose of the survey was to determine whether three special-status plants, Sacramento Orcutt grass (*Orcuttia viscida*), slender Orcutt grass (*Orcuttia tenuis*), and Boggs lake hedge-hyssop (*Gratiola heterosepala*), occur within the Project site. Transects were systematically walked throughout the whole of the Project site, with special attention paid to areas that contained suitable habitat for the special-status plant species. In this case, five-foot transects were walked throughout each vernal pool on the Project site and all riverine wetland features were surveyed.

The surveys were conducted by two biologists with the following qualifications: experience with conducting floristic surveys; intimate knowledge of plant taxonomy and plant community ecology and classification; familiarity with the plants of the area, including special-status and locally significant plants; familiarity with the appropriate State and federal statutes related to plants and plant collecting; and experience with analyzing impacts of Project activities on native plants and plant communities.

Additionally, a literature review and database search were conducted to gather information regarding sensitive plants, animals, and habitats. The purpose of the literature and database review is to identify species known to occur within the region based on historic range, observations, and habitat requirements.

South Sacramento Habitat Conservation Plan Final EIR/EIS

Section 15152 of the State CEQA Guidelines allows the Lead Agency to “tier” the environmental analysis for separate but related projects. Per Section 15152(b) of the State CEQA Guidelines, tiering “can eliminate repetitive discussions of the same issues and focus the later EIR or negative declaration on the actual issues ripe for decision at each level of environmental review. Tiering is appropriate when the sequence of analysis is from an EIR prepared for a general plan, policy, or program to an EIR or negative declaration for another plan, policy, or program of lesser scope, or to a site-specific EIR or negative declaration.” Section 15152(d) of the State CEQA Guidelines requires that tiering “shall be limited to situations where the project is consistent with the general

plan and zoning of the city or county in which the project is located, except that a project requiring a rezone to achieve or maintain conformity with a general plan may be subject to tiering.” CEQA Guidelines Section 15152(d) provides the following direction regarding limiting analysis of a later project, where an EIR has already been prepared and certified for a program, plan, policy, or ordinance consistent with the requirements of Section 15152:

Where an EIR has been prepared and certified for a program, plan, policy, or ordinance consistent with the requirements of this section, any lead agency for a later project pursuant to or consistent with the program, plan, policy, or ordinance should limit the EIR or negative declaration on the later project to effects which:

(1) Were not examined as significant effects on the environment in the prior EIR; or

(2) Are susceptible to substantial reduction or avoidance by the choice of specific revisions in the project, by the imposition of conditions, or other means.

The USFWS and County of Sacramento prepared a EIS/EIR (SCH #2008062030) to evaluate the environmental impacts of implementing the SSHCP, which was described previously in this section. The analysis provided in this section tiers from the SSHCP EIS/EIR to focus on examining project-specific impacts.

The City of Rancho Cordova is using the analyses presented in the final SSHCP EIS/EIR to simplify and streamline preparation of future CEQA documents for individual Covered Activity projects, especially the comprehensive analyses of impacts to native plant and animal species, natural communities, aquatic resources, water quality, and hydrology. Project-level CEQA and NEPA documents can reference and use the final SSHCP EIS/EIR’s regional-scale and 50-year comprehensive and programmatic analysis of future Covered Activity impacts to native plant and animal species, natural communities, aquatic resources, water quality, hydrology, and other environmental resources natural resources, as well as the EIS/EIR’s cumulative analysis of impacts to wetlands and other waters in the region.

In determining potential environmental impacts to biological resources as a result of the Project, the impact analysis below analyzes the Projects consistency and implementation of the SSHCP and also identifies any potential impacts that were not examined in the SSHCP EIS/EIR. Impacts associated with biological resources identified in the final SSHCP EIS/EIR, which are anticipated to occur with the urbanization of the SSHCP area and establishment of planned preserves in the SSHCP area as described in the SSHCP, that are applicable to the Project’s habitat types and potential species are identified in Table 3.3-3 below.

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TABLE 3.3-3: SSHCP EIS/EIR IMPACTS OF SSHCP PROPOSED ACTION/PROPOSED PROJECT

IMPACT	CEQA/NEPA SIGNIFICANCE	MITIGATION MEASURES
<i>NATURAL LAND COVER HABITATS, AND ASSOCIATED PLANT AND ANIMAL COMMUNITIES</i>		
<i>DIRECT AND INDIRECT EFFECTS – VERNAL POOL ECOSYSTEM</i>		
<p>As compared to the No Action/No Project Alternative baseline condition, the Proposed Action/Proposed Project would:</p> <ul style="list-style-type: none"> • directly and indirectly impact 690 fewer total acres of the Planning Area’s total vernal pool ecosystem and the associated vernal pool plant and animal communities; • directly and indirectly impact 1,283 fewer acres of the Mather Core Area’s vernal pool ecosystem and the associated vernal pool plant and animal communities; • require Covered Activities to implement better and more consistently implemented AMMs to avoid and minimize indirect effects of development projects and activities on the vernal pool ecosystem; • preserve approximately 7,340 more acres of Vernal Pool Ecosystem in the Planning Area; • result in interconnected and more contiguous preserves of vernal pool ecosystem within the Planning Area; and • preserve 934 more acres of the Mather Core Area’s vernal pool ecosystem and the associated vernal pool plant and animal communities. 	Significant Beneficial Effect	None required
<i>CUMULATIVE EFFECTS – VERNAL POOL ECOSYSTEM</i>		
<p>Overall, the Proposed Action/Proposed Project Alternative would make a slightly smaller contribution to Study Area cumulative effects on the vernal pool ecosystem, when compared to the No Action/No Project Alternative. However, at the scale of Vernal Pool Ecosystem impacts throughout the Study Area, the 690-acre difference in impacts under the Proposed Action/Proposed Project Alternative compared to impacts under the No Action/No Project Alternative is not discernibly different.</p>	No Cumulative Effect	None required

IMPACT	CEQA/NEPA SIGNIFICANCE	MITIGATION MEASURES
<i>DIRECT AND INDIRECT EFFECTS – SEASONAL WETLANDS, FRESHWATER MARSH, STREAMS/CREEKS, OPEN WATER</i>		
<p>As compared to the No Action/No Project Alternative baseline condition, the Proposed Action/Proposed Project would:</p> <ul style="list-style-type: none"> • directly impact 79 fewer acres of Seasonal Wetlands, Freshwater Marsh, Streams/Creeks, and Open Water land covers and associated plant and animal communities; • require Covered Activity activities and project to implement better and more consistently implemented AMMs to avoid and minimize indirect effects to Seasonal Wetlands, Freshwater Marsh, Streams/Creeks, Open Water natural communities, such as larger setbacks between new development and streams and creeks; • preserve 480 more acres of Seasonal Wetlands, Freshwater Marsh, Streams/Creeks, and Open Water; • re-establish or establish 213 more acres of Seasonal Wetlands, Freshwater Marsh, Streams/Creeks, and Open Water land covers within the Planning Area; and • result in more interconnected and contiguous preserves of Seasonal Wetlands, Freshwater Marsh, Streams/Creeks, and Open Water land covers within the Planning Area. 	<p>Minor Beneficial Effect</p>	<p>None required</p>
<i>CUMULATIVE EFFECTS – SEASONAL WETLANDS, FRESHWATER MARSH, STREAMS/CREEKS, OPEN WATER</i>		
<p>Overall, the Proposed Action/Proposed Project Alternative would make a slightly smaller incremental contribution the cumulative loss of Seasonal Wetlands, Freshwater Marsh, Streams/Creeks, and Open Water in the Study Area, when compared to the No Action/No Project Alternative. However, at the scale of impacts to these aquatic resources throughout the Study Area, the 79-acre difference in direct impacts, the 480-acre difference in preservation, and the 213-acre difference in re-establishment of Seasonal Wetlands, Freshwater Marsh, Streams/Creeks, and Open Water land covers under the Proposed Action/Proposed Project Alternative when compared to impacts under the No Action/No Project Alternative is not discernibly different.</p>	<p>No Cumulative Effect</p>	<p>None required</p>

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IMPACT	CEQA/NEPA SIGNIFICANCE	MITIGATION MEASURES
<i>DIRECT AND INDIRECT EFFECTS – VALLEY GRASSLAND</i>		
<p>As compared to the No Action/No Project Alternative baseline condition, the Proposed Action/Proposed Project would:</p> <ul style="list-style-type: none"> • directly impact(remove) 1,415 fewer acres of Valley Grassland land cover and the associated plant and animal communities; • require Covered Activities to implement better and more consistently implemented AMMs to avoid and minimize indirect effects to Valley Grasslands; • preserve 10,208 acres more Valley Grassland within a large SSHCP Preserve System; and • result in more interconnected and contiguous preserves of Valley Grassland within the Planning Area, which would reduce habitat fragmentation effects on the Valley Grassland plant and animal community. 	Significant Beneficial Effect	None required
<i>CUMULATIVE EFFECTS – VALLEY GRASSLAND</i>		
<p>The incremental impacts of the Proposed Action/Proposed Project Alternative would make a smaller contribution to the cumulative loss of Valley Grassland in the Study Area, when compared to the incremental impact of the No Action/No Project Alternative.</p>	Minor Beneficial Cumulative Effect	None required.
<i>DIRECT AND INDIRECT EFFECTS – WILDLIFE MOVEMENT CORRIDORS</i>		
<p>As compared to the No Action/No Project Alternative baseline condition, the Proposed Action/Proposed Project would:</p> <ul style="list-style-type: none"> • provide a coordinated, interconnected Preserve System designed to provide connectivity between existing preserves and new preserves established under the Proposed Action/Proposed Project; • require new development project to incorporate AMMs that would avoid or minimize effects on riparian corridors used for wildlife movement; • require new development projects inside the UDA and related roadway projects outside the UDA to incorporate wildlife crossing structures at specific locations; and • not result in displaced development outside the UDA, to locations that have a greater potential to affect designated wildlife movement corridors. 	Minor Beneficial Effect	None required

<i>IMPACT</i>		<i>CEQA/NEPA SIGNIFICANCE</i>	<i>MITIGATION MEASURES</i>
<i>CUMULATIVE EFFECTS -- WILDLIFE MOVEMENT CORRIDORS</i>			
The incremental impacts of the Proposed Action/Proposed Project Alternative would make a smaller contribution the cumulative loss of wildlife movement and dispersal in the Study Area, when compared to the incremental impact of the No Action/No Project Alternative. However, at the scale of wildlife movement throughout the Study Area, the difference in movement under the Proposed Action/Proposed Project Alternative when compared to impacts under the No Action/No Project Alternative is not discernibly different.		No Cumulative Effect	None required
<i>SPECIAL-STATUS SPECIES INCLUDING HCP COVERED SPECIES</i>			
<i>DIRECT, INDIRECT, AND CUMULATIVE EFFECTS</i>			
<i>SPECIES COMMON NAME</i>	<i>COVERED SPECIES?</i>	<i>CEQA/NEPA SIGNIFICANCE</i>	<i>MITIGATION MEASURES</i>
Vernal Pool Tadpole Shrimp	Y	Significant Beneficial Effect No Cumulative Effect	None required.
Vernal Pool Fairy Shrimp	Y	Significant Beneficial Effect No Cumulative Effect	None required.
Mid-Valley Fairy Shrimp	Y	Significant Beneficial Effect No Cumulative Effect	None required.
Ricksecker's Water Scavenger Beetle	Y	Significant Beneficial Effect No Cumulative Effect	None required.
Dwarf Downingia	Y	Significant Beneficial Effect No Cumulative Effect	None required.
Ahart's Dwarf Rush	Y	Significant Beneficial Effect No Cumulative Effect	None required.
Pincushion Navarretia	Y	Significant Beneficial Effect No Cumulative Effect	None required.
Slender Orcutt Grass	Y	Significant Beneficial Effect No Cumulative Effect	None required.
Sacramento Orcutt Grass	Y	Significant Beneficial Effect No Cumulative Effect	None required.
Boggs Lake Hedge-Hyssop	Y	Significant Beneficial Effect No Cumulative Effect	None required.
Legenere	Y	Significant Beneficial Effect No Cumulative Effect	None required.
Valley Elderberry Longhorn Beetle	Y	Minor Beneficial Effect No Cumulative Effect	None required.

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<i>IMPACT</i>		<i>CEQA/NEPA SIGNIFICANCE</i>	<i>MITIGATION MEASURES</i>
California Tiger Salamander (Central Valley population)	Y	Significant Beneficial Effect Minor Beneficial Cumulative Effect	None required.
Western Spadefoot	Y	Significant Beneficial Effect Minor Beneficial Cumulative Effect	None required.
Giant Garter Snake	Y	Minor Beneficial Effect Minor Beneficial Cumulative Effect	None required.
Western Pond Turtle	Y	Significant Beneficial Effect Minor Beneficial Cumulative Effect	None required.
Cooper's Hawk	Y	Minor Beneficial Effect No Cumulative Effect	None required.
Tricolored Blackbird	Y	Significant Beneficial Effect Significant Beneficial Cumulative Effect	None required.
Western Burrowing Owl	Y	Significant Beneficial Effect Minor Beneficial Cumulative Effect	None required.
Ferruginous Hawk	Y	Significant Beneficial Effect Minor Beneficial Cumulative Effect	None required.
Swainson's Hawk	Y	Significant Beneficial Effect Minor Beneficial Cumulative Effect	None required.
Northern Harrier	Y	Significant Beneficial Effect Minor Beneficial Cumulative Effect	None required.
White-Tailed Kite	Y	Significant Beneficial Effect Minor Beneficial Cumulative Effect	None required.
Greater Sandhill Crane	Y	Minor Beneficial Effect No Cumulative Effect	None required
Lesser Sandhill Crane	N	Minor Beneficial Effect No Cumulative Effect	None required
Loggerhead Shrike	Y	Significant Beneficial Effect Minor Beneficial Cumulative Effect	None required.

<i>IMPACT</i>		<i>CEQA/NEPA SIGNIFICANCE</i>	<i>MITIGATION MEASURES</i>
Grasshopper Sparrow	N	Significant Beneficial Effect Minor Beneficial Cumulative Effect	None required.
Song Sparrow (Modesto population)	N	Minor Beneficial Effect No Cumulative Effect	None required
Bank Swallow	N	Less than Significant Adverse Effect No Cumulative Effect	None required
Western Red Bat	Y	Significant Beneficial Effect Minor Beneficial Cumulative Effect	None required.
American Badger	Y	Significant Beneficial Effect Minor Beneficial Cumulative Effect	None required.
Sanford's Arrowhead	Y	Significant Beneficial Effect Minor Beneficial Cumulative Effect	None required.
Watershield	N	Less than Significant Adverse Effect No Cumulative Effect	None required.
Bristly sedge	N	Less than Significant Adverse Effect No Cumulative Effect	None required.
Fleshy owl's clover	N	Less than Significant Adverse Effect No Cumulative Effect	None required.
Brandegee's clarkia	N	Less than Significant Adverse Effect No Cumulative Effect	None required.
Bolander's water-hemlock	N	Less than Significant Adverse Effect No Cumulative Effect	None required.
Peruvian dodder	N	Less than Significant Adverse Effect No Cumulative Effect	None required.
Tuolumne button-celery	N	Less than Significant Adverse Effect No Cumulative Effect	None required.
Stinkbells	N	Less than Significant Adverse Effect No Cumulative Effect	None required.
Woolly rose-mallow	N	Less than Significant Adverse Effect No Cumulative Effect	None required.
Northern California black walnut	N	Less than Significant Adverse Effect No Cumulative Effect	None required.

3.3 BIOLOGICAL RESOURCES

<i>IMPACT</i>		<i>CEQA/NEPA SIGNIFICANCE</i>	<i>MITIGATION MEASURES</i>
Delta tule pea	N	Less than Significant Adverse Effect No Cumulative Effect	None required.
Heckard's pepper-grass	N	Less than Significant Adverse Effect No Cumulative Effect	None required.
Mason's lilaepsis	N	Less than Significant Adverse Effect No Cumulative Effect	None required.
Delta mudwort	N	Less than Significant Adverse Effect No Cumulative Effect	None required.
Marsh skullcap	N	Less than Significant Adverse Effect No Cumulative Effect	None required.
Side-flowering skullcap	N	Less than Significant Adverse Effect No Cumulative Effect	None required.
Suisun Marsh aster	N	Less than Significant Adverse Effect No Cumulative Effect	None required.
Saline clover	N	Less than Significant Adverse Effect No Cumulative Effect	None required.
AQUATIC RESOURCES			
<i>DIRECT AND INDIRECT EFFECTS</i>			
<p>As compared to the No Action/No Project Alternative baseline condition, the Proposed Action/Proposed Project would:</p> <ul style="list-style-type: none"> • result in the loss of 855 acres of wetland waters, which is 34 more acres than the 821-acre loss anticipated under the No Action/No Project Alternative; • result in the loss of 294 other waters, which is 65 acres less than the 359-acre loss anticipated under the No Action/No Project Alternative; • result in the loss of 464 acres of Riparian land cover types, which is 37 acres more than the 427 acres expected under the No Action/No Project Alternative; • in total, result in the loss of 1,613 acres of aquatic resources, which is 5 acres greater loss of aquatic resources compared to the 1,607-acre loss of the No Action/No Project Alternative; • preserve 2,738 acres of aquatic resources, which is greater by 998 acres compared 1,740 acres under the No Action/No Project Alternative; 		Minor Beneficial Effect	None required

<i>IMPACT</i>	<i>CEQA/NEPA SIGNIFICANCE</i>	<i>MITIGATION MEASURES</i>
<ul style="list-style-type: none"> • require AMMs such as increased Stream Setbacks that would be more protective to aquatic resources relative to the No Action/No project Alternative; • implement the SSHCP and ARP resulting in a greater area of aquatic resources protections and management than the No Action/No Project Alternative; and • improve aquatic resource abundance, diversity, and condition within the Planning Area over that expected under the No Action/No Project Alternative. 		
<i>CUMULATIVE EFFECTS</i>		
Implementation of the SSHCP Conservation Strategy, including the SSHCP AMMs, the SSHCP ARP, and the interconnected SSHCP Preserve System is expected to result in more consistent and frequent conservation of aquatic resources compared to the No Action/No Project Alternative.	Minor Beneficial Cumulative Effect	None required

SOURCE: FINAL SSHCP EIS/EIR, 2018

Peer Review

A peer review of the biological work performed by Foothill Associates was performed by De Novo Planning Group. The peer review included reviewing the Foothill Associates biological studies, performing a database search to gather information regarding sensitive plants, animals, and habitats, and performing a reconnaissance level survey of the Project site. The database search includes a 9-quad region (USGS quadrangles: Citrus Heights, Folsom, Clarksville, Carmichael, Buffalo Creek, Folsom Southeast, Elk Grove, Sloughhouse, and Carbondale). The review also included a review of the SSHCP modeling habitats for the Project site. The intent of the peer review was to verify the accuracy of the information provided in the reports, to identify information gaps, and to ultimately prepare the biological resources chapter for the Draft EIR.

IMPACTS AND MITIGATION

Impact 3.3-1: The Project has the potential to, directly or indirectly, have a substantial adverse effect through habitat modifications or reductions, cause populations to drop below self-sustaining levels, substantially eliminate a community, or substantially reduce the number of, or restrict the range of, an endangered, rare or threatened species, including those considered candidate, sensitive, or special-status, in local or regional plans, policies, regulations, or by the CDFW or USFWS - Invertebrates (Less than Significant with Mitigation)

The SSHCP has five invertebrates that are Covered Species. These include: valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), Ricksecker's Water Scavenger Beetle, Mid-Valley Fairy Shrimp (*Branchinecta mesovallensis*), Vernal Pool Fairy Shrimp, and Vernal Pool Tadpole Shrimp. Of these five species, the SSHCP modeled habitat maps (SSHCP Figures 3-11 through 3-15) show that modeled habitat is present within the Project footprint for four of the five Covered Species, including: Ricksecker's water scavenger beetle, Mid-Valley fairy shrimp, vernal pool fairy shrimp, and vernal pool tadpole shrimp. There is no SSHCP modeled habitat for valley elderberry longhorn beetle within the Project site.

Valley Elderberry Longhorn Beetle: The valley elderberry longhorn beetle is a federally threatened insect that is dependent upon the elderberry plant (*Sambucus* sp.) as a primary host species. Elderberry shrubs are a common component of riparian areas throughout the Sacramento Valley region. There are five CNDDDB occurrences within five miles of the Project site.

The SSHCP valley elderberry longhorn beetle modeled habitat map (SSHCP Figure 3-13) shows that modeled habitat for valley elderberry longhorn beetle is not present within the Project footprint. The Project site does not provide habitat for this species and surveys did not indicate the presence of valley elderberry longhorn beetle on the site.

Ricksecker's Water Scavenger Beetle: Ricksecker's Water Scavenger Beetle is a SSHCP Covered Species. This vernal pool insect is entirely dependent upon the aquatic environment provided by vernal pools. The Ricksecker's water scavenger beetle depends upon the presence of water in the winter and early spring and the absence of water during the summer. These specific vernal pool wetland characteristics are dependent upon the surrounding uplands. Vernal pools supporting Ricksecker's water scavenger beetle are typically in Central Valley California floristic provinces below 300 meters in elevation. Collection records suggest that the Ricksecker's water scavenger beetle is not sensitive to the size of vernal pools, and uses both vernal pools and swales, as well as constructed vernal pools. Optimal Ricksecker's water scavenger beetle habitat tends to be neutral to slightly alkaline, clear vernal pools, low in dissolved salts, dominated with vernal pool plants, sustaining a complex vernal pool crustacean community.

The SSHCP Ricksecker's water scavenger beetle modeled habitat map (SSHCP Figure 3-12) shows that modeled habitat for Ricksecker's water scavenger beetle is present within the Project

footprint. The field surveys revealed that the necessary habitat for this species is present within the vernal pools located on the Project site, and this species has a high potential to occur on-site.

Mid-Valley Fairy Shrimp: Mid-Valley Fairy Shrimp is a SSHCP Covered Species. This small vernal pool crustacean is entirely dependent upon the aquatic environment provided by vernal pool ecosystems. Mid-valley fairy shrimp depends upon the presence of water in the winter and early spring and the absence of water during the summer. These specific vernal pool wetland characteristics are dependent upon the surrounding uplands. Mid-valley fairy shrimp are typically in Central Valley California floristic provinces below 300 meters in elevation. Typical habitat for mid-valley fairy shrimp in California includes vernal pools and seasonally ponded areas within vernal swales. Optimal mid-valley fairy shrimp habitat tends to be small vernal pools, with an abbreviated hydroperiod, neutral to slightly alkaline, clear vernal pools, low in dissolved salts, dominated with vernal pool plants, and sustains a complex vernal pool crustacean community.

The SSHCP Mid-valley fairy shrimp modeled habitat map (SSHCP Figure 3-11) shows that modeled habitat for Mid-valley fairy shrimp is present within the Project footprint. The field surveys revealed that the necessary habitat for this species is present within the vernal pools located on the Project site, and this species has a high potential to occur on-site.

Vernal Pool Fairy Shrimp: Vernal Pool Fairy Shrimp is a SSHCP Covered Species and is listed as federally threatened. This small vernal pool crustacean is entirely dependent upon the aquatic environment provided by vernal pool wetland ecosystems. Vernal pool fairy shrimp depends upon the presence of water in the winter and early spring and the absence of water during the summer. Habitats supporting the vernal pool fairy shrimp are typically in Central Valley California floristic provinces below 300 meters elevation. Typical habitat for vernal pool fairy shrimp in California includes vernal pools, seasonally ponded areas within vernal swales, rock outcrop ephemeral pools, playas, and alkali. Vernal pool fairy shrimp have also been found in water pooled in sandstone outcrops and in alkaline vernal pools. Optimal habitat for vernal pool fairy shrimp tends to be neutral to slightly alkaline, clear vernal pools, low in dissolved salts, dominated with vernal pool plants, and sustains a complex vernal pool crustacean community. Fairy shrimp occurs only in cool-water pools. Individuals hatch from cysts during cold-weather winter storms; they require water temperatures of 50°F or lower to hatch. The time to maturity and reproduction is temperature-dependent, varying between 18 days and 147 days, with a mean of 40 days. Pool volume is also important in determining potential shrimp habitat because deeper pools with a large surface area can more easily maintain their dissolved oxygen levels. Similarly, deeper pools will pond long enough to allow the shrimp to complete their life cycle.

The SSHCP vernal pool fairy shrimp modeled habitat map (SSHCP Figure 3-13) shows that modeled habitat for vernal pool fairy shrimp is present within the Project footprint. The field surveys revealed that the necessary habitat for this species is present within the vernal pools located on the Project site, and this species has a high potential to occur on-site.

Vernal Pool Tadpole Shrimp: Vernal Pool Tadpole Shrimp is a SSHCP Covered Species and is listed as federally endangered. This small vernal pool crustacean is entirely dependent upon the aquatic environment provided by vernal pool wetland ecosystems. Vernal pool tadpole shrimp depends

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upon the presence of water in the winter and early spring and the absence of water during the summer. These specific vernal pool wetland characteristics are dependent upon the surrounding uplands. Habitats supporting the Vernal pool tadpole shrimp are typically in Central Valley California floristic provinces below 300 meters in elevation. Typical habitat for vernal pool tadpole shrimp in California includes vernal pools, seasonally ponded areas within vernal swales, rock outcrop ephemeral pools, playas, and alkali flats. Vernal pool tadpole shrimp have also been found in alkaline vernal pools. Optimal habitat for vernal pool tadpole shrimp tends to be neutral to slightly alkaline, clear vernal pools, low in dissolved salts, dominated with vernal pool plants, and sustains a complex vernal pool crustacean community. Pool volume is also important in determining potential shrimp habitat because deeper pools with a large surface area can more easily maintain their dissolved oxygen levels. Similarly, deeper pools will pond long enough to allow the shrimp to complete their life cycle. Occupied pools may have aquatic vegetation that may provide shelter from predators and range in size from 54 square feet to 84 acres. Although the tadpole shrimp is found on a variety of geologic formations and soil types, more than 50% of tadpole shrimp occurrences have been found on High Terrace, also known as old terrace landforms and Laguna Formation Redding and Corning soils. In the SSHCP Plan Area, vernal pool tadpole shrimp has been observed in many of the vernal streams.

The SSHCP vernal pool tadpole shrimp modeled habitat map (SSHCP Figure 3-14) shows that modeled habitat for vernal pool tadpole shrimp is present within the Project footprint. The field surveys revealed that the necessary habitat for this species is present within the vernal pools located on the Project site, and this species has a high potential to occur on-site.

Conclusion: Protocol-level surveys were not conducted in the preparation of the Biological Resources Assessment for this Project. In accordance with USFWS policy, given the presence of potential habitat and the absence of protocol surveys, these species are presumed present on the Project site.

The Project will result in the direct loss of 4.75 acres of vernal pool habitat, and the death of an unknown number of Ricksecker's water scavenger beetle, Mid-valley fairy shrimp, vernal pool fairy shrimp, and vernal pool tadpole shrimp through the direct filling of vernal pools and vernal swales within the Project site.

The Project would result in indirect effects to vernal pool habitat, and the death of an unknown number of Ricksecker's water scavenger beetle, Mid-valley fairy shrimp, vernal pool fairy shrimp, and vernal pool tadpole shrimp, in the form of death, injury, and harm, found in vernal pools that are supported by associated upland areas and swales, and all habitat otherwise damaged by loss of watershed, human intrusion, introduced species, and pollution that will be caused by the Project. The Project would result in indirect effects to 4.75 acres of federally-listed crustacean habitat. This is a **potentially significant** impact.

The Project proponent intends to obtain coverage for their activities under the City's ITP. As required by the federal ESA (Section 10(a)(2)(A)(ii)) and Fish and Game Code Section 2081, the SSHCP includes measures to avoid and minimize take of Covered Species. All relevant SSHCP AMMs will be required for the Project. Mitigation Measure 3.3-1 requires that the Project

proponent submit a SSHCP permit application package to the City as a request that the incidental take coverage provided by the City's SSHCP ITP be extended to the proposed activities. The City must review the SSHCP permit application for consistency with all of the SSHCP requirements and provide the South Sacramento Conservation Agency ("Implementing Entity) with a copy of the SSHCP requirements for tracking purposes. The Project proponent shall be responsible for paying all SSHCP development fees associated with obtaining coverage from the City. A portion of those fees are then used to purchase habitat land as compensatory mitigation for the loss of habitat. Any proposal to provide land in fee title, or provide a conservation easement in lieu of paying all or part of the required SSHCP development fees, shall include a consistency analysis in the application that sufficiently shows that the proposal is consistent with the SSHCP Conservation Strategy. Because the Project includes a 199.5-acre preserve, they will be required to include a consistency analysis in their application in order to receive credit for the preserve. Mitigation Measure 3.3-1 would require the Project proponent to fulfill all SSHCP requirements to ensure consistency with the SSHCP Conservation Strategy and receive coverage under the SSHCP, which has been developed to ensure preservation of species, natural communities, and aquatic resources in the SSHCP area, while providing for an environmental permitting process for Covered Activities that impact listed species, listed species habitats, or aquatic resources.

Mitigation Measure 3.3-2 requires that all applicable AMMs identified in the SSHCP be implemented to avoid direct and indirect effects to invertebrates. As required, a post-construction compliance report would be submitted to the SSHCP Implementing Entity within 30 calendar days of completion of construction activities or within 30 calendar days of any break in construction activity that lasts more than 30 days. The report would detail the construction start and completion dates, any information about meeting or failing to meet species take AMMs, effectiveness of each AMM that was applied at the Project site, and any known Project effects to Covered Species. The SSHCP AMMs would reduce indirect impacts on vernal pool invertebrate and other species. For example, AMM EDGE-3 establishes a 50-foot setback from the edge of established preserves to minimize indirect effects. AMM EDGE-4 requires roads, sidewalks, and other impermeable surfaces adjacent to planned preserves to slope away from preserves and preserve setbacks. AMM ROAD-1 requires road projects to be located in the least environmentally sensitive area to avoid impacts on covered species. AMM RE-ESTABLISHMENT/ESTABLISHMENT-1 requires that vernal pool wetlands be established or re-established. The maximum anticipated loss of species modeled habitat for vernal pool tadpole shrimp and vernal pool fairy shrimp modeled habitat due to direct impacts of the SSHCP would be approximately 17,117 acres (Table 9-23 of the SSHCP). Indirect effects on vernal pool tadpole shrimp and vernal pool fairy shrimp modeled aquatic habitat are anticipated to result in additional approximately 142 acres of impacts as a result of the SSHCP. The total impact, including direct and indirect impacts, of the Proposed Action/Proposed Project Alternative of the SSHCP on vernal pool tadpole shrimp and vernal pool fairy shrimp modeled habitat is expected to be approximately 17,259 acres. The total SSHCP impact area of 17,233 acres for Ricksecker's water scavenger beetle modeled habitat under the Proposed Action/Proposed Project of the SSHCP is approximately 674 acres less than the estimated 17,907 acres of total loss under the No Action/No Project Alternative of the SSHCP (Table 9-4 of the SSHCP). The Proposed Action/Proposed Project Alternative of the SSHCP is not

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expected to remove any of the eight occurrences of Ricksecker's water scavenger beetle in the SSHCP Planning Area; no occurrences would be removed under the No Action/No Project Alternative of the SSHCP.

Additional AMMs are specifically presented later in this document for specific species. It is noted, however, that before construction begins, the SSHCP requires that the Project proponent demonstrate to the City that all necessary AMMs will be fulfilled. This is accomplished by having pre-construction AMMs in place prior to construction and by having a plan that shows how all applicable post-construction AMMs will be addressed. During construction, it is the responsibility of the City to ensure that the AMMs are being implemented. The City can compel the Project proponent to stop working if a project is not in compliance with all SSHCP AMMs. Upon construction completion, the City will monitor and confirm that post-construction conditions are acceptable and consistent with the requirements of the SSHCP permits (e.g., revegetation, soil treatments). Once the constructed Project has received final clearance from the City, it is the responsibility of the City to monitor continued operation of installed AMMs (e.g., swales, retention basins) and to monitor compliance with AMMs required for future operations and maintenance of the Covered Activity. The Implementing Entity (i.e., the South Sacramento Conservation Agency) may also assist with and in some instances may assume responsibility for monitoring continued operation of installed AMMs when those AMMs are part of the Preserve System, Preserve Setbacks, or Stream Setbacks.

The below mitigation measures would result in compensatory mitigation for the loss of habitat, and would avoid or minimize impacts to protected species to the extent feasible. Implementation of the Project, with the below mitigation measures and consistency with the SSHCP, would reduce the potential for impacts to special-status species to a ***less than significant*** level.

MITIGATION MEASURE(S)

Mitigation Measure 3.3-1: *Prior to any ground disturbing activities, the Project proponent shall submit a South Sacramento Habitat Conservation Plan (SSHCP) permit application package to the City of Rancho Cordova ("Land Use Authority Permittee") as a request that the incidental take coverage provided by City's SSHCP Incidental Take Permit (ITP) be extended to the proposed activities. The City of Rancho Cordova shall review the SSHCP permit application for consistency with all of the SSHCP requirements and provide the South Sacramento Conservation Agency ("Implementing Entity) with a copy of the SSHCP requirements for tracking purposes. The Project proponent shall be responsible for paying all SSHCP development fees associated with obtaining coverage from the City of Rancho Cordova. Any proposal to provide land in fee title or provide a conservation easement in lieu of paying all or part of the required SSHCP development fees, shall include a consistency analysis in the application that sufficiently shows that the proposal is consistent with the SSHCP Conservation Strategy.*

Mitigation Measure 3.3-2: *The Project proponent shall implement the following SSHCP Avoidance and Minimization Measures (AMMs) to the satisfaction of the City to avoid direct and indirect effects of Covered Activities on Covered Species:*

- *AMM SPECIES-1 (Litter Removal Program): A litter control program shall be instituted for the entire Project site. All workers shall ensure that their food scraps, paper wrappers, food containers, cans, bottles, and other trash are deposited in covered or closed trash containers. All garbage shall be removed from the Project site at the end of each work day, and construction personnel shall not feed or otherwise attract wildlife to the area where construction activities are taking place.*
- *AMM SPECIES-2 (No Pets in Construction Areas): To avoid harm and harassment of native species, workers and visitors shall not bring pets onto a Project site.*
- *AMM SPECIES-3 (Take Report): If accidental injury or death of any Covered Species occurs, workers shall immediately inform the approved biologist or on-site monitor and site supervisor. The approved biologist or on-site monitor shall phone the appropriate contact person at the Implementing Entity (i.e., the South Sacramento Conservation Agency). The Implementing Entity shall immediately contact the Wildlife Agencies (i.e., the USFWS and CDFW) by telephone. A memorandum shall be provided to the Implementing Entity and Wildlife Agencies within 1 working day of the incident. The report shall provide the date and location of the incident, number of individuals taken, the circumstances resulting in the take, and any corrective measures taken to prevent additional take.*
- *AMM SPECIES-4 (Post-Construction Compliance Report): A post-construction compliance report shall be submitted to the SSHCP Implementing Entity within 30 calendar days of completion of construction activities or within 30 calendar days of any break in construction activity that lasts more than 30 days. The report shall detail the construction start and completion dates, any information about meeting or failing to meet species take AMMs, effectiveness of each AMM that was applied at the Project site, and any known Project effects to Covered Species.*
- *AMM LID-1 (Stormwater Quality): When the size of a Covered Activity project exceeds the thresholds established by the State Water Resources Control Board (SWRCB) (see the most recent Stormwater Quality Design Manual for the Sacramento and South Placer Regions, or future SWRCB-approved design manuals applicable to the Plan Area), incorporate stormwater management into site design to satisfy the requirements outlined in the most recent Stormwater Quality Design Manual for the Sacramento and South Placer Regions. Stormwater management may include groundwater recharge (LID-2) and natural site features (LID-3).*
- *AMM LID-3 (Natural Site Features): Incorporate preservation of a site's natural aquatic features (such as creeks and streams) into project design to retain natural hydrologic patterns and to retain habitat that might be used by Covered Species.*
- *AMM EDGE-1 (Compatible Land Uses): To the maximum extent practicable, development project Covered Activities will locate compatible land uses (e.g., designated open space such as parks and ball fields, detention basins, and other land uses with less-intensive human activity) in areas immediately adjacent to existing or planned Preserve boundaries. The compatible land use will provide additional buffering of Preserves from potential indirect effects of adjacent urban development. The soil surfaces in a compatible land use area may be re-contoured provided that the soil restrictive layer remains undamaged and most of the soil profile above the restrictive layer remains intact. The Land Use Authority*

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will determine when it is not practicable to locate a compatible land use adjacent to existing or planned Preserve boundaries.

- *AMM EDGE-2 (Single-Loaded Streets): To the maximum extent practicable, the design of Urban Development Covered Activities will locate single-loaded streets adjacent to existing or planned Preserve. The Land Use Authority will determine when single-loaded streets are not practicable.*
- *AMM EDGE-3 (Preserve Setbacks): Urban Development Covered Activities constructed adjacent to existing or planned Preserves must establish a minimum 50-foot-wide setback outward from the boundary of any existing Preserve or planned SSHCP Preserve. This minimum 50-foot-wide setback will function as a transition between Urban Development and the Preserve, and must be managed to maintain the natural community of vegetation present in the adjacent Preserve. As much of the setback as possible should remain in the same natural habitat as the Preserve.*

However, as discussed in Section 5.2.5, Covered Activities in Preserve Setbacks in the UDA, where an existing or planned Preserve is adjacent to an existing roadway (e.g., collectors, arterials, thoroughfares), the 50-foot Preserve Setback will not be required, and any bicycle or pedestrian trail will be established in the road right-of-way. In addition, where a planned roadway crosses an existing or planned Preserve, no Preserve Setback will be required, and any bicycle or pedestrian trail will be established in the road right-of-way.

- *AMM EDGE-4 (Locate Stormwater Control Outside Preserves): Roads, sidewalks, and other impermeable surfaces of Urban Development Covered Activities adjacent to existing or planned Preserves will slope away from Preserves and Preserve Setbacks or intercept drainage with swales or curbs and gutters to preclude drainage from entering Preserves and Preserve Setbacks. Stormwater flows must be directed away from Preserves and Preserve Setbacks and directed into stormwater control facilities inside the development (outside Preserves and Preserve Setbacks) (see EDGE-6 for exception to EDGE-4 in certain SSHCP Linkage Preserves).*
- *AMM EDGE-5 (Stormwater Control in Preserve Setbacks): If trails are established in any Preserve Setback in compliance with EDGE-3, the trail must be sloped away from the Preserve, and rainwater leaving the trail surface must flow into an adjacent low-velocity bio-retention swale or cell to keep rainwater runoff and trail contaminants from entering the Preserve. Low-velocity bio-retention swales or cells are typically small linear features placed on one or both sides of a trail. As required by EDGE-3, trails and their adjacent bio-retention swales or cells must be located on the side of the Preserve Setback nearest development.*
- *AMM EDGE-7 (Hardpan/Duripan Protection): To protect the soil perched aquifer and the micro-watersheds supporting existing vernal pool hydrology, activities that have the potential to cut into, disrupt, or remove the soil's restrictive layer (hardpan or duripan) will not occur within Preserves or Preserve Setbacks. However, in certain circumstances, the Covered Activities defined in Section 5.2.6, Covered Activities in Stream Setbacks in the UDA, and Section 5.2.8, Covered Activities in the Laguna Creek Wildlife Corridor of the Preserve System, may result in punctures or other minor disruptions of the soil hardpan or duripan if approved by the Implementing Entity and the Technical Advisory Committee*

according to the process described in Chapter 9 of the SSHCP. If a Covered Activity on a Preserve or Preserve Setback results in a puncture or other disruption to the soil hardpan or duripan, the puncture will be sealed using bentonite clay or other material that maintains the functionality of the soil's restrictive layer and associated perched aquifer.

- *AMM EDGE-10 (Prevent Invasive Species Spread): Completed Covered Activities (including roads) will be maintained in a manner that avoids the spread of invasive species into Preserve and Open Space areas. Such maintenance measures will include the following:*
 - *To prevent the transport of non-native invasive species onto Preserves, before bringing any equipment onto an SSHCP Preserve or Preserve Setback, equipment must be cleaned of mud, dirt, and plant material. Cleaning will occur in the infested area or another appropriate location as approved by a Plan Permittee.*
 - *Mowing rotation will start in un-infested areas and move to infested areas.*
 - *Invasive plant prevention techniques will be incorporated into maintenance plans.*
 - *The SSHCP Implementing Entity will survey road shoulders, ditches, and rights-of-way that border SSHCP Preserves for invasive weeds or other exotic plant species. Where roadside weed infestations have reached a critical control point, the Implementing Entity or Land Use Authority Permittee will apply the appropriate manual, mechanical, or chemical treatment.*
- *AMM BMP-9 (Soil Compaction): After construction is complete, all temporarily disturbed areas will be restored similar to pre-project conditions, including impacts relating to soil compaction, water infiltration capacity, and soil hydrologic characteristics.*
- *AMM NATURE TRAIL-1 (Nature Trail Plan): A nature trail plan must be prepared for each Preserve where a trail is allowed by the Preserve Management Plan. Nature trails will be unpaved trails that vary in width depending on terrain and existing constraints, but will never exceed 4 feet in width. Where a trail crosses a swale, wooden walkways elevated to a height no greater than 2 feet will be installed. Trail improvements may include mowing vegetation to create or maintain a trail, minor grading to remove trip hazards, and signs providing directional and educational information. Public access to land acquired for preservation will be prohibited until a trail plan can be prepared by the Implementing Entity and approved by the Permitting Agencies. A trail plan will include the following:*
 - *Maps identifying areas that contain sensitive habitats or species occurrences.*
 - *Maps that show the location and footprint of proposed trails.*
 - *Methods used to control public access.*
 - *Trail and use monitoring methods, schedules, and responsibilities.*
 - *Trail operation and maintenance guidelines and responsibilities.*
 - *Clear triggers for use restrictions or closure based on sensitive biological indicators (e.g., seasonal closures of some trails on the basis of activity periods of Covered Species or sensitive species).*
- *AMM NATURE TRAIL-2 (Nature Trail Protection of Duripan): Nature trails will be sited and constructed so as not to interfere with existing soil duripan and the perched aquifer that support the existing hydrologic regime of the Vernal Pool–Grassland and will not interfere with existing pool hydrology. Trails within Preserves will not be paved.*

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- *AMM NATURE TRAIL-3 (Nature Trail Location): Nature trails will be located away from sensitive natural resources (e.g., vernal pools, riparian habitat, woodland habitat, Covered Species occurrences, raptor nesting sites, tricolored blackbird (*Agelaius tricolor*) colony sites). The Wildlife Agencies will determine the distance necessary to avoid impacts to sensitive natural resources.*
- *AMM NATURE TRAIL-4 (Biological Studies Prior to Nature Trail Design): Biological studies will be conducted within the area being considered for nature trail construction prior to project design. The studies will include land cover type mapping and focused species surveys and/or wetland delineations. The biological studies will include assessments of potential effects of trail construction on Preserve System resources, and recommendations for avoidance and minimization that may be incorporated into project siting, design, construction, and operation.*
- *AMM NATURE TRAIL-5 (Monitoring of Nature Trail Impacts): Impacts that could result from use of a nature trail within a Preserve will be monitored according to the Preserve Management Plan (Chapter 8) to ensure that uses do not conflict with the individual Preserve Management Plan. If use of a trail is found to conflict with the individual Preserve Management Plan, use of that trail will be discontinued until adjustments in the use can be made to reduce or eliminate conflicts. The Implementing Entity will make decisions about discontinuing or modifying use of a trail in consultation with the Preserve Manager or other applicable Preserve management agency or organization.*
- *AMM ROAD-1 (Road Project Location): Road projects will be located in the least environmentally sensitive area to avoid, to the maximum extent practicable, impacts on Covered Species, Covered Species habitat, and waters of the United States. Road project alignments will follow existing roads, road easements, and rights-of-way, or be sited in disturbed areas to minimize habitat loss and additional habitat fragmentation.*
- *AMM ROAD-3 (Roadside Pesticide Use): If pesticide use is necessary along roadsides, the appropriate SSHCP Permittee will ensure that the pesticide application strictly complies with the pesticide label and all other applicable federal, state, and local authorities pertaining to the use, safety, storage, disposal, and reporting of the pesticide. Where roadside weed infestations have reached a critical control point, the Implementing Entity or a Land Use Authority Permittee will apply the appropriate manual, mechanical, or chemical treatment. In addition, the Implementing Entity or appropriate Land Use Authority Permittee will post signs along road shoulders adjacent to sensitive areas that are within the SSHCP Preserve System (e.g., California tiger salamander breeding ponds, endemic plant populations, vertebrates that rely on insects for part of their diet). The signs will identify pesticide use restrictions or other roadside maintenance restrictions.*
- *AMM RE-ESTABLISHMENT/ESTABLISHMENT-1 (Vernal Pool): Re-establish or establish Vernal Pool Wetland according to the following guidelines:*
 - *Re-establishment will always take priority over establishment of vernal pools. Establishment will be permitted only after it has been determined that sites with the potential to re-establish vernal pools no longer exist in the Plan Area or cannot be acquired through a willing seller/buyer agreement.*

- *When possible, re-established or established sites will be located adjacent to an existing Preserve(s) to maximize connectivity and Preserve area.*
 - *Re-establishment or establishment will not result in direct or indirect adverse impacts to the hydrologic regime of existing vernal pools. Vernal pool re-establishment or establishment actions will not remove more than 10% of any existing vernal pool watershed, as defined by the SSHCP LIDAR analysis (see Section 3.3 and Conservation Action VPI1.2 in Table 7.1).*
 - *Vernal pool re-establishment will attempt to restore the historical density and range of vernal pool sizes to the maximum extent feasible using historical aerial photography of the site, if available. Where aerial photography of the site's historical conditions is not available, vernal pool re-establishment will include a range of pool sizes (area and depth) to accommodate the different habitat needs and life history characteristics of the vernal pool invertebrate Covered Species.*
 - *Established vernal pools must be located on sites with vernal pool soils, defined as any Plan Area soil type where vernal pools currently exist.*
 - *Established vernal pool sites will include a range of pool sizes to accommodate the different habitat needs and life history characteristics of the three vernal pool invertebrate Covered Species.*
 - *The total density of vernal pools will not exceed 10% of the suitable soil areas in any vernal pool re-establishment and/or establishment site, unless it can be shown that the suitable areas of that site historically supported greater densities.*
 - *Re-establishment or establishment may include inoculation when it is likely that no seed or cyst bank of vernal pool species remains at a site. Vernal Pool inocula will come from nearby vernal pools that are on the same geologic formation and soil type.*
 - *AMM UTILITY-2 (Utility Maintenance on Preserves): Utility maintenance inside SSHCP Preserves and SSHCP Preserve Setbacks containing vernal pools will occur only when vernal pools have been dry for 30 days, except in emergency situations related to human health and safety.*
 - *AMM UTILITY-3 (Trenchless Construction Methods): Where a pipeline or conduit crosses an existing or planned Preserve or will be located between adjacent Preserves (e.g., under a roadway that has a Preserve on both sides), trenchless construction methods will be used to minimize impacts to the existing soil profile (including impacts to a hardpan or duripan) to maintain the perched aquifer in Vernal Pool Grassland land cover type.*
- AMM UTILITY-4 (Siting of Entry and Exit Location): The entry and exit locations for the trenchless construction method (see Utility-3) will be sited to avoid impacts to vernal pools and Riparian Woodland, and to avoid direct take of SSHCP Covered Species.*

Impact 3.3-2: The Project has the potential to, directly or indirectly, have a substantial adverse effect through habitat modifications or reductions, cause populations to drop below self-sustaining levels, substantially eliminate a community, or substantially reduce the number of, or restrict the range of, an endangered, rare or threatened species, including those considered candidate, sensitive, or special-status, in local or regional plans, policies, regulations, or by the CDFW or USFWS - Reptile and Amphibian (Less than Significant with Mitigation)

Special-status reptiles and amphibians that occur within the 9-quad region for the Project site include: California red-legged frog (*Rana draytonii*), California tiger salamander, foothill yellow-legged frog (*Rana boylei*), giant garter snake, western pond turtle, and western spadefoot. Each of these is discussed below:

California Red-Legged Frog: The California red-legged frog is a federally threatened and a California species of special concern. This species occurs along the coast and coastal mountain ranges of California from Marin County to San Diego County and in the Sierra Nevada from Tehama County to Fresno County. California red-legged frog requires permanent and semi-permanent aquatic habitats, such as creeks and cold-water ponds, with emergent and submergent vegetation; this species may also estivate in rodent burrows or cracks during dry periods.

The Project site is outside of the known range for this species and does not provide the appropriate habitat. This species is not present.

California Tiger Salamander: The California tiger salamander is a federal and California threatened species. This species is also a SSHCP Covered Species. It typically breeds in fish-free seasonal or permanent ponds associated with grassland communities. California tiger salamander may also breed in deeper ponded vernal pools, seasonal wetlands and/or other seasonal pools within swales or channels. California tiger salamander spends the majority of its life cycle below ground in ground squirrel or pocket gopher burrows in grasslands situated adjacent to potential breeding sites.

Forty-seven units of critical habitat, or habitat that has been deemed as essential to the survival and recovery of the California tiger salamander, were proposed by the USFWS on August 10, 2004. The 9,966-acre Unit 3 (Southeastern Sacramento Unit) is located approximately 12 miles south of the Project site.

The SSHCP California tiger salamander modeled habitat map (SSHCP Figure 3-16) shows that modeled habitat for California tiger salamander is not present within the Project footprint or within 300 feet of the Project footprint. While the Project site has a variety of aquatic habitats, it does not have the necessary aquatic habitat for this species during their breeding season and, as such, this species is not present within the Project site.

Foothill Yellow-Legged Frog: The Foothill yellow-legged frog is a federally threatened and a California species of special concern. This species occurs is found in most of northern California

west of the Cascade crest and along the western Sierra Nevada foothills up to approximately 6,370 feet. This species requires rocky streams in a variety of habitats including valley-foothill hardwood, conifer, and riparian forests, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral and wet meadow.

The Project site is outside of the known range for this species and does not provide the appropriate habitat. There are no CNDDDB occurrences within five miles of the Project site. This species is not present.

Giant Garter Snake: Giant garter snake is designated as a federally threatened and state threatened species afforded special protection by FWS and CDFW. This species is also a SSHCP Covered Species. The giant garter snake is generally associated with larger canals, irrigation ditches, and other semi-permanent to permanent aquatic sites with slow moving water and an abundance of emergent vegetation.

The SSHCP giant garter snake modeled habitat map (SSHCP Figure 3-18) shows that modeled habitat for giant garter snake is not present within the Project footprint or within 300 feet of the Project footprint. While the Project site has a variety of aquatic habitats, it does not have the necessary aquatic habitat for this species during their active season and, thus, is not present within the Project site.

Western Pond Turtle: The western pond turtle is a California species of special concern. This species is also a SSHCP Covered Species. Its favored habitats include streams, large rivers and canals with slow-moving water, aquatic vegetation, and open basking sites. Although the turtles must live near water, they can tolerate drought by burrowing into the muddy beds of dried drainages. This species feeds mainly on invertebrates such as insects and worms, but will also consume small fish, frogs, mammals and some plants. Western pond turtle predators include raccoons, coyotes, raptors, weasels, large fish, and bullfrogs. This species breeds from mid to late spring in adjacent open grasslands or sandy banks.

The SSHCP western pond turtle modeled habitat map (SSHCP Figure 3-19) does not show that modeled habitat for western pond turtle is present within the Project footprint or within 300 feet of the Project footprint. While the Project site has a variety of aquatic habitats, it does not have the necessary aquatic habitat for this species and, thus, is not present within the Project site.

Western Spadefoot: The western spadefoot is a California species of special concern. This species is also a SSHCP Covered Species. This species is found in the Sierra Nevada foothills, Central Valley, Coast Ranges, and coastal counties in southern California. Its favored habitats include shallow streams with riffles and seasonal wetlands, such as vernal pools in annual grasslands and oak woodlands.

The SSHCP western spadefoot modeled habitat map (SSHCP Figure 3-17) shows that modeled habitat for western spadefoot is present within the Project footprint. The field surveys revealed that the necessary habitat for this species is present within the Project site, and this species has a high potential to occur on-site. The vernal pools and depression seasonal wetlands in the Project

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site provide breeding habitat and there is one known occurrence within five miles of the Project site.

Conclusion: The Project site is largely undeveloped and has been previously used for agricultural (grazing) uses. The Project site is outside of the known extant range for California red legged-frog, California tiger salamander, and Foothill yellow-legged frog. Additionally, habitat for giant garter snake and western pond turtle is not present within the Project site. However, due to the suitable vernal pool and seasonal wetland habitat present within the Project site, the potential for western spadefoot to occur within the Project site is high. Without mitigation, this would be considered a **potentially significant** impact.

As previously discussed, the Project proponent intends to obtain coverage for their activities under the City's ITP. The SSHCP includes western spadefoot as a Covered Species. Mitigation Measure 3.3-1 provides the requirement to submit a SSHCP permit application package to the City as a request that the incidental take coverage provided by the City's SSHCP ITP be extended to the proposed activities. All relevant SSHCP AMMs will be required and the Project proponent shall be responsible for paying all SSHCP development fees associated with obtaining coverage. A portion of those fees are then used to purchase habitat land as compensatory mitigation for the loss of habitat. The Project also includes a 199.5 acre preserve; however, credit for the preserve is subject to the review and approval of the City.

Mitigation Measure 3.3-3 includes AMMs that are specifically presented for western spadefoot. As noted in Impact 3.3-1, however, before construction begins, the SSHCP requires that the Project proponent demonstrate to the City that all necessary AMMs will be fulfilled. Additionally, the below mitigation measures would result in compensatory mitigation for the loss of habitat, and would avoid or minimize impacts to protected species to the extent feasible. Implementation of the Project, with the below mitigation measures and consistency with the SSHCP, would reduce the potential for impacts to special-status species to a **less than significant** level.

MITIGATION MEASURE(S)

Mitigation Measure 3.3-3: *The Project proponent shall implement the following SSHCP AMMs to the satisfaction of the City to avoid direct and indirect effects of Covered Activities on western spadefoot:*

- *AMM WS-1 (Western Spadefoot Work Window): Ground-disturbing Covered Activities shall occur outside the breeding and dispersal season (after May 15 and before October 15), to the maximum extent practicable.*
- *AMM WS-2 (Western Spadefoot Exclusion Fencing): If Covered Activities must be implemented after October 15 and before May 15, exclusion fencing shall be installed around the Project footprint before October 15, and the Project site must be monitored by an approved biologist following rain events. Temporary high visibility construction fencing shall be installed along the edge of work areas, and silt fencing shall be installed immediately behind the temporary high-visibility construction fencing to exclude western spadefoot from entering the construction area. Fencing shall remain in place until all construction activities within the construction area are completed. No Project activities*

shall occur outside the delineated Project footprint. If a western spadefoot is encountered. If a western spadefoot is encountered, refer to WS-6, below.

- *AMM WS-3 (Western Spadefoot Monitoring): If Covered Activities must be implemented in the breeding and dispersal season (after October 15 and before May 15), an approved biologist experienced with western spadefoot identification and behavior shall monitor the Project site, including the integrity of any exclusion fencing. The approved biologist shall be on site daily while construction related activities are taking place, and shall inspect the Project site daily for western spadefoot prior to construction activities. The approved biologist shall also train construction personnel on the required avoidance procedures, exclusion fencing, and protocols in the event that a western spadefoot enters an active construction zone (i.e., outside the buffer zone). If a western spadefoot is encountered, refer to WS-6, below.*
- *AMM WS-4 (Avoid Western Spadefoot Entrapment): If a Covered Activity occurs in western spadefoot modeled habitat (Figure 3-17), all excavated steep-walled holes and trenches more than 6 inches deep shall be covered with plywood (or similar material) or provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each work day or 30 minutes prior to sunset, whichever occurs first. All steep-walled holes and trenches shall be inspected by the approved biologist each morning to ensure that no wildlife has become entrapped. All construction pipes, culverts, similar structures, construction equipment, and construction debris left overnight within western spadefoot modeled habitat shall be inspected for western spadefoot by the approved biologist prior to being moved. If a western spadefoot is encountered, refer to WS-6, below.*
- *AMM WS-5 (Erosion Control Materials in Western Spadefoot Habitat): If erosion control is implemented within western spadefoot modeled habitat, non-entangling erosion control material shall be used to reduce the potential for entrapment. Tightly woven fiber netting (mesh size less than 0.25 inch) or similar material shall be used to ensure that western spadefoots are not trapped (no monofilament). Coconut coir matting and fiber rolls containing burlap are examples of acceptable erosion control materials.*
- *AMM WS-6 (Western Spadefoot Encounter Protocol): If Covered Activities must be implemented during the breeding and dispersal season (after October 15 and before May 15), and a western spadefoot is encountered during construction activities, the approved biologist shall notify the Wildlife Agencies (i.e., the USFWS and CDFW) immediately. Construction activities shall be suspended in a 100-foot radius of the animal until the animal leaves the Project site on its own volition. If necessary, the approved biologist shall notify the Wildlife Agencies to determine the appropriate procedures related to relocation. If the animal is handled, a report shall be submitted, including date(s), location(s), habitat description, and any corrective measures taken to protect the western spadefoot within 1 business day to the Wildlife Agencies. The biologist shall report any take of listed species to the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife immediately. Any worker who inadvertently injures or kills a western spadefoot or who finds dead, injured, or entrapped western spadefoot(s) must immediately report the incident to the approved biologist.*

Impact 3.3-3: The Project has the potential to, directly or indirectly, have a substantial adverse effect through habitat modifications or reductions, cause populations to drop below self-sustaining levels, substantially eliminate a community, or substantially reduce the number of, or restrict the range of, an endangered, rare or threatened species, including those considered candidate, sensitive, or special-status, in local or regional plans, policies, regulations, or by the CDFW or USFWS - Fish (No Impact)

The SSHCP does not include any fish species that are Covered Species. Additionally, the SSHCP does not include any modeled habitat map for species status fish species. Special-status fish that occur within the 9-quad region for the Project site include steelhead - Central Valley DPS. Populations of this species can be found in the Sacramento and San Joaquin Rivers and their tributaries. This species requires aquatic habitat that is free of heavy sedimentation with adequate flow and cool, clear water. Escape cover such as logs, undercut banks, and deep pools are required for spawning adults. Although the Project site contains aquatic habitats, including a headwater tributary of Morrison Creek, seasonal drainages, and wetlands, these on-site aquatic habitats are not suitable for this species. Implementation of the Project would have *no impact* on special-status fish species.

Impact 3.3-4: The Project has the potential to, directly or indirectly, have a substantial adverse effect through habitat modifications or reductions, cause populations to drop below self-sustaining levels, substantially eliminate a community, or substantially reduce the number of, or restrict the range of, an endangered, rare or threatened species, including those considered candidate, sensitive, or special-status, in local or regional plans, policies, regulations, or by the CDFW or USFWS - Birds (Less than Significant with Mitigation)

The SSHCP has nine birds that are Covered Species. These include: Cooper's hawk, ferruginous hawk (*Buteo regalis*), greater sandhill crane (*Grus canadensis tabida*), loggerhead shrike (*Lanius ludovicianus*), northern harrier (*Circus cyaneus*), Swainson's hawk (*Buteo Swainsoni*), tricolored blackbird (*Agelaius tricolor*), western burrowing owl (*Athene cunicularia*), and white-tailed kite (*Elanus leucurus*). Of these nine species, the SSHCP modeled habitat maps (SSHCP Figures 3-20 through 3-28) show that modeled habitat is present within the Project footprint for the seven of the nine Covered Species, including: ferruginous hawk, loggerhead shrike, northern harrier, Swainson's hawk, tricolored blackbird, western burrowing owl, and white-tailed kite. There is no SSHCP modeled habitat for Cooper's hawk or greater sandhill crane within the Project site.

In addition to the nine SSCHP Covered Species, there are nine special-status bird species documented as occurring within the 9-quad region for the Project site. This includes the following species: bald eagle (*Haliaeetus leucocephalus*), bank swallow (*Riparia riparia*), California black rail (*Laterallus jamaicensis coturniculus*), double-crested cormorant (*Phalacrocorax auritus*), golden eagle (*Aquila chrysaetos*), great egret (*Ardea alba*), great blue heron (*Ardea herodias*), grasshopper sparrow (*Ammodramus savannarum*), and merlin (*Falco columbarius*).

In addition to these SSHCP Covered Species and CNDDDB documented species, all nesting raptors and migratory birds known within the region receive special protections. These species are discussed below.

Nesting Raptors (Birds of Prey)

All raptors (owls, hawks, eagles, falcons), including common species, and their nests, are protected from take pursuant to the Fish and Game Code of California Section 3503.5, and the federal MBTA, among other federal and state regulations. Powerlines on the Project site and trees located in the region represent potentially suitable nesting habitat for a variety of special-status raptors. There are no trees located on the Project site. The remainder of the Project site is generally not suitable for nesting raptors other than ground nesters. In general, raptor nesting occurs from late February and early March through late July and early August, depending on various environmental conditions. The field surveys over the past decade, including the latest 2016 survey, did not reveal any evidence of raptor nesting in the powerline towers or ground nesting; however, the Project site provides foraging habitat for most raptors and nesting habitat for a few ground nesting raptors.

Raptors that are documented in the CNDDDB in the regional vicinity, and/or that are SSHCP Covered Species, are discussed individually below.

SSHCP COVERED SPECIES

Cooper's Hawk: Cooper's hawk is a SSHCP Covered Species and is protected by the MBTA and the Fish and Game Code. They prefer open woodland habitat. Nest sites for this species are mainly found in riparian growths of deciduous trees, in canyon bottoms on river flood-plains, and also in live oaks.

The SSHCP Cooper's hawk modeled habitat map (SSHCP Figure 3-20) does not show that modeled habitat for Cooper's hawk is present within the Project footprint or within 300 feet of the Project footprint. The Project site does not contain suitable habitat for this species.

Ferruginous Hawk: Ferruginous hawk is a SSHCP Covered Species and is listed by CDFW as a Watch List species. They prefer open grasslands, sagebrush flats, desert scrub, low foothills, and fringes of pinyon and juniper habitats. This species eats mostly lagomorphs, ground squirrels, and mice.

The SSHCP ferruginous hawk modeled habitat map (SSHCP Figure 3-21) shows that modeled habitat for ferruginous hawk is present within the Project footprint. The field survey revealed that the annual grassland on and surrounding the Project site may provide suitable foraging habitat. Suitable nesting habitat is not present.

Northern Harrier: Northern harrier is a SSHCP Covered Species and is listed by CDFW as a Watch List species. They prefer a variety of open grassland, wetland, and agricultural habitats. Open wetland habitats used for breeding include marshy meadows, wet and lightly grazed pastures, and freshwater and brackish marshes. Northern Harrier breeding habitat also includes dry upland habitats, including grasslands, croplands, drained marshlands, and shrub-steppe in cold deserts. This species is a ground nester.

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The SSHCP northern harrier modeled habitat map (SSHCP Figure 3-24) shows that modeled habitat for northern harrier is present within the Project footprint. The field survey revealed that the annual grassland on and surrounding the Project site may provide suitable foraging and nesting habitat.

Swainson's Hawk: Swainson's hawk is a SSHCP Covered Species and currently listed as threatened in California by the CDFW. Breeding pairs typically nest in tall cottonwoods, valley oaks, or willows associated with riparian corridors, grassland, irrigated pasture, and cropland with a high density of rodents. The Central Valley populations breed and nest in the late spring through early summer before migrating to Central and South America for the winter.

The SSHCP Swainson's hawk modeled habitat map (SSHCP Figure 3-25) shows that modeled habitat for Swainson's hawk is present within the Project footprint. The field survey revealed that the Project site is considered potential foraging habitat for this species since they are known to nest within five miles of the Project site. The nearest recorded nest location is approximately half a mile east of the northeast corner of the Project site.

Western Burrowing Owl: Western burrowing owl is a SSHCP Covered Species and is a CDFW species of special concern. They typically inhabit open grasslands and nest in abandoned ground squirrel burrows, cavities associated with raised mounds, levees, or soft berm features. This species is a ground nester.

The SSHCP western burrowing owl modeled habitat map (SSHCP Figure 3-27) shows that modeled habitat for western burrowing owl is present within the Project footprint. There are also 12 CNDDDB records for this species within five miles of the Project site. The field survey revealed that the Project site contains annual grassland and suitable burrows to support this species.

White-Tailed Kite: White-tailed kite is a SSHCP Covered Species and a CDFW Fully Protected species. This non-migrating bird typically attains a wingspan of approximately 40 inches and feeds primarily on insects, small mammals, reptiles, and amphibians, which it forages from open grasslands. It builds a platform-like nest of sticks in trees or shrubs and lays 3 to 5 eggs, but may brood a second clutch if prey is abundant. The kite's distinct style of hunting includes hovering before diving onto its target.

The SSHCP white-tailed kite modeled habitat map (SSHCP Figure 3-28) shows that modeled habitat for white-tailed kite is present within the Project footprint. There are three CNDDDB records of white-tailed kite documented within five miles of the Project site. One white-tailed kite was observed foraging within the annual grassland during the June 12, 2017 rare plant survey of the Project site. The annual grassland on the Project site provides suitable foraging habitat for this species.

OTHER RAPTOR SPECIES

Bald Eagle: Bald eagle is listed by CDFW as an Endangered species. The breeding range includes the Sierra Nevada, Cascade Range and portions of the Coast Ranges; winter range expands to include most of the state. This species forages primarily in large inland fish-bearing waters with

adjacent large trees or snags and occasionally in uplands with abundant rabbits, other small mammals, or carrion.

The Project site does not contain suitable habitat for this species.

Golden Eagle: Golden eagle is listed by CDFW as a Fully Protected species. The winter range for this species spans most of California; the breeding range excludes the Central Valley floor. This species nests in cliffs, rocky outcrops, and large trees. Golden eagles typically forage in a variety of open habitats, including grassland, shrubland, and cropland

There is one CNDDDB record of golden eagle nest documented within five miles of the Project site. No golden eagles were observed during previous site visits. Given the territory size of foraging golden eagles, the site could potentially be within the nesting pair's foraging territory. The annual grassland on-site provides suitable foraging habitat for golden eagle; however, there is not suitable nesting habitat for golden eagles on-site.

Merlin: The Merlin is a CDFW species of special concern that has never been observed nesting in California. Though it is a transient throughout most of the state, wintering populations are known to occur in the Central Valley and along the coast.

The annual grassland on and surrounding the Project site may provide suitable foraging habitat for this species. This species does not nest in the region.

Nesting Passerine Birds (Songbirds)

There is limited nesting habitat present on the Project site for songbirds. The annual grasslands with aquatic features scattered throughout the Project site provide some foraging habitat for nesting passerine birds. Tricolored blackbird and loggerhead shrike are covered by the SSHCP. Additionally, the following birds are discussed further below: bank swallow and grasshopper sparrows. Development of the Project site would remove potential habitat.

SSHCP COVERED SPECIES

Tricolored Blackbird: Tricolored blackbirds is a SSHCP Covered Species and is listed by CDFW as a Threatened species. During the breeding season, tricolored blackbirds typically nest in dense colonies (some estimated as having 200,000+ nests), with males defending small territories and mating with one to four females. Studies have shown that nesting colonies are often located in seasonal wetlands with tules and cattails present. More recent studies indicate that nesting colonies are also regularly found in Himalayan blackberries (*Rubus discolor*) and grain fields. Other substrates where they have been observed nesting include giant European reed (*Arundo donax*), safflower (*Carthamus tinctorius*), tamarisk (*Tamarix* spp.), elderberry (*Sambucus* spp.), poison-oak (*Toxicodendron diversilobum*), and riparian scrublands and forests (e.g., *Salix*, *Populus*, and *Fraxinus* spp.).

Tricolored blackbird foraging habitats in all seasons include annual grasslands, wet and dry vernal pools and other seasonal wetlands, agricultural fields (such as large tracts of alfalfa and pastures with continuous haying schedules, and recently tilled fields), cattle feedlots, and dairies. They also forage occasionally in Mixed Riparian Scrub habitats along marsh borders. Weed-free row crops,

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intensively managed vineyards, and orchards do not serve as regular foraging sites (Beedy and Hamilton 1997, 1999; DeHaven 2000).

The SSHCP tricolored blackbird modeled habitat map (SSHCP Figure 3-26) shows that modeled habitat for tricolored blackbird is present within the Project footprint. The annual grassland on the Project site provides suitable foraging habitat for this species. The aquatic habitat on the Project site does not provide suitable nesting habitat for this species.

Loggerhead Shrike: loggerhead shrike is a SSHCP Covered Species and is listed by CDFW as a species of special concern. Loggerhead shrikes occur in dry, open habitats including grasslands, pastures with fence rows, agricultural fields, open woodlands (savannas), scrub, and riparian areas. They inhabit open areas with clear visibility for hunting, perches for scanning, and scattered small trees and large shrubs for nesting. Loggerhead shrikes typically avoid completely treeless and shrubless areas (Cade and Woods 1997), as well as urbanized and densely wooded areas (Grinnell and Miller 1944). Winter foraging habitat is similar to summer breeding and foraging habitat; however, shrikes also use idle pastures and hayfields during the winter (Bartgis 1992).

The SSHCP loggerhead shrike modeled habitat map (SSHCP Figure 3-23) shows that modeled habitat for loggerhead shrike is present within the Project footprint. The annual grassland on the Project site provides suitable foraging habitat for this species.

OTHER SPECIES

Bank Swallow: Bank swallow is listed by CDFW as a Threatened species. They typically prefer to nest along banks or bluffs along rivers or coastal areas. This species also prefers low gradient and meandering rivers or bodies of water.

The Project site does not contain suitable habitat for this species.

Grasshopper Sparrow: Grasshopper sparrows are listed by CDFW as a species of special concern due to declining populations in the Great Central Valley of California. They prefer open grasslands with barren ground for foraging, and tend to be found in areas with vegetation and scrub cover especially in grasslands and prairies.

The annual grassland on and surrounding the Project site may provide suitable nesting and foraging habitat.

Shore/Water Birds

Colonial nesting water birds, such as double-crested cormorant, great blue heron, and great egret, among others, are considered sensitive species. These species are not formally listed and protected pursuant to either the state or federal Endangered Species Acts and are not SSHCP Covered Species. However, these species are of stated interest to CDFW and are protected by the MBTA. The colonial nesting water birds documented within the region are discussed individually below.

Double-Crested Cormorant: Double-crested cormorant are protected by the MBTA. They are colonial nesters which prefer to nest on coastal cliffs, offshore islands, and along lake margins in

the interior of the state. This species nests along coast on sequestered islets, usually on ground with sloping surface, or in tall trees along lake margins.

The Project site does not contain suitable habitat for this species.

Great Egret: Great egret are protected by the MBTA. These colonial nesters prefer to nest in large trees. Rookery sites are typically located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.

The grassland of the Project site provides foraging habitat for this species. There is no nesting habitat within the Project site.

Great Blue Heron: Great blue heron are protected by the MBTA. These colonial nesters prefer to nest in tall trees, cliffsides, and sequestered spots on marshes. Rookery sites are typically located in close proximity to foraging areas, which include marshes, lake margins, tide-flats, rivers and streams, wet meadows

The grassland of the Project site provides foraging habitat for this species and this species was observed flying over the Project site during the June 12, 2017, rare plant survey. However, there is no nesting habitat within the Project site.

Other Sensitive Birds (Gruiformes)

The term “Gruiformes” means “crane-like” and there are a considerable number of Gruiformes bird families with a widespread geographical diversity. Greater sandhill crane (*Grus canadensis tabida*) is an SSHCP Covered Species. Additionally, as discussed below, there is some suitable habitat (seasonal wetlands and drainages) on the Project site for California black rail (*Laterallus jamaicensis coturniculus*). The development of the Project site would remove this habitat.

SSHCP COVERED SPECIES

Greater Sandhill Crane: Greater sandhill crane is listed as a CDFW threatened species, and is a SSHCP Covered Species. Greater sandhill cranes winter and use open agricultural habitats, natural vegetation communities, and seasonally managed wetlands. After the onset of winter rains, sandhill cranes begin foraging for invertebrates by probing soils in grassland habitats and overturning cattle dung. They also hunt for mice in taller grassland vegetation. They appear to avoid grassland habitats when vegetation exceeds 10 inches. Invertebrates are also consumed in natural and managed seasonal wetlands.

The SSHCP greater sandhill crane modeled habitat map (SSHCP Figure 3-20) does not show that modeled habitat for greater sandhill crane is present within the Project footprint or within 300 feet of the Project footprint. The Project site does not contain suitable habitat for this species.

OTHER SPECIES

California Black Rail: California black rail are listed by CDFW as a Threatened species. They inhabit freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. This species requires water depths of about one inch that do not fluctuate during the year and dense vegetation for nesting habitat.

The aquatic habitat on the Project site is seasonally dry and is not optimal for this species. The Project site does not provide suitable habitat for this species.

Conclusion

Several bird species discussed above are protected under federal, state, or local regulations, and several are Covered Species under the SSHCP. The Project design includes an on-site preserve that would protect approximately 199.5 acres of habitat. Nevertheless, the Project would result in the removal of approximately 330 acres of suitable foraging habitat for a variety of special-status birds discussed above. Vegetation clearing activities could impact ground nesting birds. In addition, noise and vibration associated with construction activities could result in nest abandonment if active nesting were to occur during construction. This is a **potentially significant** impact.

As previously discussed, the Project proponent intends to obtain coverage for their activities under the City's ITP. Mitigation Measure 3.3-1 provides the requirement to submit a SSHCP permit application package to the City as a request that the incidental take coverage provided by the City's SSHCP ITP be extended to the proposed activities. All relevant SSHCP AMMs will be required and the Project proponent shall be responsible for paying all SSHCP development fees associated with obtaining coverage. A portion of those fees are then used to purchase habitat land as compensatory mitigation for the loss of habitat. The Project also includes a 199.5 acre preserve; however, credit for the preserve is subject to the review and approval of the City.

Mitigation Measures 3.3-4 through 3.7, included below, include AMMs that are specifically presented for special-status birds. It is noted, however, that before construction begins, the SSHCP requires that the Project proponent demonstrate to the City that all necessary AMMs will be fulfilled. Additionally, Mitigation Measure 3.3-8, included below, requires preconstruction surveys for other protected bird species.

The below Mitigation Measures would result in compensatory mitigation for the loss of habitat, and would avoid or minimize impacts to protected species to the extent feasible. Implementation of the Project, with the below mitigation measures and consistency with the SSHCP, would reduce the potential for impacts to special-status species to a **less than significant** level.

MITIGATION MEASURE(S)

Mitigation Measure 3.3-4: *The Project proponent shall implement the following SSHCP AMMs to the satisfaction of the City to avoid direct and indirect effects of Covered Activities on tricolored blackbird:*

- *AMM TCB-1 (Tricolored Blackbird Surveys): If modeled habitat for tricolored blackbird is present within a Covered Activity's Project footprint or within 500 feet of a project footprint, then an approved biologist shall conduct a field investigation to determine if existing or potential nesting or foraging sites are present within the Project footprint and adjacent areas within 500 feet of the Project footprint. Adjacent parcels under different land ownership shall be surveyed only if access is granted or if the parcels are visible from authorized areas. Within the Plan Area, potential tricolor blackbird nest sites are often associated with freshwater marsh and seasonal wetlands, or in thickets of willow,*

blackberry, wild rose, thistle, and other thorny vegetation. Tricolored blackbirds are also known to nest in crops associated with dairy farms. Foraging habitat is associated with annual grasslands, wet and dry vernal pools and other seasonal wetlands, agricultural fields (such as large tracts of alfalfa and pastures with continuous haying schedules and recently tilled fields), cattle feedlots, and dairies. The Third-Party Project Proponent shall map all existing or potential nesting or foraging sites and provide these maps to the Local Land Use Permittees (i.e., City of Rancho Cordova) and Implementing Entity (i.e., the South Sacramento Conservation Agency). Nesting sites must also be noted on plans that are submitted to a Local Land Use Permittee. See Chapter 10 of the SSHCP for the process to conduct and submit survey information.

- *AMM TCB-2 (Tricolored Blackbird Pre-Construction Surveys): Pre-construction surveys shall be required to determine if active nests are present within a project footprint or within 500 feet of a project footprint if existing or potential nest sites were found during design surveys and construction activities shall occur during the breeding season (March 1 through September 15). An approved biologist shall conduct pre-construction surveys within 30 days and within 3 days of ground-disturbing activities, and within the Project footprint and 500 feet of the Project footprint to determine the presence of nesting tricolored blackbird. Pre-construction surveys shall be conducted during the breeding season (March 1 through August 31). Surveys conducted in February (to meet pre-construction survey requirements for work starting in March) must be conducted within 14 days and 3 days in advance of ground-disturbing activities. If a nest is present, then TCB-3 and TCB-4 shall be implemented. The approved biologist shall inform the Land Use Authority Permittee and the Implementing Entity of species locations, and they in turn shall notify the Wildlife Agencies (i.e., the USFWS and CDFW).*
- *AMM TCB-3 (Tricolored Blackbird Nest Buffer): If active nests are found within the Project footprint or within 500 feet of any Project -related Covered Activity, the Third-Party Project Proponent shall establish a 500-foot temporary buffer around the active nest until the young have fledged.*
- *AMM TCB-4 (Tricolored Blackbird Nest Buffer Monitoring): If nesting tricolored blackbirds are present within the Project footprint or within 500 feet of any Project-related Covered Activity, then an approved biologist experienced with tricolored blackbird behavior shall be retained by the Third-Party Project Proponent to monitor the nest throughout the nesting season and to determine when the young have fledged. The approved biologist shall be on site daily while construction-related activities are taking place near the disturbance buffer. Work within the nest disturbance buffer shall not be permitted. If the approved biologist determines that tricolored blackbirds 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 tricolored blackbirds. If the biologist determines that the colonies are at risk, a meeting with the Third-Party Project Proponent, Implementing Entity, and Wildlife Agencies shall be held to determine the best course of action to avoid nest abandonment or take of individuals. The approved biologist shall also train construction personnel on the required avoidance procedures, buffer zones, and protocols in the event*

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that a tricolored blackbird flies into an active construction zone (i.e., outside the buffer zone).

- AMM TCB-5 (*Timing of Pesticide Use and Harvest Timing on Agricultural Preserves*): On SSHCP Agricultural Preserves, pesticides (including herbicides) shall not be applied from January 1 through July 15.

Mitigation Measure 3.3-5: *The Project proponent shall implement the following SSHCP AMMs to the satisfaction of the City to avoid direct and indirect effects of Covered Activities on Swainson's hawk:*

- AMM SWHA-1 (*Swainson's Hawk Surveys*): *If modeled habitat for Swainson's hawk (Figure 3-25) is present within a Covered Activity's Project footprint or within 0.25 mile of a Project footprint, then an approved biologist shall conduct a survey to determine if existing or potential nesting sites are present within the Project footprint and adjacent areas within 0.25 mile of the Project footprint. Adjacent parcels under different land ownership shall be surveyed only if access is granted or if the parcels are visible from authorized areas. Nest sites are often associated with Riparian land cover, but also include lone trees in fields, trees along roadways, and trees around structures. Nest trees may include, but are not limited to, Fremont's cottonwood (*Populus fremontii*), oaks (*Quercus spp.*), willows (*Salix spp.*), walnuts (*Juglans spp.*), eucalyptus (*Eucalyptus spp.*), pines (*Pinus spp.*), and Deodar cedar (*Cedrus deodara*). The Third-Party Project Proponent shall map all existing and potential nesting sites and provide these maps to the Local Land Use Permittees (i.e., City of Rancho Cordova) and Implementing Entity (i.e., the South Sacramento Conservation Agency). Nesting sites must also be noted on plans that are submitted to a Local Land Use Permittee. See Chapter 10 for the process to conduct and submit survey information.*
- AMM SWHA-2 (*Swainson's Hawk Pre-Construction Surveys*): *Pre-construction surveys shall be required to determine if active nests are present within a Project footprint or within 0.25 mile of a Project footprint if existing or potential nest sites were found during initial surveys and construction activities shall occur during the breeding season (March 1 through September 15). An approved biologist shall conduct pre-construction surveys within 30 days and 3 days of ground-disturbing activities to determine presence of nesting Swainson's hawk. Pre-construction surveys shall be conducted during the breeding season (March 1 through September 15). If a nest is present, then SWHA-3 and SWHA-4 shall be implemented. The approved biologist shall inform the Land Use Authority Permittee and Implementing Entity of species locations, and they in turn shall notify the Wildlife Agencies (i.e., the USFWS and CDFW).*
- AMM SWHA-3 (*Swainson's Hawk Nest Buffer*): *If active nests are found within the Project footprint or within 0.25 mile of any Project-related Covered Activity, the Third-Party Project Proponent shall establish a 0.25 mile disturbance buffer around the active nest until the young have fledged, with concurrence from the Wildlife Agencies.*
- AMM SWHA-4 (*Swainson's Hawk Nest Buffer Monitoring*): *If nesting Swainson's hawks are present within the Project footprint or within 0.25 mile of any Project-related Covered Activity, then an approved biologist experienced with Swainson's hawk behavior shall be retained by the Third-Party Project Proponent to monitor the nest throughout the nesting*

season and to determine when the young have fledged. The approved biologist shall be on site daily while construction-related activities are taking place within the buffer. Work within the temporary nest disturbance buffer can occur with the written permission of the Implementing Entity and Wildlife Agencies. If nesting Swainson's hawks begin to exhibit agitated behavior, such as defensive flights at intruders, getting up from a brooding position, or flying off the nest, the approved biologist shall have the authority to shut down construction activities. If agitated behavior is exhibited, the biologist, Third-Party Project Proponent, Implementing Entity, and Wildlife Agencies shall meet to determine the best course of action to avoid nest abandonment or take of individuals. The approved biologist shall also train construction personnel on the required avoidance procedures, buffer zones, and protocols in the event that a Swainson's hawk flies into an active construction zone (i.e., outside the buffer zone).

Mitigation Measure 3.3-6: The Project proponent shall implement the following SSHCP AMMs to the satisfaction of the City to avoid direct and indirect effects of Covered Activities on western burrowing owl:

- **AMM WBO-1 (Western Burrowing Owl Surveys):** Surveys within modeled habitat are required for both the breeding and non-breeding season. If the Project site falls within modeled habitat, an approved biologist shall survey the Project site and map all burrows, noting any burrows that may be occupied. Occupied burrows are often (but not always) indicated by tracks, feathers, egg shell fragments, pellets, prey remains, and/or excrement. Surveying and mapping shall be conducted by the approved biologist while walking transects throughout the entire Project site plus all accessible areas within a 250-foot radius from the Project site. The centerline of these transects shall be no more than 50 feet apart and shall vary in width to account for changes in terrain and vegetation that can preclude complete visual coverage of the area. For example, in hilly terrain with patches of tall grass, transects shall be closer together, and in open areas with little vegetation, they can be 50 feet apart. This methodology is consistent with current survey protocols for this species (California Burrowing Owl Consortium 1993). Adjacent parcels under different land ownership shall be surveyed only if access is granted or if the parcels are visible from authorized areas. If suitable habitat is identified during the initial survey, and if the Project does not fully avoid the habitat, pre-construction surveys shall be required. Burrowing owl habitat is fully avoided if Project-related activities do not impinge on a 250-foot buffer established by the approved biologist around suitable burrows. See Chapter 10 for the process to conduct and submit survey information.
- **AMM WBO-2 (Western Burrowing Owl Pre-Construction Surveys):** Prior to any Covered Activity ground disturbance, an approved biologist shall conduct pre-construction surveys in all areas that were identified as suitable habitat during the initial surveys. The purpose of the pre-construction surveys is to document the presence or absence of burrowing owls on the Project site, particularly in areas within 250 feet of construction activities. To maximize the likelihood of detecting owls, the pre-construction survey shall last a minimum of 3 hours. The survey shall begin 1 hour before sunrise and continue until 2 hours after sunrise (3 hours total), or begin 2 hours before sunset and continue until 1 hour after

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sunset. Additional time may be required for large project sites. A minimum of two pre-construction surveys shall be conducted (if owls are detected on the first survey, a second survey is not needed). All owls observed shall be counted and their location shall be mapped. Surveys shall conclude no more than 2 calendar days prior to construction. Therefore, the Third-Party Project Proponent must begin surveys no more than 4 days prior to construction (2 days of surveying plus up to 2 days between surveys and construction). To avoid last-minute changes in schedule or contracting that may occur if burrowing owls are found, the Third-Party Project Proponent may also conduct a preliminary survey up to 15 days before construction. This preliminary survey may count as the first of the two required surveys as long as the second survey concludes no more than 2 calendar days in advance of construction.

- *AMM WBO-3 (Burrowing Owl Avoidance): If western burrowing owl or evidence of western burrowing owl is observed on the Project site or within 250 feet of the Project site during pre-construction surveys, then the following shall occur:*

***During Breeding Season:** If the approved biologist finds evidence of western burrowing owls within a Project site during the breeding season (February 1 through August 31), all Project-related activities shall avoid nest sites during the remainder of the breeding season or while the nest remains occupied by adults or young (nest occupation includes individuals or family groups foraging on or near the site following fledging). Avoidance is establishment of a minimum 250-foot buffer zone around nests. Construction and other Project-related activities may occur outside of the 250-foot buffer zone. Construction and other Project-related activities may be allowed inside of the 250-foot non-disturbance buffer during the breeding season if the nest is not disturbed, and the Third-Party Project Proponent develops an avoidance, minimization, and monitoring plan that is approved by the Implementing Entity (i.e., the South Sacramento Conservation Agency) and Wildlife Agencies (i.e., the USFWS and CDFW) prior to Project construction based on the following criteria:*

- *The Implementing Entity (i.e., the South Sacramento Conservation Agency) and Wildlife Agencies (i.e., the USFWS and CDFW) approve of the avoidance and minimization plan provided by the Project applicant.*
- *An approved biologist monitors the owls for at least 3 days prior to construction to determine baseline nesting and foraging behavior (i.e., behavior without construction).*
- *The same approved biologist monitors the owls during construction and finds no change in owl nesting and foraging behavior in response to construction activities.*

If there is any change in owl nesting and foraging behavior as a result of construction activities, the approved biologist shall have authority to shut down activities within the 250-foot buffer. Construction cannot resume within the 250-foot buffer until any owls present are no longer affected by nearby construction activities, and with written concurrence from the Wildlife Agencies.

If monitoring by the approved biologist indicates that the nest is abandoned prior to the end of nesting season and the burrow is no longer in use, the non-disturbance buffer zone may be removed if approved by the Wildlife Agencies. The approved biologist shall excavate the burrow in accordance with the latest California Department of Fish and Wildlife guidelines for burrowing owl to prevent reoccupation after receiving approval from the Wildlife Agencies.

The Implementing Entity and Wildlife Agencies shall respond to a request from the Third-Party Project Proponent to review the proposed construction monitoring plan within 21 days.

During Non-Breeding Season: *During the non-breeding season (September 1 through January 31), the approved biologist shall establish a minimum 250-foot non-disturbance buffer around occupied burrows. Construction activities outside of this 250-foot buffer shall be allowed. Construction activities within the non-disturbance buffer shall be allowed if the following criteria are met to prevent owls from abandoning overwintering sites:*

- An approved biologist monitors the owls for at least 3 days prior to construction to determine baseline foraging behavior (i.e., behavior without construction).*
- The same approved biologist monitors the owls during construction and finds no change in owl foraging behavior in response to construction activities.*
- If there is any change in owl foraging behavior as a result of construction activities, the approved biologist shall have authority to shut down activities within the 250-foot buffer.*
- If the owls are gone for at least 1 week, the Third-Party Project Proponent may request approval from the Implementing Entity (i.e., the South Sacramento Conservation Agency) and Wildlife Agencies (i.e., the USFWS and CDFW) that an approved biologist excavate usable burrows and install one-way exclusionary devices to prevent owls from re-occupying the site. After all usable burrows are excavated, the buffer zone shall be removed and construction may continue.*

Monitoring must continue as described above for the non-breeding season as long as the burrow remains active.

- AMM WBO-4 (Burrowing Owl Construction Monitoring): During construction of Covered Activities, 250-foot construction buffer zones shall be established and maintained around any occupied burrow. An approved biologist shall monitor the site to ensure that buffers are enforced and owls are not disturbed. The approved biologist shall also train construction personnel on avoidance procedures, buffer zones, and protocols in the event that a burrowing owl flies into an active construction zone.*
- AMM WBO-5 (Burrowing Owl Passive Relocation): Passive relocation is not allowed without the express written approval of the Wildlife Agencies. Passive owl relocation may be allowed on a case-by-case basis on project sites during the non-breeding season (September 1 through January 31) with the written approval of the Wildlife Agencies if the other measures described in this condition preclude work from continuing. Passive*

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relocation must be done in accordance with the latest California Department of Fish and Wildlife guidelines for burrowing owl. Passive relocation shall only be proposed if the burrow needing to be removed or with the potential to collapse from construction activities is the result of a Covered Activity. If passive relocation is approved by the Wildlife Agencies, an approved biologist can passively exclude birds from their burrows during the non-breeding season by installing one-way doors in burrow entrances. These doors shall be in place for 48 hours to ensure that owls have left the burrow, and then the biologist shall excavate the burrow to prevent reoccupation. Burrows shall be excavated using hand tools only. During excavation, an escape route shall be maintained at all times. This may include inserting an artificial structure into the burrow to avoid having materials collapse into the burrow and trap owls inside. Other methods of passive relocation, based on best available science, may be approved by the Wildlife Agencies over the 50-year Permit Term.

- *AMM WBO-6 (Burrowing Owl Timing of Maintenance Activities): All activities adjacent to existing or planned Preserves, Preserve Setbacks, or Stream Setback areas shall be seasonally timed, when safety permits, to avoid or minimize adverse effects on occupied burrows.*
- *AMM WBO-7 (Rodent Control): Rodent control shall be allowed only in developed portions of a Covered Activity Project site within western burrowing owl modeled habitat. Where rodent control is allowed, the method of rodent control shall comply with the methods of rodent control discussed in the 4(d) Rule published in the U.S. Fish and Wildlife Service's (2004) final listing rule for tiger salamander.*

Mitigation Measure 3.3-7: *The Project proponent shall implement the following SSHCP AMMs to the satisfaction of the City to avoid direct and indirect effects on covered raptor species. This measure applies to loggerhead shrike (*Lanius ludovicianus*), northern harrier (*Circus cyaneus*), and white-tailed kite (*Elanus leucurus*). The following AMMs do not apply to ferruginous hawk (*Buteo regalis*), as they do not nest in the Plan Area. The following AMMs also do not apply to Swainson's hawk or burrowing owl, as specific AMMs have been developed for these covered raptor species and are included in separate mitigation measures.*

- *AMM RAPTOR-1 (Raptor Surveys): An approved biologist shall conduct a field investigation to determine if existing or potential nesting sites are present within the Project footprint and adjacent areas within 0.25 mile of the Project footprint. Adjacent parcels under different land ownership shall be surveyed only if access is granted or if the parcels are visible from authorized areas. The Project proponent shall map all existing or potential nesting sites and provide these maps to the Local Land Use Permittees (i.e., City of Rancho Cordova) and Implementing Entity (i.e., the South Sacramento Conservation Agency). Nesting sites must also be noted on plans that are submitted to a Local Land Use Permittee. See Chapter 10 for the process to conduct and submit survey information.*
- *AMM RAPTOR-2 (Raptor Pre-Construction Surveys): Pre-construction surveys shall be required to determine if active nests are present with a Project footprint or within 0.25 mile of a Project footprint if existing or potential nest sites are found during initial surveys and construction activities shall occur during the raptor breeding season. An approved biologist shall conduct pre-construction surveys within 30 days and 3 days of ground disturbing*

activities within the Project footprint and within 0.25 mile of the Project footprint to determine presence of nesting covered raptor species. Preconstruction surveys shall be conducted during the raptor breeding season. If a nest is present, then RAPTOR-3 and RAPTOR-4 shall be implemented. The approved biologist shall inform the Land Use Authority Permittee and Implementing Entity of species locations, and they in turn shall notify the Wildlife Agencies.

- *AMM RAPTOR-3 (Raptor Nest/Roost Buffer): If active nests are found within the Project footprint or within 0.25 mile of any Project-related Covered Activity, the Third-Party Project Proponent shall establish a 0.25 mile temporary nest disturbance buffer around the active nest until the young have fledged.*
- *AMM RAPTOR-4 (Raptor Nest/Roost Buffer Monitoring): If Project-related Covered Activities within the temporary nest disturbance buffer are determined to be necessary during the nesting season, then an approved biologist experienced with raptor behavior shall be retained by the Third-Party Project Proponent to monitor the nest throughout the nesting season and to determine when the young have fledged. The approved biologist shall be on site daily while construction-related activities are taking place within the disturbance buffer. Work within the temporary nest disturbance buffer can occur with the written permission of the Implementing Entity and Wildlife Agencies. If nesting raptors begin to exhibit agitated behavior, such as defensive flights at intruders, getting up from a brooding position, or flying off the nest, the approved biologist/monitor shall have the authority to shut down construction activities. If agitated behavior is exhibited, the biologist, Third-Party Project Proponent, Implementing Entity, and Wildlife Agencies shall meet to determine the best course of action to avoid nest abandonment or take of individuals. The approved biologist shall also train construction personnel on the required avoidance procedures, buffer zones, and protocols in the event that a covered raptor species flies into an active construction zone (i.e., outside the buffer zone).*

Mitigation Measure 3.3-8: *The Project proponent shall implement the following measure to avoid or minimize impacts on other protected bird species that may occur on the site:*

- *Prior to any ground disturbance a pre-construction survey for protected bird species shall be completed. This survey shall be conducted in the morning or evening hours within 30 days prior to any construction activities. The entire site shall be surveyed for birds, nests and nesting behavior. Common nesting behavior by birds includes; collecting nesting materials, bringing food items to a nest and vocalizations from young or from adults to attract a mate and to establish or defend a nesting territory. A construction-free buffer of suitable dimensions must be established around any active migratory bird nests (up to 250 feet, depending on the location and species) for the duration of the Project or until it has been determined that the chicks have fledged and are independent of their parents.*

Impact 3.3-5: The Project has the potential to, directly or indirectly, have a substantial adverse effect through habitat modifications or reductions, cause populations to drop below self-sustaining levels, substantially eliminate a community, or substantially reduce the number of, or restrict the range of, an endangered, rare or threatened species, including those considered candidate, sensitive, or special-status, in local or regional plans, policies, regulations, or by the CDFW or USFWS - Mammals (Less than Significant with Mitigation)

Special-status mammals that occur within the 9-quad region for the Project site include: American badger and pallid bat (*Antrozous pallidus*). Additionally, western red bat is a SSHCP Covered Species. These species, among others, are discussed below.

SSHCP COVERED SPECIES

American Badger: American badger is a SSHCP Covered Species and is a listed CDFW species of special concern. This burrowing carnivorous mammal is solitary and very territorial preferring to feed on small mammals, lizards, snakes, insects, and carrion. It has no known natural enemies and inhabits dry, open fields, grasslands, and pastures.

The SSHCP American badger modeled habitat map (SSHCP Figure 3-29) shows that modeled habitat for American badger is present within the Project footprint. There are no CNDDDB records for this species within five miles of the Project site. The annual grassland and burrows provide marginal habitat for this species given the lack of sandy soils within the Project site.

Western Red Bat: Western red bat is a SSHCP Covered Species and is a CDFW species of special concern. Western red bat roosts in the foliage of large shrubs and trees in habitats bordering forests, rivers, agricultural areas, and urban areas (Harvey et al. 1999). Roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas with mature trees. Foraging has been noted in habitats such as mature orchards, oak woodland, low elevation conifer forest, and non-native trees in urban and rural residential areas. In addition, this species may forage in habitats adjacent to streams and rivers that do not provide roosting habitat. Water features are a vital habitat component because bats often drink immediately after emergence and water is an important source of concentrated insects.

The SSHCP western red bat modeled habitat map (SSHCP Figure 3-30) shows that modeled habitat for western red bat is present within the Project footprint. The annual grassland, especially in the area surrounding the aquatic habitats, provides foraging habitat for this bat species.

OTHER SPECIES

Special-Status Bats: The Project site is located within the range of several special-status bats, including: Mexican free-tailed bat (*Tadarida brasiliensis*), California mastiff bat (*Eumops perotis californicus*), big brown bat (*Eptesicus fuscus*), Hoary bat (*Lasiurus cinereus*), spotted bat (*Euderma maculatum*), Townsend's big-eared bat (*Corynorhinus townsendii*), pallid bat, western pipistrelle (*Pipistrellus Hesperus*), small-footed myotis/bat (*Myotis ciliolabrum*), long-eared myotis/bat

(*Myotis evotis*), California myotis (*Myotis californicus*), long-legged myotis/bat (*Myotis volans*), Yuma myotis/bat (*Myotis yumanensis*), and little brown bat (*Myotis lucifugus*). These species are not federal or state listed; however, most of them are considered species of special concern and/or are tracked by the CNDDDB. Bats are found in a variety of habitats in the region, including buildings, bridges, mines, caves, tree cavities, under bark or rocks, etc. There are no CNDDDB records for these species within five miles of the Project site. No bat species were observed roosting during site visits. The annual grassland provides foraging habitat for bat species.

CONCLUSION

The Project site is largely undeveloped and has been previously used for agricultural uses. Although the potential for these special-status mammal species to be found on the Project site is low, the Project site provides marginally suitable habitat to support foraging and movement of these special-status mammals, including bats. This is a **potentially significant** impact.

As previously discussed, the Project proponent intends to obtain coverage for their activities under the City's ITP. Mitigation Measure 3.3-1 provides the requirement to submit a SSHCP permit application package to the City as a request that the incidental take coverage provided by the City's SSHCP ITP be extended to the proposed activities. All relevant SSHCP AMMs will be required and the Project proponent shall be responsible for paying all SSHCP development fees associated with obtaining coverage. A portion of those fees are then used to purchase habitat land as compensatory mitigation for the loss of habitat. The Project also includes a 199.5 acre preserve; however, credit for the preserve is subject to the review and approval of the City.

Mitigation Measures 3.3-9 and 3.3-10 include AMMs that are specifically presented for special-status bats and American badger. It is noted, however, that before construction begins, the SSHCP requires that the Project proponent demonstrate to the City that all necessary AMMs will be fulfilled.

The below mitigation measures would result in compensatory mitigation for the loss of habitat, and would avoid or minimize impacts to protected species to the extent feasible. Implementation of the Project, with the above mitigation measures and consistency with the SSHCP, would reduce the potential for impacts to special-status species to a **less than significant** level.

MITIGATION MEASURE(S)

Mitigation Measure 3.3-9: *The Project proponent shall implement the following SSHCP AMMs to the satisfaction of the City to avoid or minimize impacts on protected bat species that may occur on the site:*

- *AMM BAT-1 (Winter Hibernaculum Surveys): An approved biologist shall conduct a field investigation of the Project footprint and adjacent areas within 300 feet of a Project footprint to determine if a potential winter hibernaculum is present, and to identify and map potential hibernaculum sites. Adjacent parcels under different land ownership shall be surveyed only if access is granted or if the parcels are visible from authorized areas. If potential hibernaculum sites are found, the Project proponent shall note their locations on Project designs and shall design the Project to avoid all areas within a 300-foot buffer*

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around the potential hibernaculum sites. Winter hibernaculum habitat is fully avoided if Project-related activities do not impinge on a 300-foot buffer established by the approved biologist around an existing or potential winter hibernaculum site.

- *AMM BAT-2 (Winter Hibernaculum Pre-Construction Surveys): If the Project proponent elects not to avoid potential winter hibernaculum sites within the Project footprint plus a 300-foot buffer, additional surveys are required. Prior to any ground disturbance related to Covered Activities, an approved biologist shall conduct a preconstruction survey within 3 days of ground-disturbing activities within the Project footprint and 300 feet of the Project footprint to determine the presence of winter hibernaculum sites. Pre-construction surveys shall be conducted during the winter hibernaculum season (November 1 through March 31). If a winter hibernaculum is present, then BAT-3 and BAT-4 shall be implemented. The approved biologist shall inform the City of Rancho Cordova and Implementing Entity (i.e., the South Sacramento Conservation Agency) of species locations, and they in turn shall notify the Wildlife Agencies (i.e., the USFWS and CDFW).*
- *AMM BAT-3 (Winter Hibernaculum Buffer): If active winter hibernaculum sites are found within the Project footprint or within 300 feet of the Project footprint, the Project proponent shall establish a 300-foot temporary disturbance buffer around the active winter hibernaculum site until bats have vacated the hibernaculum and the Implementing Entity and Wildlife Agencies concur.*
- *AMM BAT-4 (Bat Eviction Methods): An approved biologist shall determine if non-maternity and non-hibernaculum day and night roosts are present on the Project site. If necessary, an approved biologist shall use safe eviction methods to remove bats if direct impacts to non-maternity and non-hibernaculum day and night roosts cannot be avoided. If a winter hibernaculum site is present, Covered Activities shall not occur until the hibernaculum is vacated, or, if necessary, safely evicted using methods acceptable to the Wildlife Agencies.*

Mitigation Measure 3.3-10: *The Project proponent shall implement the following measure to avoid or minimize impacts on American badger that may occur on the site:*

- *A qualified biologist shall conduct a pre-construction survey for American badger within 14 days prior to the start of ground disturbance. If no American badgers are observed, then a letter report documenting the results of the survey shall be provided to the Project proponent for their records, and no additional measures are recommended. If construction does not commence within 14 days of the preconstruction survey, or halts for more than 14 days, a new survey is required. The results of the survey shall be submitted to the City's Planning Department.*
- *If American badgers or their dens are found during the survey, additional avoidance measures shall be implemented, including having a qualified biologist conduct a pre-construction survey within 24 hours prior to commencement of construction activities, performing a Worker Awareness Training to all construction workers, and being present on the Project site during grading activities for the purpose of temporarily halting construction activities until the biologist determines that the badger has left the construction footprint*

on its own accord. The results of the survey shall be submitted to the City's Planning Department.

Impact 3.3-6: The Project has the potential to, directly or indirectly, have a substantial adverse effect through habitat modifications or reductions, cause populations to drop below self-sustaining levels, substantially eliminate a community, or substantially reduce the number of, or restrict the range of, an endangered, rare or threatened species, including those considered candidate, sensitive, or special-status, in local or regional plans, policies, regulations, or by the CDFW or USFWS - Plants (Less Than Significant with Mitigation)

The SSHCP includes eight plants that are Covered Species, including: Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*), Boggs Lake hedge-hyssop, Dwarf downingia (*Downingia pusilla*), Legenere (*Legenere limosa*), pincushion navarretia (*Navarretia myersii* ssp. *myersii*), Sacramento Orcutt grass, Sanford's arrowhead (*Sagittaria sanfordii*), and slender Orcutt grass. The CNDDDB search identified an additional 15 documented special-status plant species within the 9-quad region for the Project site, including: Bisbee Peak rush-rose (*Crocyanthemum suffrutescens*), Brandegee's clarkia (*Clarkia biloba* ssp. *brandegeae*), El Dorado bedstraw (*Galium californicum* ssp. *sierra*), El Dorado County mule ears (*Wyethia reticulata*), hoary navarretia (*Navarretia eriocephala*), lone buckwheat (*Eriogonum apricum* var. *apricum*), lone manzanita (*Arctostaphylos myrtifolia*), Irish Hill buckwheat (*Eriogonum apricum* var. *prostratum*), Layne's ragwort (*Packera layneae*), Parry's horkelia (*Horkelia parryi*), Pine Hill ceanothus (*Ceanothus roderickii*), Pine Hill flannelbush (*Fremontodendron decumbens*), Red Hills soaproot (*Chlorogalum grandiflorum*), stinkbells (*Fritillaria agrestis*), and Tuolumne button-celery (*Eryngium pinnatisectum*).

The SSHCP modeled habitat maps (SSHCP Figure 3-3 through 3-10) show that modeled habitat for seven of the SSHCP Covered Species (plants) is found on-site, including: Ahart's dwarf rush, Boggs Lake hedge-hyssop, Legenere, pincushion navarretia, Sacramento Orcutt grass, Sanford's arrowhead, and slender Orcutt grass. Many of the species identified within the CNDDDB search have no potential to occur. None of these species were observed on the Project site during botanical surveys.

Ground disturbance associated with the Project would result in the temporary disturbance of 0.09 acres and permanent removal of 318.82 acres within SSHCP modeled habitat for eight plants that could potentially occur. Plant surveys did not reveal the presence of any special-status plants within the Project site; however, given the habitat present, there is a future potential for presence during future years. This is a **potentially significant** impact.

As previously discussed, the Project proponent intends to obtain coverage for their activities under the City's ITP. Mitigation Measure 3.3-1 provides the requirement to submit a SSHCP permit application package to the City as a request that the incidental take coverage provided by the City's SSHCP ITP be extended to the proposed activities. All relevant SSHCP AMMs will be required and the Project proponent shall be responsible for paying all SSHCP development fees associated

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with obtaining coverage. A portion of those fees are then used to purchase habitat land as compensatory mitigation for the loss of habitat. The Project also includes a 199.5 acre preserve; however, credit for the preserve is subject to the review and approval of the City.

Mitigation Measure 3.3-11 includes AMMs that are specifically presented for special-status plants. It is noted, however, that before construction begins, the SSHCP requires that the Project proponent demonstrate to the City that all necessary AMMs will be fulfilled.

The below Mitigation Measure would result in compensatory mitigation for the loss of habitat, and would avoid or minimize impacts to protected species to the extent feasible. Implementation of the Project, with the below mitigation measure and consistency with the SSHCP, would reduce the potential for impacts to special-status species to a **less than significant** level.

MITIGATION MEASURE(S)

Mitigation Measure 3.3-11: *The Project proponent shall implement the following SSHCP AMMs to the satisfaction of the City to avoid or minimize impacts on special-status plants that may occur on the site:*

- *AMM PLANT-1 (Rare Plant Surveys): The Project site shall be surveyed for rare plants, specifically including Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*), Dwarf downingia (*Downingia pusilla*), pincushion navarretia (*Navarretia myersii* ssp. *myersii*), and hoary navarretia (*Navarretia eriocephala*), by an approved biologist and following the CDFW rare plant survey protocols (CDF 2009) or the most recent CDFW rare plant survey protocols. An approved biologist will conduct the field surveys and will identify and map plant species occurrences according to the protocols.*
- *AMM PLANT-2 (Rare Plant Protection): If a rare plant listed in AMM PLANT-1 is detected within an area proposed to be disturbed by a Covered Activity or is detected within 250 feet of the area proposed to be disturbed by a Covered Activity, the Implementing Entity (i.e., the South Sacramento Conservation Agency) will assure one unprotected occurrence of the species is protected within a SSHCP Preserve before any ground disturbance occurs at the Project site.*
- *AMM ORCUTT-1 (Orcutt Grass Surveys): The Project site will be surveyed for Sacramento and slender Orcutt grass by an approved biologist following CDFW rare plant survey protocols (CDFG 2009) or most recent CDFW guidelines to determine if Sacramento and/or slender Orcutt grass is present. An approved biologist will conduct the field investigation to identify and map occurrences.*
- *AMM ORCUTT-2 (Orcutt Grass Protection): Where known or new Sacramento or slender Orcutt grass occurrences are found, they will be protected within an SSHCP Preserve that is at least 50 acres. The occurrence will be located interior to the Preserve at a distance of no less than 300 feet from the edge of the Preserve boundary. If a Project proponent encounters a previously undiscovered occurrence of Sacramento or slender Orcutt grass on a Covered Activity Project site, the Project proponent will contact the Implementing Entity or City of Rancho Cordova with authority over the Project, who will coordinate with the*

Wildlife Agencies (i.e., the USFWS and CDFW) for written concurrence of avoidance to ensure that the Project does not cause take of the species.

Impact 3.3-7: The Project has the potential to have substantial adverse effect on federally- or state-protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means (Less than Significant with Mitigation)

The USACE has regulatory responsibility for navigable waters as well as "all other waters such as...streams ...wetlands...and natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce" (33 CFR 323.2) under Section 404 of the CWA. A formal jurisdictional determination must be made by the USACE relative to the protected wetlands and jurisdictional waters within the Project site.

As noted previously, the site is characterized by moderate rolling areas and extensive flatlands, with wetlands, vernal pools, and seasonal drainage courses scattered throughout the site. A headwater tributary of Morrison Creek traverses the Project site, entering at the northeast corner and flowing generally to the southwest. As shown in Table 3.3-4, a total of 21.53 acres of jurisdictional aquatic resources have been mapped with the Project site, including: 2.92 acres of depressional seasonal wetlands, 15.04 acres of vernal pools, 1.66 acres of riverine seasonal wetlands, 0.06 acres of riverine seasonal wet swales, 1.54 acres of intermittent drainages, and 0.30 acres of drainage basin outfalls.

TABLE 3.3-4: AQUATIC RESOURCES WITHIN THE PROJECT SITE

<i>AQUATIC RESOURCE TYPE</i>	<i>AQUATIC RESOURCE CLASSIFICATION</i>	<i>AQUATIC RESOURCE SIZE (ACRES)</i>
Depressional Seasonal Wetland	PEM2B	2.92
Vernal Pool	PEM2C	15.04
Riverine Seasonal Wetland	PEM2B	1.66
Seasonal Wet Swale	R4SB7	0.06
Intermittent Drainage	R4SB	1.54
Detention Basin Outfall	R4SB5	0.30
Total		21.53

NOTE: ACREAGES ARE CALCULATED TO SIX SIGNIFICANT FIGURES AND SUBSEQUENTLY ROUND TO THREE SIGNIFICANT FIGURES. TOTAL ACREAGE IS FURTHER ROUNDED TO TWO SIGNIFICANT FIGURES.

SOURCE: FOOTHILL ASSOCIATES, 2017.

The Project would preserve approximately 199.5 acres as a wetland preserve that would be deeded to a third-party conservation entity for protection via a perpetual conservation easement and would preserve an additional 10.39 acres as protected area/drainage basin lots (Lots G through I) and 15.98 acres as protected area/landscape lots (Lots J through O). The Project applicant would incorporate protections for the preservation of wetland and natural resources within the preserve, including preserve fencing, long-term funding and management of the preserve in perpetuity, and protection of the preserve from drainage and runoff generated from development areas through the construction of several detention basins throughout the site. The

3.3 BIOLOGICAL RESOURCES

preserve itself is a design measure incorporated into the Project that is intended to avoid and minimize impacts to the jurisdictional features, and other habitat, to the extent practicable, while still seeking to achieve the overall goals and objectives of the development Project. Of the 199.5 acres preserved, 14.8 acres are aquatic features that are potentially jurisdictional. Construction activities located on the balance of the Project site would result in direct permanent impacts to 6.58 acres. Table 3.3-5 presents the impacts to the biological communities located on the Project site. Figure 3.3-4 illustrates the location of the aquatic features.

TABLE 3.3-5: IMPACTS TO BIOLOGICAL COMMUNITIES

HABITAT TYPES	PROJECT IMPACTS	PREVIOUSLY PERMITTED IMPACTS	CITY (CIP) IMPACTS	SSHCP BUFFER ACREAGE	PRESERVED ACREAGE	TOTAL ACREAGE
<i>WETLANDS</i>						
Depressional Seasonal Wetland	1.04	—	—	0.03	1.85	2.92
Vernal Pool	4.75	0.02	0.18	0.12	9.97	15.04
Riverine Seasonal Wetland	0.51	0.01	—	<0.01	1.15	1.66
Intermittent Drainage	—	<0.01	—	—	1.53	1.54
Seasonal Wet Swale	0.06	—	—	—	—	0.06
Detention Basin Outfall	—	—	—	—	0.30	0.30
<i>BIOLOGICAL COMMUNITIES</i>						
Annual Grassland	305.15	—	0.51	13.16	187.16	506.07
Developed/Disturbed	2.43	—	—	—	0.03	2.45
Total	313.93	0.03	0.69	13.31	201.98	530.05

NOTE: ACREAGE MAY NOT ADD ACROSS ROWS OR COLUMNS DUE TO ROUNDING.

SOURCE: FOOTHILL ASSOCIATES, 2017.

These aquatic features are all scattered throughout the 506.07 acres of annual grassland, making up the entirety of the vernal pool complex. While approximately 199.5 acres would be included in the preserve, including 14.8 acres of aquatic habitat, approximately 6.58 acres would be permanently disturbed. This is a **potentially significant** impact.

The Project applicant has made a significant effort to preserve aquatic features (14.8 acres preserved). However, the 6.58 acres of aquatic habitat that would be permanently lost is part of a vernal pool complex which is a sensitive habitat. All feasible mitigation has been incorporated into the Project by design through regulatory permit compliance (i.e. Section 404/401/1600 permits) and adherence to the no net loss requirements (minimum 1:1 replacement).

An important component of the SSHCP Conservation Strategy is an Aquatic Resources Program (ARP). The ARP describes how the SSHCP strategy for the conservation of aquatic habitat in the SSHCP Plan Area will avoid and minimize Covered Activity impacts on the SSHCP Plan Area's aquatic resources, and provide adequate compensatory mitigation for unavoidable Covered Activity impacts. In exchange for conservation of wetlands streams, riparian, and other SSHCP Plan Area aquatic resources, the USACE plans to develop a multi-level permitting strategy under Section 404 of the CWA for future Covered Activities that are consistent with all SSHCP requirements.

The Plan Permittees have requested that the RWQCB use the ARP document to develop a parallel program to issue Water Quality Certifications under Section 401 of the CWA, and a program to issue a Report of Waste Discharge under the California Porter-Cologne Water Quality Control Act.

The Plan Permittees will also request that CDFW use the ARP document to develop a Master Streambed Alteration Agreement under Section 1600 of the California Fish and Game Code for Plan Permittee Covered Activities and to streamline permitting for all Covered Activities described with the SSHCP.

In addition, Covered Activities implemented by Third-Party Project Proponents can avoid the extensive negotiation and processing currently required to obtain CWA 404 permits from the USACE and U.S. USEPA, as well as extensive negotiation and processing currently required to obtain CWA Section 401 approvals from the RWQCB and to issue Reports of Waste Discharge under the California Porter-Cologne Act.

The central goal of compensatory mitigation for Covered Activities authorized under the SSHCP permitting framework is to maintain and improve the aquatic resources diversity, abundance, condition, and ecological connectivity across the Plan Area's differing landscape and geomorphic settings. Under the SSHCP and ARP, there would be no minimum threshold of proposed acreage loss of aquatic resources for compensatory mitigation to be required. That is, all permanent loss of aquatic resources incurred by a project would require compensatory mitigation.

Costs for the aquatic resources compensatory mitigation projects would be covered through the Covered Activity project mitigation fees collected under the SSHCP. Fees under the SSHCP are set at levels that fully offset the cost of compensating for the unavoidable impacts to aquatic resources. The SSHCP includes a fee structure that is distinguished by land cover type. This approach accounts for variations in costs associated with the particular requirements for each land cover type. Each new project would pay fees based on the land cover types affected by the development project and the fee schedule. The Project would be subject to the mitigation fees collected under the SSHCP. Fees collected for compensatory mitigation would be routed to an in-lieu fee program that is consistent with the federal Mitigation Rule (33 CFR Part 332) so that project proponents can satisfy their obligations under Section 404 of the CWA and the SSHCP.

Mitigation Measure 3.3-12 requires the Project to submit a wetland delineation, site plan, and mitigation methods to the City of Rancho Cordova and the South Sacramento Conservation Agency. The Project proponent would also submit a SSHCP permit application package to the City of Rancho Cordova ("Land Use Authority Permittee") as a request that coverage provided by City's SSHCP Aquatic Resources Program be extended to the proposed activities. This measure also requires payment of the mitigation fees, which would be routed to the in-lieu fee program. Mitigation Measure 3.3-13 requires implementation of SSHCP AMMs that will minimize the direct and indirect impacts on the aquatic land covers of the vernal pool ecosystem. The SSHCP AMMs include limiting ground disturbance to the construction footprint; implementing erosion-control BMPs during ground disturbance and siting roads and utilities outside of sensitive areas (BMP-1, BMP-2, BMP-3, ROAD-1, and UTILITY-4); and implementing BMPs that control construction dust (BMP-5), limit construction lighting in adjacent natural habitats (BMP-6), require biological monitoring (BMP-7), require worker awareness training (BMP-8), and implement speed limits on the construction site (BMP-11). Indirect impacts to stream/creek and vernal pool water quality and hydrology would be minimized by AMM LID-1 through LID-3 and EDGE-4 through EDGE-7.

3.3 BIOLOGICAL RESOURCES

These mitigation measures would ensure that impacts to wetlands would be *less than significant*.

MITIGATION MEASURE(S)

Implement **Mitigation Measure 3.5-1** (see Section 3.5, Geology and Soils).

Mitigation Measure 3.3-12: *Prior to any construction activities that would disturb a jurisdictional feature, The Project proponent shall submit a wetland delineation, site plan, and mitigation methods to the City of Rancho Cordova and the SSHCP. The Project proponent shall submit a SSHCP permit application package to the City of Rancho Cordova (“Land Use Authority Permittee”) as a request that coverage provided by City’s SSHCP Aquatic Resources Program be extended to the proposed activities. The City of Rancho Cordova shall review the SSHCP permit application for consistency with all of the SSHCP requirements and provide the South Sacramento Conservation Agency (“Implementing Entity) with a copy of the SSHCP requirements for tracking purposes. The Project proponent shall be responsible for paying all SSHCP development fees associated with obtaining coverage from the City of Rancho Cordova.*

Additionally, the Project applicant shall participate in the SSHCP Aquatic Resources Program (ARP) by paying the applicable mitigation fee for the loss of jurisdictional aquatic features. Costs for the aquatic resources compensatory mitigation projects shall be covered through the Covered Activity project mitigation fees collected under the SSHCP. The SSHCP includes a fee structure that is distinguished by land cover type. This approach accounts for variations in costs associated with the particular requirements for each land cover type. The Project proponent shall pay fees based on the land cover types affected by the development Project and the fee schedule.

Mitigation Measure 3.3-13: *The Project proponent shall implement the following SSHCP Avoidance and Minimization Measures (AMMs) to the satisfaction of the City to avoid direct and indirect effects of Covered Activities on Aquatic land covers of the Verna Pool Ecosystem:*

- *AMM LID-1 (Stormwater Quality): When the size of a Covered Activity project exceeds the thresholds established by the State Water Resources Control Board (SWRCB) (see the most recent Stormwater Quality Design Manual for the Sacramento and South Placer Regions, or future SWRCB-approved design manuals applicable to the Plan Area), incorporate stormwater management into site design to satisfy the requirements outlined in the most recent Stormwater Quality Design Manual for the Sacramento and South Placer Regions. Stormwater management may include groundwater recharge (LID-2) and natural site features (LID-3).*
- *AMM LID-2 (Groundwater Recharge): When siting SSHCP Preserves containing Riparian, Open Water, or Freshwater Marsh SSHCP land cover types, the Implementing Entity (i.e., the South Sacramento Conservation Agency) will prioritize locations that are suitable for groundwater recharge.*
- *AMM LID-3 (Natural Site Features): Incorporate preservation of a site’s natural aquatic features (such as creeks and streams) into project design to retain natural hydrologic patterns and to retain habitat that might be used by Covered Species.*
- *AMM BMP-1 (Construction Fencing): Orange construction fencing will be installed to ensure that ground disturbance does not extend beyond the allowed construction footprint*

(i.e., the limit of project construction plus equipment staging areas and access roads). Plan Permittees and Third-Party Project Proponents implementing ground-disturbing Covered Activities will mark the outer boundary of any Preserve Setback or Stream Setback adjacent to or within the project site with orange construction fencing prior to ground disturbance. This fencing will remain in place until project completion, as identified by the Plan Permittee.

- AMM BMP-2 (Erosion Control): Plan Permittees and Third-Party Project Proponents implementing ground-disturbing Covered Activities will install temporary control measures for sediment, stormwater, and pollutant runoff as required by the Plan Permittee to protect water quality and species habitat. Silt fencing or other appropriate sediment control device(s) will be installed downslope of any Covered Activity that disturbs soils.

Fiber rolls and seed mixtures used for erosion control will be certified as free of viable noxious weed seed. As discussed in Section 5.4.2, Covered Species Take Avoidance and Minimization Measures, erosion controls installed in or adjacent to Plan Area modeled habitat for giant gartersnake (*Thamnophis gigas*), western pond turtle (*Actinemys marmorata*), California tiger salamander (California tiger salamander), or western spadefoot (see Chapter 3) must be of appropriate design and materials that will not entrap the species (e.g., not contain mesh netting). Regular monitoring and maintenance of the project's erosion control measures will be conducted until project completion to ensure effective operation of erosion control measures.

- AMM BMP-3 (Equipment Storage and Fueling): Plan Permittees and Third-Party Project Proponents implementing ground-disturbing Covered Activities will ensure that equipment storage and staging will occur in the development footprint only (not sited in any existing on-site Preserve, planned on-site Preserve, Preserve Setback, Stream Setback, or aquatic land cover type). Fuel storage and equipment fueling will occur away from waterways, stream channels, stream banks, and other environmentally sensitive areas within the development footprint.

However, certain equipment storage and fueling activities can be allowed on Preserves within habitat re-establishment/establishment sites (refer to Section 5.2.7) if no location outside of the site is available. If a Covered Activity results in a spill of fuel, hydraulic fluid, lubricants, or other petroleum products, the spill will be absorbed and waste disposed of in a manner to prevent pollutants from entering a waterway, Preserve, Preserve Setback, or Stream Setback.

- AMM BMP-4 (Erodible Materials): Plan Permittees and Third-Party Project Proponents implementing Covered Activities must not deposit erodible materials into waterways. Vegetation clippings, brush, loose soils, or other debris material will not be stockpiled within stream channels or on adjacent banks. Erodible material must be disposed of such that it cannot enter a waterway, Preserve, Preserve Setback, Stream Setback, or aquatic land cover type. If water and sludge must be pumped from a subdrain or other structure, the material will be conveyed to a temporary settling basin to prevent sediment from entering a waterway.

3.3 BIOLOGICAL RESOURCES

- *AMM BMP-5 (Dust Control): Plan Permittees and Third-Party Project Proponents implementing ground-disturbing Covered Activities will water active construction sites regularly, if warranted, to avoid or minimize impacts from construction dust on adjacent vegetation and wildlife habitats. No surface water will be used from aquatic land covers; water will be obtained from a municipal source or existing groundwater well.*
- *AMM BMP-6 (Construction Lighting): Plan Permittees and Third-Party Project Proponents implementing ground-disturbing Covered Activities will direct all temporary construction lighting (e.g., lighting used for security or nighttime equipment maintenance) away from adjacent natural habitats, and particularly Riparian and Wetland habitats and wildlife movement areas.*
- *AMM BMP-7 (Biological Monitor): If a Covered Activity includes ground disturbance within Covered Species modeled habitat, an approved biologist will be on site during the period of ground disturbance, and may need to be on site during other construction activities depending on the Covered Species affected. After ground-disturbing project activities are complete, the approved biologist will train an individual to act as the on-site construction monitor for the remainder of construction, with the concurrence of the Permitting Agencies. The on-site monitor will attend the training described in BMP-8. The approved biologist and the on-site monitor will have oversight over implementation of Avoidance and Minimization Measures, and will have the authority to stop activities if any of the requirements associated with those measures are not met. If the monitor requests that work be stopped, the Wildlife Agencies Agencies (i.e., the USFWS and CDFW) will be notified within one working day by email. The approved biologist and/or on-site monitor will record all observations of listed species on California Natural Diversity Database field sheets and submit them to the California Department of Fish and Wildlife. The approved biologist or on-site monitor will be the contact source for any employee or contractor who might inadvertently kill or injure a Covered Species or who finds a dead, injured or entrapped individual. The approved biologist and on-site monitor's names and telephone numbers will be provided to the Wildlife Agencies prior to the initiation of ground-disturbing activities. Refer to species-specific measures for details on requirements for biological monitors.*
- *AMM BMP-11 (Speed Limit): Project-related vehicles will observe the posted speed limits on paved roads and a 10-mile-per-hour speed limit on unpaved roads and during travel in project areas. Construction crews will be given weekly tailgate instruction to travel only on designated and marked existing, cross-country, and project-only roads.*
- *AMM ROAD-1 (Road Project Location): Road projects will be located in the least environmentally sensitive area to avoid, to the maximum extent practicable, impacts on Covered Species, Covered Species habitat, and waters of the United States. Road project alignments will follow existing roads, road easements, and rights-of-way, or be sited in disturbed areas to minimize habitat loss and additional habitat fragmentation.*
- *AMM UTILITY-4 (Siting of Entry and Exit Location): The entry and exit locations for the trenchless construction method (see Utility-3) will be sited to avoid impacts to vernal pools and Riparian Woodland, and to avoid direct take of SSHCP Covered Species.*

- *AMM EDGE-4 (Locate Stormwater Control Outside Preserves): Roads, sidewalks, and other impermeable surfaces of Urban Development Covered Activities adjacent to existing or planned Preserves will slope away from Preserves and Preserve Setbacks or intercept drainage with swales or curbs and gutters to preclude drainage from entering Preserves and Preserve Setbacks. Stormwater flows must be directed away from Preserves and Preserve Setbacks and directed into stormwater control facilities inside the development (outside Preserves and Preserve Setbacks) (see EDGE-6 for exception to EDGE-4 in certain SSHCP Linkage Preserves).*
- *AMM EDGE-5 (Stormwater Control in Preserve Setbacks): If trails are established in any Preserve Setback in compliance with EDGE-3, the trail must be sloped away from the Preserve, and rainwater leaving the trail surface must flow into an adjacent low-velocity bio-retention swale or cell to keep rainwater runoff and trail contaminants from entering the Preserve. Low-velocity bio-retention swales or cells are typically small linear features placed on one or both sides of a trail. As required by EDGE-3, trails and their adjacent bio-retention swales or cells must be located on the side of the Preserve Setback nearest development.*
- *AMM EDGE-6 (Detention Basins in Linkage Preserves): Because planned SSHCP Linkage Preserves L1, L2, L4, L7, L8, L9, and L10 (see Section 7.5) surround natural creeks or streams that must receive stormwater from planned adjacent Urban Development Covered Activities, a limited number of stormwater detention basins will be allowed on those Linkage Preserves. Detention basins within Linkage Preserves (see Section 5.2.7) will be designed and constructed with fill material to build up the perimeter of the detention basin so as not to impact the soil restrictive layer (duripan or hardpan) and function of the soil perched aquifer. Detention basins within Linkage Preserves will capture stormwater flows and runoff, and will discharge water to the stream/creek or percolate collected water to the soil perched aquifer. Detention basin structures that collect stormwater entering the basin or convey stormwater leaving the basin must be designed to avoid and minimize effects to Covered Species habitat in the Linkage Preserve.*
- *AMM EDGE-7 (Hardpan/Duripan Protection): To protect the soil perched aquifer and the micro-watersheds supporting existing vernal pool hydrology, activities that have the potential to cut into, disrupt, or remove the soil's restrictive layer (hardpan or duripan) will not occur within Preserves or Preserve Setbacks. However, in certain circumstances, the Covered Activities defined in Section 5.2.6, Covered Activities in Stream Setbacks in the UDA, and Section 5.2.8, Covered Activities in the Laguna Creek Wildlife Corridor of the Preserve System, may result in punctures or other minor disruptions of the soil hardpan or duripan if approved by the Implementing Entity and the Technical Advisory Committee according to the process described in Chapter 9 of the SSHCP. If a Covered Activity on a Preserve or Preserve Setback results in a puncture or other disruption to the soil hardpan or duripan, the puncture will be sealed using bentonite clay or other material that maintains the functionality of the soil's restrictive layer and associated perched aquifer.*

Impact 3.3-8: The Project has the potential to have substantial adverse effect on riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service (Less than Significant)

The CNDDDB record search revealed documented occurrences of two sensitive habitats, Northern Hardpan Vernal Pool and Valley Needlegrass Grassland, within the 9-quad region for the Project site. The CNDDDB does not contain records for Valley Needlegrass Grassland on the Project site, and this native plant community was not observed during the field surveys. However, Northern Hardpan Vernal Pool is mapped within the Project site, and it was verified to be present during the field surveys. The Project site contains approximately 15.04 acres of vernal pools within a grassland vernal pool complex. There are other aquatic features such as Depressional Seasonal Wetland (2.92 acres), Riverine Seasonal Wetland (1.66 acres), Intermittent Drainage (1.54 acres), and Seasonal Wet Swale (0.06 acres). These aquatic features are all scattered throughout the 506.07 acres of annual grassland making up the entirety of the vernal pool complex.

Figure 3.3-4 illustrates the location of the aquatic features, including where the vernal pools are scattered. The impacts to vernal pools are summarized in Table 3.3-4 and shown in Figure 3.3-5. As previously discussed, the Project would preserve approximately 199.5 acres as a wetland preserve that would be protected in perpetuity. The Project applicant would incorporate protections for the preservation of wetland and natural resources within the preserve, including preserve fencing, long-term funding and management of the preserve in perpetuity, and protection of the preserve from drainage and runoff generated from development areas through the construction of several detention basins throughout the site. The preserve itself is a design measure incorporated into the Project that is intended to avoid and minimize impacts to the vernal pool complex to the extent practicable, while still seeking to achieve the overall goals and objectives of the development Project. Even though approximately 9.97 acres of the vernal pool complex is preserved in perpetuity through this design, 4.75 acres of vernal pool complex will be permanently removed.

All feasible mitigation has been incorporated into the Project by design, through regulatory permit compliance (i.e. Section 404/401/1600 permits), participation in the SSHCP, and through mitigation measures presented earlier in this chapter. Therefore, the permanent loss of the sensitive habitat is considered a *less than significant* impact.

Impact 3.3-9: The Project has the potential to interfere substantially with the movement of native fish or wildlife species or with established wildlife corridors, or impede the use of native wildlife nursery sites (Less than Significant with Mitigation)

Wildlife movement includes migration (i.e., usually movement one way per season), inter-population movement (i.e., long-term dispersal and genetic flow), and small travel pathways (i.e., daily movement within an animal's territory). While small travel pathways usually facilitate movement for daily home range activities, such as foraging or escape from predators, they also provide connection between outlying populations and the main populations, permitting an

increase in gene flow among populations. These habitat linkages can extend for miles and occur on a large scale throughout the greater region. Habitat linkages facilitate movement between populations located in discrete locales and populations located within larger habitat areas.

Impacts from development, such as habitat fragmentation and/or isolation, and the creation of impassable barriers can cause a significant impact to wildlife corridors. Depending on the organism and its needs, movement corridors can either be continuous or discontinuous patches of suitable habitat. Preserving expanses of open space that are connected may enable species utilizing these areas as foraging or breeding habitat to persist.

The record search did not reveal any documented wildlife corridors or wildlife nursery sites on or adjacent to the Project site. Furthermore, the field surveys did not reveal any wildlife corridors or wildlife nursery sites on or adjacent to the Project site. The intermittent drainage that traverse the site (1.54 acres) provides some aquatic linkage and potential movement corridors for wildlife. The Project would temporarily impact 0.01 acres of the drainage, but would be restored after construction. The balance of 1.53 acres would be preserved. With the implementation of mitigation measures that require restoration of temporary impacts to all jurisdictional facilities, this impact would be reduced to a *less than significant* level.

Impact 3.3-10: The Project may result in conflicts with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (Less than Significant)

The City establishes the basic standards and measures for the preservation and protection of trees within the community in Chapter 19.12, Preservation and Protection of Private Trees, of the Municipal Code. There are no trees located on the Project site. Therefore, the Project would not conflict with the City's Preservation and Protection of Private Trees Ordinance.

The City establishes impact permit and delineation requirements, avoidance, minimization, and compensation standards, and other provisions pertaining to aquatic resources in Chapter 16.94, Aquatic Resources Protection, of the Municipal Code. Pursuant to Section 16.94.040 of the Code, because the Project would permanently and/or temporarily impact aquatic resources on the Project site, an aquatic resource impact permit would be required for any proposed development activities. All aquatic resource impact permits require approval of a compensatory mitigation plan in accordance with the provisions of Section 16.94.040(J) section unless the compensatory mitigation plan requirement is waived under the provisions of Section 16.94.040(J)(3). Further, the Project would be subject to the standards, pre-permit consultation requirements, and compensatory mitigation plan. The compensatory mitigation plan consists of two parts: baseline information for the site and a conceptual compensatory mitigation plan. If off-site aquatic resource compensatory mitigation is proposed, baseline information for both the Project site and mitigation site is required. Further, the Project would be subject to the setback standards set forth in Section 16.94.080, which are consistent with the requirements of Chapter 5 of the SSHCP.

Compliance with Chapter 16.94 of the Municipal Code would ensure that this impact is *less than significant*.

Impact 3.3-11: The Project may result in conflicts with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (Less than Significant)

The SSHCP is a regional effort that will provide development and infrastructure projects with streamlined, predictable federal and state permitting processes while creating a Preserve System to protect habitat, open space, and agricultural lands. The SSHCP allows project proponents within the Plan Area to simplify and expedite the state and federal ESA permitting process. In addition to streamlining the ESA permitting processes, a separate but parallel multi-tiered permitting program has been developed to streamline CWA Section 404 and 401 permitting process and a Master Streambed Alternation Agreement has been prepared to address Section 1602 of the California Fish and Game Code.

The SSHCP allows the City of Rancho Cordova, City of Galt, Sacramento County, Sacramento County Water Agency, and the Southeast Connector Joint Powers Authority (collectively referred to as the Plan Permittees) to receive an ITP for activities and projects they conduct. In addition, the three local Land Use Authority Permittees (the County, Galt, and Rancho Cordova) have the ability to extend incidental take coverage provided by the SSHCP ITPs to activities and projects implemented by Third-Party Project Proponents that are under the jurisdiction of that Land Use Authority Permittee. This will allow Third-Party Project Proponents to avoid the extensive negotiation and processing currently required to obtain individual project permits under the CESA from the CDFW and project ESA compliance from the USFWS. The SSHCP was adopted by the Rancho Cordova City Council in October 2018.

As required by the federal ESA (Section 10(a)(2)(A)(ii)) and Fish and Game Code Section 2081, the SSHCP includes measures to avoid and minimize take of Covered Species. All relevant SSHCP AMMs will be required.

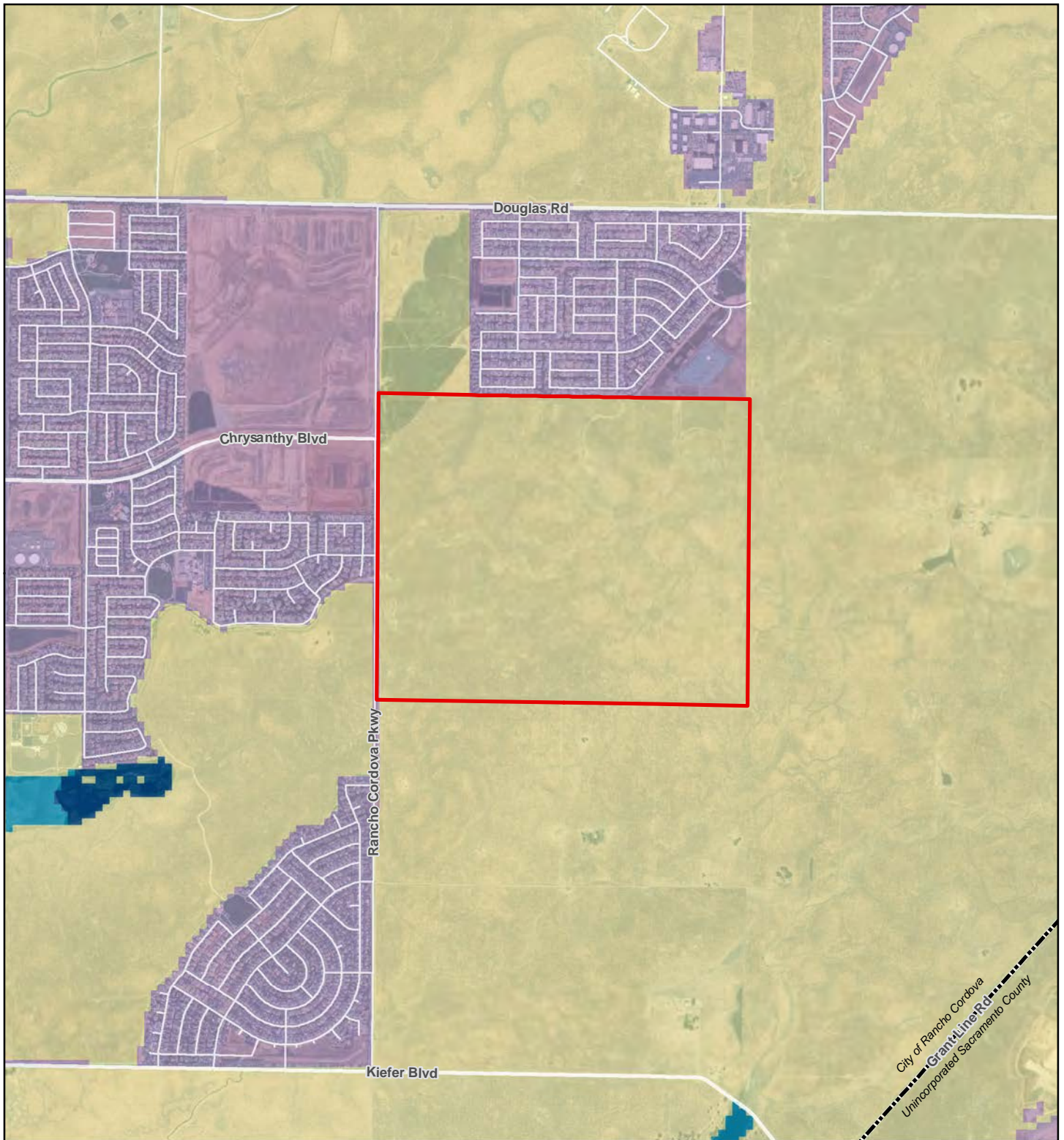
Mitigation Measure 3.3-1 requires that the Project proponent submit a SSHCP permit application package to the City as a request that the incidental take coverage provided by the City's SSHCP ITP be extended to the proposed activities. The City must review the SSHCP permit application for consistency with all of the SSHCP requirements and provide the South Sacramento Conservation Agency ("Implementing Entity) with a copy of the SSHCP requirements for tracking purposes. The Project proponent shall be responsible for paying all SSHCP development fees associated with obtaining coverage from the City. A portion of those fees are then used to purchase habitat land as compensatory mitigation for the loss of habitat. Any proposal to provide land in fee title or provide a conservation easement in lieu of paying all or part of the required SSHCP development fees, shall include a consistency analysis in the application that sufficiently shows that the proposal is consistent with the SSHCP Conservation Strategy. Because the Project includes a 199.5-acre wetland preserve, they will be required to include a consistency analysis in their application in order to receive credit for the preserve. This Draft EIR addresses land cover types, wetland impacts, and Covered Species and other protected species habitat present on the Project site. As previously described, all relevant SSHCP AMMs will be required of the Project. The wetland

preserve has been designed to implement the requirements of the SSHCP, including provision of a 50-foot transition area buffering the preserve from areas proposed for development.


Additional AMMs are specifically presented throughout this document for specific species. It is noted, however, that before construction begins, the SSHCP requires that the Project proponent demonstrate to the City that all necessary AMMs will be fulfilled and that the Project design, including preserve features, are consistent with the SSHCP.

The Project proponent intends to obtain coverage for their proposed activities. Implementation of the Project, with the above mitigation measures and consistency with the SSHCP would ensure that there is not conflict. Implementation of the Project would have a *less than significant* impact relative to this topic.

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Legend

 Project Location (528.48 acres)

 Rancho Cordova City Boundary

Cover Type (WHR)

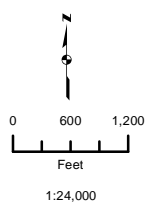
 Annual Grassland (528.48 acres on site)

 Fresh Emergent Wetland

 Riverine

 Urban

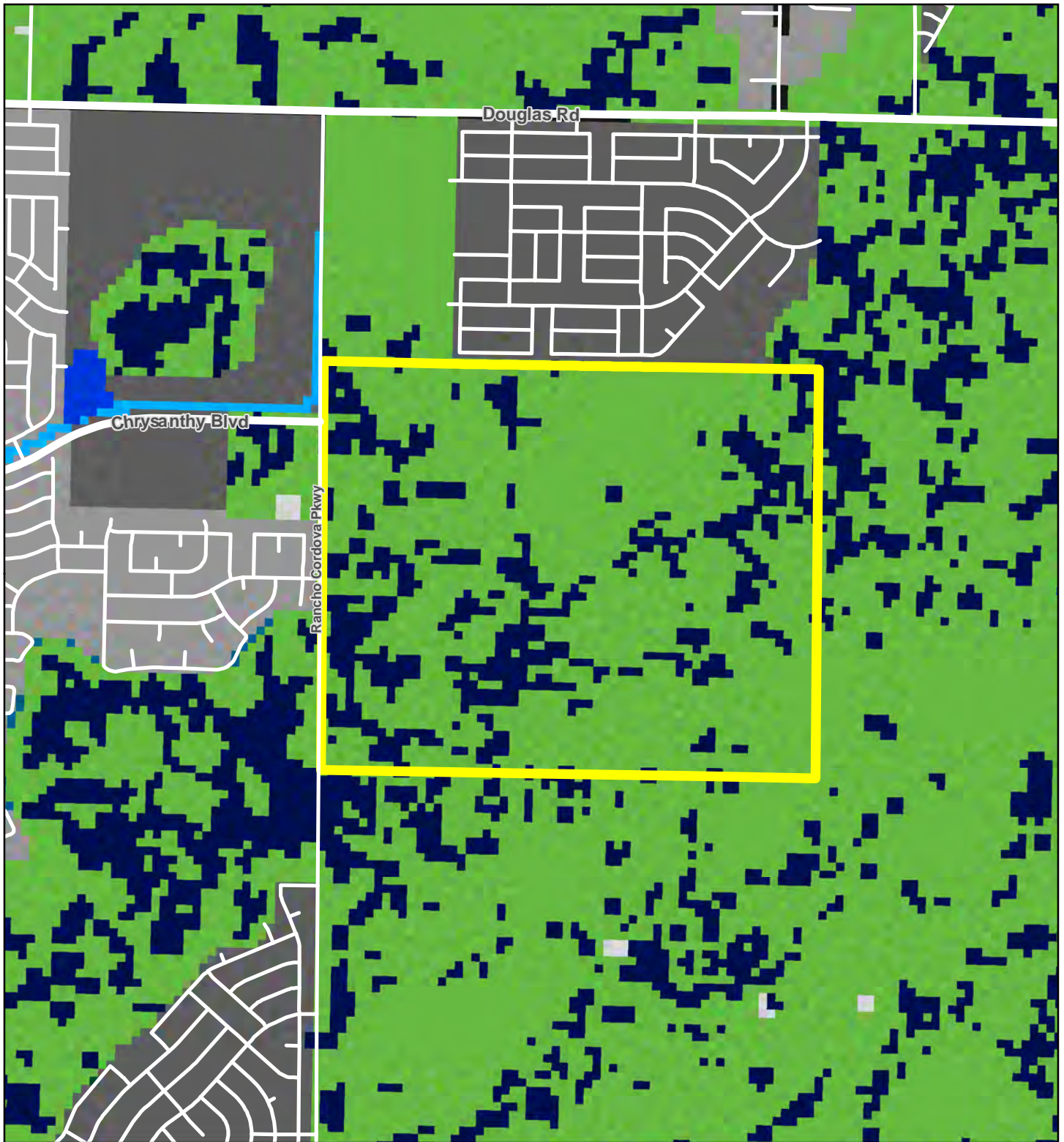
Data sources: Sacramento County GIS; ArcGIS Online World Imagery Map Service. FRAP Vegetation (FVEG15_1). Map date: July 16, 2018.




**THE RANCH
SACRAMENTO COUNTY, CALIFORNIA**

Figure 3.3-1. Cover Types



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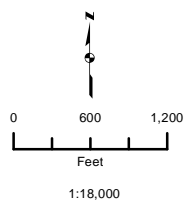


Legend

 Project Location (528.48 acres)

Land Cover Types (SSHCP)

-  Valley Grassland
-  Vernal Pool
-  Open Water
-  Streams/Creeks
-  Disturbed
-  High Density Development

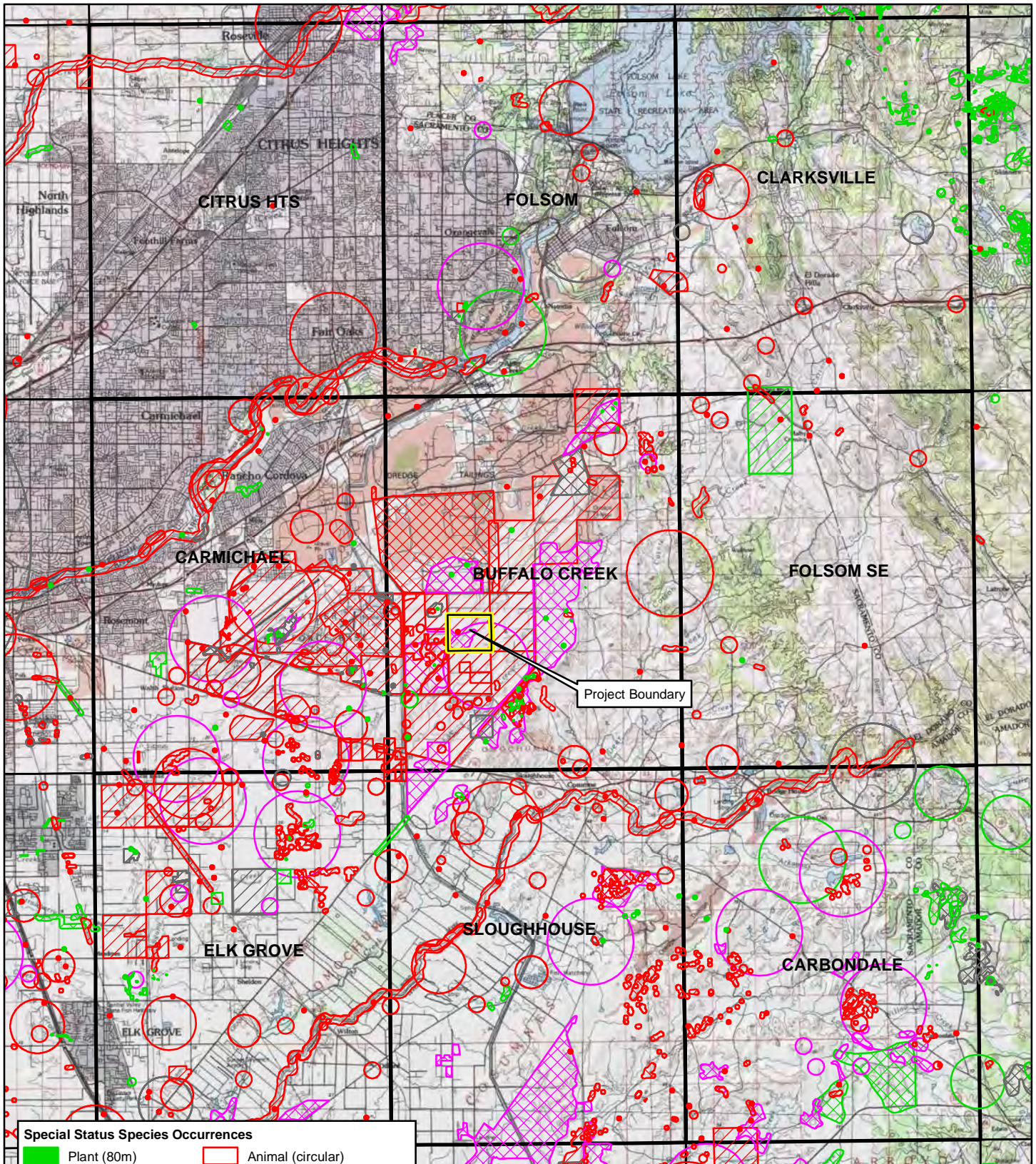


THE RANCH
SACRAMENTO COUNTY, CALIFORNIA

Figure 3.3-2.
South Sacramento Habitat
Conservation Plan (SSHCP)
Land Cover Types

Data sources: Sacramento County GIS; South Sacramento Habitat Conservation Plan, Figure 3-1 Plan Area Land Cover Types, 2014. Map date: June 20, 2019.

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Special Status Species Occurrences

	Plant (80m)		Animal (circular)
	Plant (specific)		Terrestrial Comm. (specific)
	Plant (non-specific)		Terrestrial Comm. (circular)
	Plant (circular)		Multiple (80m)
	Animal (80m)		Multiple (specific)
	Animal (specific)		Multiple (non-specific)
	Animal (non-specific)		Multiple (circular)

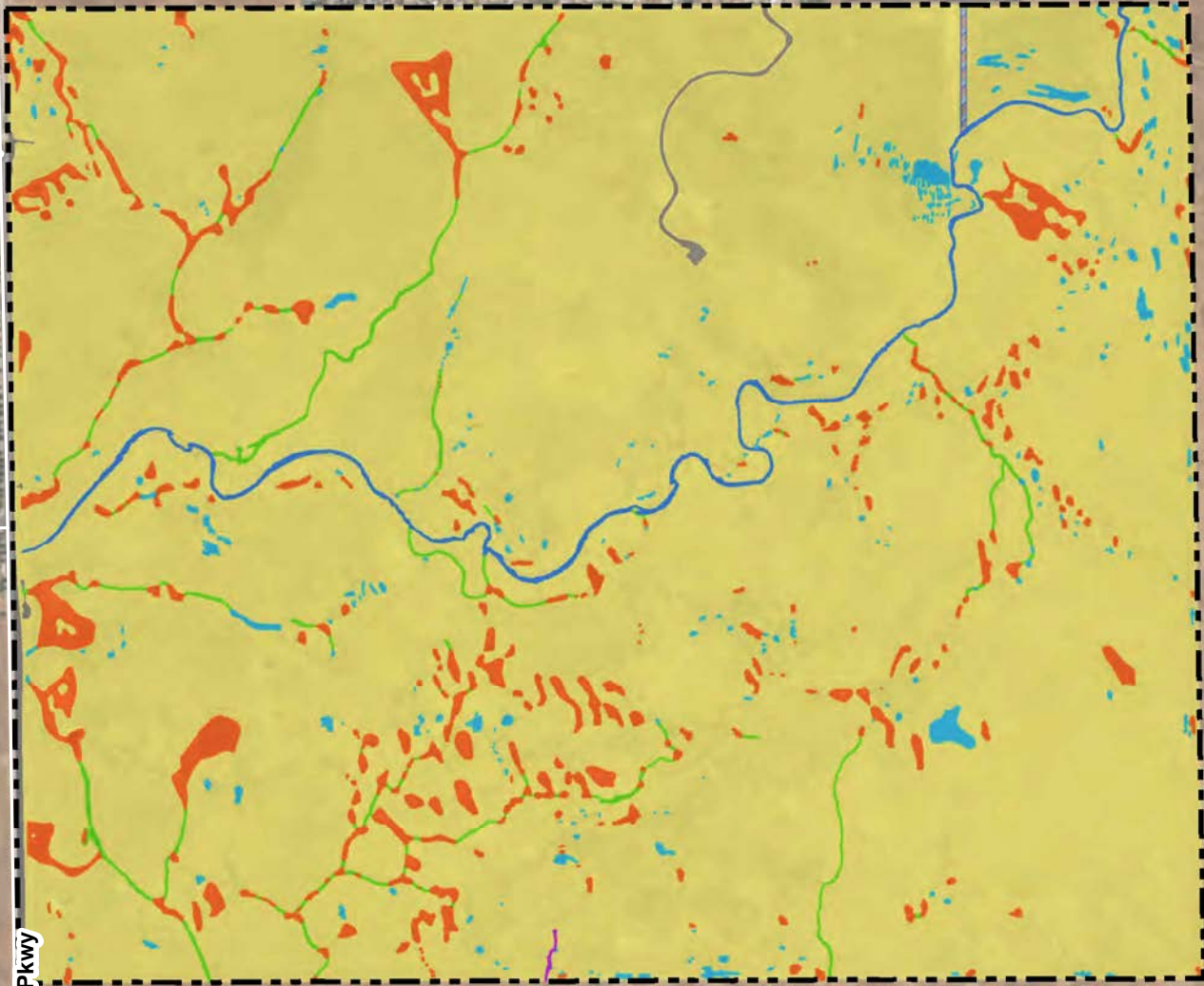
CNDDDB version 07/2018. Please Note: the occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not been surveyed and/or mapped. Lack of information in the CNDDDB about a species or an area can never be used as proof that no special status species occur in an area. Basemap: ArcGIS Online Topographic Map Service. Map date: July 16, 2018.

**THE RANCH
SACRAMENTO COUNTY, CALIFORNIA**

Figure 3.3-3: California Natural
Diversity Database
9-Quad Search


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Aerial Imagery Source: NAIP 2016, USDA FSA, ESRI
Aerial Imagery Date: 06/20/2016



Rancho Cordova Pkwy



Legend

 Study Area

Aquatic Resources

-  Vernal Pools - 15.04 acres
-  Depressional Seasonal Wetlands - 2.92 acres
-  Riverine Seasonal Wetlands - 1.66 acres
-  Intermittent Drainages - 1.54 acres
-  Seasonal Wetland Swale - 0.06 acres
-  Detention Basin Outfall - 2.92 acres

Biological Communities

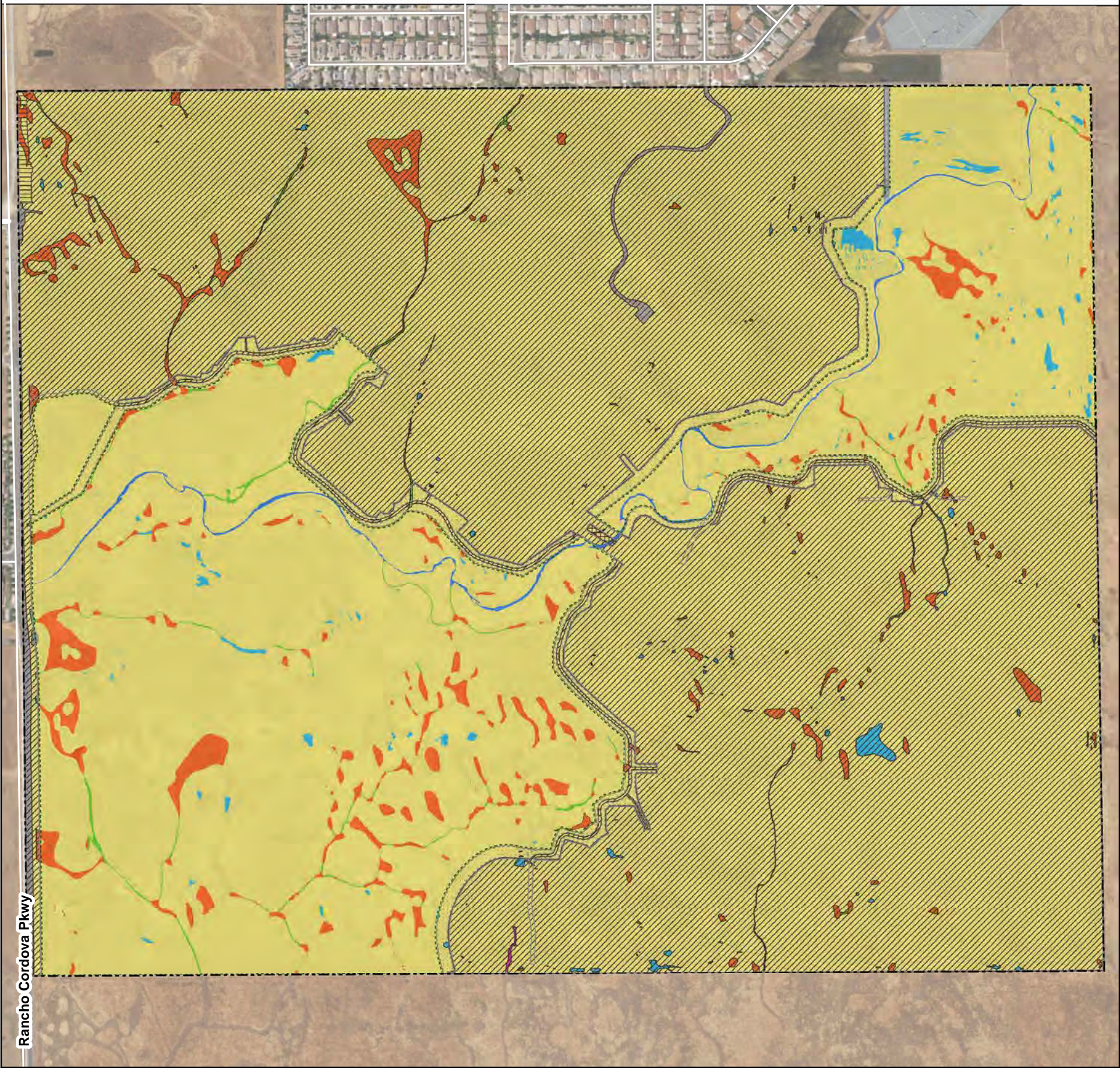
-  Annual Grassland - 506.07 acres
-  Developed/Disturbed - 2.45 acres

**THE RANCH
SACRAMENTO COUNTY, CALIFORNIA**

Figure 3.3-4. Biological Communities and Aquatic Resources

Data source: Foothill Associates. Map date: July 16, 2018.

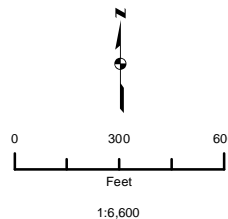
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Habitat Types	Preserved (Acres)	Buffer Area (Acres)	Project Impact (Acres)	City Capital Improvement Projects Impact (Acres)	Past Impact (Acres)	Temp. Impact (Acres)	Total (Acres)
Wetlands:							
Depressional Seasonal Wetland	1.85	0.03	1.04	0.18	0.02		2.92
Vernal Pool	9.97	0.12	4.75		0.01		15.04
Riverine Seasonal Wetland	1.15	<0.01	0.51		<0.01	0.01	1.66
Intermittent Drainage	1.53						1.54
Seasonal Wet Swale			0.06				0.06
Detention Basin Outfall	0.30						0.30
Subtotal:	14.80	0.15	6.36	0.18	0.03	0.01	21.53
Biological Communities:							
Annual Grassland	187.16	13.16	305.15	0.51		0.09	506.07
Developed/Disturbed	0.03	0.00	2.43				2.45
Subtotal:	187.18	13.16	307.57	0.51		0.09	508.52
Total	201.98	13.31	313.93	0.69	0.03	0.10	530.05

Other Features

- Development Footprint (+/- 315 acres)
- Preserve buffer (+/-13 acres)
- Preserve Boundary (+/-202 acres)
- Project Boundary (+/-530 acres)



THE RANCH
SACRAMENTO COUNTY, CALIFORNIA

Figure 3.3-5. Impacts to Biological Communities and Aquatic Resources

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This section provides a discussion of the prehistoric period background, ethnographic background, historic period background, known cultural resources in the region, the regulatory setting, an impact analysis, and mitigation measures. This section is based in part on the following:

- *Rancho Cordova General Plan* (City of Rancho Cordova, Adopted June 26, 2006);
- *Rancho Cordova General Plan Draft Environmental Impact Report* (City of Rancho Cordova, March 2006);
- *The Ranch Updated Cultural Resources Inventory and Evaluation, Rancho Cordova, Sacramento County, California* (Windmill Consulting, Inc., June 2018); and
- *Determination of Eligibility and Effect for the Jaeger 530 Project Area, Sacramento County, California* (Peak & Associates, Inc., 2005).

The analysis contained in this section is intended to be at a Project-level, and covers impacts associated with development of the entire site, with the exception of areas designated for protection as described in Chapter 2.0, Project Description, to an urban use.

Comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from the Native American Heritage Commission (NAHC, July 30, 2019). Each of the comments related to this topic are addressed within this section.

3.4.1 ENVIRONMENTAL SETTING

The environmental setting of the region and Project site is based primarily on the Determination of Eligibility and Effect for the Jaeger 530 Project Area, Sacramento County, California prepared for the Project site by Peak & Associates.

PREHISTORY

Archaeological work in the Central Valley area during the 1920s and 1930s led to the development of the first cultural chronology for Central California. The chronology identified three archaeological cultures, which were named Early, Transitional, and Late. Subsequently the three cultural groups were subsumed into three time periods, designated the Early, Middle, and Late Horizons.

The Windmill Pattern is representative of the Early Horizon in the Rancho Cordova area. The Early Horizon is highlighted by: large, heavy, stemmed and leaf-shaped projectile points made of a variety of materials; charmstones; shell beads and ornaments; trident fish spears; flat slab millingstones; small numbers of mortars; and ventrally extended burials oriented toward the west. The Windmill Pattern probably emphasized hunting and fishing, with seed collecting as a supplement to the diet. The Windmill Pattern dates from 4,500-2,500 Before Present (B.P.).

The Cosumnes Culture is representative of the Middle Horizon in the Rancho Cordova area. The Middle Horizon is highlighted by: large, heavy, lanceolate concave base projectile points made of a variety of materials; charmstones; shell beads and ornaments; cobble mortars and evidence of wooden mortars; numerous bone tools and bone ornaments; and tightly flexed burials with

3.4 CULTURAL AND TRIBAL RESOURCES

variable orientation and red ochre staining. Middle Horizon cultures are generally quite different from the Windmill Pattern, but do continue to exhibit some of the characteristics of Windmill such as similar projectile point forms. The similarities in projectile point forms may be indicative of cultural continuity and/or functional and adaptational success of particular forms. The Middle Horizon dates from 2,500 B.P.-A.D. 500.

The Hotchkiss Culture is representative of the Late Horizon in the Rancho Cordova area. The Late Horizon primarily represents both local innovation and the blending of new cultural traits introduced into the Central Valley primarily from the north. It is distinguished by intensive fishing, extensive use of acorns, elaborate ceremonialism, social stratification, and cremation of the dead. The Hotchkiss Culture dates from A.D. 500-to Euroamerican contact.

ETHNOGRAPHY

A large population of Native Americans speaking more than 100 different languages and occupying a variety of ecological settings inhabited California prior to the arrival of Euroamericans. Peak and Associates identified that Rancho Cordova and the surrounding area are in Valley Nisenan territory. The *Ranch Updated Cultural Resources Inventory and Evaluation* prepared by Windmill Consulting in 2018 identifies that the Project site lies almost midway between the former homeland of the Maiduan-speaking Nisenan along the American River and the *Amuchamne* tribelet of Miwok speakers along the Cosumnes River.

The basic social and economic group of the Nisenan was the family or household unit, with the nuclear and/or extended family forming a corporate unit. Among the Nisenan these groups combined to form tribelets, which were their largest sociopolitical unit. Each tribelet had a chief or headman, and tribelet populations were as large as 500 persons living in permanent villages that were usually located on raised areas to avoid flooding.

Valley Nisenan used a variety of utilitarian stone tools, with obsidian being a highly valued material for tool manufacture. Other tools and weapons were made of bone, wood, and plant materials including stirring sticks, mush paddles, pipes, hide preparation equipment, and baskets. Fishing formed a large component of Valley Nisenan subsistence activity. Consequently, they used an extensive assemblage of fishing-related implements including: spears; cordage lines with bone fishhooks; harpoons with detachable points; dams for stream diversion; nets of cordage and basketry; weirs; and an array of fish traps. Other food processing equipment included bedrock mortars and pestles for grinding acorns, buckeyes, pine nuts, seeds, berries, and meat. Valley Nisenan also fostered trading relationships with surrounding groups for commodities such as salt, marine shells, and basketry.

The Plains Miwok were identified as a distinct language group as early as 1806. Lineage was the most important political and economic unit, with lineages based on the male line of descent. Miwok lineages were associated with a specific place, such as a tribelet's permanent settlement. The tribelet was the largest sociopolitical group. The permanent settlement usually included an assembly house, which was often a large, circular, semi-subterranean earth-covered lodge,

housing including pole and thatch structures, a sweathouse, and other structures. Miwok-speaking people were hunter-fisher-gatherers and the major staple, acorns, were gathered in the fall.

The *Amuchamne* tribelet was the northernmost tribelet on the Cosumnes river drainage within the Sacramento Valley and was the only organized Cosumnes River Miwok village to survive the gold rush. Sometime between 1850 and 1870, the people of Amuchamne moved their village to the outskirts of Elk Grove.

HISTORIC PERIOD

Spanish exploration of the Central Valley dates to the late 1700s, but exploration of the Northern section of the Central Valley and contact with its Native American population did not begin until the early 1800s. At this time, the attention of Spanish missionaries shifted away from the coast and its dwindling Native American population, to the conversion and missionization of interior populations. This time period also marks the beginning of the decline of Native American populations due to Euroamerican diseases and the relocation of many groups to missions, which resulted in not only the loss of life, but also the loss of Native American traditional culture.

The second quarter of the nineteenth century encompasses the Mexican Period (ca. 1821-1848) in California. This period is an outgrowth of the Mexican Revolution, and its accompanying social and political views affected the mission system across California. In 1833, the missions were secularized and their lands divided among the Californians as land grants called ranchos. These ranchos, such as the 35,000-acre Rancho Rio de los Americanos, part of which is located within the Planning Area, facilitated the growth of a semi-aristocratic group that controlled the large ranchos.

During the middle of the 19th century trails were being blazed across the plains and mountains facilitating the westward migration of Euroamericans. Groups such as the 1841 Bartleson-Bidwell party and the 1844 Stevens-Murphy party that traveled to California typify these early immigrants. The commencement of the Mexican-American war in 1846 also affected the exploration and development of California, including the identification of new trails across the Sierra Nevada.

The Rancho Rio de los Americanos was originally granted to William Leidesdorff and subsequently sold to Joseph Folsom. Neither of these individuals, however, developed the rancho, and it does not reflect patterns of rancho development and use that are typical in other parts of California. Regardless, the discovery of gold at Sutter's Mill in Coloma in 1848 caused a dramatic alteration of both Native American and Euroamerican cultural patterns in California. Once news of the discovery of gold spread, a flood of Euroamericans began to enter the region, and gravitated to the area of the "Mother Lode". Initially, the Euroamerican population grew slowly, but soon exploded as the presence of large deposits of gold was confirmed. The population of California quickly swelled from an estimated 4,000 Euroamericans in 1848 to 500,000 in 1850. This large influx of immigrants had a negative effect on Native American cultures, and marks the beginning of a relatively rapid decline of Native American populations and culture.

The Project site was purchased by George F. Jaeger in 1880 and was used by his family to raise hay and livestock.

The second half of the nineteenth century witnessed an ongoing and growing immigration of Euroamericans into the area, an influx also accompanied by regional cultural and economic changes. These changes are highlighted by the development of the Rancho Cordova area associated with expanding business opportunities related to gold mining, agriculture, and/or ranching.

PROJECT SITE

Setting

The 530-acre Project site is currently vacant and has been previously used for agricultural uses (cattle grazing). The topography of the site exhibits low relief topography with elevations ranging between 170 and 210 feet above mean sea level (MSL). The slopes throughout the site range from approximately zero to eight percent. The site is characterized by moderate rolling hills and areas of extensive flatlands, with wetlands, vernal pools, and seasonal drainage courses scattered throughout the site. A headwater tributary of Morrison Creek traverses the Project site, entering at the northeast corner and flowing generally to the southwest.

The property is traversed by a 275-foot-wide utility easement occupied by a 230-kV Pacific Gas and Electric (PG&E) transmission line, one 230-kV Sacramento Municipal Utility District (SMUD) transmission line, and one 69-kV SMUD sub-transmission line. No other public utilities (water, sewer, drainage) are located on site. The parallel 203-kV electrical transmission towers and lines were identified as a historic resource (P-34-5210) in the Updated Cultural Resources Inventory and Evaluation prepared by Windmiller Consulting.

The Project site is bound by existing single-family residential uses and Douglas Road to the north, vacant land and Grant Line Road to the east, vacant land and Kiefer Boulevard to the south, and Rancho Cordova Parkway, single family residential, and vacant land on the west.

Historical Context

George Frederick Jaeger was born in Germany in October 1840. His family immigrated to the United States in 1845. In the 1860 Federal Census (taken in June), there are two 19-year-old men named George Jaeger born in Germany and residing in the United States with their parents – one in Missouri and one in Wisconsin. The George Jaeger who purchased the land in the study area is one of these individuals, but without extensive research, it is not possible to know which one is the correct individual.

The first record of George Jager in California is in 1875 when he married Emma Henriette Reese in El Dorado County. Emma Reese was born in California in 1857 with parent Henry and Henrietta Reese born in Prussia and Germany. Her father worked as a miner in 1870 and the family lived in the Placerville Township.

On January 1, 1879, their first daughter was born at Reservoir Hill in El Dorado County. In the 1880 Federal Census, George Jaeger is listed in El Dorado County in the Placerville Township as a 38-year-old miner, with his wife Emma, 23, and their one-year-old daughter, Etta.

In 1880, George Jaeger purchased land including the Project site, apparently deciding to switch his occupation to ranching and farming. Jaeger likely purchased the property between April and November of 1880. By 1885, Jaeger was listed as the owner of the 850-acre tract, valued at \$12,750. He had a house and fences worth \$1,250. Other property included furniture, an organ, farming tools, machinery, wagons, harnesses, four horses, four colts, ten cows, 15 head of cattle, poultry, and wheat.

In 1887, twin girls were born to the family – Maybel and Myrtle. By 1890, Jaeger had continued to prosper. In the 1891-1892 County Directory, his residence is listed as “four miles north” of Cosumne. In 1892, the Sacramento County Great Register of Voters provided a physical description of Jaeger – five-feet, nine-inches in height, light hair and complexion, and blue eyes. He was then listed at Michigan Bar, apparently the closest precinct at the time. He was reported to be a naturalized citizen by virtue of his father’s naturalization.

In 1900, the family was listed on the ranch in Lee Township. George and Emma Jaeger lived with their three daughters – Etta, a 21-year-old bookkeeper at a drugstore, and 12-year-old twins, Maybel and Myrtle. Jaeger apparently raised hay and grain on his land, as well as some livestock. He likely irrigated a portion of his lands as pasture for the livestock. Jaeger may have also had some difficulty in sustaining operations at the ranch as the involvement of his daughters in ranch activities would have been limited due to the attitudes toward the role of women at this time.

Jaeger apparently moved his family in to the City of Sacramento in about 1905 or 1906. George may have been in ill health, or may have wished to retire from farming with increasing age. He purchased a home at 1523 F Street. Jaeger died on February 14, 1907 at age 66. The family had visitation at their home on the 16th with a private funeral. No other detail on his life was provided in the obituaries.

In his will, Jaeger left three-fifths of his estate to his wife, with the remaining two-fifths to be shared by his three daughters. In early 1908, Emma Jaeger filed a final account for the estate. Jaeger owned four houses in the City of Sacramento – a 414-acre ranch in the Florin area, a 200-acre ranch, the 850-acre main ranch, and the home in Sacramento. He sold his 480-acre holdings in El Dorado County to Alex Forni. The total value of the estate was over \$37,000.

Apparently, two of the homes in Sacramento were rental properties. The ranch was apparently rented to the Little Brothers. Income was received for hay sold. Sacramento County maps continue to show the Project site as owned by George Jaeger estate through at least 1923. The 1920 Federal Census indicates that Mrs. Jaeger lived with her unmarried daughter, Myrtle, on 27th Street in the City of Sacramento. Both of their incomes were listed as “none”, suggesting they continued to receive income from the ranch property.

KNOWN CULTURAL RESOURCES

A summary of the record search, Native American consultation, and field assessment that was performed for the Project site is included below.

Research

A record search was conducted for the Project area at the North Central Information Center (NCIC) of the California Historical Resources Information System (CHRIS) in November 2004. According to NCIC files, no sites have been identified in or adjacent to the Project site. CA-SAC-308H has been used to record all of the mining tailings and features of the American River Mining District, and it is assumed that the nearby dredger tailings are considered part of that “site”.

Additionally, an updated record search was conducted for the Project area at the NCIC in June 2017. According to NCIC files, no sites have been identified in or adjacent to the Project site. The June 2017 search did, however, identify two previously recorded cultural resources outside of the Project area but within one-quarter mile radius of the Project site. The records search identified six previous cultural resources within the radius, which may have included cultural resources inventories immediately adjacent to the Project site, though only one previous survey encompassed the site according to the map accompanying the record search. That survey was designated S-5843 by the NCIC and was conducted by Peak & Associates, Inc. in 2005. No cultural resources were identified in the NCIC’s file for report S-5843.

The NCIC records search identified the Wietsma Dairy (P-34-533) and the George Jaeger (home) ranch (P-34-1065) located within one-quarter mile of the Project site radius. The 1916 USGS Buffalo Creek 7.5 minute quadrangle included within the records search did not illustrate any man-made buildings or structures within the Project site. However, two buildings were illustrated within one-quarter mile north of the Project site in the same section. Also, a north-south road (Jaeger Road) is illustrated adjacent to the west side of the Project site. An east-west road (Douglas Road) is illustrated within one-quarter mile north and east of the Project site.

The 1954 USGS Buffalo creek 7.5 minute quadrangle also does not illustrate any man-made buildings or structures within the Project site. However, three small reservoirs are illustrated within one-quarter mile north of the Project site and Jaeger Road is illustrated adjacent the west of the Project site.

As no previously recorded cultural resources were on file with the NCIC for the Project site, the Office of Historic Preservation’s (OHP’s) Archaeological Determinations of Eligibility was not searched for sites with relevant designations. For the same reason, OHP’s Directory of Properties in the Historic Property Data File for Sacramento County was not searched.

NCIC staff reported nothing listed in local inventories. No bridges were located within the Project site. Therefore, a search of the Caltrans Bridge Survey was not conducted.

Consultation

PEAK & ASSOCIATES

Peak & Associates, Inc. sent a letter to the Native American Heritage Commission (NAHC) requesting a check of the Sacred Lands files. The check failed to reveal any properties listed as Sacred Lands on the Project site. The NAHC did provide a list of individuals and groups to contact regarding the site. Letters were sent to: Leland Daniels; Glenn Villa Sr. and Pamela Baumgartner of the Lone Band of Miwok Indians; Clifford McKean of the Miwok Indian Community of the Wilton Rancheria; Dwight Dutschke of the Sierra Native American Council; and Mary Daniels-Tarango of the Wilton Rancheria. No replies were received in response to the Peak & Associates outreach.

DE NOVO PLANNING GROUP

De Novo Planning Group, on behalf of the City, sent a letter to the NAHC requesting the Senate Bill (SB) 18 Tribal Consultation List. The NAHC did provide a list of individuals and groups to contact regarding the site. Letters were sent to: Rhonda Morningstar Pope, Buena Vista Rancheria of Me-Wuk Indians; Pamela Cubbler, Colfax-Todds Valley Consolidated Tribe; Clyde Prout, Colfax-Todds Valley Consolidated Tribe; Sara Dutschke Setchwaelo, Lone Band of Miwok Indians; Cosme A. Valdez, Nashville Enterprise Miwok-Maidu-Nishinam Tribe; Regina Cuellar; Shingle Springs Band of Miwok Indians; Grayson Coney, Tsi Akim Maidu; Gene Whitehouse, United Auburn Indian Community of the Auburn Rancheria (UAIC); and Raymond Hitchcock, Wilton Rancheria. One tribe, the Shingle Springs Band of Miwok Indians responded to the De Novo Planning Group/City outreach. The response letter notes that the Shingle Springs Band of Miwok Indians is not aware of any known cultural resources on the Project site. However, the Shingle Springs Band of Miwok Indians requested to have continued consultation through updates as the Project progresses. Additionally, the Shingle Springs Band of Miwok Indians requested any and all completed record searches and/or surveys that were done in or around the Project area up to and including environmental, archaeological, and cultural reports. Further, the Shingle Springs Band of Miwok Indians requested that, if during the progress of the Project new information or human remains are found, they would like to go over their process with the City to protect such important and sacred artifacts (especially near rivers and streams).

CITY OF RANCHO CORDOVA

Pursuant to Assembly Bill (AB) 52, the City sent letters to the following tribal representatives: Antonio Ruiz Jr. of Wilton Rancheria; Gene Whitehouse of UAIC; Jason Camp of UAIC; Marcos Guerrero of UAIC; and Randy Yonemura of Lone Band of Miwok Indians. One tribe, the UAIC responded to the City outreach. The response letter notes that the UAIC does not wish to initiate consultation under AB 52. However, the UAIC requested that the Tribe be informed of any changes to the Project. The UAIC also requested any and all completed record searches and/or surveys that were done in or around the Project area up to and including environmental, archaeological, and cultural reports. The Tribe also requested to be contacted if any tribal cultural resources are discovered in the Project area. The City sent a response to the UAIC which included the *Determination of Eligibility and Effect for the Jaeger 530 Project Area, Sacramento County,*

3.4 CULTURAL AND TRIBAL RESOURCES

California (Peak & Associates, 2005). The City's response further notes that the Tribe is on the City's list to receive notification when the environmental document is available for public review and comment. The City's response letter concludes by noting that the City will notify the Tribe if the Project changes or if tribal cultural resources are identified within the Project area.

WINDMILLER CONSULTING

In 2017, Windmill Consulting contacted NAHC to request an updated Sacred Land Files search and Native American contacts. The NAHC responded on May 30, 2017 and noted that the Sacred Land Files search was negative. No Native American cultural resources were identified by NAHC staff in the Project area. NAHC staff recommended contacting other sources for information on known and documented sites. The staff included a list of Native American contacts with the response letter:

- Mr. Randy Yonemura, Ione Band of Miwok Indians;
- Ms. Rhonda Morningstar Pope, Chairperson, Buena Vista Rancheria, Sacramento;
- Mr. Cosme Valdez, interim Chief Executive Officer, Nashville-Eldorado Miwok;
- Ms. Crystal Martinez, Chairperson, Ione Band of Miwok Indians;
- Mr. Grayson Coney, Cultural Director, Tsi Akim Maidu;
- Mr. Nicholas Fonseca, Chairperson, Shingle Springs Band of Miwok Indians, Shingle Springs;
- Mr. Don Ryberg, Chairperson, Tsi Akim Maidu;
- Mr. Raymond Hitchcock, Chairperson, Wilton Rancheria;
- Mr. Gene Whitehouse, Chairperson, UAIC.

A letter dated April 26, 2018 along with a location map was mailed to each of the above contacts describing the Project and asking for volunteered information on the location of any sacred or other sites of importance to Native American tribal groups. A follow-up telephone call was made to each contact on May 8, 2018.

In a letter dated May 10, 2018 that appeared to be a standard response, Mr. Gene Whitehouse, Chairman, UAIC stated that the UAIC is concerned about development within its aboriginal territory including potential impact on the lifeways, cultural sites, and landscapes that may be of sacred or ceremonial importance. To ascertain if the Project could affect cultural resources of importance to the UAIC, the UAIC would like to consult on the Project. In addition, the UAIC would like to receive copies of any archaeological reports, environmental documents and the opportunity to comment on the identification, assessment and mitigation related to cultural resources. The UAIC also recommends that UAIC tribal representatives observe and participate in all cultural resource surveys. The letter ended with the statement that the UAIC Preservation Committee requests a meeting or site visit and for further contact, address Mr. Marcos Guerrero, Cultural Resource Manager at UAIC. Mr. Whitehouse's letter did not identify any specific sites of Native American importance within or near the Project site. No other responses from tribal contacts were received as of the date of the Windmill Consulting report.

Earlier, on May 22, 2017, an email was sent to the Sacramento County Historical Society and to the Elk Grove Historical Society. The email described the Project, its location and requested

information on potential historic sites that may be impacted by the Project. There was one response received. Mr. Jim Entrican, Elk Grove Historical Society responded on several occasions with a discussion of pioneer families in the region, but did not specify any historic sites located at the Project location.

There was no response from the Sacramento Historical Society. A second email was sent to the Sacramento Historical Society on May 8, 2018. However, no response was received as of the date of the Windmill Consulting report.

Field Assessment

PEAK & ASSOCIATES - 2004

Ann Peak, Peak & Associates, Inc., assisted by Sue Merritt (graduate student in Anthropology, CSU Sacramento) and Leland Daniels (archaeological technician of Miwok descent), completed a complete field survey and inspection of the Project site in December 2004. Ground visibility was fair to good. No historic, archaeological, or tribal cultural resources were found on the site during the survey. Based on the results of the inspection, there are no prehistoric nor historic period resources located within the Project site.

WINDMILLER CONSULTING - 2018

In April 2018, Ric Windmiller, M.A., conducted a pedestrian reconnaissance of the Project site was conducted along widely spaced transects. Ground visibility was fair to good; grass was cropped close to the ground by grazing cattle. One person day was expended on the reconnaissance. Expectations of finding prehistoric or historic archaeological resources were low. None were identified. However, a double row of parallel high voltage electric transmission lines crosses the Project site from northeast to southwest. The towers (P-34-5210, SMUD Electrical Transmission Towers and Lines) were recorded on DPR 523 series forms by architectural historian Dana Supernowicz, M.A.

P-34-5210, SMUD Electrical Transmission Towers and Lines, consists of two parallel rows of 230kV electrical transmission towers with attached transmission lines. The towers are over 100 feet high and made of riveted steel with lattice bracing. The double row of towers traverses the Project site from northeast to southwest along a utility easement owned by SMUD. Each tower has three horizontal arms or masts mounted to the upper half of the tower. The rectangular, truncated-shaped lattice transmission towers rest on four concrete piers. A form of "X" bracing with radiating steel lattice braces is used on opposing sides of the towers for support. The three steel arms on each tower, also containing lattice bracing, connect to twisted or elongated insulators attached to high lead cables that transmit electricity from tower to tower. The double line of towers cuts through a large swath of agricultural open-space land, terminating to the west at the West Hedge Substation at Elder Creek. The subject transmission towers were reportedly constructed between 1961 and 1968, which is based on a review of historic topographic maps and aerial photographs. P-34-5210, SMUD Electrical Transmission Towers and Lines, are not individually eligible or collectively eligible as a National Register historic district.

3.4.2 REGULATORY SETTING

FEDERAL

National Historic Preservation Act

The National Historic Preservation Act was enacted in 1966 as a means to protect cultural resources that are eligible to be listed on the National Register of Historic Places (NRHP). The law sets forth criterion that is used to evaluate the eligibility of cultural resources. The NRHP is composed of districts, sites, buildings, structures, objects, architecture, archaeology, engineering, and culture that are significant to American History.

Virtually any physical evidence of past human activity can be considered a cultural resource. Although not all such resources are considered to be significant and eligible for listing, they often provide the only means of reconstructing the human history of a given site or region, particularly where there is no written history of that area or that period. Consequently, their significance is judged largely in terms of their historical or archaeological interpretive values. Along with research values, cultural resources can be significant, in part, for their aesthetic, educational, cultural and religious values.

STATE

California Register of Historic Resources

The CRHR was established in 1992 and codified in the Public Resource Code §5020, 5024 and 21085. The law creates several categories of properties that may be eligible for the CRHR. Certain properties are included in the program automatically, including: properties listed in the NRHP; properties eligible for listing in the NRHP; and certain classes of State Historical Landmarks. Determining the CRHR eligibility of historic and prehistoric properties is guided by CCR §§15064.5(b) and Public Resources Code (PRC) §§21083.2 and 21084.1. NRHP eligibility is based on similar criteria outlined in Section 106 of the NHPA (16 U.S. Code [USC] 470).

Cultural resources, under CRHR and NRHP guidelines, are defined as buildings, sites, structures, or objects that may have historical, architectural, archaeological, cultural, or scientific importance. A cultural resource may be eligible for listing on the CRHR and/or NRHP if it:

- is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- is associated with the lives of persons important in our past;
- embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual or possesses high artistic values; or
- has yielded, or may be likely to yield, information important in prehistory or history.

If a prehistoric or historic period cultural resource does not meet any of the four CRHR criteria, but does meet the definition of a "unique" site as outlined in PRC §21083.2, it may still be treated as a

significant resource if it is: an archaeological artifact, object or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- it contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information,
- it has a special and particular quality such as being the oldest of its type or the best available example of its type, or
- it is directly associated with a scientifically recognized important prehistoric or historic event.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) Guidelines §15064.5 provides guidance for determining the significance of impacts to archaeological and historical resources. Demolition or material alteration of a historical resource, including archaeological sites, is generally considered a significant impact. Determining the CRHR eligibility of historic and prehistoric properties is guided by CCR §§15064.5(b) and Public Resources Code (PRC) §§21083.2 and 21084.1. NRHP eligibility is based on similar criteria outlined in Section 106 of the NHPA (16 U.S. Code [USC] 470).

CEQA also provides for the protection of Native American human remains (CCR §15064.5[d]). Native American human remains are also protected under the Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001 et seq.), which requires federal agencies and certain recipients of federal funds to document Native American human remains and cultural items within their collections, notify Native American groups of their holdings, and provide an opportunity for repatriation of these materials. This act also requires plans for dealing with potential future collections of Native American human remains and associated funerary objects, sacred objects, and objects of cultural patrimony that might be uncovered as a result of development projects overseen or funded by the federal government.

Assembly Bill 52

AB 52, approved in September 2014, creates a formal role for California Native American tribes by creating a formal consultation process and establishing that a substantial adverse change to a tribal cultural resource has a significant effect on the environment. Tribal cultural resources are defined as:

- 1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
 - A) Included or determined to be eligible for inclusion in the CRHR
 - B) Included in a local register of historical resources as defined in PRC Section 5020.1(k)
- 2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC Section 5024.1 (c). In applying the criteria set forth in PRC Section 5024.1 (c) the lead agency shall consider the significance of the resource to a California Native American tribe.

A cultural landscape that meets the criteria above is also a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape. In addition, a historical resource described in PRC Section 21084.1, a unique archaeological resource as defined in PRC Section 21083.2(g), or a “non-unique archaeological resource” as defined in PRC Section 21083.2(h) may also be a tribal cultural resource if it conforms with above criteria.

AB 52 requires a lead agency, prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a project, to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of a proposed project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe, and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation.

Assembly Bill 978

In 2001, AB 978 expanded the reach of Native American Graves Protection and Repatriation Act of 1990 and established a state commission with statutory powers to assure that federal and state laws regarding the repatriation of Native American human remains and items of patrimony are fully complied with. In addition, AB 978 also included non-federally recognized tribes for repatriation.

LOCAL

Rancho Cordova General Plan

The Rancho Cordova General Plan contains the following goals and policies that are relevant to cultural and tribal resources:

CULTURAL AND HISTORIC RESOURCES ELEMENT

Goal CHR.1: Identify and preserve the history of Rancho Cordova for future generations.

Policy CHR.1.1: Establish, support, and fund programs that enhance Rancho Cordova’s sense of community and identity, such as the collection of oral histories; genealogical research; and the acquisition of collections of historic artifacts, photographs, memorabilia, or other information relevant to the history of the City.

Policy CHR.1.2: Establish and promote programs that identify, maintain, and protect buildings, sites, or other features of the landscape possessing historic or cultural significance.

Policy CHR.1.3: Establish review procedures for development projects that recognize the history of the area in conjunction with State and federal laws.

3.4.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the Project is considered to have a significant impact on cultural and tribal cultural resources if it will:

- Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines §15064.5;
- Cause a substantial adverse change in the significance of archaeological resource pursuant to CEQA Guidelines §15064.5;
- Disturb any human remains, including those interred outside of formal cemeteries;
- 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 geographically 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:
 - 1) listed or eligible for listing on the California Register of Historical Resources, or on a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
 - 2) a resource determined by a lead agency, in its discretion and supported by substantial evidence, to be significant according to the historical register criteria in Public Resources Code section 5024.1 (c), and considering the significance of the resource to a California Native American tribe.

IMPACTS AND MITIGATION MEASURES

Impact 3.4-1: Project implementation has the potential to cause a substantial adverse change to a significant historical or archaeological resource, as defined in CEQA Guidelines §15064.5, or a significant tribal cultural resource, as defined in Public Resources Code §21074 (Less than Significant with Mitigation)

The Project site is located in an area known to have historical, archaeological, and tribal cultural resources. The field surveys did not reveal a significant historical, archaeological, or tribal cultural resources or sites on the Project site. The field surveys did identify a historical resource; however, it was determined to not be historically significant (Windmiller Consulting, 2018).

As described under the Consultation heading above, the City of Rancho Cordova sent outreach letters to five tribal representatives pursuant to AB 52; De Novo Planning Group contacted nine tribal representatives pursuant to AB 52, and Windmiller Consulting contacted nine tribal representatives as part of their outreach efforts. None of the tribes that were contacted identified any tribal cultural resources on the Project site.

The UAIC responded in writing to both the City and Windmiller Consulting and requested to be notified of any changes to the Project, provided with any additional surveys, record searches or

3.4 CULTURAL AND TRIBAL RESOURCES

reports, and recommended that the UAIC participate in or observe any surveys. The Shingle Springs Band of Miwok Indians responded in writing to De Novo Planning Group and requested to be notified of any changes to the Project, provided with any additional surveys, record searches or reports, and requested to be contacted if any tribal cultural resources are discovered in the Project area. The UAIC's request to observe cultural surveys is addressed by Mitigation Measure 3.4-1 which provides for the tribe's monitoring of ground-disturbing activities and provides the tribe with an opportunity to make recommendations regarding any tribal cultural resources if inadvertently discovered. Mitigation Measure 3.4-1 provides the tribe with an opportunity to make recommendations regarding tribal cultural resources or Native American remains, if inadvertently discovered. The request by the Shingle Springs Band of Miwok Indians to be notified if human remains are found is addressed by Mitigation Measure 3.4-2 which requires the tribe to be consulted if human remains that are Native American in origin are inadvertently discovered.

As with most projects in the region that involve ground-disturbing activities, there is the potential for discovery of a previously unknown historical, archaeological, or tribal cultural resource. Implementation of the following mitigation measure would ensure that any finds are appropriately evaluated, documented, and addressed and would reduce this potential impact to a **less than significant** level.

MITIGATION MEASURE(S)

Mitigation Measure 3.4-1: *Prior to any ground-disturbing activities on the Project site, a qualified archaeologist shall conduct pre-construction worker cultural resources sensitivity training. The training session shall focus on the recognition of the types of historical and cultural, including Native American, resources that could be encountered, procedures to be followed if resources are found, and pertinent laws protecting these resources. Representatives from the Shingle Springs Band of Miwok Indians and the United Auburn Indian Community shall be invited to attend the training.*

If any cultural resources, including prehistoric or historic artifacts, or other indications of archaeological resources or tribal cultural resources are found during grading and construction activities, all work shall be halted immediately within a 100-foot radius of the discovery until an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology, as appropriate, has evaluated the find(s) and until the Shingle Springs Band of Miwok Indians and the United Auburn Indian Community have been contacted and invited to review and document the find.

Work shall not continue at the discovery site until the archaeologist conducts sufficient research and data collection to make a determination that the resource is either 1) not cultural in origin; or 2) not potentially significant or eligible for listing on the NRHP or CRHR; or 3) not a significant Public Trust Resource.

If a significant finding is made, a plan must be developed for this inadvertent finding. Measures to potentially address a subsurface finding could include one or more of the following depending upon the nature of the find: recordation of the finding; further efforts to define the extent and nature of

the resource; preservation in place, and re-design to ensure long-term preservation of the resource; and/or data recovery excavations.

If Native American resources are identified, a Native American monitor, following the Guidelines for Monitors/Consultants of Native American Cultural, Religious, and Burial Sites established by the Native American Heritage Commission, may also be required and, if required, shall be retained at the Applicant's expense. Additionally, if any of these resources are identified, the Shingle Springs Band of Miwok Indian shall be notified and provided the opportunity to comment on the process to protect any potentially important or sacred resources, particularly if located along the on-site aquatic resources.

Impact 3.4-2: Project implementation has the potential to disturb human remains, including those interred outside of formal cemeteries (Less than Significant with Mitigation)

Indications suggest that humans have occupied Sacramento County for over 10,000 years and it is not always possible to predict where human remains may occur outside of formal burials. Therefore, excavation and construction activities, regardless of depth, may yield human remains that may not be interred in marked, formal burials.

Under CEQA, human remains are protected under the definition of archaeological materials as being "any evidence of human activity." Additionally, Public Resources Code Section 5097 has specific stop-work and notification procedures to follow in the event that human remains are inadvertently discovered during Project implementation.

While no human remains were found during field surveys of the Project site, implementation of the following mitigation measure would ensure that all construction activities which inadvertently discover human remains implement state-required consultation methods to determine the disposition and historical significance of any discovered human remains. The following mitigation measure would ensure that any discovered human remains are evaluated and addressed in compliance with State law and would reduce this impact to a ***less-than-significant*** level.

MITIGATION MEASURE(S)

Mitigation Measure 3.4-2: *If human remains are discovered during the course of construction during any phase of the Project, work shall be halted at the site and at any nearby area reasonably suspected to overlie adjacent human remains until the Sacramento County Coroner has been informed and has determined that no investigation of the cause of death is required. If the remains are of Native American origin, either of the following steps will be taken:*

- *The coroner shall contact the Native American Heritage Commission in order to ascertain the proper descendants from the deceased individual. The coroner shall make a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods, which may include obtaining a qualified archaeologist or team of archaeologists to properly excavate the human remains.*

3.4 CULTURAL AND TRIBAL RESOURCES

- *The Shingle Springs Band of Miwok Indian shall be consulted to go over the process to protect any human remains, particularly if located along the on-site aquatic resources.*
- *The landowner shall retain a Native American monitor, and an archaeologist, if recommended by the Native American monitor, and rebury the Native American human remains and any associated grave goods, with appropriate dignity, on the property and in a location that is not subject to further subsurface disturbance when any of the following conditions occurs:*
 - *The Native American Heritage Commission is unable to identify a descendent.*
 - *The descendant identified fails to make a recommendation.*
 - *The City of Rancho Cordova or its authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.*

The purpose of this section is to disclose and analyze the potential impacts associated with the geology of the Project region and general vicinity, and to analyze issues such as the potential exposure of people and property to geologic hazards, landform alteration, and erosion. This section is based in part on the following:

- *Rancho Cordova General Plan* (City of Rancho Cordova, Adopted June 26, 2006);
- *Rancho Cordova General Plan Draft Environmental Impact Report* (City of Rancho Cordova, March 2006);
- *Preliminary Geotechnical Engineering Report – Jaeger Ranch Property* (Wallace-Kuhl & Associates, September 2016);
- *Web Soil Survey* (United States Department of Agriculture Natural Resources Conservation Service, 2018); and
- *Soil Survey of Sacramento County, California* (USDA, 1993).

One comment was received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from the following: Cordova Recreation & Park District (August 3, 2018). The comment related to this topic is addressed within this section.

3.5.1 ENVIRONMENTAL SETTING

REGIONAL GEOLOGY

The Project site is located near the center of the Sacramento Valley, approximately 16 miles southeast of the confluence of the American and Sacramento Rivers. The Sacramento Valley is bordered by the Coast Ranges and Delta on the west and the foothills of the Sierra Nevada to the east.

The Sacramento Valley has been filled over time with up to a six-mile thick sequence of interbedded clay, silt, sand, and gravel deposits. The sediments range in age from more than 144 million years old (Jurassic Period) to less than 10,000 years (Holocene). The most recent sediments consist of coarse-grained (sand and gravel) deposits along river courses and fine-grained (clay and silt) deposits located in low-lying areas or flood basins and are referred to as alluvial deposits. These deposits are loose and not well consolidated soils.

Older alluvial deposits underlie the edges of the Valley. The older alluvial deposits are exposed in the foothill regions in the eastern portion of the county. The alluvial deposits, which slope gradually toward the center of the Valley, contain most of the groundwater supplies in region. The foothills of the coast ranges to the west of the Project site are underlain by alluvial deposits and older marine sediments deposited during the Tertiary Period when an inland sea occupied the Great Valley.

Great Valley Geomorphic Province

The Great Valley is an alluvial plain, about 50 miles wide and 400 miles long, between the Coast Ranges and Sierra Nevada. The Great Valley is drained by the Sacramento and San Joaquin rivers,

3.5 GEOLOGY AND SOILS

which join and enter San Francisco Bay. The eastern border is the west-sloping Sierran bedrock surface, which continues westward beneath alluvium and older sediments. The western border is underlain by east-dipping Cretaceous and Cenozoic strata that form a deeply buried synclinal trough, lying beneath the Great Valley along its western side.

City of Rancho Cordova

The geological formations underlying the majority of the City of Rancho Cordova General Plan Planning Area consist mostly of Cenozoic Quaternary gravelly alluvial and glacial deposits from the ancestral channel of the American River, which date back to the mid Pleistocene age or approximately 600,000 years. These formations are typically found north of Douglas Road and east of Sunrise Boulevard. The geologic structure east of Grant Line Road consists primarily of Cenozoic Tertiary Mehrten formations of andesitic conglomerate, sandstone, and breccia. The youngest geomorphic features in the Planning Area are low floodplains, which are found primarily along the American River and Cosumnes River. These features include natural levees, alluvial plains, and many smaller channels along both river corridors. Bar and channel topography is evident on the low floodplains adjacent to these river corridors. The floodplains along the Cosumnes River are not protected by levees or dams and are frequently inundated during the rainy season.

The majority of the soils in the City's General Plan Planning Area are the result of alluvial deposits, or river and lake deposits on various geomorphic surfaces. The U.S. Department of Agriculture (USDA) Soil Conservation Service produces maps classifying soil groups based on physical, hydrologic, and chemical properties. According to the USDA Soil Survey of Sacramento County (Soil Survey), the Planning Area contains 59 separate soil types.

SITE GEOLOGY

Soil Survey

A Custom Soil Survey was completed for the Project site using the Natural Resources Conservation Service (NRCS) Web Soil Survey program. The NRCS Soils Map is provided in Figure 3.5-1. Table 3.5-1 identifies the type and range of soils found in the Project site.

TABLE 3.5-1: PROJECT SITE SOILS

<i>UNIT SYMBOL</i>	<i>NAME</i>	<i>ACRES IN PROJECT SITE</i>	<i>PERCENT OF PROJECT SITE</i>
145	Fiddymment fine sandy loam, 1-8% slopes	2.60	0.5%
159	Hicksville gravelly loam, 0-2% slopes	12.41	2.4%
193	Red Bluff-Redding complex, 0-5% slopes	85.18	16.2%
197	Redding loam, 2-8% slopes	54.90	10.5%
198	Redding gravelly loam, 0-8% slopes, MLRA 17	370.39	70.5%

SOURCE: NRCS CUSTOM SOIL SURVEY 2018.

Fiddymment. The Fiddymment series consists of moderately deep, well drained soils formed in material weathered from consolidated sediments of mixed rock sources. Fiddymment soils are on nearly level to rolling low terraces and hills. This soils series is well drained, has slow to medium

runoff, and very slow permeability. Water perches above the claypan for short periods after periods of high rainfall in December through April. The soil is used for rangeland, non-irrigated small grain crops, and urban development. Some areas are used for irrigated pasture. Natural vegetation is annual grasses and forbs such as soft chess, oats, and filaree and a few scattered oaks.

Hicksville. The Hicksville series consists of deep and very deep, moderately well drained soils that formed in alluvium derived from mixed rock sources. Hicksville soils are on low stream terraces and alluvial flats along drainageways of terraces and hills. This soils series is moderately well drained, has very slow to slow runoff, and moderately slow permeability. These soils are used for livestock grazing. A few areas are used for irrigated hay and pasture and irrigated row and orchard crops. Natural vegetation is soft chess, wild oats, riggut brome, needlegrass and filaree.

Red Bluff. The Red Bluff series consists of very deep, well drained soils formed in old mixed alluvium. Red Bluff soils are on terraces. This soils series is well drained, has slow to medium runoff, and moderately slow permeability. Small grains and pasture are grown where dry farmed. Row crops, pasture and a few orchards are grown under irrigation. Native vegetation consists of blue oak, live oak, manzanita, soft chess, wild oats, and annual forbs. In lower rainfall areas, oaks and brush are absent.

Redding. The Redding series consists of moderately deep to duripan, well or moderately well drained soils that formed in alluvium derived from mixed sources. They are on nearly level or dissected fan remnants. This soils series is well or moderately well drained, has very low to high runoff, except for local ponding in intermound areas, and very slow to slow permeability. These soils are used for rangeland and dryland small grain. A few areas are used for irrigated pasture. Natural vegetation is annual grasses and forbs.

Groundwater

The Central Area groundwater subbasin (i.e., the Central Basin) corresponds to the South American Sub-Basin (California Department of Water Resources [DWR] Basin Number 5-21.65) and is located between the American River and the Cosumnes River. Zone 40 is located within the Central Basin.

Groundwater in the Central Basin is classified as occurring in a shallow aquifer zone (Laguna or Modesto Formation) or in an underlying deeper aquifer zone (Mehrtens Formation). Within Zone 40, the shallow aquifer extends to approximately 200 to 300 feet below the ground surface; in general, the water quality in this zone is considered good, except for the occurrence of low levels of arsenic in some locations. The shallow aquifer is typically used for private domestic wells and requires no treatment unless naturally occurring arsenic is encountered.

The deep aquifer is semiconfined by and separated from the shallow aquifer by a discontinuous clay layer. The base of the deep aquifer averages approximately 1,400 feet below the ground surface. Water at the base of the deep aquifer has higher concentrations of total dissolved solids.

Iron and manganese typically found in the deep aquifer are at levels requiring treatment. Groundwater used in Zone 40 is supplied from both the shallow and deeper aquifer systems.

Groundwater in central Sacramento County moves from sources of recharge to areas of discharge. Recharge to the aquifer system occurs along river and stream channels where extensive sand and gravel deposits exist, particularly along the American, Cosumnes, and Sacramento River channels. Additional recharge occurs along the eastern boundary of Sacramento County at the transition point from the consolidated rocks of the Sierra Nevada to the alluvial deposited basin sediments. This typically occurs through fractured granitic rock that makes up the Sierra Nevada foothills. Other sources of recharge within the areas include deep percolation from applied surface water, precipitation, and small streams.

Groundwater elevations through much of the Central Basin generally declined from the 1950s to about 1980 by about 20 to 30 feet. From 1980 to 1983, water levels recovered by about 10 feet and remained stable until 1987, which was the beginning of the 1987–1992 droughts. From 1987 to 1995, water levels declined by about 15 feet. From 1995 to 2003, most water levels recovered to higher levels than before the 1987–1992 drought. Much of this recovery can be attributed to increased use of surface water in the Central Basin and the fallowing of previously irrigated agricultural lands for development of urban uses.

According to the Geotechnical Engineering Report prepared for the Project site (Wallace-Kuhl, 2016) (Appendix E of this Draft EIR), groundwater was not encountered in the test pits excavated at the site in August of 2016. Based on groundwater depth observations taken from 2008 to 2012 in nearby wells (e.g. Wells EX-20, EX-21, EX-22, and EX-27 from Central Valley Regional Water Quality Control Board Case Number SL205493018) permanent groundwater is anticipated to vary between 150 and 240 feet below existing surface grades.

However, perched seasonal groundwater is anticipated to occur at this site. Surface water features observed during site exploration activities included vernal ponds and ephemeral streams/washes. Based on these surface features, and the underlying geology, we anticipate the perched groundwater conditions are likely to occur at the site with potential for significant surface water flows. Perched groundwater conditions should be expected after heavy rainfall or during the wetter seasons of the year.

FAULTS AND SEISMICITY

Faults

A fault is a fracture in the crust of the earth along which rocks on one side have moved relative to those on the other side. A fault trace is the line on the earth's surface defining the fault. Displacement of the earth's crust along faults releases energy in the form of earthquakes and in some cases in fault creep. Most faults are the result of repeated displacements over a long period of time.

Surface rupture occurs when movement on a fault deep within the earth breaks through to the surface. Surface ruptures have been known to extend up to 50 miles with displacements of an inch

to 20 feet. Fault rupture almost always follows preexisting faults, which are zones of weakness. Rupture may occur suddenly during an earthquake or slowly in the form of fault creep. Sudden displacements are more damaging to structures because they are accompanied by shaking.

The State of California designates faults as active, potentially active, and inactive depending on how recent the movement that can be substantiated for a fault. Table 3.5-2 presents the California fault activity rating system.

TABLE 3.5-2: FAULT ACTIVITY RATING

<i>FAULT ACTIVITY RATING</i>	<i>GEOLOGIC PERIOD OF LAST RUPTURE</i>	<i>TIME INTERVAL</i>
Active (A)	Holocene	Within last 11,700 Years
Potentially Active (PA)	Quaternary	Age Undifferentiated
Inactive (I)	Pre-Quaternary	Greater than 1.6 Million Years

SOURCE: CALIFORNIA DEPARTMENT OF CONSERVATION, FAULT ACTIVITY MAP OF CALIFORNIA (2010).

No known faults traverse through the Rancho Cordova Planning Area. However, the site does lie within a seismically active region, as California has numerous faults that are considered active. Generally, a fault is considered active if it has ruptured within the Holocene epoch (11,700 years before present). Mapped, active regional faults within the vicinity of the Project site range from 14 to 50 miles away.

Fault Systems

Seismicity is directly related to the distribution of fault systems within a region. Depending on activity patterns, faults and fault-related geologic features may be classified as active, potentially active, or inactive.

The Quaternary Faults are illustrated on Figure 3.5-2. There are no Alquist-Priolo Earthquake Fault Zones in the region. With the exception of the Dunnigan Hills fault, located in the Woodland area, the Sacramento Valley has generally not been seismically active in the last 11,000 years (Holocene time). Faults with known or estimated activity during the Holocene are generally located in the San Francisco Bay Area to the west, or in the Lake Tahoe area to the east.

Seismicity

The amount of energy available to a fault is determined by considering the slip-rate of the fault, its area (fault length multiplied by down-dip width), maximum magnitude, and the rigidity of the displaced rocks. These factors are combined to calculate the moment (energy) release on a fault. The total seismic energy release for a fault source is sometimes partitioned between two different recurrence models, the characteristic and truncated Gutenberg-Richter (G-R) magnitude-frequency distributions. These models incorporate our knowledge of the range of magnitudes and relative frequency of different magnitudes for a particular fault. The partition of moment and the weights for multiple models are given in the following summary.

Earthquakes are generally expressed in terms of intensity and magnitude. Intensity is based on the observed effects of ground shaking on people, buildings, and natural features. By comparison, magnitude is based on the amplitude of the earthquake waves recorded on instruments, which

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have a common calibration. The Richter scale, a logarithmic scale ranging from 0.1 to 9.0, with 9.0 being the strongest, measures the magnitude of an earthquake relative to ground shaking. Table 3.5-3 provides a description and a comparison of intensity and magnitude.

The California Building Standards Code (CBSC) places all of California in the zone of greatest earthquake severity because recent studies indicate high potential for severe ground shaking.

TABLE 3.5-3: MODIFIED MERCALLI INTENSITY SCALE FOR EARTHQUAKES

<i>RICHTER MAGNITUDE</i>	<i>MODIFIED MERCALLI SCALE</i>	<i>EFFECTS OF INTENSITY</i>
0.1 – 0.9	I	Earthquake shaking not felt
1.0 – 2.9	II	Shaking felt by those at rest.
3.0 – 3.9	III	Felt by most people indoors, some can estimate duration of shaking.
4.0 – 4.5	IV	Felt by most people indoors. Hanging objects rattle, wooden walls and frames creak.
4.6 – 4.9	V	Felt by everyone indoors, the duration of shaking can be estimated by most people. Standing autos rock. Crockery clashes, dishes rattle and glasses clink. Doors open, close and swing.
5.0 – 5.5	VI	Felt by all who estimate duration of shaking. Sleepers awoken, liquids spill, objects are displaced, and weak materials crack.
5.6 – 6.4	VII	People frightened and walls unsteady. Pictures and books thrown, dishes and glass are broken. Weak chimneys break. Plaster, loose bricks and parapets fall.
6.5 – 6.9	VIII	Difficult to stand. Waves on ponds, cohesionless soils slump. Stucco and masonry walls fall. Chimneys, stacks, towers, and elevated tanks twist and fall.
7.0 – 7.4	IX	General fright as people are thrown down, hard to drive. Trees broken, damage to foundations and frames. Reservoirs damaged, underground pipes broken.
7.5 – 7.9	X	General panic. Ground cracks, masonry and frame buildings destroyed. Bridges destroyed, railroads bent slightly. Dams, dikes and embankments damaged.
8.0 – 8.4	XI	Large landslides, water thrown, general destruction of buildings. Pipelines destroyed, railroads bent.
8.5 +	XII	Total nearby damage, rock masses displaced. Lines of sight/level distorted. Objects thrown into air.

SOURCE: UNITED STATES GEOLOGICAL SURVEY.

Alquist-Priolo Special Study Zone

The California legislature passed the Alquist-Priolo Special Studies Zone Act in 1972 to address seismic hazards associated with faults and to establish criteria for developments for areas with identified seismic hazard zones. The California Geologic Survey (CGS) evaluates faults with available geologic and seismologic data and determines if a fault should be zoned as active, potentially active, or inactive. If CGS determines a fault to be active, then it is typically incorporated into a Special Studies Zone in accordance with the Alquist-Priolo Earthquake Hazard Act. Alquist-Priolo Special Study Zones are usually one-quarter mile or less in width and require site-specific evaluation of fault location and require a structure setback if the fault is found traversing a Project site. The Project site is not within an Alquist-Priolo Special Study Zone.

SEISMIC HAZARDS

Seismic Ground Shaking

The potential for seismic ground shaking is expected in California. As a result of the foreseeable seismicity in California, the State requires special design considerations for all structural improvements in accordance with the seismic design provisions in the California Building Code. These seismic design provisions require enhanced structural integrity based on several risk parameters. Seismic ground shaking on the Project site is expected during the life of the Project.

Fault Rupture

A fault rupture occurs when the surface of the earth breaks as a result of an earthquake, although this does not happen with all earthquakes. These ruptures generally occur in a weak area of an existing fault. Ruptures can be sudden (i.e. earthquake) or slow (i.e. fault creep). The Alquist-Priolo Fault Zoning Act requires active earthquake fault zones to be mapped and it provides special development considerations within these zones. The Project site does not have surface expression of active faults and fault rupture is not anticipated.

Liquefaction

Liquefaction typically requires a significant sudden decrease of shearing resistance in cohesionless soils and a sudden increase in water pressure, which is typically associated with an earthquake of high magnitude. The potential for liquefaction is highest when groundwater levels are high, and loose, fine, sandy soils occur at depths of less than 50 feet. Based on a review of geologic maps and Natural Resources Conservation Service (NRCS) soil data, it is unlikely that soils on the Project site would be subject to liquefaction in the event of an earthquake because the Project site is underlain by relatively stable Pleistocene-age soils, the potential seismic sources are a relatively long distance away, and the groundwater table is at least 100 feet below the ground surface.

According to the Geotechnical Engineering Report prepared for the Project site (Wallace-Kuhl, 2016), groundwater at the site is greater than 50 feet below grade, and saturated soils were not encountered during site exploration activities. Soils will likely remain unsaturated during the majority of the year, and are thus not considered susceptible to liquefaction. The silty sands and sands are susceptible to seismic compression. Therefore, liquefaction potential at the site is considered very low.

Lateral Spreading

Lateral spreading typically results when ground shaking moves soil toward an area where the soil integrity is weak or unsupported, and it typically occurs on the surface of a slope, although it does not occur strictly on steep slopes. Oftentimes, lateral spreading is directly associated with areas of liquefaction. Areas in the region that are susceptible to this hazard are located along creeks or open water bodies, or within the foothills to the west. According to the City's General Plan Draft EIR, the potential for lateral spreading throughout the General Plan Planning Area to occur during or after seismic events is considered to be low due to the distance of active faults.

Landslides

Landslides include rockfalls, deep slope failure, and shallow slope failure. Factors such as the geological conditions, drainage, slope, vegetation, and others directly affect the potential for landslides. One of the most common causes of landslides is construction activity that is associated with road building (i.e. cut and fill). The potential for landslides is considered remote in the Sacramento Valley floors due to the lack of significant slopes. For this reason, the probability of landslides occurring on the Project site is low.

NON-SEISMIC HAZARDS

Expansive Soils

Expansive soils can undergo significant volume change with changes in moisture content. They shrink and harden when dried and expand and soften when wet. If structures are underlain by expansive soils, it is important that foundation systems be capable of tolerating or resisting any potentially damaging soil movements. In addition, it is important to limit moisture changes in the surficial soils by using positive drainage away from buildings as well as limiting landscaping watering. As shown in Figure 3.5-3, the expansive potential of the Project site soils is generally low. According to the Geotechnical Engineering Report prepared for the Project site (Wallace-Kuhl, 2016), laboratory test results performed on Project site soil samples collected in the upper two to three feet indicate that these soils typically have a plasticity index of less than 15 and can be considered to have a low expansion potential. The soils beneath about two feet typically have a plasticity index of greater than 15, and should be considered to have a low to moderate expansion potential.

Erosion

Erosion naturally occurs on the surface of the earth as surface materials (i.e. rock, soil, debris, etc.) is loosened, dissolved, or worn away, and transported from one place to another by gravity. Two common types of soil erosion include wind erosion and water erosion. The steepness of a slope is an important factor that affects soil erosion. Erosion potential in soils is influenced primarily by loose soil texture and steep slopes. Loose soils can be eroded by water or wind forces, whereas soils with high clay content are generally susceptible only to water erosion. The potential for erosion generally increases as a result of human activity, primarily through the development of facilities and impervious surfaces and the removal of vegetative cover. According to the City's General Plan Draft EIR and the SunCreek Specific Plan Draft EIR, the erosion potential for the Project area is low to moderate.

The *Custom Soils Report* identified the erosion potential for the soils in the Project site. This report summarizes those soil attributes used by the Revised Universal Soil Loss Equation Version 2 (RUSLE2) for the map units in the selected area. Soil property data for each map unit component includes the hydrologic soil group, erosion factor "K" for the surface horizon, erosion factor "T", and the representative percentage of sand, silt, and clay in the surface horizon.

Erosion factor “K” indicates the susceptibility of a soil to sheet and rill erosion by water. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water. Within the Project site, the erosion factor Kf varies from 0.32 to 0.49, which is considered a moderate potential for erosion.

Subsidence

Land subsidence is the gradual settling or sinking of an area with little or no horizontal motion due to changes taking place underground. It is a natural process, although it can also occur (and is greatly accelerated) as a result of human activities. Common causes of land subsidence from human activity include: pumping water, oil, and gas from underground reservoirs; dissolution of limestone aquifers (sinkholes); collapse of underground mines; drainage of organic soils; and initial wetting of dry soils. Sacramento County is affected by five causes of land subsidence: 1) compaction of unconsolidated soils from earthquakes; 2) compaction by heavy structures; 3) erosion of peat soils; 4) peat oxidation; and 5) groundwater withdrawal. Minor land subsidence was observed and recorded in the County between 1912 and the mid-1960s for all groundwater basins underlying the County. However, subsidence did not exceed 0.40-feet during this time frame.

The Project site contains creek banks, and areas of low soil bearing strength. According to the City’s General Plan EIR, the likeliness of subsidence in the City’s Planning Area is considered very low.

3.5.2 REGULATORY SETTING

STATE

The State of California has established a variety of regulations and requirements related to seismic safety and structural integrity, including the California Building Code, the Alquist-Priolo Earthquake Fault Zoning Act and the Seismic Hazards Mapping Act.

California Building Standards Code

The CBSC is included in Title 24 of the California Code of Regulations (CCR) and includes the California Building Code. Under state law, all building standards must be centralized in Title 24 or they are not enforceable.

The CBSC is a compilation of three types of building criteria from three different origins:

- Building standards that have been adopted by state agencies without change from building standards contained in national model codes;
- Building standards that have been adopted and adapted from the national model code standards to meet California conditions; and
- Building standards, authorized by the California legislature, that constitute extensive additions not covered by the model codes that have been adopted to address particular California concerns.

Through the CBSC, the state provides a minimum standard for building design and construction. The CBSC contains specific requirements for seismic safety, excavation, foundations, retaining walls, and site demolition. It also regulates grading activities, including drainage and erosion control.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 sets forth the policies and criteria of the State Mining and Geology Board, which governs the exercise of governments' responsibilities to prohibit the location of developments and structures for human occupancy across the trace of active faults. The policies and criteria are limited to potential hazards resulting from surface faulting or fault creep within Earthquake Fault Zones, as delineated on maps officially issued by the State Geologist. Working definitions include:

- Fault – a fracture or zone of closely associated fractures along which rocks on one side have been displaced with respect to those on the other side;
- Fault Zone – a zone of related faults, which commonly are braided and sub parallel, but may be branching and divergent. A fault zone has a significant width (with respect to the scale at which the fault is being considered, portrayed, or investigated), ranging from a few feet to several miles;
- Sufficiently Active Fault – a fault that has evidence of Holocene surface displacement along one or more of its segments or branches (last 11,000 years); and
- Well-Defined Fault – a fault whose trace is clearly detectable by a trained geologist as a physical feature at or just below the ground surface. The geologist should be able to locate the fault in the field with sufficient precision and confidence to indicate that the required site-specific investigations would meet with some success.

“Sufficiently Active” and “Well Defined” are the two criteria used by the State to determine if a fault should be zoned under the Alquist-Priolo Act.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act, passed in 1990, addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically-induced landslides. Under the Act, seismic hazard zones are to be mapped by the State Geologist to assist local governments in land use planning. The program and actions mandated by the Seismic Hazards Mapping Act closely resemble those of the Alquist-Priolo Earthquake Fault Zoning Act (which addresses only surface fault-rupture hazards) and are outlined below:

The State Geologist is required to delineate the various “seismic hazard zones.”

- Cities and Counties, or other local permitting authority, must regulate certain development “projects” within the zones. They must withhold the development permits

for a site within a zone until the geologic and soil conditions of the site are investigated and appropriate mitigation measures, if any, are incorporated into development plans.

- The State Mining and Geology Board provides additional regulations, policies, and criteria, to guide cities and counties in their implementation of the law. The Board also provides guidelines for preparation of the Seismic Hazard Zone Maps and for evaluating and mitigating seismic hazards.
- Sellers (and their agents) of real property within a mapped hazard zone must disclose that the property lies within such a zone at the time of sale.

National Pollutant Discharge Elimination System (NPDES)

National Pollutant Discharge Elimination System (NPDES) permits are required for discharges of pollutants to navigable waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, the ocean, dry stream beds, wetlands, and storm sewers that are tributary to any surface water body. NPDES permits are issued under the Federal Clean Water Act, Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.)

The Regional Water Quality Control Board (RWQCB) issues these permits in lieu of direct issuance by the Environmental Protection Agency, subject to review and approval by the Environmental Protection Agency Regional Administrator. The terms of these NPDES permits implement pertinent provisions of the Federal Clean Water Act and the Act's implementing regulations, including pre-treatment, sludge management, effluent limitations for specific industries, and anti- degradation. In general, the discharge of pollutants is to be eliminated or reduced as much as practicable so as to achieve the Clean Water Act's goal of "fishable and swimmable" navigable (surface) waters. Technically, all NPDES permits issued by the RWQCB are also Waste Discharge Requirements issued under the authority of the California Water Code.

These NPDES permits regulate discharges from publicly owned treatment works, industrial discharges, stormwater runoff, dewatering operations, and groundwater cleanup discharges. NPDES permits are issued for five years or less, and are therefore to be updated regularly. The rapid and dramatic population and urban growth in the Central Valley Region has caused a significant increase in NPDES permit applications for new waste discharges. To expedite the permit issuance process, the RWQCB has adopted several general NPDES permits, each of which regulates numerous discharges of similar types of wastes. The SWRCB issues general permits for stormwater runoff from construction sites statewide. Stormwater discharges from industrial and construction activities in the Central Valley Region can be covered under these general permits, which are administered jointly by the SWRCB and RWQCB.

In accordance with the NPDES General Construction Permit requirements, a Storm Water Pollution Prevention Plan (SWPPP) is required for projects that disturb at least one acre of soil. The SWPPP must be submitted to the RWQCB.

LOCAL

Rancho Cordova General Plan

The Rancho Cordova General Plan contains the following goals and policies that are relevant to geotechnical aspects of the proposed Project:

SAFETY ELEMENT

Goal S.3: Reduce the risk of adverse effects to residents or businesses as a result of geologic or seismic instability.

Policy S.3.1: Support efforts by federal, State, and local jurisdictions to investigate local seismic and geologic hazards and support those programs that effectively mitigate these hazards.

Policy S.3.2: Ensure that new structures are protected from damage caused by geologic and/or soil conditions to the greatest extent feasible.

NATURAL RESOURCES ELEMENT

Goal NR.5: Protect the quantity and quality of the City's water resources.

Policy NR.5.5: Minimize erosion to stream channels resulting from new development in urban areas consistent with State law.

City of Rancho Cordova Municipal Code

Chapter 16.04, Building Code, provides minimum standards to safeguard life or limb, health, property, and public welfare by regulating and controlling the design, construction, installation, quality of materials, use and occupancy, location and maintenance of all buildings and structures within this jurisdiction, and certain equipment. Section 16.030 of this chapter adopts the 2016 California Building Code.

Chapter 16.44, Land Grading and Erosion Control, establishes administrative procedures, a minimum standard of review, and implementation and enforcement procedures for controlling erosion, sedimentation, and other pollutant runoff from new development projects. The ordinance also addresses grading, filling, land excavation, construction activities, and drainage as they relate to a particular project. The ordinance applies to any development project resulting in the excavation of 350 cubic yards of soil or more. Grading and erosion control permits, and amendments thereto, are subject to the requirements of the California Environmental Quality Act (CEQA) if they have not been addressed in a previous environmental document. Individual project applicants are required to furnish a copy of the permit application to the City for review and approval. The City reviews all grading and erosion control permits and geotechnical studies and reports in accordance with the Ordinance to ensure geologic and soil stability have been properly addressed.

3.5.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the Project will have a significant impact on geology, soils, and minerals if it will:

- 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; and/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;
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property; and/or
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

As discussed in the Initial Study prepared for the Project (see Appendix A), there would be *no impact* regarding mineral resources and *no impact* associated with the use of septic tanks or alternative wastewater disposal systems. These issues will not be addressed further.

IMPACTS AND MITIGATION MEASURES

Impact 3.5-1: Project implementation would not directly or indirectly cause potential substantial adverse effects involving strong seismic ground shaking or seismic related ground failure (Less than Significant)

The Project site is not within an Alquist-Priolo Special Study Zone. There are no known faults (active, potentially active, or inactive) that traverse through the City.

With the exception of the Dunnigan Hills fault, located in the Woodland area, the Sacramento Valley has generally not been seismically active in the last 11,000 years (Holocene time). Faults with known or estimated activity during the Holocene are generally located in the San Francisco Bay Area to the west, or in the Lake Tahoe area to the east. The CBSC places all of California in the zone of greatest earthquake severity because recent studies indicate high potential for severe ground shaking.

There will always be a potential for groundshaking caused by seismic activity anywhere in California, including the Project site. In order to minimize potential damage to the buildings and site improvements, all construction in California is required to be designed in accordance with the latest seismic design standards of the California Building Code. Design in accordance with these standards would reduce any potential impact to a *less than significant* level. Refer to Impact 3.5-3 for a discussion of impacts related to landslides, lateral spreading, subsidence, and liquefaction.

Impact 3.5-2: Project construction and implementation has the potential to result in substantial soil erosion or the loss of topsoil (Less than Significant with Mitigation)

According to the *Custom Soils Report* prepared for the Project site, the erosion potential for the soils on the Project site is moderate, with the erosion factor Kf varying from 0.32 to 0.49. There is always the potential for human caused erosion associated with construction activities or through the operational phase of a Project.

Grading, excavation, removal of vegetation cover, and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation. Construction activities also could result in soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas. Mitigation Measure 3.5-1 requires an approved SWPPP that includes best management practices for grading and preservation of topsoil. The SWPPP will be designed to control storm water quality degradation to the extent practicable using best management practices during and after construction. The Project applicant will submit the SWPPP with a Notice of Intent to the RWQCB to obtain a General Permit. The RWQCB is an agency responsible for reviewing the SWPPP with the Notice of Intent, prior to issuance of a General Permit for the discharge of storm water during construction activities.

Additionally, there is the potential for erosion associated with stormwater runoff throughout the operational phase of the Project. The potential for erosion is associated with the design of the improvements, structures, and landscaping. Mitigation Measure 3.5-2 requires the Project to incorporate design measures that treat stormwater runoff in accordance with the standards of the California Stormwater Best Management Practice New Development and Redevelopment Handbook and Section E.12 of the Phase II Small MS4 General Permit. This includes the drainage design from all paved surfaces, including streets, parking lots, driveways, and roofs, as well as landscaping.

The California Stormwater Best Management Practice New Development and Redevelopment Handbook addresses potential water quality impacts from completed development that can include the following:

- Urban activities can result in the generation of new dry-weather runoff that may contain many of the following pollutants: sediment, nutrients, bacteria and viruses, oil and grease, metals, organics, pesticides, and trash;

- Impervious surfaces associated with development, such as streets, rooftops, and parking lots, prevent runoff infiltration and increase the rate and volume of stormwater runoff that may increase downstream erosion potential and associated potential water quality impairment;
- Urban activities and increased impervious surfaces which can increase the concentration and/or total load of many of the pollutants listed above in wet weather stormwater runoff.

Practices that reduce erosion and help retain water on-site include incorporating organic amendments into disturbed soils after construction, retaining native vegetation, covering soil during revegetation, providing street trees, drainage basin maintenance, and more. Compliance with the California Stormwater Best Management Practice New Development and Redevelopment Handbook would ensure that the storm drain system does not increase flooding and erosion potential.

With the implementation of the following mitigation measures, the Project would have a ***less than significant*** impact relative to this topic.

MITIGATION MEASURE(S)

Mitigation Measure 3.5-1: *Prior to any site disturbance, the Project proponent shall submit a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) to the RWQCB in accordance with the NPDES General Construction Permit requirements. The SWPPP shall be designed to control pollutant discharges utilizing Best Management Practices (BMPs) and technology to reduce erosion and sediments. BMPs may consist of a wide variety of measures taken to reduce pollutants in stormwater runoff from the Project site. Measures shall include temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) that will be employed to control erosion from disturbed areas. Final selection of BMPs will be subject to approval by the City of Rancho Cordova and the RWQCB. The SWPPP will be kept on site during construction activity and will be made available upon request to representatives of the RWQCB.*

Impact 3.5-3: The Project has the potential to be located on a geologic unit or soil that is unstable, or that would become unstable as a result of Project implementation, and potentially result in landslide, lateral spreading, subsidence, liquefaction or collapse (Less than Significant with Mitigation)

The on-site soils include: Fiddymont fine sandy loam, 1-8% slopes; Hicksville gravelly loam, 0-2% slopes; Red Bluff-Redding complex, 0-5% slopes; Redding loam, 2-8% slopes; and Redding gravelly loam, 0-8% slopes, MLRA 17. These soils are well or moderately well drained with very slow to slow permeability. According to the NRCS Web Soil Survey, these soils are rated as “somewhat limited” for development of dwellings and commercial buildings.

LANDSLIDES

Landslides include rockfalls, deep slope failure, and shallow slope failure. Factors such as the geological conditions, drainage, slope, vegetation, and others directly affect the potential for landslides. One of the most common causes of landslides is construction activity that is associated with road building (i.e. cut and fill). The potential for landslides is considered remote in the Sacramento Valley floors due to the lack of significant slopes. For this reason, the probability of landslides occurring on the Project site is low.

LATERAL SPREADING

Lateral spreading typically results when ground shaking moves soil toward an area where the soil integrity is weak or unsupported, and it typically occurs on the surface of a slope, although it does not occur strictly on steep slopes. Oftentimes, lateral spreading is directly associated with areas of liquefaction. Areas in the region that are susceptible to this hazard are located along creeks or open water bodies, or within the foothills to the west. The potential for lateral spreading to occur during or after seismic events is considered to be low due to the distance of active faults from the Project site.

SUBSIDENCE

Sacramento County is affected by five causes of land subsidence: 1) compaction of unconsolidated soils from earthquakes; 2) compaction by heavy structures; 3) erosion of peat soils; 4) peat oxidation; and 5) groundwater withdrawal. Minor land subsidence was observed and recorded in the County between 1912 and the mid-1960's for all groundwater basins underlying the County. However, subsidence did not exceed 0.40-feet during this time frame. The Project site contains creek banks, and areas of low soil bearing strength. According to the City's General Plan EIR, the likeliness of subsidence in the City's Planning Area is considered very low.

LIQUEFACTION

Soil liquefaction results from loss of strength during cyclic loading, such as imposed by earthquakes. Soils most susceptible to liquefaction are clean, loose, saturated, uniformly graded, fine-grained sands. It is unlikely that soils on the Project site would be subject to liquefaction in the event of an earthquake because the Project site is underlain by relatively stable Pleistocene-age soils, and the potential seismic sources are a relatively long distance away.

According to the Geotechnical Engineering Report prepared for the Project site (Wallace-Kuhl, 2016), groundwater at the site is greater than 50 feet below grades, and saturated soils were not encountered during site exploration activities. Soils will likely remain unsaturated during the majority of the year, and are thus not considered susceptible to liquefaction. The silty sands, and sands are susceptible to seismic compression. While liquefaction potential at the site is considered very low, there is the potential for some limited settlement associated with the potential for low to moderate ground shaking that could occur at the site. The Preliminary Geotechnical Engineering Report recommended that the expected total and differential settlements of soil be evaluated in more detail in the final geotechnical engineering report.

CORROSIVITY

The California Department of Transportation Corrosion and Structural Concrete Field Investigation Branch, 2012 Corrosion Guidelines, considers a site to be corrosive to foundation elements if one or more of the following conditions exists for the representative soil and/or water samples taken: has a chloride concentration greater than or equal to 500 parts per million (ppm), sulfate concentration greater than or equal to 2000 ppm, or a pH of 5.5 or less (Caltrans, 2012). The Preliminary Geotechnical Engineering Report prepared for the Project identified soil corrosivity testing results for the Project site, which included a pH of 5.22 for the soil sample tested. While the chloride and sulfate levels (6.5 and 1.9 ppm, respectively) were well below the levels identified for corrosivity concerns, the pH of the Project site is considered potentially corrosive based on the California Department of Transportation 2012 Corrosion Guidelines.

CONCLUSION

While the potential for landslides, lateral spreading, subsidence, and liquefaction are low at the site, the potential for soils instability associated with settlement to occur associated with potential groundshaking and the corrosivity is a potentially significant impact. Mitigation Measure 3.5-2 below would be required to address this impact once design-level details (i.e., foundation planning and lot layouts) are available for future phases of the Project. This mitigation measure would mitigate this potential impact related to unstable soils because the design-level geotechnical engineering report would include compaction and subgrade specifications for the site-specific soil conditions. The soil and groundwater conditions would be determined through laboratory test data and exploration data to be completed by a licensed Geotechnical Engineer. Overall, it was determined that the Project site was suitable for the proposed types of development, and with implementation of the following mitigation measure, the proposed Project would have a **less than significant** impact relative to this topic.

MITIGATION MEASURE(S)

Mitigation Measure 3.5-2: *Prior to final design approval and issuance of building permits for each phase of the Project, the Project applicant shall submit to the City of Rancho Cordova Building and Safety Division, for review and approval, a design-level geotechnical engineering report produced by a California Registered Civil Engineer or Geotechnical Engineer. The design-level report shall address, at a minimum, the following:*

- *Compaction specifications and subgrade preparation for onsite soils;*
- *Structural foundations, including concrete design that addresses potential soils corrosivity;*
- *Grading practices; and*
- *Expansive/unstable soils.*

The design-level geotechnical engineering report shall include a summary of the site, soil, and groundwater conditions, seismicity, laboratory test data, exploration data and a site plan showing exploratory locations and improvement limits. The report shall include borings/test pits for park sites and include recommendations for park site development, including the potential to amend soils, if necessary, during the preliminary grading of the Project site during the first phase of

construction activities. The report shall be signed by a licensed California Geotechnical Engineer. Design-level recommendations shall be included in the foundation and improvement plans and approved by the City of Rancho Cordova Public Works Department prior to issuance of any building permits.

Impact 3.5-4: The Project would not be located on expansive soil creating substantial risks to life or property (Less than Significant)

Expansive soils are those that undergo volume changes as moisture content fluctuates; swelling substantially when wet or shrinking when dry. Soil expansion can damage structures by cracking foundations, causing settlement and distorting structural elements. Expansion is a typical characteristic of clay-type soils. Expansive soils shrink and swell in volume during changes in moisture content, such as a result of seasonal rain events, and can cause damage to foundations, concrete slabs, roadway improvements, and pavement sections.

As shown in Figure 3.5-3, the expansive potential of the Project site soils is low. According to the Geotechnical Engineering Report prepared for the Project site (Wallace-Kuhl, 2016), laboratory test results performed on Project site soil samples collected in the upper two to three feet indicate that these soils typically have a plasticity index of less than 15 and can be considered to have a low expansion potential. The soils beneath about two feet typically have a plasticity index of greater than 15, and should be considered to have a low to moderate expansion potential. Additional testing of the clay and silty/clay should be conducted to confirm the expansive potential of this soil layer prior to final design. These soils were typically encountered in the northwestern area of the property, with the presence of these soils less prominent to the south and east.

Implementation of Mitigation Measure 3.5-2 requires submittal of a design-level geotechnical engineering report which will include geotechnical recommendations to address the potential effects of the expansive clays present on the Project site. Implementation of the Mitigation Measure 3.5-2 would ensure that the Project would have a *less than significant* impact relative to this topic.

Impact 3.5-5: Project implementation has the potential to directly or indirectly destroy a unique paleontological resource (Less than Significant with Mitigation)

The field surveys conducted for the Project did not reveal any surface evidence of paleontological resources on the Project site. The Project site is not expected to contain subsurface paleontological resources; however, it is possible that undiscovered paleontological resources could be encountered during ground-disturbing activities.

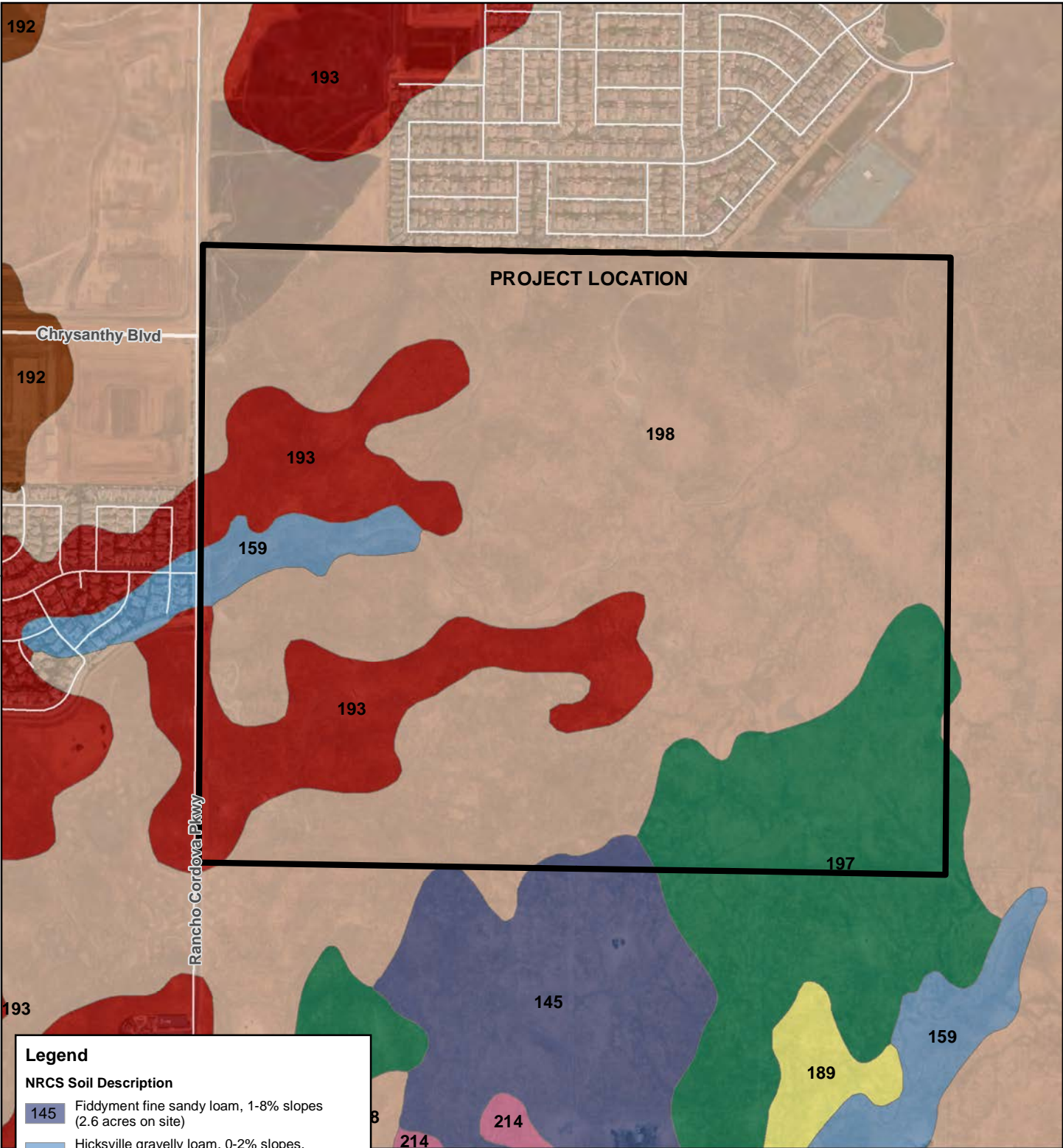
Damage to or destruction of a paleontological resource would be considered a potentially significant impact under local, state, or federal criteria. Implementation of Mitigation Measure 3.5-3 would ensure steps would be taken to reduce impacts to paleontological resources in the event that they are discovered during construction. This mitigation measure would reduce this impact to a *less-than-significant* level.

MITIGATION MEASURE(S)

Mitigation Measure 3.5-3: *If any paleontological resources are found during grading and construction activities, all work shall be halted immediately within a 200-foot radius of the discovery until a qualified paleontologist has evaluated the find.*

Work shall not continue at the discovery site until the paleontologist evaluates the find and makes a determination regarding the significance of the resource and identifies recommendations for conservation of the resource, including preserving in place or relocating on the Project site, if feasible, or collecting the resource to the extent feasible and documenting the find with the University of California Museum of Paleontology.

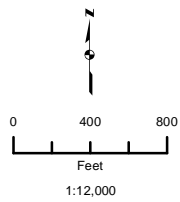
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Legend

NRCS Soil Description

- 145** Fiddymont fine sandy loam, 1-8% slopes (2.6 acres on site)
- 159** Hicksville gravelly loam, 0-2% slopes, occasionally flooded (12.41 acres on site)
- 189** Peters clay, 1-8% slopes
- 192** Red Bluff loam, 2-5% slopes
- 193** Red Bluff-Redding complex, 0-5% slopes (85.18 acres on site)
- 197** Redding loam, 2-8% slopes (57.90 acres on site)
- 198** Redding gravelly loam, 0-8% slopes, MLRA 17 (370.39 acres on site)
- 214** San Joaquin silt loam, 0-3% slopes

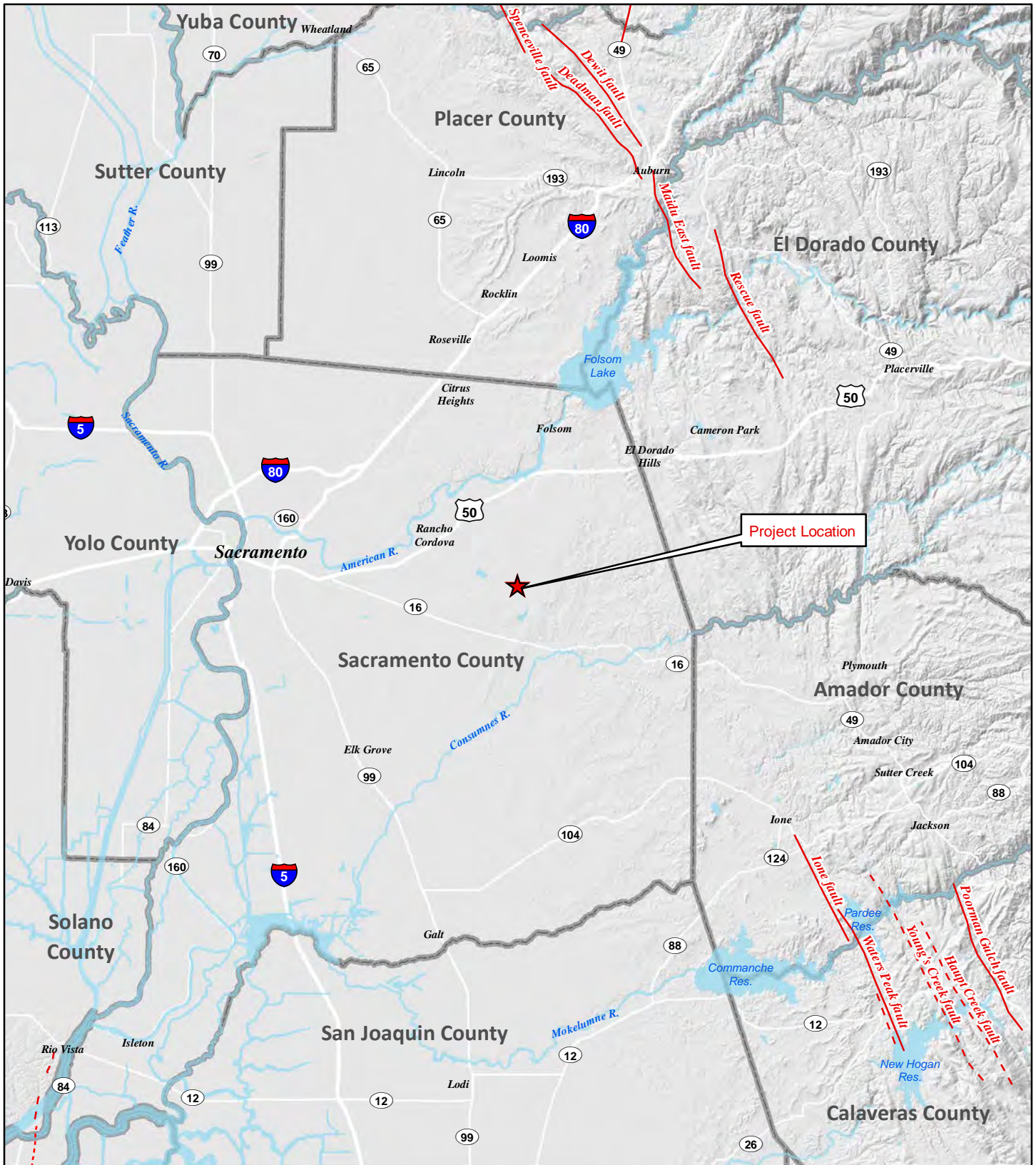


**THE RANCH
SACRAMENTO COUNTY, CALIFORNIA**

Figure 3.5-1. Project Site Soils

Data sources: Sacramento County GIS; ArcGIS Online World Imagery Map Service.
NRCS Web Soil Survey, Sacramento County, California (CA067). Map date: July 16, 2018.

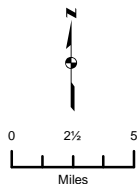
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Legend

Quaternary Faults

- Well-constrained
- - - Moderately-constrained
- · · Inferred

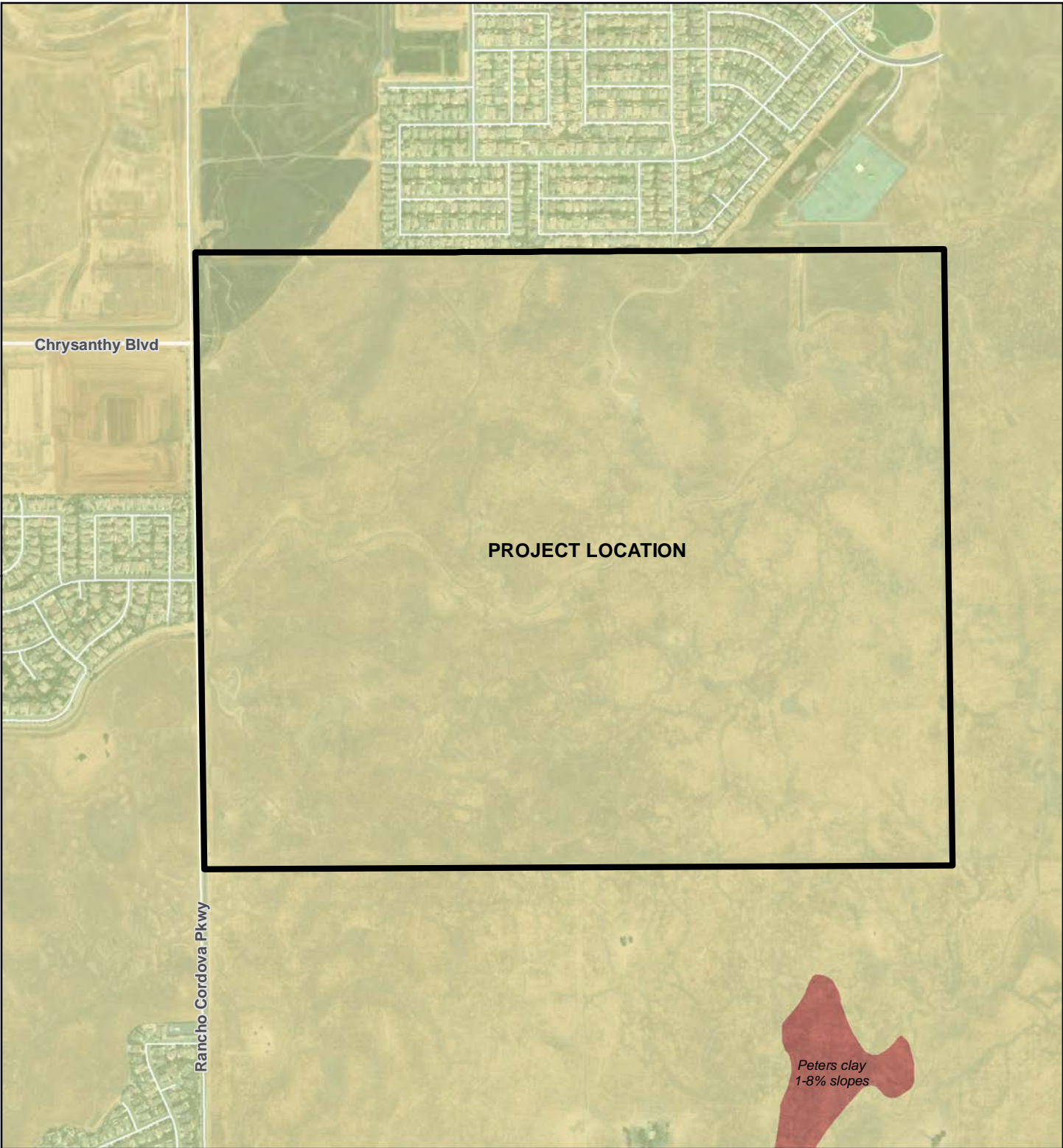


**THE RANCH
SACRAMENTO COUNTY, CALIFORNIA**

Figure 3.5-2. Known Faults in the Project Area

Data sources: US Geologic Survey; CalAtlas; Open Streets. Map date: July 16, 2018.

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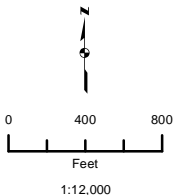
Legend

Shrink-Swell Potential*

- Low Potential
- High Potential

**Shrink-Swell Potential is determined by linear extensibility. Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Soils are considered to have low potential when the linear extensibility is less than 3%, moderate if 3-6%, high if 6-9%, and very high if greater than 9%*

Data sources: Sacramento County GIS; ArcGIS Online World Imagery Map Service. NRCS Web Soil Survey, Sacramento County, California (CA067). Map date: July 16, 2018.



**THE RANCH
SACRAMENTO COUNTY, CALIFORNIA**

Figure 3.5-3. Shrink-Swell Potential of Soils

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This section discusses regional greenhouse gas (GHG) emissions, climate change, and energy conservation impacts that could result from implementation of the Project. This section provides a background discussion of greenhouse gases and climate change linkages and effects of global climate change. This section also provides background discussion on energy use of the Project. This section is organized with an existing setting, regulatory setting, approach/methodology, and impact analysis.

The analysis and discussion of the GHG, climate change, and energy conservation impacts in this section focuses on the Project's consistency with local, regional, statewide, and federal climate change and energy conservation planning efforts and discusses the context of these planning efforts as they relate to the Project. Disclosures of the Project's estimated energy usage and greenhouse gas emissions are provided.

Emissions of GHGs have the potential to adversely affect the environment in a cumulative context. The emissions from a single project will not cause global climate change; however, GHG emissions from multiple projects throughout the world could result in a cumulative impact with respect to global climate change. Therefore, the analysis of GHGs and climate change presented in this section is presented in terms of the Project's contribution to cumulative impacts and potential to result in cumulatively considerable impacts related to GHGs and climate change.

Comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from the Sacramento Metropolitan Air Quality Management District (SMAQMD) (July 13, 2018) and the Sacramento Municipal Utility District (SMUD) (August 6, 2018). Each of the comments related to this topic are addressed within this section.

3.6.1 ENVIRONMENTAL SETTING

GREENHOUSE GASES AND CLIMATE CHANGE LINKAGES

Various gases in the Earth's atmosphere, classified as atmospheric GHGs, play a critical role in determining the Earth's surface temperature. Solar radiation enters Earth's atmosphere from space, and a portion of the radiation is absorbed by the Earth's surface. The Earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation.

Naturally occurring greenhouse gases include water vapor (H₂O), carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and ozone (O₃). Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also greenhouse gases, but they are, for the most part, solely a product of industrial activities. Although the direct greenhouse gases CO₂, CH₄, and N₂O occur naturally in the atmosphere, human activities have changed their atmospheric concentrations. From the pre-industrial era (i.e., ending about 1750) to 2011, concentrations of these three greenhouse gases have increased globally by 40, 150, and 20 percent, respectively (IPCC, 2013).

Greenhouse gases, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now

3.6 GREENHOUSE GASES, CLIMATE CHANGE, AND ENERGY

retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are CO₂, CH₄, O₃, water vapor, N₂O, and chlorofluorocarbons (CFCs).

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. In California, the transportation sector is the largest emitter of GHGs, followed by the industrial sector (California Energy Commission, 2018a).

As the name implies, global climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern, respectively. California produced approximately 440 million gross metric tons of carbon dioxide equivalents (MMTCO₂e) in 2016 (California Energy Commission, 2018a). To meet the annual statewide targets set by the California Air Resources Board, California would need to reduce emissions to below 431 MMTCO₂e by 2020, and to below 260 MMTCO₂e by 2030 (California Air Resources Board, 2017).

Carbon dioxide equivalents are a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential of a GHG, is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO₂ were being emitted.

Consumption of fossil fuels in the transportation sector was the single largest source of California's GHG emissions in 2016, accounting for 41% of total GHG emissions in the state. This category was followed by the industrial sector (23%), the electricity generation sector (including both in-state and out of-state sources) (16%), the agriculture sector (8%), the residential energy consumption sector (7%), and the commercial energy consumption sector (5%) (California Energy Commission, 2018a).

EFFECTS OF GLOBAL CLIMATE CHANGE

The effects of increasing global temperature are far-reaching and extremely difficult to quantify. The scientific community continues to study the effects of global climate change. In general, increases in the ambient global temperature as a result of increased GHGs are anticipated to result in rising sea levels, which could threaten coastal areas through accelerated coastal erosion, threats to levees and inland water systems and disruption to coastal wetlands and habitat.

If the temperature of the ocean warms, it is anticipated that the winter snow season would be shortened. Snowpack in the Sierra Nevada provides both water supply (runoff) and storage (within the snowpack before melting), which is a major source of supply for the state. The snowpack portion of the supply could potentially decline by 50% to 75% by the end of the 21st century (National Resources Defense Council, 2014). This phenomenon could lead to significant challenges securing an adequate water supply for a growing state population. Further, the increased ocean

temperature could result in increased moisture flux into the state; however, since this would likely increasingly come in the form of rain rather than snow in the high elevations, increased precipitation could lead to increased potential and severity of flood events, placing more pressure on California's levee/flood control system.

Sea level has risen approximately seven inches during the last century and it is predicted to rise an additional 22 to 35 inches by 2100, depending on the future GHG emissions levels (California Environmental Protection Agency, 2010). If this occurs, resultant effects could include increased coastal flooding, saltwater intrusion and disruption of wetlands. As the existing climate throughout California changes over time, mass migration of species, or failure of species to migrate in time to adapt to the perturbations in climate, could also result. According to the most recent California Climate Change Assessment (*California's Fourth Climate Change Assessment*) (2019), the impacts of global warming in California are anticipated to include, but are not limited to, the following.

Wildfires

In recent years, the area burned by wildfires has increased in parallel with increasing air temperatures. Wildfires have also been occurring at higher elevations in the Sierra Nevada mountains, a trend which is expected to continue under future climate change. Climate change will likely modify the vegetation in California, affecting the characteristics of fires on the land. Land use and development patterns also play an important role in future fire activity. Because of these complexities, projecting future wildfires is complicated, and results depend on the time period for the projection and what interacting factors are included in the analysis. Because wildfires are affected by multiple and sometimes complex drivers, projections of wildfire in future decades in California range from modest changes from historical conditions to relatively large increases in wildfire regimes.

Public Health

Nineteen heat-related events occurred from 1999 to 2009 that had significant impacts on human health, resulting in about 11,000 excess hospitalizations. However, the National Weather Service issued Heat Advisories for only six of the events. Heat-Health Events (HHEs), which better predict risk to populations vulnerable to heat, will worsen drastically throughout the state: by midcentury, the Central Valley is projected to experience average Heat-Health Events that are two weeks longer, and HHEs could occur four to ten times more often in the Northern Sierra region.

Higher temperatures are expected to increase the frequency, duration, and intensity of conditions conducive to air pollution formation. Climate change poses direct and indirect risks to public health, as people will experience earlier death and worsening illnesses. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances depending on wind conditions.

Energy Resources

Higher temperatures will increase annual electricity demand for homes, driven mainly by the increased use of air conditioning units. High demand is projected in inland and Southern California,

and more moderate increases are projected in cooler coastal areas. However, the increased annual residential energy demand for electricity is expected to be offset by reduced use of natural gas for space heating. Increases in peak hourly demand during the hot months of the year could be more pronounced than changes in annual demand. This is a critical finding for California's electric system, because generating capacity must match peak electricity demand.

Water Supply

A vast network of man-made reservoirs and aqueducts capture and transport water throughout the state from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snow pack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snow pack, increasing the risk of summer water shortages.

The state's water supplies are also at risk from rising sea levels. An influx of saltwater would degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta, a major state fresh water supply.

Current management practices for water supply and flood management in California may need to be revised for a changing climate. This is in part because such practices were designed for historical climatic conditions, which are changing and will continue to change during the rest of this century and beyond. As one example, the reduction in the Sierra Nevada snowpack, which provides natural water storage, will have implications throughout California's water management system. Even under the wetter climate projections, the loss of snow pack would pose challenges to water managers, hamper hydropower generation, and nearly eliminate all skiing and other snow-related recreational activities.

Agriculture

Increased GHG emissions are expected to cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. Although higher carbon dioxide levels can stimulate plant production and increase plant water-use efficiency, California's farmers will face greater water demand for crops and a less reliable water supply as temperatures rise.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures are likely to worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits and nuts, and milk.

Crop growth and development will be affected, as will the intensity and frequency of pest and disease outbreaks. Rising temperatures will likely aggravate ozone pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

In addition, continued global warming will likely shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion is expected in many species while range contractions are less likely in rapidly evolving species with significant populations already established. Should range contractions occur, it is likely that new or different weed species will fill the emerging gaps. Continued global warming is also likely to alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

Forests and Landscapes

Climate change will make forests more susceptible to extreme wildfires. *California's Fourth Climate Change Assessment* found that by 2100, if greenhouse gas emissions continue to rise, the frequency of extreme wildfires burning over approximately 25,000 acres would increase by nearly 50 percent, and that average area burned statewide would increase by 77 percent by the end of the century. In the areas that have the highest fire risk, wildfire insurance is estimated to see costs rise by 18 percent by 2055 and the fraction of property insured would decrease.

Moreover, continued global warming will alter natural ecosystems and biological diversity within the state. For example, alpine and sub-alpine ecosystems are expected to decline by as much as 60% to 80% by the end of the century as a result of increasing temperatures. The productivity of the state's forests is also expected to decrease as a result of global warming.

Rising Sea Levels

A new model estimates that, under mid to high sea-level rise scenarios, 31 to 67 percent of Southern California beaches may completely erode by 2100 without large-scale human interventions. Statewide damages could reach nearly \$17.9 billion from inundation of residential and commercial buildings under 50 centimeters (~20 inches) of sea-level rise, which is close to the 95th percentile of potential sea-level rise by the middle of this century. A 100-year coastal flood, on top of this level of sea-level rise, would almost double the costs.

Rising sea levels, more intense coastal storms, and warmer water temperatures will increasingly threaten the state's coastal regions. Rising sea levels would inundate coastal areas with saltwater, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.

ENERGY CONSUMPTION

Energy in California is consumed from a wide variety of sources. Fossil fuels (including gasoline and diesel fuel, natural gas, and energy used to generate electricity) are most widely used form of energy in the State. However, renewable source of energy (such as solar and wind) are growing in proportion to California's overall energy mix. A large driver of renewable sources of energy in California is the State's current Renewable Portfolio Standard (RPS), which requires the State to derive at least 33% of electricity generated from renewable resources by 2020, and 50 percent by 2030.

Overall, in 2015, California's per capita energy usage was ranked 49th in the nation (U.S. EIA, 2017). Additionally, California's per capita rate of energy usage has remained relatively constant since the 1970's. Many State regulations since the 1970's, including new building energy efficiency standards, vehicle fleet efficiency measures, as well as growing public awareness, have helped to keep per capita energy usage in the State in check.

The consumption of nonrenewable energy (primarily gasoline and diesel fuel) associated with the operation of passenger, public transit, and commercial vehicles results in GHG emissions that ultimately result in global climate change. Other fuels such as natural gas, ethanol, and electricity (unless derived from solar, wind, nuclear, or other energy sources that do not produce carbon emissions) also result in GHG emissions and contribute to global climate change.

Electricity Consumption

California relies on a regional power system composed of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. Approximately 71 percent of the electrical power needed to meet California's demand is produced in the state. Approximately 29 percent of its electricity is imported from the Pacific Northwest and the Southwest (California Energy Commission, 2019). In 2010, California's in-state generated electricity was derived from natural gas (53.4 percent), large hydroelectric resources (14.6 percent), coal (1.7 percent), nuclear sources (15.7 percent), and renewable resources that include geothermal, biomass, small hydroelectric resources, wind, and solar (14.6 percent) (California Energy Commission, 2019). The percentage of renewable resources as a proportion of California's overall energy portfolio is increasing over time, as directed the State's Renewable Portfolio Standard (RPS).

According to the California Energy Commission (CEC), total statewide electricity consumption increased from 166,979 gigawatt-hours (GWh) in 1980 to 228,038 GWh in 1990, which is an estimated annual growth rate of 3.66 percent. The statewide electricity consumption in 1997 was 246,225 GWh, reflecting an annual growth rate of 1.14 percent between 1990 and 1997 (California Energy Commission, 2019). Statewide consumption was 274,985 GWh in 2010, an annual growth rate of 0.9 percent between 1997 and 2010. The Sacramento Area Council of Governments (SACOG) region consumed 18,398 GWh in 2010 (SACOG MTP/SCS 2035 Draft EIR, 2011) and 17,824 GWh in 2016 (CEC, 2016), roughly 6.7 percent of the state total. The SACOG region includes the counties of El Dorado, Placer, Sacramento, Sutter, Yolo and Yuba as well as the 22 cities within these six counties.

Oil

The primary energy source for the United States is oil, which is refined to produce fuels like gasoline, diesel, and jet fuel. Oil is a finite, nonrenewable energy source. World consumption of petroleum products has grown steadily in the last several decades. As of 2018, world consumption of oil had reached 100 million barrels per day (U.S. EIA, 2019a). The United States, with approximately five percent of the world's population, accounts for approximately 21 percent of world oil consumption, or approximately 20.5 million barrels per day (U.S. EIA, 2019b). The transportation sector relies heavily on oil. In California, petroleum based fuels currently provide

approximately 96 percent of the state's transportation energy needs (California Energy Commission, 2018b).

Natural Gas

In 2010, the SACOG region consumed 529.5 million therms of natural gas. Natural gas supplies are derived from underground sources and brought to the surface at gas wells. Once it is extracted, gas is purified and the odorant that allows gas leaks to be detected is added to the normally odorless gas. Natural gas suppliers, such as PG&E, then send the gas into transmission pipelines, which are usually buried underground. Compressors propel the gas through the pipeline system, which delivers it to homes and businesses.

The state produces approximately 12 percent of its natural gas, while obtaining 22 percent from Canada and 65 percent from the Rockies and the Southwest (California Energy Commission, 201b). In 2006, California produced 325.6 billion cubic feet of natural gas (California Energy Commission, 2019). PG&E is the largest publicly-owned utility in California and provides natural gas for residential, industrial, and agency consumers within the SACOG area, including the City of Rancho Cordova.

3.6.2 REGULATORY SETTING

FEDERAL

Clean Air Act

The Federal Clean Air Act (FCAA) was first signed into law in 1970. In 1977, and again in 1990, the law was substantially amended. The FCAA is the foundation for a national air pollution control effort, and it is composed of the following basic elements: National ambient air quality standards (NAAQS) for criteria air pollutants, hazardous air pollutant standards, state attainment plans, motor vehicle emissions standards, stationary source emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

The U.S. Environmental Protection Agency (USEPA) is responsible for administering the FCAA. The FCAA requires the USEPA to set NAAQS for several problem air pollutants based on human health and welfare criteria. Two types of NAAQS were established: primary standards, which protect public health, and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction.

Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 sought to ensure that all vehicles sold in the U.S. would meet certain fuel economy goals. Through this Act, Congress established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the Act, the National Highway Traffic and Safety Administration, which is part of the U.S. Department of Transportation (USDOT), is responsible for establishing additional vehicle standards and for revising existing standards.

Since 1990, the fuel economy standard for new passenger cars has been 27.5 mpg. Since 1996, the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 mpg. Heavy-duty vehicles (i.e., vehicles and trucks over 8,500 pounds gross vehicle weight) are not currently subject to fuel economy standards. Compliance with federal fuel economy standards is determined on the basis of each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the U.S. The Corporate Average Fuel Economy (CAFE) program, which is administered by the USEPA, was created to determine vehicle manufacturers' compliance with the fuel economy standards. The USEPA calculates a CAFE value for each manufacturer based on city and highway fuel economy test results and vehicle sales. Based on the information generated under the CAFE program, the USDOT is authorized to assess penalties for noncompliance.

Energy Policy Act of 1992 (EPAct)

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

Energy Policy Act of 2005

The Energy Policy Act of 2005 was signed into law on August 8, 2005. Generally, the act provides for renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for a clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

Intermodal Surface Transportation Efficiency Act (ISTEA)

ISTEA (49 U.S.C. § 101 et seq.) promoted the development of intermodal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that metropolitan planning organizations (MPOs), such as SACOG, were to address in developing transportation plans and programs, including some energy-related factors. To meet the ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values that were to guide transportation decisions in that metropolitan area. The planning process was then to address these policies. Another requirement was to consider the consistency of transportation planning with federal, state, and local energy goals. Through this requirement, energy consumption was expected to become a criterion, along with cost and other values that determine the best transportation solution.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)

SAFETEA-LU (23 U.S.C. § 507), renewed the Transportation Equity Act for the 21st Century (TEA-21) of 1998 (23 U.S.C.; 49 U.S.C.) through FY 2009. SAFETEA-LU authorized the federal surface transportation programs for highways, highway safety, and transit. SAFETEA-LU addressed the many challenges facing our transportation system today—such as improving safety, reducing traffic congestion, improving efficiency in freight movement, increasing intermodal connectivity, and protecting the environment—as well as laying the groundwork for addressing future challenges. SAFETEA-LU promoted more efficient and effective federal surface transportation programs by focusing on transportation issues of national significance, while giving state and local transportation decision makers more flexibility to solve transportation problems in their communities. SAFETEA-LU was extended in March of 2010 for nine months, and expired in December of the same year. In June 2012, SAFETEA-LU was replaced by the Moving Ahead for Progress in the 21st Century Act (MAP-21), which will take effect October 1, 2012.

U.S. Federal Climate Change Policy

According to the USEPA, “the United States government has established a comprehensive policy to address climate change” that includes slowing the growth of emissions; strengthening science, technology, and institutions; and enhancing international cooperation. To implement this policy, “the Federal government is using voluntary and incentive-based programs to reduce emissions and has established programs to promote climate technology and science.” The federal government’s goal is to reduce the greenhouse gas (GHG) intensity (a measurement of GHG emissions per unit of economic activity) of the American economy by 18 percent over the 10-year period from 2002 to 2012. In addition, the EPA administers multiple programs that encourage voluntary GHG reductions, including “ENERGY STAR”, “Climate Leaders”, and Methane Voluntary Programs. However, as of this writing, there are no adopted federal plans, policies, regulations, or laws directly regulating GHG emissions.

Mandatory Greenhouse Gas Reporting Rule

On September 22, 2009, EPA issued a final rule for mandatory reporting of GHGs from large GHG emissions sources in the United States. In general, this national reporting requirement will provide USEPA with accurate and timely GHG emissions data from facilities that emit 25,000 metric tons or more of CO₂ per year. This publicly available data will allow the reporters to track their own emissions, compare them to similar facilities, and aid in identifying cost effective opportunities to reduce emissions in the future. Reporting is at the facility level, except that certain suppliers of fossil fuels and industrial greenhouse gases along with vehicle and engine manufacturers will report at the corporate level. An estimated 85% of the total U.S. GHG emissions, from approximately 10,000 facilities, are covered by this final rule.

STATE

Warren-Alquist Act

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

Energy Action Plan

The first Energy Action Plan (EAP) emerged in 2003 from a crisis atmosphere in California's energy markets. The State's three major energy policy agencies (CEC, CPUC, and the Consumer Power and Conservation Financing Authority [established under deregulation and now defunct]) came together to develop one high-level, coherent approach to meeting California's electricity and natural gas needs. It was the first time that energy policy agencies formally collaborated to define a common vision and set of strategies to address California's future energy needs and emphasize the importance of the impacts of energy policy on the California environment.

In the October 2005 Energy Action Plan II, CEC and CPUC updated their energy policy vision by adding some important dimensions to the policy areas included in the original EAP, such as the emerging importance of climate change, transportation-related energy issues, and research and development activities. The CEC adopted an update to the EAP II in February 2008 that supplements the earlier EAPs and examines the State's ongoing actions in the context of global climate change.

State of California Energy Action Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The current plan is the 1997 California Energy Plan. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero-emission vehicles and addressing their infrastructure needs; and encouragement of urban design that reduces VMT and accommodates pedestrian and bicycle access.

Assembly Bill 1493

In response to AB 1493, CARB approved amendments to the California Code of Regulations (CCR) adding GHG emission standards to California's existing motor vehicle emission standards. Amendments to CCR Title 13 Sections 1900 (CCR 13 1900) and 1961 (CCR 13 1961), and adoption of Section 1961.1 (CCR 13 1961.1) require automobile manufacturers to meet fleet average GHG emission limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes beginning with the 2009 model year. Emission limits are

further reduced each model year through 2016. For passenger cars and light-duty trucks 3,750 pounds or less loaded vehicle weight (LVW), the 2016 GHG emission limits are approximately 37 percent lower than during the first year of the regulations in 2009. For medium-duty passenger vehicles and light-duty trucks 3,751 LVW to 8,500 pounds gross vehicle weight (GVW), GHG emissions are reduced approximately 24 percent between 2009 and 2016.

The CARB requested a waiver of federal preemption of California's Greenhouse Gas Emissions Standards. The intent of the waiver is to allow California to enact emissions standards to reduce carbon dioxide and other greenhouse gas emissions from automobiles in accordance with the regulation amendments to the CCRs that fulfill the requirements of AB 1493. The U.S. EPA granted a waiver to California to implement its greenhouse gas emissions standards for cars.

Assembly Bill 1007

Assembly Bill 1007, (Pavley, Chapter 371, Statutes of 2005) directed the CEC to prepare a plan to increase the use of alternative fuels in California. As a result, the CEC prepared the State Alternative Fuels Plan in consultation with the state, federal, and local agencies. The plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes costs to California and maximizes the economic benefits of in-state production. The Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce greenhouse gas emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Bioenergy Action Plan – Executive Order #S-06-06

Executive Order #S-06-06 establishes targets for the use and production of biofuels and biopower and directs state agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The executive order establishes the following target to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20 percent of its biofuels within California by 2010, 40 percent by 2020, and 75 percent by 2050. The executive order also calls for the state to meet a target for use of biomass electricity.

California Executive Orders S-3-05 and S-20-06, and Assembly Bill 32

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California's GHG emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020 and 3) 80% below the 1990 levels by the year 2050. EO-S-20-06 establishes responsibilities and roles of the Secretary of Cal/EPA and state agencies in climate change

In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that the CARB create a plan, which includes market mechanisms, and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases."

Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the state's Climate Action Team.

EO S-13-08

EO S-13-08 was issued on November 14, 2008. The EO is intended to hasten California's response to the impacts of global climate change, particularly sea level rise, and directs state agencies to take specified actions to assess and plan for such impacts, including requesting the National Academy of Sciences to prepare a Sea Level Rise Assessment Report, directing the Business, Transportation, and Housing Agency to assess the vulnerability of the State's transportation systems to sea level rise, and requiring the Office of Planning and Research and the Natural Resources Agency to provide land use planning guidance related to sea level rise and other climate change impacts.

The order also required State agencies to develop adaptation strategies to respond to the impacts of global climate change that are predicted to occur over the next 50 to 100 years. The adaptation strategies report summarizes key climate change impacts to the State for the following areas: public health; ocean and coastal resources; water supply and flood protection; agriculture; forestry; biodiversity and habitat; and transportation and energy infrastructure. The report recommends strategies and specific responsibilities related to water supply, planning and land use, public health, fire protection, and energy conservation.

Assembly Bill 32 - Climate Change Scoping Plan

On December 11, 2008, the CARB adopted its *Climate Change Scoping Plan* (Scoping Plan), which functions as a roadmap of the CARB's plans to achieve GHG reductions in California required by Assembly Bill (AB) 32 through subsequently enacted regulations. The Scoping Plan contains the main strategies California will implement to reduce carbon dioxide-equivalent (CO₂e) emissions by 169 million metric tons (MMT), or approximately 30 percent, from the state's projected 2020 emissions level of 596 MMT of CO₂e under a business-as-usual scenario. (This is a reduction of 42 MMT CO₂e, or almost 10 percent, from 2002–2004 average emissions, but requires the reductions in the face of population and economic growth through 2020.) The Scoping Plan also breaks down the amount of GHG emissions reductions the CARB recommends for each emissions sector of the state's GHG inventory. The Scoping Plan calls for the largest reductions in GHG emissions to be achieved by implementing the following measures and standards:

- improved emissions standards for light-duty vehicles (estimated reductions of 31.7 MMT CO₂e);
- the Low-Carbon Fuel Standard (15.0 MMT CO₂e);
- energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 MMT CO₂e); and
- a renewable portfolio standard for electricity production (21.3 MMT CO₂e).

The CARB updated the Scoping Plan in 2013 (*First Update to the Scoping Plan*) and again in 2017 (the *Final Scoping Plan*). The 2013 Update built upon the initial Scoping Plan with new strategies and recommendations, and also set the groundwork to reach the long-term goals set forth by the

state. Successful implementation of existing programs (as identified in previous iterations of the Scoping Plan) has put California on track to meet the 2020 target. The 2017 Update expands the scope of the plan further by focusing on the strategy for achieving the state's 2030 GHG target of 40 percent emissions reductions below 1990 levels (to achieve the target codified into law by SB 32), and substantially advances toward the state's 2050 climate goal to reduce GHG emissions by 80 percent below 1990 levels.

The 2017 Update relies on the preexisting programs paired with an extended, more stringent Cap-and-Trade Program, to delivery climate, air quality, and other benefits. The 2017 Update identifies new technologically feasible and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health.

Senate Bill 32

Senate Bill 32, which passed into law in 2016, sets the target of reducing greenhouse gas emissions to 40 percent below the 1990 level by the year 2030. SB 32 extends the original set of greenhouse gas targets provided by the passage of AB 32 (the Global Warnings Solutions Act of 2006). This new target sets an aggressive goalpost, helping the State along its pathway to achieve its longer-term goal of an 80 percent reduction in greenhouse gas emissions by the year 2050.

Senate Bill 743

SB 743, passed into law in 2013, changes the way that public agencies evaluate the transportation impacts of projects under CEQA. The proposed revisions to the State CEQA Guidelines would establish new criteria for determining the significance of a project's transportation impacts that will more appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of GHGs. The 2017 Update to the Scoping Plan identified that slower VMT growth from more efficient land use development patterns would promote achievement of the state's climate goals.

As detailed in SB 743, the Governor's Office of Planning and Research (OPR) was tasked with developing potential metrics to measure transportation impacts and replace the use of delay and level of service (LOS). More detail about SB 743 is provided in the setting Chapter 17, "Traffic and Circulation."

In December 2018, OPR released its final changes to the CEQA Guidelines, including the addition of Section 15064.3 that would implement SB 743. In support of these changes, OPR also published its Technical Advisory on Evaluating Transportation Impacts in CEQA, which recommends that the transportation impact of a project be based on whether it would generate a level of vehicle miles traveled (VMT) per capita (or VMT per employee) that is 15 percent lower than existing development in the region. OPR's technical advisory explains that this criterion is consistent with Section 21099 of the California Public Resources Code, which states that the criteria for determining significance must "promote the reduction in greenhouse gas emissions". It is also consistent with the statewide per capita VMT reduction target developed by Caltrans in its

Strategic Management Plan, which calls for a 15 percent reduction in per capita VMT, compared to 2010 levels, by 2020. Additionally, the California Air Pollution Control Officers Association (CAPCOA) determined that a 15 percent reduction in VMT is typically achievable for projects. CARB's First Update to the Climate Change Scoping Plan also called for local governments to set communitywide GHG reduction targets of 15 percent below then-current levels by 2020. Although not required, a lead agency may elect to be governed by the provisions of Section 15064.3 immediately. However, the provisions of Section 15064.3 do not apply statewide until July 1, 2020.

Executive Order B-48-18: Zero-Emission Vehicles

In January 2018, EO B-48-18 was signed into law and requires all State entities to work with the private sector to have at least 5 million zero-emission vehicles (ZEVs) on the road by 2030, as well as install 200 hydrogen fueling stations and 250,000 electric vehicle charging stations by 2025. It specifies that 10,000 of the electric vehicle charging stations should be direct current fast chargers. This Executive Order also requires all State entities to continue to partner with local and regional governments to streamline the installation of ZEV infrastructure. The Governor's Office of Business and Economic Development is required to publish a Plug-in Charging Station Design Guidebook and update the 2015 Hydrogen Station Permitting Guidebook to aid in these efforts. All State entities are required to participate in updating the 2016 Zero-Emissions Vehicle Action Plan (Governor's Interagency Working Group on Zero-Emission Vehicles 2016) to help expand private investment in ZEV infrastructure with a focus on serving low-income and disadvantaged communities. Additionally, all State entities are to support and recommend policies and actions to expand ZEV infrastructure at residential uses through the Low Carbon Fuel Standard Program, and recommend how to ensure affordability and accessibility for all drivers.

Assembly Bill 2076: California Strategy to Reduce Petroleum Dependence

In response to the requirements of Assembly Bill (AB) 2076 (Chapter 936, Statutes of 2000), the CEC and the CARB developed a strategy to reduce petroleum dependence in California. The strategy, *Reducing California's Petroleum Dependence*, was adopted by the CEC and CARB in 2003. The strategy recommends that California reduce on-road gasoline and diesel fuel demand to 15 percent below 2003 demand levels by 2020 and maintain that level for the foreseeable future; the Governor and Legislature work to establish national fuel economy standards that double the fuel efficiency of new cars, light trucks, and sport utility vehicles (SUVs); and increase the use of non-petroleum fuels to 20 percent of on-road fuel consumption by 2020 and 30 percent by 2030.

Assembly Bill 2188: Solar Permitting Efficiency Act

Assembly Bill (AB) 2188, enacted in California in 2015, required local governments to adopt a solar ordinance by September 30, 2015 that creates a streamlined permitting process that conforms to the best practices for expeditious and efficient permitting of small residential rooftop solar systems. The act is designed to lower the cost of solar installations in California and further expand the accessibility of solar to more California homeowners. The bulk of the time and cost savings associated with a streamlined permitting process comes from the use of a standardized eligibility checklist and a simplified plan. This bill also shortens the number of days for those seeking Homeowner's Association (HOA) approval for a written denial of a proposed solar installation.

Governor's Low Carbon Fuel Standard (Executive Order #S-01-07)

Executive Order #S-01-07 establishes a statewide goal to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020 through establishment of a Low Carbon Fuel Standard. The Low Carbon Fuel Standard is incorporated into the State Alternative Fuels Plan and is one of the proposed discrete early action GHG reduction measures identified by the CARB pursuant to AB 32.

Senate Bill 97

Senate Bill (SB) 97 (Chapter 185, 2007) required OPR to develop recommended amendments to the State CEQA Guidelines for addressing greenhouse gas emissions. OPR prepared its recommended amendments to the State CEQA Guidelines to provide guidance to public agencies regarding the analysis and mitigation of greenhouse gas emissions and the effects of greenhouse gas emissions in draft CEQA documents. The Amendments became effective on March 18, 2010.

Senate Bill 375

Senate Bill (SB) 375 (Stats. 2008, ch. 728) (SB 375) was built on AB 32 (California's 2006 climate change law). SB 375's core provision is a requirement for regional transportation agencies to develop a Sustainable Communities Strategy (SCS) in order to reduce GHG emissions from passenger vehicles. The SCS is one component of the existing Regional Transportation Plan (RTP).

The SCS outlines the region's plan for combining transportation resources, such as roads and mass transit, with a realistic land use pattern, in order to meet a state target for reducing GHG emissions. The strategy must take into account the region's housing needs, transportation demands, and protection of resource and farmlands.

Additionally, SB 375 modified the state's Housing Element Law to achieve consistency between the land use pattern outlined in the SCS and the Regional Housing Needs Assessment allocation. The legislation also substantially improved cities' and counties' accountability for carrying out their housing element plans.

Finally, SB 375 amended the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.) to ease the environmental review of developments that help reduce the growth of GHG emissions.

Executive Order B-30-15

On April 29, 2015, Governor Jerry Brown issued Executive Order (EO) B-30-15, which establishes a State GHG reduction target of 40 percent below 1990 levels by 2030. The new emission reduction target provides for a mid-term goal that would help the State to continue on course from reducing GHG emissions to 1990 levels by 2020 (per AB 32) to the ultimate goal of reducing emissions 80 percent under 1990 levels by 2050 (per EO S-03-05). This is in line with the scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius – the warming threshold at which scientists say there will likely be major climate disruptions. EO B-30-15 also addresses the need for climate adaptation and directs State government to:

- Incorporate climate change impacts into the State’s Five-Year Infrastructure Plan;
- Update the Safeguarding California Plan, the State climate adaptation strategy, to identify how climate change will affect California infrastructure and industry and what actions the State can take to reduce the risks posed by climate change;
- Factor climate change into State agencies' planning and investment decisions; and
- Implement measures under existing agency and departmental authority to reduce GHG emissions.

Advanced Clean Cars Program

In January 2012, the CARB approved the Advanced Clean Cars program which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of zero-emission vehicles, into a single package of standards for vehicle model years 2017 through 2025. The new rules strengthen the GHG standard for 2017 models and beyond. This will be achieved through existing technologies, the use of stronger and lighter materials, and more efficient drivetrains and engines. The program’s zero-emission vehicle regulation requires battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15 percent of California’s new vehicle sales by 2025. The program also includes a clean fuels outlet regulation designed to support the commercialization of zero-emission hydrogen fuel cell vehicles planned by vehicle manufacturers by 2015 by requiring increased numbers of hydrogen fueling stations throughout the state. The program will have significant energy demand implications as battery, fuel cell, and/or plug-in hybrid electric vehicle sales increase overtime, creating new demand for electricity services both in residential and commercial buildings (e.g. charging stations) as well as demand for new EV and hydrogen fuel cell charging stations. The number of stations will grow as vehicle manufacturers sell more fuel cell vehicles. According to the CARB, by 2025, when the rules will be fully implemented, the statewide fleet of new cars and light trucks will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions than the statewide fleet in 2016.

California Building Energy Efficiency Standards

Title 24, Part 6 of the California Code of Regulations, known as the Building Energy Efficiency Standards (Standards), was established in 1978 in response to a legislative mandate to reduce California’s energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. On January 1, 2010, the California Building Standards Commission adopted CALGreen and became the first state in the United States to adopt a statewide green building standards code.

The 2016 update to the California Building Energy Efficiency Standards (the current version of the Standards) went into effect on January 1, 2017. The Standards are divided into three basic sets. First, there is a basic set of mandatory requirements that apply to all buildings. Second, there is a set of performance standards – the energy budgets – that vary by climate zone (of which there are 16 in California) and building type; thus, the Standards are tailored to local conditions. Finally, the third set constitutes an alternative to the performance standards, which is a set of prescriptive packages that are basically a recipe or a checklist compliance approach.

Compared with the previous version of the Standards, the 2016 Standards are expected to reduce statewide annual electricity consumption by approximately 281 gigawatt-hours per year, and natural gas consumption by 16 million therms per year, which is equivalent to a reduction in GHG emissions of approximately 160,000 MT CO₂e/year. The forthcoming update to the Standards (the 2019 Standards) will become effective on January 1, 2020, and will further increase energy efficiency requirements for new development beyond the 2016 update.

CEQA Guidelines Appendix F

In order to ensure that energy implications are considered in project decisions, Appendix F of the CEQA Guidelines requires that EIRs include a discussion of the potential energy impacts of projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy. The goal of conserving energy implies the wise and efficient use of energy.

LOCAL

Sacramento Area Local Council of Governments

The SACOG Board, which is the local metropolitan planning organization that covers the six-county area in the Sacramento region, including the City of Ranch Cordova, adopted the 2012 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) in April 2012. An update to the 2012 MTP/SCS (the “2016” MTP/SCS), with a focus on implementation of the goals established in the 2012 MTP/SCS, was adopted by the SACOG Board in February 2016. A program-level EIR addressing the environmental impacts of the 2016 MTP/SCS was also prepared and certified. The SCS portion of the MTP/SCS identifies policies and strategies to reduce GHG emissions from passenger vehicles to targets set by the CARB. Pursuant to SB 375, SACOG was tasked by the CARB to achieve a 7 percent per capita reduction in passenger-vehicle generated transportation emissions by 2020 and a 16 percent per capita reduction by 2035 from 2005, which the CARB confirmed the region would achieve by implementing its Sustainable Communities Strategy. SACOG’s 2012-2035 MTP/SCS projects (as identified in the 2012 MTP/SCS) are estimated to exceed the CARB’s targets with anticipated per capita reductions of 10 percent by 2020 and 16 percent by 2035 from 2005 levels [23.0 pounds (lb) CO₂ per capita per day]. The SACOG 2016 MTP/SCS reaffirmed these targets. The CARB verified SACOG’s modeled CO₂ emissions reductions and affirmed that the SCS meets the adopted per capita GHG emissions reduction targets for years 2020 and 2035.

Rancho Cordova General Plan

The Rancho Cordova General Plan contains the following goals and policies that are relevant to greenhouse gases, climate change, and energy:

AIR QUALITY ELEMENT

Goal AQ.2: Support land use patterns and densities that lessen air quality impacts.

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Policy AQ.2.1: Promote strategic land use patterns for businesses that reduce the number and length of motor vehicle trips and that encourage multiple forms of transportation for employees and patrons.

Policy AQ.2.2: Encourage mixed-use developments that put residences in close proximity to services, employment, transit, schools, and civic facilities/services.

Policy AQ.2.3: Encourage infill development as a way to reduce vehicle trips and improve air quality.

Policy AQ.2.4: Maximize air quality benefits through selective use of landscaping vegetation that is low in emission of volatile organic compounds, and through revegetation of appropriate areas.

Goal AQ.3: Support multiple forms of transportation and a circulation system design that reduces vehicle trips and emissions.

Policy AQ.3.1: Promote walking and bicycling as viable forms of transportation to services, shopping, and employment.

Policy AQ.3.2: Promote mass transit as an alternative to single-occupant motor vehicle travel.

Policy AQ.3.3: Involve local businesses in creating, maintaining, or promoting mass transit opportunities and reducing vehicle emissions.

Policy AQ.3.4: Emphasize “demand management” strategies that seek to reduce single-occupant vehicle use in order to achieve state and federal air quality plan objectives.

Goal AQ.4: Support energy conservation, the use of alternative fuels, clean vehicles and industries to reduce air quality impacts.

Policy AQ.4.1: Promote improved air quality benefits through energy conservation measures for new and existing development.

Policy AQ.4.2: Support vehicle improvements and the use of clean vehicles that reduce emissions and improve air quality.

Policy AQ.4.4: Support SMAQMD’s program of retrofitting construction equipment.

LAND USE ELEMENT

Goal LU.1: Achieve a balanced and integrated land use pattern throughout the community.

Policy LU.1.4: Promote high quality, efficient, and cohesive land utilization that minimizes negative impacts (e.g., traffic congestion and visual blight) and environmental hazards (e.g. flood, soil instability) on adjacent neighborhoods and infrastructure and preserve existing and future residential neighborhoods from encroachment of incompatible activities and land uses.

City of Rancho Cordova Municipal Code

Chapter 16.07 of the City of Rancho Cordova Municipal Code (Municipal Code) provides for an expedited, streamlined solar permitting process that complies with the Solar Rights Act and AB 2188 (Chapter 521, Statutes 2013, California Government Code Section 65850.5) in order to achieve timely and cost-effective installations of small residential rooftop solar energy systems. The provisions of this chapter encourage the use of solar systems by removing unreasonable barriers, minimizing costs to property owners and the city, and expanding the ability of property owners to install solar energy systems.

Additionally, Chapter 10.64 of the Municipal Code establishes requirements and procedures whereby major employers can develop and implement programs designed to reduce the number of employee vehicle commute trips as part of a broad city of Rancho Cordova program to achieve the following objectives:

- A. Reduce peak-hour traffic circulation and congestion by reducing the number of single-occupant motor vehicle trips associated with home-to-work commuting.
- B. Reduce or delay the need for major transportation facility improvements by making more efficient use of existing facilities.
- C. Reduce future air pollution concentrations and strive towards meeting federal ambient air pollution standards by reducing the number of single-occupant motor vehicle trips associated with home-to-work commuting.
- D. Reduce the consumption of energy for transportation uses and thereby contribute to the national policy to increase energy self-sufficiency.

3.6.3 IMPACTS AND MITIGATION MEASURES

GHG THRESHOLDS OF SIGNIFICANCE AND METHODOLOGY

Analysis Approach

Cumulative impacts are the collective impacts of one or more past, present, and future projects that, when combined, result in adverse changes to the environment. In determining the significance of a project's contribution to anticipated adverse future conditions, a lead agency should generally undertake a two-step analysis. The first question is whether the *combined* effects from *both* the Project *and* other projects would be cumulatively significant. If the agency answers this inquiry in the affirmative, the second question is whether "the project's *incremental* effects are cumulatively considerable" and thus significant in and of themselves. The cumulative project list for this issue (climate change) comprises anthropogenic (i.e., human-made) GHG emissions sources across the globe and no project alone would reasonably be expected to contribute to a noticeable incremental change to the global climate. However, legislation and executive orders on the subject of climate change in California have established a statewide context and process for developing an enforceable statewide cap on GHG emissions. Given the nature of environmental

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consequences from GHGs and global climate change, CEQA requires that lead agencies consider evaluating the cumulative impacts of GHGs. Small contributions to this cumulative impact (from which significant effects are occurring and are expected to worsen over time) may be potentially considerable and, therefore, significant.

The California Office of Planning and Research (OPR) recommends that lead agencies under CEQA make a good-faith effort, based on available information, to estimate the quantity of GHG emissions that would be generated by a project, including the emissions associated with construction activities, vehicular traffic, energy consumption, and area sources: to determine whether the impacts have the potential to result in a significant project or cumulative environmental impact; and, where feasible mitigation is available, to mitigate any project or cumulative impact determined to be potentially significant. The guidance contained within Chapter 6 of the SMAQMD *Guide to Air Quality Assessment in Sacramento County* (CEQA Guide) (2018) was used in the following analysis.

GREENHOUSE GASES THRESHOLDS OF SIGNIFICANCE

Per Appendix G of the CEQA Guidelines, climate change-related impacts are considered significant if implementation of the Project under consideration would do any of the following:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Methodology

Greenhouse gases attributable to the construction phase of the Project would be generated from two primary sources: 1) emissions from off-road construction vehicles used to develop the Project and 2) emissions from worker, vendor, and hauler vehicle trips and vehicle miles travelled generated during construction activities.

Greenhouse gases attributable to the operational phase of the Project would be generated from two primary sources: 1) indirect energy (e.g. electricity and natural gas) usage from the Project and 2) emissions from vehicle trips and vehicle miles travelled generated by the Project.

The Project would include housing units that exceed the operational and construction greenhouse gas screening levels as provided by SMAQMD (2018). Therefore, in order to determine whether or not the Project would generate GHG emissions that may have a significant impact on the environment during the Project's construction and operational phases, this EIR addresses the Project's compliance with the SMAQMD's established and adopted greenhouse gas emission thresholds (SMAQMD, 2018). These thresholds and standards are used by the City to determine a project's GHG emissions impacts during a project's construction and operational phases. The SMAQMD thresholds for both construction and operational emissions are 1,100 metric tons of CO₂e/year. CalEEMod (v.2016.3.2) was utilized to calculate construction and operational GHG

emissions. Only CO₂, CH₄, and N₂O emissions were considered. Other GHGs were considered to be negligible.

It should be noted that the SMAQMD is currently in the process of updating their operational GHG emissions thresholds for land development projects. On November 28, 2018, the SMAQMD released the *Draft Sacramento Metropolitan Air Quality Management District Greenhouse Gas Thresholds of Significance Update for Land Development Operational Emissions*. After review of the current thresholds and available land use and GHG datasets, the SMAQMD staff is recommending an update to the land use operational threshold to include a screening level for smaller projects and an efficiency metric for projects exceeding the screening level to determine significance of operational emissions. For projects exceeding a 3,500 metric tons GHG/year screening threshold, the SMAQMD staff recommends (in their draft report) to compare project GHG emissions to one of the efficiency metrics shown in the following table to determine significance and the need to mitigate GHG emissions. An analysis of the Project's compliance with this draft threshold is provided.

TABLE 3.6-1: RECOMMENDED LAND USE OPERATIONAL THRESHOLDS OF SIGNIFICANCE (METRIC TONS)

YEAR	GHG/CAPITA (METRIC TONS)	GHG/SERVICE POPULATION
2020	5.90	4.16
2036	2.94	2.05

SOURCE: DRAFT SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT GREENHOUSE GAS THRESHOLDS OF SIGNIFICANCE UPDATE FOR LAND DEVELOPMENT OPERATIONAL EMISSIONS, 2018.

An analysis of the Project's consistency with applicable plans, policies, and regulations for the purpose of reducing greenhouse gas emissions is also provided, including consistency with:

- AB 32, SB 32, the CARB Scoping Plan, and Executive Order B-30-15 goals; and
- The SACOG MTP/SCS.

The City of Rancho Cordova does not have a qualified climate action plan or GHG reduction plan. Therefore, an analysis of the Project's consistency with such planning documents is not provided herein.

ENERGY CONSERVATION THRESHOLDS OF SIGNIFICANCE

Per Appendix G of the State CEQA Guidelines, the Project would result in a significant impact on energy use if it would:

1. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
2. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

In order to determine whether or not the Project would result in a significant impact on energy use, this EIR includes an analysis of Project energy use, as provided under *Impacts and Mitigation*

Measures, below. A description of the methodology used to estimate energy emissions is provided within the analysis provided under *Impacts and Mitigation Measures*.

IMPACTS AND MITIGATION MEASURES

Impact 3.6-1: The Project has the potential to generate construction-related GHGs, either directly or indirectly, that may have a significant effect on the environment (Less than Significant with Mitigation)

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. A project's GHG emissions are at a micro-scale relative to global emissions, but could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. Implementation of the Project would contribute to increases of GHG emissions that are associated with global climate change. Estimated GHG emissions attributable to future development would be primarily associated with increases of CO₂ and other GHG pollutants, such as methane (CH₄) and nitrous oxide (N₂O), from mobile sources and utility usage.

The Project's short-term construction-related and long-term operational GHG emissions were estimated using the California Emission Estimator Model (CalEEMod)TM (v.2016.3.2). CalEEMod is a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify GHG emissions from land use projects. The model quantifies direct GHG emissions from construction and operation (including vehicle use), as well as indirect GHG emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. Emissions are expressed in annual metric tons of CO₂ equivalent units of measure (i.e., MT CO₂e), based on the global warming potential of the individual pollutants. Section 3.2 (Air Quality) provides further detail on the construction phasing and parameters assumed for the purposes of modeling.

Construction-related activities that would generate GHGs include worker commute trips, haul trucks carrying supplies, materials, and cut and fill to and from the Project site, and off-road construction equipment (e.g., dozers, loaders, excavators). Construction of the land uses on the Project site is expected to occur over several years. Annual construction emissions are summarized in Table 3.6-2, in units of metric tons per year (MT/year). Table 3.6-2 represents both unmitigated and mitigated construction-related GHG emissions, since the measures provided within Mitigation Measure 3.6-1 would not affect the Project construction GHG emissions directly.

TABLE 3.6-2: SUMMARY OF CONSTRUCTION-RELATED GREENHOUSE GAS EMISSIONS (METRIC TONS/YEAR)

CONSTRUCTION YEAR	BIO-CO ₂	NON-BIO CO ₂	TOTAL CO ₂	CH ₄	N ₂ O	CO ₂ E
<i>PHASE 1</i>						
2020	0	948.8	948.8	0.2	0	953.9
2021	0	1,001.8	1,001.8	0.2	0	1,006.1
2022	0	1,070.7	1,070.7	0.2	0	1,075.1
2023	0	368.9	368.9	0.1	0	370.3
<i>PHASE 2</i>						
2022	0	226.0	226.0	0.1	0	227.4
2023	0	579.1	579.1	0.1	0	580.8
2024	0	800.9	800.9	0.1	0	803.1
2025	0	482.5	482.5	0.1	0	483.8
<i>PHASE 3</i>						
2025	0	557.2	557.2	0.2	0	561.3
2026	0	1,169	1,169	0.1	0	1,171.5
2027	0	1,582.0	1,582.0	0.2	0	1,587.7
2028	0	1,250.3	1,250.3	0.2	0	1,255.0
2029	0	111.5	111.5	<0.1	0	112.4
<i>PHASE 4</i>						
2030	0	304.3	304.3	<0.1	0	304.6
2031	0	388.4	388.4	<0.1	0	388.7
2032	0	514.2	514.2	<0.1	0	514.7
2033	0	21.7	21.7	<0.1	0	21.7
<i>PHASE 5</i>						
2034	0	313.8	313.8	<0.1	0	314.2
2035	0	282.3	282.3	<0.1	0	282.6
Threshold	N/A	N/A	N/A	N/A	N/A	1,100
Above Threshold?	N/A	N/A	N/A	N/A	N/A	Y

SOURCE: CALEEMOD (v.2016.3.2)

NOTES: BIO-CO₂ REFERS TO BIOGENIC SOURCES OF CO₂. THE LOSS OF CARBON SEQUESTRATION FROM THE REMOVAL OF EXISTING VEGETATION IS ADDRESSED UNDER THE OPERATIONAL IMPACT DISCUSSION UNDER IMPACT 3.6-2. THE SMAQMD PROVIDES GHG THRESHOLDS ONLY FOR CO₂E, WHICH IS AN AGGREGATE OF ALL GHG EMISSIONS AS EXPRESSED IN TERM OF CO₂.

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TABLE 3.6-3: SUMMARY OF CONSTRUCTION GREENHOUSE GAS EMISSIONS (METRIC TONS/YEAR) IN YEARS WITH CONCURRENT PHASES

YEAR	BIO-CO ₂	NON-BIO CO ₂	TOTAL CO ₂	CH ₄	N ₂ O	CO ₂ E
<i>2022</i>						
Phase 1	0	1,070.70	1,070.70	0.2	0	1,075.10
Phase 2	0	226	226	0.1	0	227.4
Total	0	1,296.7	1,296.7	0.3	0	1,302.5
<i>2023</i>						
Phase 1	0	368.9	368.9	0.1	0	370.3
Phase 2	0	579.1	579.1	0.1	0	580.8
Total	0	948	948.0	0.2	0	951.1
<i>2025</i>						
Phase 2	0	482.5	482.5	0.1	0	483.8
Phase 3	0	557.2	557.2	0.2	0	561.3
Total	0	1,039.7	1,039.7	0.3	0	1,045.1
Maximum	0	1,296.7	1,296.7	0.3	0	1,302.5
Threshold	N/A	N/A	N/A	N/A	N/A	1,100
Above Threshold?	N/A	N/A	N/A	N/A	N/A	Y

SOURCE: CALEEMOD (v.2016.3.2); DE NOVO PLANNING GROUP, 2019

It is noted that construction phases would overlap in 2022, 2023, and 2025 and emissions during these years would reflect concurrent development of multiple phases, as shown in Table 3.6-3.

The GHG emissions would be the greatest during year 2027 because that is the year when a large amount of building construction, site preparation, and grading for Phases 3 and 4, as well as grading and paving for the Rancho Cordova Parkway widening, would occur. The GHG emissions threshold would also be exceeded during years 2022 (with Phases 1 and 2 combined), 2025, with Phases 2 and 3 combined, 2028, and 2029. Refer Section 3.2, Air Quality, for additional details on the construction schedule. Refer to Appendix B.1 for a detailed summary of the CalEEMod modeling assumptions, inputs, and outputs.

As presented in the table, short-term construction emissions of GHG associated with the Project are estimated to be a maximum of approximately 1,587.7 MT CO₂e in a single year (year 2027). Construction GHG emissions are a one-time release and are, therefore, not expected to generate a significant contribution to global climate change in the long-term. Emissions from construction are above the SMAQMD construction phase threshold of 1,100 MT CO₂e/year. Therefore, during the construction phase, the Project would be required to implement mitigation to reduce emissions to less than the SMAQMD construction phase threshold of 1,100 MT CO₂e/year. The SMAQMD *Guide to Air Quality Assessment in Sacramento County* allows for construction emissions to be amortized over the expected (long-term) operational life of a project. Therefore, construction emissions are amortized (as provided under Impact 3.6-2, below) and are subject to Mitigation Measure 3.6-1 (as

provided under Impact 3.6-2). With implementation of Mitigation Measure 3.6-1, the Project would have a *less than significant* impact relative to this topic.

Impact 3.6-2: The Project has the potential to generate operation-related GHGs, either directly or indirectly, that may have a significant effect on the environment (Less than Significant with Mitigation)

The Project is anticipated to be fully developed (i.e. achieve buildout) by approximately 2035. However, partial buildout (completion of Phase 1) could occur as soon as 2023. The long-term operational GHG emissions estimate for the Project incorporates the Project's potential area source and vehicle emissions, and emissions associated with utility and water usage, and wastewater and solid waste generation. The modeling also reflects a loss of carbon sequestration from the loss of existing trees and vegetation, as well as the benefits of carbon sequestration from the installation of new trees within the Project site.

Project Operational Characteristics

CalEEMod was used to estimate operational emissions for the Project. As described in Section 3.2, Air Quality, the CalEEMod model only allows some Project characteristics to be modeled as "mitigation" for the purposes of the model; therefore, the "mitigated" Project scenario modeled in the unmitigated CalEEMod run represents reductions associated with Project characteristics that reduce emissions.

A summary of the Project characteristics that reduce GHG emissions is provided below (note: the associated CalEEMod measure is provided in brackets). For further detail, see the list of sustainability features and other Project details as provided in Chapter 2.0, Project Description.

- Density to 6.86 dwelling units per acre [Traffic Mitigation, LUT-1];
- Increase diversity through single family residential, multi-family residential, commercial, parks and recreation, and senior uses [Traffic Mitigation, LUT-3];
- Improve walkability design (123.53 intersections per square miles) [Traffic Mitigation, LUT-9];
- Improve destination accessibility (12.3 miles) [Traffic Mitigation LUT-4];
- Increase transit accessibility (Project site would include transit facilities for the City's Signature Transit Route) – average distance to transit for Project residents would be approximately 0.25 miles) [Traffic Mitigation, LUT-5];
- Improve pedestrian network (Project site and connecting off-site) [Traffic Mitigation, SDT-1];
- Provide traffic calming measures (50% of streets and intersections with improvements) [Traffic Mitigation, SDT-2];
- Install electric vehicle (EV) charging stations throughout the Project site, such that at least 50% of single-family residences and 5% of parking spaces within the commercial, park and recreation, and multi-family land uses will have EV charging stations [Traffic Mitigation SDT-3];
- Expand transit network [Traffic Mitigation, TST-3];
- Plant a minimum of 2,240 new trees throughout the Project site [4.11.2-Sequestration];
- No hearths [Area Mitigation];
- Use low-VOC paint (50 EF g/L);

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- Install energy efficient (i.e. LED or better lighting) for all outdoor lighting (for outdoor lighting) [Energy Mitigation, LE-1];
- Generate 95% or more of electricity via renewable energy (on-site energy generation and/or contract with SMUD) [Energy Mitigation, AE-1, AE-2, AE-3];
- Install energy efficient (*i.e. Energy Star*) appliances [Energy Mitigation, BE-4];
- Install low-flow appliances (bathroom faucet, kitchen faucet, toilet, and shower) [Water Mitigation, WUW-1];
- Use water-efficient irrigation systems (automatic rain shut-off, maximum gallon per minute restriction, WiFi connectivity) [Water Mitigation, WUW-4]; and
- Minimize turf for residential uses to 70% less than the maximum allowed turf area [Water Mitigation, WUW-5].

Furthermore, as discussed in Section 3.2, Air Quality, the Project would implement all feasible SMAQMD BMPs for particulate matter emissions from land use development projects. The SMAQMD BMPs are required by existing regulations. The following list identifies the BMPs for operational PM emissions for land use development projects that would also contribute to a reduction in GHGs:

- Compliance with the mandatory measures in the California Building Energy Efficiency Standards (Title 24, Part 6) that pertain to efficient use of natural gas for space and water heating and other uses at residential or non-residential land uses.
- Compliance with mandatory measures in the California Green Building Code (Title 24, Part 11). Current mandatory measures related to operational PM include requirements for bicycle parking, parking for fuel-efficient vehicles, electric vehicle charging, and fireplaces for non-residential projects. Residential project measures include requirements for electric vehicle charging and fireplaces.
- Compliance with anti-idling regulations for diesel-powered commercial motor vehicles (greater than 10,000 gross vehicular weight rating). This BMP focuses on non-residential land use projects (retail and industrial) that would attract these vehicles.

Unmitigated Project Emissions

For Table 3.6-4, two mobile source scenarios are provided: the first scenario shows mobile source emissions inclusive of all Project trips, whilst a second scenario for the mobile emissions category (“Mobile Emissions Category Excluding Car and Light-Duty Truck Trips”) shows Project mobile category emissions without emissions from car and light-duty truck trips (consistent with the SB 375 CEQA streamlining benefit for “Mixed-Use Residential Projects”, for which the Project qualifies).

TABLE 3.6-4: UNMITIGATED OPERATIONAL GHG EMISSIONS AT PROJECT BUILDOUT (METRIC TONS/YEAR)

CATEGORY	BIO- CO ₂	NON-BIO- CO ₂	TOTAL CO ₂	CH ₄	N ₂ O	CO ₂ E
Area	0	29.1	29.1	<0.1	0	29.8
Energy	0	1,758.7	1,758.7	<0.1	<0.1	1,768.9
Mobile	0	6,834.0	6,834.0	0.3	0	6,840.5
Waste	252.0	0	252.0	14.9	0	624.5
Water	32.5	199.4	231.9	0.1	0.1	256.6
Total	284.5	8,821.2	9,105.7	15.3	0.1	9,520.1
<i>MOBILE EMISSIONS CATEGORY EXCLUDING CAR AND LIGHT-DUTY TRUCK TRIPS</i>						
Mobile	0	3,063.4	3,063.4	0.2	0	3,068.8
Total	284.5	5,050.60	5,335.1	15.2	0.1	5,748.6

SOURCE: CALSEEMOD (v.2016.3.2)

As shown in Table 3.6-4 the Project's operational GHG emissions would equal approximately 5,748.6 MT CO₂e/year, when removing the emissions from car and light-duty truck trips, per the SB 375 CEQA streamlining benefits.

In addition to the emissions shown in Table 3.6-4, the CalEEMod results also identify the sequestration loss from existing vegetation as well as the benefits of carbon sequestration from the installation of new trees within the Project site. As a conservative estimate, the loss of existing vegetation (annual grasslands) was estimated to generate a one-time loss (from carbon sequestration) of approximately 1,083.3 MT CO₂e.¹ If amortized over a 30-year period, this loss represents an approximate carbon sequestration loss of 36.11 MT CO₂e/year. However, installation of new trees within the Project site is expected to sequester approximately 1,585.9 MT CO₂e. If amortized over a 30-year period, this represents an approximate carbon sequestration gain of 52.86 MT CO₂e/year. Combined with the loss from existing vegetation, the net change to carbon sequestration due to development of the Project at full buildout is expected to be approximately 502.6 MT CO₂e, or 16.8 MT CO₂e/year. This carbon sequestration gain (i.e. net reduction in Project GHG emissions) is in addition to the Project unmitigated operational GHG emissions provided in Table 3.6-3.

Separately, as provided under Impact 3.6-1, construction emissions as modeled by CalEEMod would total approximately 12,014.9 CO₂e/year over the life of the Project. If amortized over a 40-year period (consistent with SMAQMD guidance)², total amortized construction emissions would be equivalent to 200.4 CO₂e/year.

When carbon sequestration and amortized construction emissions are included in the calculation, the Project's net annual GHG emissions would equal 5,446.4 MT CO₂e/year, as shown in Table 3.6-5. Therefore, the Project is required to implement all feasible mitigation to reduce Project operational GHG emissions to a below the applicable threshold of significance.

¹ Note: for the purposes of modeling, it was assumed that the Project site currently consists of "Grassland". The proposed project was assumed to remove an amount of "Grassland" representative of the land area to be developed (not including the open space areas that would be preserved upon proposed project buildout).

² As provided on page 6-14 of the SMAQMD's Guide to Air Quality Assessment in Sacramento County (2018).

3.6 GREENHOUSE GASES, CLIMATE CHANGE, AND ENERGY

TABLE 3.6-5: UNMITIGATED OPERATIONAL GHG EMISSIONS AT PROJECT BUILDOUT (METRIC TONS/YEAR)

CATEGORY	CO ₂ E
Total Area, Energy, Mobile, Waste, and Water Emissions (Table 3.4-3)	5,748.6
Net Carbon Sequestration (Reduction) ¹	<502.6>
Net Construction Amortization (Gain) ²	200.4
Total	5,446.4

¹ ONE-TIME LOSS OF APPROXIMATELY 1,083.3 MT CO₂E AMORTIZED OVER A 30-YEAR PERIOD REPRESENTS AN APPROXIMATE CARBON SEQUESTRATION LOSS OF 36.11 MT CO₂E/YEAR ASSOCIATED WITH REMOVAL OF EXISTING VEGETATION DUE TO PROJECT CONSTRUCTION. INSTALLATION OF NEW TREES AS PART OF THE PROJECT WOULD SEQUESTER APPROXIMATELY 1,585.9 MT CO₂E, REPRESENTS AN APPROXIMATE CARBON SEQUESTRATION GAIN OF 52.86 MT CO₂E/YEAR IF AMORTIZED OVER A 30-YEAR PERIOD.

² CONSTRUCTION EMISSIONS WOULD TOTAL APPROXIMATELY 12,014.9 CO₂E/YEAR OVER THE LIFE OF THE PROJECT (SEE IMPACT 3.6-1). WHEN AMORTIZED OVER A 40-YEAR PERIOD, TOTAL AMORTIZED CONSTRUCTION EMISSIONS WOULD BE EQUIVALENT TO 200.4 CO₂E/YEAR.

SOURCE: CALEEMOD (v.2016.3.2)

Mitigated Project Emissions

The Project has been designed and planned to incorporate a substantial amount of available mitigation. As shown in the Project's GHG Reduction Plan (see Mitigation Measure 3.6-1), the Project has been designed to incorporate the majority of CalEEMod measures identified by SMAQMD as appropriate for reducing GHG emissions. These measures are described previously under the Project Operational Characteristics heading. In reviewing GHG reduction measures identified by SMAQMD as included in CalEEMod and appropriate for reducing GHG emissions, an additional three measures were identified as applicable to the Project, as described below:

- Implement Trip Reduction Program (100% of employees eligible; voluntary) [Traffic Mitigation, TRT-1 and TRT-2];
- Exceed Title 24 (2% improvement) [Energy Mitigation, BE-1]; and
- Apply Water Conservation Strategy (25% reduction in outdoor water consumption) [Water Mitigation WUW-2].

Table 3.6-6 provides the mitigation operational GHG emissions at project buildout in year 2035.

TABLE 3.6-6: UNMITIGATED OPERATIONAL GHG EMISSIONS AT PROJECT BUILDOUT (METRIC TONS/YEAR)

CATEGORY	BIO- CO ₂	NON-BIO- CO ₂	TOTAL CO ₂	CH ₄	N ₂ O	CO ₂ E
Area	0	29.1	29.1	<0.1	0	29.8
Energy	0	1,730.7	1,730.7	<0.1	<0.1	1,740.8
Mobile	0	6,640.6	6,640.6	0.3	0	6,646.9
Waste	252.0	0	252.0	14.9	0	624.3
Water	40.6	214.5	255.1	0.2	0.1	285.9
Total	292.6	8,614.9	8,907.5	15.4	0.1	9,327.6
<i>MOBILE EMISSIONS CATEGORY EXCLUDING CAR AND LIGHT-DUTY TRUCK TRIPS</i>						
Mobile	0	2,982.3	2,982.3	0.2	0	2,987.7
Total	292.6	4,956.6	5,249.2	15.3	0.1	5,668.5

SOURCE: CALEEMOD (v.2016.3.2)

As shown in Table 3.6-6, the Project's operational GHG emissions would equal approximately 5,668.5 MT CO₂e/year, when removing the impact from car and light-duty truck trips, per the SB 375 CEQA streamlining benefits.

In addition to the emissions shown in Table 3.6-6, the CalEEMod results also identify the sequestration loss from existing vegetation as well as the benefits of carbon sequestration from the installation of new trees within the Project site. As a conservative estimate, the loss of existing vegetation (annual grasslands) was estimated to generate a one-time loss (from carbon sequestration) of approximately 1,083.3 MT CO₂e.³ If amortized over a 30-year period, this loss represents an approximate carbon sequestration loss of 36.11 MT CO₂e/year. However, installation of new trees within the Project site is expected to sequester approximately 1,585.9 MT CO₂e. If amortized over a 30-year period, this represents an approximate carbon sequestration gain of 52.86 MT CO₂e/year. Combined with the loss from existing vegetation, the net change to carbon sequestration due to development of the Project at full buildout is expected to be approximately 502.6 MT CO₂e, or 16.8 MT CO₂e/year. This carbon sequestration gain (i.e. net reduction in Project GHG emissions) is in addition to the Project unmitigated operational GHG emissions provided in Table 3.6-3.

Separately, as provided under Impact 3.6-1, construction emissions as modeled by CalEEMod would total approximately 12,014.9 CO₂e/year over the life of the Project. If amortized over a 40-year period (consistent with SMAQMD guidance)⁴, total amortized construction emissions would be equivalent to 200.4 CO₂e/year.

When carbon sequestration and amortized construction emissions are included in the calculation, the Project's net annual GHG emissions would equal 5,336.3 MT CO₂e/year, as shown in Table 3.6-7. Therefore, the Project is required to implement all feasible mitigation to reduce Project operational GHG emissions to a below the applicable threshold of significance.

TABLE 3.6-7: UNMITIGATED OPERATIONAL GHG EMISSIONS AT PROJECT BUILDOUT (METRIC TONS/YEAR)

CATEGORY	CO ₂ E
Total Area, Energy, Mobile, Waste, and Water Emissions (Table 3.4-3)	5,668.5
Net Carbon Sequestration (Reduction) ¹	<502.6>
Net Construction Amortization (Gain) ²	200.4
Total	5,336.3

¹ ONE-TIME LOSS OF APPROXIMATELY 1,083.3 MT CO₂E AMORTIZED OVER A 30-YEAR PERIOD REPRESENTS AN APPROXIMATE CARBON SEQUESTRATION LOSS OF 36.11 MT CO₂E/YEAR ASSOCIATED WITH REMOVAL OF EXISTING VEGETATION DUE TO PROJECT CONSTRUCTION. INSTALLATION OF NEW TREES AS PART OF THE PROJECT WOULD SEQUESTER APPROXIMATELY 1,585.9 MT CO₂E, REPRESENTS AN APPROXIMATE CARBON SEQUESTRATION GAIN OF 52.86 MT CO₂E/YEAR IF AMORTIZED OVER A 30-YEAR PERIOD.

² CONSTRUCTION EMISSIONS WOULD TOTAL APPROXIMATELY 12,014.9 CO₂E/YEAR OVER THE LIFE OF THE PROJECT (SEE IMPACT 3.6-1). WHEN AMORTIZED OVER A 40-YEAR PERIOD, TOTAL AMORTIZED CONSTRUCTION EMISSIONS WOULD BE EQUIVALENT TO 200.4 CO₂E/YEAR.

SOURCE: CALEEMOD (v.2016.3.2)

³ Note: for the purposes of modeling, it was assumed that the Project site currently consists of "Grassland". The proposed project was assumed to remove an amount of "Grassland" representative of the land area to be developed (not including the open space areas that would be preserved upon proposed project buildout).

⁴ As provided on page 6-14 of the SMAQMD's Guide to Air Quality Assessment in Sacramento County (2018).

3.6 GREENHOUSE GASES, CLIMATE CHANGE, AND ENERGY

CONSISTENCY WITH THE DRAFT RECOMMENDED LAND USE OPERATIONAL GHG THRESHOLDS

The following discussion provides an analysis of the Project's compliance with the draft recommended land use operational GHG thresholds that are currently under consideration by the SMAQMD.

The Project includes both residential and non-residential components, and is not expected to achieve full buildout until approximately 2035. Therefore, the GHG per service population threshold for year 2036 (as provided in Table 3.6-1) was selected for the purposes of comparing Project operational GHG emissions to the new draft recommended land use thresholds of significance for GHG emissions. As provided in Table 3.6-1, the proposed project would need to reach a GHG service population threshold of 2.05 in 2036. Operational emissions for 2035 are used as a proxy for year 2036 (carbon efficiency is expected to improve in California over time, so this serves as a conservative estimate).

The residential population of the Project is expected to be 4,319 persons and the number of employees within the Project at buildout is estimated at 106 employees, as described in Chapter 2.0, Project Description. Therefore, the service population for the Project would be 4,425. With total operational emissions for the Project at approximately 5,336.3 MT CO₂e/year, as shown in Table 3.6-7, the GHG per service population thresholds would equal approximately 1.21 MT CO₂e/year. Therefore, the Project would achieve the year 2036 GHG/capita thresholds of 2.05 MT CO₂e/service population under the mitigated scenario. Nevertheless, since the GHG/service population thresholds are not yet final, the existing 1,100 MT CO₂e thresholds for operational GHG emissions that is currently in place is used as the basis for the analysis of the Project's operation-related GHGs emissions.

CONCLUSION

Even with inclusion of the aforementioned Project characteristics, the Project would not meet the operational level emissions threshold as currently provided by the SMAQMD. Therefore, the Project would be required to implement Mitigation Measure 3.6-1, which requires the Project applicant to implement additional features in the Project that would reduce GHG emissions, including membership of Project components (residential communities, commercial uses, and parks and recreation uses), in a Transportation Management Association, increased efficiency beyond the minimum requirements of Title 24, use of native and drought-tolerant landscaping and trees, and purchasing carbon offsets. With implementation of Mitigation Measure 3.6-1, the Project would have a **less than significant** impact relative to this topic.

MITIGATION MEASURE(S)

Mitigation Measure 3.6-1: *The Project shall comply with the GHG Reduction Plan for The Ranch throughout all phases of Project construction and operation.*

The Ranch GHG Reduction Plan

The Project shall implement all measures shown in the table below that are identified as "Incorporated into Project Design" or "Mitigation Measure" in order to reduce the Project's net operational emissions, including amortized construction emissions, to an emissions level that meet

the SMAQMD threshold for GHG emissions. It is noted that incorporation of the three SMAQMD-Recommended CalEEMod Measures to Reduce GHGs that are identified as “Mitigation Measures” in the below table would reduce the Project’s net operational emissions, including amortized construction emissions, to 5,336.3 MT CO₂e, as shown in Table 3.6-7 of the Draft EIR. Implementation of the required carbon offset purchase, as described in the below table, will ensure that the Project meets SMAQMD thresholds as it ensures the Project will purchase adequate carbon offsets to reduce all remaining emissions over SMAQMD thresholds to a level that meets the threshold.

<i>GHG REDUCTION MEASURE</i>	<i>APPLICABILITY</i>	<i>IMPLEMENTATION</i>
<i>SMAQMD-RECOMMENDED CAL EEMOD MEASURE TO REDUCE GHGS¹</i>		
LUT-1 Increase Density: Project more dense than typical developments	Not applicable. Project is under minimum density required (eight units per acre).	Not applicable.
LUT-3 Increase Diversity of Land Uses: Different types of land uses are near each other	Incorporated into Project Description. Project provides single family residential, multifamily residential, commercial, senior community clubhouse, parks and recreation, and open space land uses.	Included in Project design as described in the Project Description. No additional implementation required.
LUT-9 Improve Walkability Design: Walkable street network	Incorporated into Project Description. Project is designed with a walkable street pattern, with 123.53 intersections per square mile, multiple bicycle/pedestrian connections, an off-street trail system, and bicycle lanes to encourage walkability.	Included in Project design as described in the Project Description. No additional implementation required.
LUT-4 Improve Destination Accessibility: Project close to regional employment or destination center	Incorporated into Project Description. Project is located 12.3 miles from a regional employment center in downtown Sacramento.	Included in Project design as described in the Project Description. No additional implementation required.
LUT-5 Increase Transit Accessibility: Project near high-quality transit	Not applicable. While Project would provide a transit stop for the planned regional transit line, transit is currently limited in the area.	Not applicable.
LUT-6 Integrate Below Market Rate Housing: Incorporates affordable housing	Not applicable. The Project includes two multifamily components, but does not include affordable housing.	Not applicable.
SDT-1 Improve Pedestrian Network: On-site pedestrian access network links all of project internally and externally	Incorporated into Project Description. Project is designed with a walkable street pattern, with 123.53 intersections per square mile, multiple bicycle/pedestrian connections, an off-street trail system, and bicycle lanes to encourage walkability.	Included in Project design as described in the Project Description. No additional implementation required.
SDT-2 Provide Traffic Calming Measures: Projects streets and intersections feature traffic calming features	Incorporated into Project Description. Project has been designed to include a range of traffic-calming street design features, such as narrower streets, limited single-loaded streets, parking on both sides of the street, posted speed limit signs, planter	Included in Project design as described in the Project Description. No additional implementation required.

3.6

GREENHOUSE GASES, CLIMATE CHANGE, AND ENERGY

<i>GHG REDUCTION MEASURE</i>	<i>APPLICABILITY</i>	<i>IMPLEMENTATION</i>
	strips with street trees, bulb-outs, and horizontal shifts (lane centerline that curves or shifts), and intersection traffic calming features, including pedestrian push-buttons at three intersections, marked crosswalks, count-down signal timers where appropriate, curb extensions, channelization islands, median islands, and tight corner radii.	
SDT-3 Implement a Neighborhood Electric Vehicle (NEV) Network: Project provides a viable NEV network	Incorporated into Project Design. While the Project does not include a traditional NEV, the Project would support electric vehicle use through installing EV charging stations throughout the Project site, such that at least 50% of single family residences and 5% of parking spaces within the commercial, park and recreation, and multi-family land uses will have EV charging stations to reduce reliance on gasoline-fueled vehicles.	Included in Project design as described in the Project Description. No additional implementation required.
PDT-1 Limit Parking Supply: Parking supply below Institute of Transportation Engineers (ITE) rates	Not applicable. The suburban context of the Project is not appropriate for this measure.	Not applicable.
PDT-2 Unbundle Parking Costs: Parking cost separate from property costs	Not applicable. Project design incorporates garages into the single family residential units and does not have significant opportunities for unbundled parking costs.	Not applicable.
TST-1 Provide a Bus Rapid Transit (BRT) System: Establish a BRT line with permanent operational funding stream	Not applicable. While the Project will provide for an expanded transit system through providing a transit stop in accordance with the City's transit plan, it will not create an independent funding source for transit.	Not applicable.
TST-3 Expand Transit Network: Establishes or enhances bus line with permanent operational funding stream	Not applicable. While the Project will provide for an expanded transit system through providing a transit stop in accordance with the City's transit plan, it will not create an independent funding source for transit.	Not applicable.
TST-4 Increase Transit Frequency: Reduces headways of existing transit	Not applicable. While the Project will provide for an expanded transit system through providing a transit stop in accordance with the City's transit plan, it will not create an independent funding source for transit that would reduce headways.	Not applicable.

<i>GHG REDUCTION MEASURE</i>	<i>APPLICABILITY</i>	<i>IMPLEMENTATION</i>
TRT-1&2 Implement Trip Reduction Program: Transportation Management Association (TMA) membership or other comprehensive services	Mitigation Measure. Mitigation Measure 3.6-1 requires the Project to join a Transportation Management Association (all employees located within the Project site to be eligible to participate).	Prior to issuance of occupancy permits for each construction phase of the Project, the Project applicant shall demonstrate that the residential, commercial, and parks and recreation uses associated with each phase have a permanent commitment, demonstrated through CC&Rs or comparable permanent mechanisms, have joined a Transportation Management Association and ensures payment of annual fees for on-going participation. The Transportation Management Association shall grant all employees located within the Project site eligibility to participate).
BE-1 Exceed Title 24 California Code of Regulations, known as the California Building Standards Code (Title 24): Use less energy than allowed by Title 24	Mitigation Measure. Mitigation Measure 3.6-1 requires the Project to exceed the 2016 Title 24 requirements by 2 percent.	Prior to issuance of building permits for each construction phase of the Project, including all residential, commercial, and parks and recreation uses, the Project applicant shall demonstrate that the phase exceeds the 2016 Title 24 requirements for energy use and efficiency by a minimum of 2 percent. The documentation shall identify specific Project components, such as building materials and design, lighting improvements beyond the minimum required by LE-1, etc. and the associated reduction with each component beyond the Title 24 requirements.
LE-1 Install High Efficiency Lighting: Make use of high-efficient outdoor and public lighting	Incorporated into Project Design. The Project proposes to install energy-efficient (i.e., LED or better) lighting for all outdoor lighting.	Included in Project design as described in the Project Description. No additional implementation required.
BE-4 Energy Efficient Appliances: Use appliances more energy efficient than standard models	Incorporated into Project Design. The Project proposes to install energy-efficient appliances.	Included in Project design as described in the Project Description. No additional implementation required.
AE-1 On-site Renewable Energy: Establish on-site renewable energy. (No	Incorporated into Project Design. The Project would generate a minimum of 95% of electricity via renewable	Included in Project design as described in the Project Description. No additional

<i>GHG REDUCTION MEASURE</i>	<i>APPLICABILITY</i>	<i>IMPLEMENTATION</i>
Ozone Precursor reductions if NO _x intensity is higher than electric utility.)	energy via either on-site energy generation and/or through a contract with SMUD.	implementation required.
WUW-2 Apply Water Conservation Strategy: Reduce indoor and outdoor water use	Incorporated into Project Design. The Project would	Included in Project design as described in the Project Description. No additional implementation required.
WSW-1 Use Reclaimed Water: Project utilizes non-potable water	Not applicable. Nonpotable water is not available to the Project site.	Not applicable.
WSW-2 Use Grey Water: Project reuses onsite water	Not applicable. The Project does not have significant opportunities to reuse onsite water.	Not applicable.
WUW-1 Install Low-Flow Bathroom Faucet, Install Low-Flow Kitchen Faucet, Install Low-flow Toilet, Install Low-flow Shower	Incorporated into Project Design. The Project proposes to install energy-efficient appliances.	Included in Project design as described in the Project Description. No additional implementation required.
WUW-5 Reduce Turf in Landscapes and Lawns: Use less turf than normal projects	Incorporated into Project Design. Minimize turf for residential uses to 70% less than the maximum allowed turf area to reduce water use.	Included in Project design as described in the Project Description. No additional implementation required.
WUW-4 Use Water-Efficient Irrigation Systems: Install a smart irrigation control system	Incorporated into Project Design. Use water-efficient irrigation systems (automatic rain shut-off, maximum gallon per minute restriction, WiFi connectivity) to reduce water waste.	Included in Project design as described in the Project Description. No additional implementation required.
WUW-3 Water Efficient Landscape: Plant native or drought-resistant trees and Vegetation	Mitigation Measure. Mitigation Measure 3.6-1 requires the Project to incorporate a minimum of 50 percent of native or drought-resistant trees and vegetation into the proposed landscaping, including landscaping lots, landscaping associated with parks and recreation facilities, and landscaping associated with residential uses. Project applicant shall demonstrate at least a 25% reduction in outdoor water use from implementation of this measure.	Prior to approval of improvement plans for each phase of construction, the Project applicant shall submit landscaping plans that demonstrate a minimum of 50 percent of native or drought-resistant trees and vegetation are included in the non-turf component of proposed landscaping, including landscaping lots, parks and recreation lots and facilities, and residential uses.
SW-1 Institute Recycling and Composting Services: Project Recycles, Reduces, and Reuses	Incorporated into Project Design. The Project will comply with the City's recycling requirements. Credit is not taken for this measure.	Not applicable.

<i>GHG REDUCTION MEASURE</i>	<i>APPLICABILITY</i>	<i>IMPLEMENTATION</i>
<i>ADDITIONAL MEASURES (NOT MODELED IN CALEEMOD)</i>		
Purchase Offsets.	Mitigation Measure. This Mitigation Measure 3.6-1 requires the Project applicant to purchase carbon offsets to reduce net project operational and amortized construction emissions to less than SMAQMD's adopted threshold for GHG emissions.	Prior to issuance of the project's first building permit, the project applicant shall develop a SMAQMD-approved commitment to purchase carbon offsets sufficient to reduce project operational emissions and amortized construction emissions to less than SMAQMD's adopted threshold for GHG emissions that is in place at the time of the offset purchase. The purchase of carbon offsets may be prorated so that the offsets are paid concurrent with the approval of each project phase (small lot subdivision maps, multifamily parcel, etc.).

¹ SMAQMD LAND USE EMISSIONS REDUCTIONS VERSION 4 (FOR OPERATIONAL EMISSIONS), SMAQMD, 2017.

Impact 3.6-3: The Project has the potential to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases (Less than Significant with Mitigation)

The City of Rancho Cordova has not developed a qualified climate action plan or a GHG reduction plan. Therefore, the Project has been analyzed to determine consistency with State of California GHG reduction targets (as identified by AB 32, SB 32, and the Scoping Plan), the SACOG MTP/SCS, and Executive Order B-30-15 goals are provided below (per SMAQMD guidance contained within the SMAQMD CEQA Guide).

CONSISTENCY WITH THE SACOG MTP/SCS

The Project would be consistent with the planned-for development as provided with the MTP/SCS, and was therefore included within the SCS growth projections. When evaluating consistency with the MTP/SCS, the Project was reviewed as a mixed-use residential project located outside of a transit priority area. The Project meets the Public Resources Code Section 21159.28(a) requirements for a mixed-use residential project, with at least 75% of the total building square footage consisting of residential use, as approximately 98% of the Project's square footage would be residential (approximately 2,875,800 square feet residential uses divided by approximately 2,934,800 total building square feet).

The Project (the "Ranch at Sunridge" in the MTP/SCS) is located within a Developing Community and is consistent with the general uses envisioned for the site in the MTP/SCS. When determining consistency within a Developing Community, SACOG's Determination of MTP/SCS Consistency Worksheet indicates that the Project's average net density must meet or exceed the average net

density described for the specific Developing Community. The proposed average net residential density of 10 units/acre exceeds the average net density of 7 units/acre described for the the Ranch at Sunridge (MTP/SCS Appendix E-3, p. 137); in comparison to earlier development proposals for this site, the area for total residential, commercial, and other development is limited by the Project's significant preservation of open space and wetland resources (approximately 199.5-acre wetland preserve). This preservation of open space is consistent with the environmental principles of the SCS. Employment-generating uses include the proposed senior clubhouse, commercial parcel, and parks and recreation uses, which are consistent with the commercial and public uses envisioned by the MTP/SCS (MTP/SCS Appendix E-3, p. 137). A Special Planning Area (SPA) Handbook has been prepared for the Project, which acts in a similar capacity to a Specific Plan, and is consistent with the MTP/SCS. The Project is consistent with the goals of the City of Rancho Cordova General Plan (see SPA Handbook for further detail). The Project provides for a high level of bicycle and pedestrian connectivity throughout the Project site, including non-auto connections to the parks, open space, and trails features of the Project. An open space and wetland preserve area is provided, preserving wetlands and aquatic resources on the site. A range of housing types (including single family market rate and senior units at a range of densities and lot sizes, senior congregate care units, and multifamily units) will serve a broad spectrum of households. As described in Section 3.2, Air Quality, comprehensive features and measures are provided to reduce GHG emissions, including use of renewable energy for the residential component of the Project, an EV charging network, and use of energy-efficient and water-conserving building and design practices.

As described above, the Project is consistent with the MTP/SCS general use designation, density and intensity, and applicable MTP/SCS policies. The Project is located in the “Developing Community” community type. Development from the Project when added to other entitled projects would not exceed the MTP/SCS buildout assumptions for the area within this Community type, which is 152,027 new housing units and 81,837 new employees.

Therefore, the Project is consistent with the MTP/SCS and qualifies for CEQA Streamlining under the ‘Residential or Mixed-Use Residential Project Designation for Projects Located Outside of an MTP/SCS TPA’ (see Appendix B.3 for the “Determination of MTP/SCS Consistency Worksheet”). Therefore, the Project would have a ***less than significant*** impact relative to consistency with this plan.

CONSISTENCY WITH STATE OF CALIFORNIA GHG REDUCTION TARGETS & EO B-30-15

The State of California has a target to reach 1990 GHG levels by 2020 (consistent with AB 32), 40 percent below 1990 levels by 2030 (consistent with EO B-30-15 and SB 32), and 80 percent below 1990 levels by 2050 (consistent with EO S-03-05). The SACOG MTP/SCS is required to be consistent with these targets. Since the Project is consistent with and has been planned for in the SACOG MTP/SCS, the Project would also be consistent with the California statewide reduction targets. The Project is also consistent with the CARB Scoping Plan, which is developed in coordination with the SACOG MTP/SCS. Therefore, the Project would have a ***less than significant*** impact relative to this threshold.

CONSISTENCY WITH THE SMAQMD CONSTRUCTION AND OPERATIONAL GHG THRESHOLDS

As previously described, the SMAQMD thresholds for construction-related and operational-related emissions is 1,100 MT CO₂e/year. The Project would not exceed these thresholds with implementation of mitigation, as described under Impact 3.6-1. With implementation of Mitigation Measure 3.6-1, the Project would have a *less than significant* impact relative to this threshold.

CONCLUSION

As demonstrated in the analysis provided above, the Project is consistent with these adopted plans, and would assist the City and the State of California in achieving their adopted GHG reduction targets. The Project would also achieve the SMAQMD construction GHG emissions threshold of 1,100 MT CO₂e per year for construction-related emissions. Additionally, with Mitigation Measure 3.6-1, the Project would offset sufficient GHG emissions to achieve the GHG emissions threshold of 1,100 MT CO₂e per year for operational-related emissions (inclusive of amortized construction-related emissions). Therefore, there is a *less than significant* impact relative to this topic.

Impact 3.6-4: Project implementation has the potential to result in the inefficient, wasteful, or unnecessary use of energy resources, or conflict with or obstruct a state or local plan for renewable energy or energy efficiency (Less than Significant)

The State CEQA Guidelines require consideration of the potentially significant energy implications of a project. CEQA requires mitigation measures to reduce “wasteful, inefficient and unnecessary” energy usage (Public Resources Code Section 21100, subdivision [b][3]). According to Appendix F of the CEQA Guidelines, the means to achieve the goal of conserving energy include decreasing overall energy consumption, decreasing reliance on natural gas and oil, and increasing reliance on renewable energy sources. In particular, the Project would be considered “wasteful, inefficient, and unnecessary” if it were to violate state and federal energy standards and/or result in significant adverse impacts related to project energy requirements, energy inefficiencies, energy intensiveness of materials, cause significant impacts on local and regional energy supplies or generate requirements for additional capacity, fail to comply with existing energy standards, otherwise result in significant adverse impacts on energy resources, or conflict or create an inconsistency with applicable plan, policy, or regulation.

The Project includes primarily residential development, as well as a commercial parcel, an active adult community clubhouse and recreation facility, and parks and recreation land uses, including a comprehensive pedestrian and bicycle network. The amount of energy used at the Project site would directly correlate to the number and size of the residential units, the energy consumption of associated unit appliances, outdoor lighting, and energy use associated with other on-site (e.g. commercial) buildings and activities. Other major sources of Project energy consumption include fuel used by vehicle trips generated during Project construction and operation, and fuel used by off-road and on-road construction vehicles during construction. The following discussion provides calculated levels of energy use expected for the Project, based on commonly used modelling

3.6 GREENHOUSE GASES, CLIMATE CHANGE, AND ENERGY

software (i.e. CalEEMod v.2016.3.2 and the California Air Resource Board’s EMFAC2014). It should be noted that many of the assumptions provided by CalEEMod are conservative relative to the Project, based on the long-term improvements in energy efficiency beyond 2050 that are not accounted for within the CalEEMod model. Therefore, this discussion provides a conservative estimate of Project energy use.

ELECTRICITY AND NATURAL GAS

Electricity and natural gas used by the Project would be used primarily to power on-site buildings. Total annual electricity (kWh) and natural gas (kBtu) usage associated with the operation of the Project are shown in Table 3.6-8, below (as provided by CalEEMod). The Project incorporates feasible mitigation to reduce the Project’s operational electricity and natural gas consumption. As shown, electricity usage within the Project site would be reduced by more than 95% between the unmitigated and mitigated scenarios (due to Project mitigation, including the measure to ensure that at least 95% of Project building electricity usage is derived from renewable sources).

TABLE 3.6-8: PROJECT OPERATIONAL NATURAL GAS AND ELECTRICITY USAGE (UNMITIGATED SCENARIO)

<i>EMISSIONS</i>	<i>NATURAL GAS (KBTU/YEAR)</i>	<i>ELECTRICITY (KWH/YEAR)</i>
Apartments Mid Rise	2,095,840	38,917
City Park	0	0
Other Asphalt Surfaces	0	0
Parking Lot	0	326
Regional Shopping Center	173,440	12,167
Retirement Community	459,751	142,243
Retirement Community	8,916,760	7,334
Single Family Housing	18,988,500	261,857
Total	30,634,291	462,844

SOURCE: CALEEMOD (v.2016.3.2)

According to CalEEMod’s *Appendix A: Calculation Details for CalEEMod*, CalEEMod uses the California Commercial End Use Survey (CEUS) database to develop energy intensity value for non-residential buildings. The energy use from residential land uses is calculated based on the Residential Appliance Saturation Survey (RASS). Similar to CEUS, this is a comprehensive energy use assessment that includes the end use for various climate zones in California.

As shown in Table 3.6-8, Project operational energy usage would be reduced with implementation of Project components considered mitigation by CalEEMod (note: given the limited mitigation options available in the current version of CalEEMod, the reduction attributable to mitigation represents a conservative analysis). As described under Mitigation Measure 3.2-1 (see Section 3.2, Air Quality), the Project incorporates feasible mitigation that would reduce the Project’s energy consumption, as compared to the unmitigated scenario. These reductions in overall Project energy usage also reflect a reduction in the Project’s energy intensity.

ON-ROAD VEHICLES (OPERATION)

The Project would generate vehicle trips during its operational phase. Based on the traffic study prepared for the Project (Kimley Horn, 2019), the Project would generate approximately 11,606

new daily vehicle trips⁵. In order to calculate operational on-road vehicle energy usage and emissions, default trip lengths generated by CalEEMod were used, which are based on the project location and urbanization level parameters De Novo (the EIR consultant) selected within CalEEMod (i.e. “Sacramento County” and “Urban”, respectively). These values are provided by the individual districts or use a default average for the state, depending on the location of the Project (CAPCOA, 2017). Based on default factors provided by CalEEMod, the average distance per trip was conservatively calculated to be approximately 7.9 miles. The Project would generate a total of approximately 86,737 average daily vehicle miles travelled (average daily VMT). Using fleet mix data provided by CalEEMod (v2016.3.2), and Year 2026 gasoline and diesel MPG (miles per gallon) factors for individual vehicle classes as provided by EMFAC2014, De Novo derived weighted MPG factors for operational on-road vehicles of approximately 37.1 MPG for gasoline and 9.8 MPG for diesel vehicles. With this information, De Novo calculated as a conservative estimate that the unmitigated Project would generate vehicle trips that would use a total of approximately 2,186 gallons of gasoline and 566 gallons of diesel fuel per day, on average, or 798,060 gallons of gasoline and 206,430 annual gallons of diesel fuel per year.

ON-ROAD VEHICLES (CONSTRUCTION)

The Project would also generate on-road vehicle trips during Project construction (from construction workers and vendors). Estimates of vehicle fuel consumed were derived based on the assumed construction schedule, vehicle trip lengths and number of workers per construction phase as provided by CalEEMod (v 2016.3.2), and Year 2035 gasoline and diesel MPG factors provided by EMFAC2014. Table 3.6-9, below, describes gasoline and diesel fuel used by on-road mobile sources during each phase of the construction schedule. As shown, the vast majority of on-road mobile vehicle fuel used during the construction of the Project would occur during the building construction phase. See Appendix B.2 for a detailed calculation.

TABLE 3.6-9: ON-ROAD MOBILE FUEL GENERATED BY PROJECT CONSTRUCTION ACTIVITIES – BY PHASE

CONSTRUCTION PHASE	TOTAL DAILY WORKER TRIPS ^(A)	TOTAL DAILY VENDOR TRIPS ^(A)	TOTAL DAILY HAULING TRIPS ^(A)	GALLONS OF GASOLINE FUEL ^(B)	GALLONS OF DIESEL FUEL ^(B)
<i>PHASE 1</i>					
Site Preparation	18	0	0	315	0
Grading	20	0	9,544	825	31,797
Paving	15	0	0	263	0
Building Construction	283	61	0	44,708	31,882
Architectural Coating	57	0	0	9,020	0
<i>PHASE 2</i>					
Improvements for Phase 2 & Paving	23	0	0	1,215	0
Building Construction	290	70	0	47,612	38,022
Architectural Coating	58	0	0	9,522	0

⁵ For the purposes of air quality and greenhouse gas emissions modeling (i.e. CalEEMod), the average internal capture rate calculated by Kimley Horn (for AM and PM peak hours) was applied to Project trips.

3.6 GREENHOUSE GASES, CLIMATE CHANGE, AND ENERGY

CONSTRUCTION PHASE	TOTAL DAILY WORKER TRIPS ^(A)	TOTAL DAILY VENDOR TRIPS ^(A)	TOTAL DAILY HAULING TRIPS ^(A)	GALLONS OF GASOLINE FUEL ^(B)	GALLONS OF DIESEL FUEL ^(B)
<i>PHASE 3</i>					
Site Preparation	18	0	3,181	315	10,598
Grading	20	0	0	825	0
Paving	15	0	0	2,463	0
Building Construction	535	145	0	87,835	80,766
Architectural Coating	107	0	0	17,567	0
Site Preparation for Rancho Cordova Widening	18	0	0	315	0
Paving for Rancho Cordova Widening	15	0	0	2,463	0
Site Preparation (Park Lot - D)	18	0	0	315	0
<i>PHASE 4</i>					
Site Preparation	18	0	0	199	0
Grading and Improvements	15	0	0	344	0
Paving	15	0	0	263	0
Building Construction	171	25	0	21,160	10,235
Architectural Coating	34	0	0	990	0
<i>PHASE 5</i>					
Site Preparation	18	0	0	204	0
Grading and Improvements	15	0	0	271	0
Paving	15	0	0	97	0
Building Construction	10	5	0	701	1,159
Architectural Coatings	2	0	0	46	0
Total	N/A	N/A	N/A	249,853	204,459

NOTE: ^(A) PROVIDED BY CALCEEMOD. ^(B) SEE APPENDIX B.2 FOR FURTHER DETAIL

SOURCE: CALCEEMOD (v.2016.3.2); EMFAC2014.

OFF-ROAD VEHICLES (CONSTRUCTION)

Off-road construction vehicles would use diesel fuel during the construction phase of the Project. A non-exhaustive list of off-road constructive vehicles expected to be used during the construction phase of the Project includes: cranes, forklifts, generator sets, tractors, excavators, and dozers. Based on the total amount of CO₂ emissions expected to be generated by the Project (as provided by the CalCEEMod output), and a CO₂ to diesel fuel conversion factor (provided by the U.S. Energy Information Administration), the Project would use a total of approximately 134,644 gallons of diesel fuel for off-road construction vehicles (during the site preparation and grading phases of the Project). Detailed calculations are provided in Appendix B.2.

OTHER

Project landscape maintenance activities would generally require the use fossil fuel (i.e. gasoline) energy. For example, lawn mowers require the use of fuel for power. As an approximation, it is estimated that landscape care maintenance would require approximately 44,200 man-hours of mowing per year. Assuming an average of approximately 0.5 gallons of gasoline used per person-

hour, the Project would require the use of approximately 22,100 gallons of gasoline per year to power landscape maintenance equipment. The energy used to power landscape maintenance equipment would not differ substantially from the energy required for landscape maintenance for similar project.

The Project could also use other sources of energy not identified here. Examples of other energy sources include alternative and/or renewable energy (such as solar PV) and/or on-site stationary sources (such as on-site diesel generators) for electricity generation. The Project would introduce solar PV onto residential rooftops, which would greatly reduce the need for fossil fuel-based energy (for Project buildings), including for electricity.

CONCLUSION

The Project would use energy resources for the operation of Project buildings (electricity and natural gas), for on-road vehicle trips (e.g. gasoline and diesel fuel) generated by the Project, and from off-road construction activities associated with the Project (e.g. diesel fuel). Each of these activities would require the use of energy resources. The Project would be responsible for conserving energy, to the extent feasible, and relies heavily on reducing per capita energy consumption to achieve this goal, including through Statewide and local measures.

The Project would be in compliance with all applicable federal, state, and local regulations regulating energy usage. For example, SMUD is responsible for the mix of energy resources used to provide electricity for its customers, and it is in the process of implementing the Statewide Renewable Portfolio Standard (RPS) to increase the proportion of renewable energy (e.g. solar and wind) within its energy portfolio. SMUD is expected to achieve at least a 33% mix of renewable energy resources by 2020, and at least 40% by 2030. Additionally, energy-saving regulations, including the latest State Title 24 building energy efficiency standards (“part 6”), would be applicable to the Project. Other Statewide measures, including those intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g. the Pavley Bill and the Low Carbon Fuel Standard), would improve vehicle fuel economies, thereby conserving gasoline and diesel fuel. These energy savings would continue to accrue over time. Furthermore, as described previously, the sustainability features of the Project that are incorporated into the project design (as described previously in this section) would further reduce Project energy consumption. The Project would also be in compliance with the planning documents described previously within this section.

As a result, the Project would not result in any significant adverse impacts related to project energy requirements, energy use inefficiencies, and/or the energy intensiveness of materials by amount and fuel type for each stage of the Project including construction, operations, maintenance, and/or removal. SMUD, the electricity provider to the site, and PG&E, the natural gas provider, maintains sufficient capacity to serve the Project. The Project would comply with all existing energy standards, including those established by Rancho Cordova, as described under Impacts 3.6-1 through 3.6-3, previously, and would not result in significant adverse impacts on energy resources. Furthermore, existing connections exist between the Project site and nearby pedestrian and bicycle pathways, and public transit access exists nearby, reducing the need for

local motor vehicle travel. Although improvements to the City's pedestrian, bicycle, and public transit systems would provide further opportunities for alternative transit, the Project would be linked closely with existing networks that, in large part, are sufficient for most residents of the Project and the City of Rancho Cordova as a whole. The Project would also be required to implement Mitigation Measures 3.6-1, which would greatly reduce the Project's net energy emissions further. For these reasons, the Project would not be expected cause an inefficient, wasteful, or unnecessary use of energy resources nor conflict with or obstruct a state or local plan for renewable energy or energy efficiency. This is a ***less than significant*** impact.

The purpose of this section is to disclose and analyze the potential impacts associated with hazards and hazardous materials related to the Project site and general vicinity, and to analyze the potential for exposure of people to hazards and hazardous materials as the Project is built and operated in the future. This section is based in part on the following:

- *Rancho Cordova General Plan* (City of Rancho Cordova, Adopted June 26, 2006);
- *Rancho Cordova General Plan Draft Environmental Impact Report* (City of Rancho Cordova, March 2006);
- *Phase I Environmental Site Assessment – Jaeger Ranch Property* (Wallace-Kuhl & Associates, September 2016);
- Envirostar database search (California Department of Toxic Substances Control [DTSC], 2018);
- GeoTracker Information System and Geographic Environmental Information Management System database search (State Water Resources Control Board [SWRCB], 2018);
- Toxics Release Inventory (TRI) Program database search (United States Environmental Protection Agency [EPA], 2018).

No comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic. The Sacramento Metropolitan Utilities District's (SMUD's) comment regarding its land use requirements for the transmission corridor, submitted via a letter dated August 6, 2018, are addressed in Section 3.9, Land Use.

3.7.1 ENVIRONMENTAL SETTING

PHYSICAL SETTING

Existing Site Uses

The Project site is currently vacant and has been previously used for agricultural uses (cattle grazing). The site is characterized by moderate rolling hills and areas of extensive flatlands, with wetlands, vernal pools, and seasonal drainage courses scattered throughout the site. A headwater tributary of Morrison Creek traverses the Project site, entering at the northeast corner and flowing generally to the southwest. A dirt/gravel road extends south into the site and terminates near a cluster of monitoring wells and a groundwater extraction feature.

The property is traversed by a 275-foot-wide utility easement occupied by a 230-kV Pacific Gas and Electric (PG&E) transmission line, one 230-kV Sacramento Municipal Utility District (SMUD) transmission line, and one 69-kV SMUD sub-transmission line. No other public utilities (water, sewer, drainage) are located on site.

The Phase I Environmental Site Assessment (ESA) performed for the Project site (see Appendix F) addressed conditions on the Project site associated with potential known hazards. One soil stockpile was observed along the eastern portion of the northern site boundary. No debris, stained soil, or distressed vegetation was observed in connection with this stockpile. Small amounts of refuse were observed along the northern and western site boundaries. Three modified tractor

tires set up as livestock watering troughs were observed along the northern Project site boundary. Each of these watering troughs had water lines plumbed utilizing PVC piping and valves. A metal water storage tank (approximately 1,500-gallon capacity) was observed north of the groundwater extraction well located within the Project site. At the time of the site reconnaissance, the tank was determined to be empty by tapping on the sides. The welded placard on the side of the tank stated that it was originally built to be utilized as an underground storage tank. No abnormally distressed vegetation or soil staining was observed in the vicinity of the tank.

Existing Surrounding Uses

The Project site is bound by the Sunridge Specific Plan to the north, east, and west, and by the SunCreek Specific Plan to the south and east. Land uses anticipated to the east and south of the Project site by the Sunridge Specific Plan and the SunCreek Specific Plan include low, medium, and high density residential uses, commercial mixed uses (retail, office, and retail professional), and neighborhood parks. Other land uses located nearby include new elementary, junior and senior high schools.

Site Topography

The topography of the site exhibits low relief topography with elevations ranging between 170 and 210 feet above mean sea level (MSL). The slopes throughout the site range from approximately zero to eight percent.

HAZARDS ASSESSMENT

For the purposes of this EIR, “hazardous material” is defined as provided in California Health & Safety Code, Section 25501:

- Any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment.

“Hazardous materials” include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

“Hazardous waste” is a subset of hazardous materials. For the purposes of this EIR, the definition of hazardous waste is essentially the same as that in the California Health & Safety Code, Section 25517, and in the California Code of Regulations (CCR), Title 22, Section 66261.2:

- Hazardous wastes are wastes that, because of their quantity, concentration, physical, chemical, or infectious characteristics, may either cause, or significantly contribute to, an increase in mortality or an increase in serious illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

CCR Title 22 categorizes hazardous waste into hazard classes according to specific characteristics of ignitability, corrosivity, reactivity, or toxicity. Hazardous waste with any of these characteristics is also known as a Resource Conservation and Recovery Act (RCRA) waste.

Hazardous materials can be categorized as hazardous non-radioactive chemical materials, radioactive materials, toxic materials, and biohazardous materials. The previous definitions are adequate for non-radioactive hazardous chemicals. Radioactive and biohazardous materials are further defined as follows:

- Radioactive materials contain atoms with unstable nuclei that spontaneously emit ionizing radiation to increase their stability.
- Radioactive wastes are radioactive materials that are discarded (including wastes in storage) or abandoned.
- Toxic wastes are harmful or fatal when ingested or absorbed (e.g., containing mercury, lead). When toxic wastes are land disposed, contaminated liquid may leach from the waste and pollute groundwater.
- Biohazardous materials include materials containing certain infectious agents (microorganisms, bacteria, molds, parasites, and viruses) that cause or significantly contribute to increased human mortality or organisms capable of being communicated by invading and multiplying in body tissues.
- Medical wastes include both biohazardous wastes (byproducts of biohazardous materials) and sharps (devices capable of cutting or piercing, such as hypodermic needles, razor blades, and broken glass) resulting from the diagnosis, treatment, or immunization of human beings, or research pertaining to these activities.

There are countless categories of hazardous materials and hazardous wastes that could be found on any given property based on past uses. Some common examples include agrichemicals (chlorinated herbicides, organophosphate pesticides, and organochlorine pesticides, such as such as Mecoprop [MCP], Dinoseb, chlordane, dichloro-diphenyltrichloroethane [DDT], and dichloro-diphenyl-dichloroethylene [DDE]), petroleum based products (oil, gasoline, diesel fuel), a variety of chemicals including paints, cleaners, and solvents, and asbestos-containing or lead-containing materials (e.g., paint, sealants, pipe solder).

“Recognized Environmental Conditions” is one of the terms used to identify environmental liability within the context of a Phase I ESA. The American Society for Testing and Materials (ASTM) defines the recognized environmental condition in the E1527-13 standard as “the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions.”

Historical Use Information

Historical information was reviewed to develop a history of the previous uses on the Project site and surrounding area, in order to evaluate the Project site and adjoining properties for evidence of Recognized Environmental Conditions. Standard historical sources reviewed during the preparation of this report included the following, as available:

ENVIRONMENTAL RECORDS AND DATABASES

De Novo Planning Group performed a search of local, state, and federal agency databases for the Project site and known contaminated sites in the vicinity. No parcels in the Project site were found to contain any known contamination.

The EPA Toxic Release Inventory (TRI) does not list data on disposal or other releases of toxic chemicals in the Project area (USEPA, 2017). The nearest TRI sites are located in the City of Rancho Cordova approximately 2.9 miles northwest of the Project site.

The DTSC maintains the *Envirostor Data Management System*, which provides information on hazardous waste facilities (both permitted and corrective action) as well as any available site cleanup information. There are no sites listed in the database within the Project site. The nearest Envirostor site, the Anatolia II Elementary School, is located approximately 0.45 miles west of the Project site and is a School Investigation Site with a status of No Further Action.

The Solid Waste Information System (SWIS) is a database of solid waste facilities that is maintained by the California Integrated Waste Management Board (CIWMB). The SWIS data identifies active, planned and closed sites. The Project site does not have any active or planned solid waste facilities listed in the database.

There is a broad list of federal and state databases that provide information for sites with varying potential for risk from the possible existence of hazardous materials. There are numerous redundancies among these various database listings. Below is a brief summary of each.

National Priorities List: The National Priorities List (NPL) of Superfund Sites and Proposed NPL Sites is EPA's database of more than 1,200 sites designated or proposed for priority cleanup under the Superfund program. NPL sites may encompass relatively large areas. The Project site is not listed in this database.

RCRIS System: The Resource Conservation and Recovery Information System (RCRIS) is an EPA database that includes selective information on sites that generate, transport, store, treat, and/or dispose of hazardous waste as defined by RCRA. Identification on this list does not indicate that there has been an impact on the environment. The Project site is not listed in this database.

CORRACTS: Corrective Action Report (CORRACTS) is an EPA database that identifies hazardous waste handlers with RCRA corrective action activity. The Project site is not listed in this database.

PADS System: PCB Activity Database System (PADS) is an EPA database that identifies generators, transporters, commercial storers, and/or brokers and disposers of polychlorinated biphenyls

(PCBs) who are required to notify EPA of such activities. The Project site is not listed in this database.

Cortese Database: The Cortese database identifies public drinking water wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with known toxic material identified through the abandoned site assessment program, sites with underground storage tanks (USTs) having a reportable release, and all solid waste disposal facilities from which there is known hazardous substance migration. The source of this database is the California Environmental Protection Agency (Cal EPA). The Project site is not listed in this database.

GeoTracker: Geotracker provides online access to environmental data and is the interface to the Geographic Environmental Information Management System, a data warehouse which tracks regulatory data about underground fuel tanks, fuel pipelines, and public drinking water supplies. GeoTracker has replaced past databases, such as the Leaking Underground Storage Tank Information System and the Underground Storage Tank (UST) database. Permitted USTs are not located in the Project site. The nearest permitted UST is located at the ARCO Gas Station (#7029), located approximately 1.15 miles northwest of the Project site.

Hazardous Material Sites

As noted above, the State of California Hazardous Waste and Substances Site List (also known as the "Cortese List") is a planning document used by the state, local agencies, and developers to comply with the California Environmental Quality Act (CEQA) requirements for providing information about the location of hazardous materials sites. Government Code Section 65962.5 requires Cal EPA to annually update the Cortese List. DTSC is responsible for preparing a portion of the information that comprises the Cortese List. Other state and local government agencies are required to provide additional hazardous material release information that is part of the complete list.

Searches of the GeoTracker database identified ten active and five inactive hazardous material sites located within one mile of the Project site known to handle and store hazardous materials that are associated with a hazardous material related release or occurrence. The terms "release" or "occurrence" include any means by which a substance could harm the environment: by spilling, leaking, discharging, dumping, injecting, or escaping.

Table 3.7-1 displays the known hazardous material sites located within one mile of the Project site with a description of the type, status, and address.

TABLE 3.7-1: GEOTRACKER KNOWN HAZARDOUS MATERIAL RELEASE SITES WITHIN 1 MILE

<i>SITE NAME</i>	<i>TYPE</i>	<i>STATUS</i>	<i>ADDRESS</i>
ARCO 7029	Permitted UST	Active	4000 Sunrise Blvd., Rancho Cordova
Elementary School No. 42	School Investigation	No Action Required	Douglas Rd./Sunrise Blvd., Rancho Cordova
Anatolia II Elementary School	School Investigation	No Further Action	Appolon Dr./Sophistry Dr., Rancho Cordova
Inactive Rancho Cordova Test Site – Kappa/Gamma Complex	Cleanup Program Site	Open – Assessment & Interim Remedial Action	Quicksilver Dr., Rancho Cordova

3.7 HAZARDS AND HAZARDOUS MATERIALS

<i>SITE NAME</i>	<i>TYPE</i>	<i>STATUS</i>	<i>ADDRESS</i>
Azteca Construction	LUST Cleanup Site	Completed - Case Closed	3871 Security Park Dr., Rancho Cordova
McDonnell Douglas – Inactive Test Site	State Response	Active	11505 Douglas Rd., Rancho Cordova
General Electric Medical Systems	Haz Waste - RCRA	Closed	3920 Security Park Dr., Rancho Cordova
Inactive Rancho Cordova Test Site – Southern Groundwater Contamination	Cleanup Program Site	Open - Remediation	Douglas Rd., Rancho Cordova
Inactive Rancho Cordova Test Site – IRCTS – Administration Area	Cleanup Program Site	Open - Remediation	Douglas Rd., Rancho Cordova
McDonnell Douglas/Aerojet Inactive (Field Point EX 26)	Complex Site Cleanup Program Facility	Open – Assessment & Interim Remedial Action	4,000 acres bounded by Douglas Rd. & Sunrise Blvd., Rancho Cordova
McDonnell Douglas/Aerojet Inactive (Field Point EX 21)	Complex Site Cleanup Program Facility	Open – Assessment & Interim Remedial Action	4,000 acres bounded by Douglas Rd. & Sunrise Blvd., Rancho Cordova
McDonnell Douglas/Aerojet Inactive (Field Point EX 20)	Complex Site Cleanup Program Facility	Open – Assessment & Interim Remedial Action	4,000 acres bounded by Douglas Rd. & Sunrise Blvd., Rancho Cordova
McDonnell Douglas/Aerojet Inactive (Field Point EX 22)	Complex Site Cleanup Program Facility	Open – Assessment & Interim Remedial Action	4,000 acres bounded by Douglas Rd. & Sunrise Blvd., Rancho Cordova
McDonnell Douglas/Aerojet Inactive (Field Point EX 27)	Complex Site Cleanup Program Facility	Open – Assessment & Interim Remedial Action	4,000 acres bounded by Douglas Rd. & Sunrise Blvd., Rancho Cordova

SOURCE: STATE WATER RESOURCES CONTROL BOARD GEOTRACKER (2018).

The ARCO 7029 site is an active permitted UST. The permitting agency for this site is the Sacramento County Environmental Management Department. The Department performs routine inspections of ongoing site operations at all permitted UST sites. As such, there are no hazards associated with this site that would affect the Project site.

The Inactive Rancho Cordova Test Site – Kappa/Gamma Complex site is a cleanup program site. Although the site has a cleanup status of Open – Assessment & Interim Remedial Action, the site history information on GeoTracker indicates that no further action and/or remedial action is required. Remedial Investigation involving soil, soil vapor, and groundwater samples was completed between July and September 1998. Contaminants of concern included volatile organics, metals, and kerosene. Kerosene was not detected at levels above limits. Mercury was the only metal found to be exceeding limits, and was evaluated in the risk assessment. Volatile organic compounds were detected in soil vapor, but are not expected to impact groundwater. Based on results of the health and ecological risk assessment, it is unlikely that exposures to soil or soil vapor will pose a risk to any current or future receptors. It is also unlikely that regional groundwater will be impacted. As such, there are no hazards associated with this site that would affect the Project site.

Eight sites listed in the above table are associated with the 4,000 acre former Aerojet site, including the: McDonnell Douglas – Inactive Test Site; Inactive Rancho Cordova Test Site – Southern Groundwater Contamination; Inactive Rancho Cordova Test Site – IRCTS – Administration Area; McDonnell Douglas/Aerojet Inactive (Field Point EX 26); McDonnell Douglas/Aerojet Inactive (Field Point EX 21); McDonnell Douglas/Aerojet Inactive (Field Point EX 20); McDonnell

Douglas/Aerojet Inactive (Field Point EX 22); and McDonnell Douglas/Aerojet Inactive (Field Point EX 27).

McDonnell Douglas – Inactive Test Site is a State Response site. The cleanup oversight agencies are the DTSC and the Regional Water Quality Control Board – Central Valley. The site, comprised of approximately 4,000 acres, is located between White Rock Road and Douglas Boulevard and between Sunrise Boulevard and just west of Grant Line Road. The site was utilized from approximately 1956 to 1972 for the assembly and testing of rocket systems and components. The last static rocket test occurred in 1969. The site consisted of seven areas, six utilized as test areas and one area serving for engineering and administration (now known as "Security Park"). Several other areas have been identified at the site including landfills, propellant burn areas and a rice hull burn area. During the processes involved in cleaning tested materials and maintaining test areas, numerous solvents, including chlorinated solvents, were utilized. Fuels utilized in testing included RP-1, hydrazine, ammonium perchlorate, and liquid hydrogen/oxygen. Releases to soil, surface water and groundwater of chlorinated solvents and fuels were detected during the Preliminary Endangerment Assessment (PEA).

The Inactive Rancho Cordova Test Site – Southern Groundwater Contamination site is a Cleanup Program site. The site has a cleanup status of Open – Remediation as of April 15, 2011. The site is an inactive rocket testing facility owned and operated over the years by Aerojet and/or the McDonnell-Douglas Corporation. The property is currently owned by Aerojet. The site is located roughly between White Rock Road on the North and Douglas Road on the south. The east and west directions are not as well defined by roads and cover the middle two-thirds of the area between Sunrise Boulevard and Grant Line Road. The remedial investigation is nearly complete on the several operable units. Groundwater remediation has been on-going for since 2004. The area is planned for the Rio Del Oro development consisting of housing, commercial and office facilities. As such, there are no hazards associated with this site that would affect the Project site.

The Inactive Rancho Cordova Test Site – IRCTS – Administration Area site is a cleanup program site. Although the site has a cleanup status of Open – Remediation, the site history information on GeoTracker indicates that the surface soils have been remediated to cleanup levels specified by DTSC. Soil vapor extraction system has been shutdown. Groundwater extraction system has been implemented and is controlling the downgradient migration of the plume. The groundwater is being covered under the site listed as IRCTS Southern Groundwater. As such, there are no hazards associated with this site that would affect the Project site.

The five McDonnell Douglas/Aerojet Inactive Field Points (Field Points EX 26, 27, 20, 21, and 22) have a status of Open – Assessment & Interim Remedial Action. The wells are a combination of monitoring wells and groundwater extraction wells associated with the inactive Rancho Cordova Test Site (Former McDonnell Douglas Test Site) located less than one-mile north of the site.

According to the site history information on GeoTracker, some interim remedial measures have taken place and additional actions will be necessary in the near future. Water supply issues are being addressed by pump and treat. All planned extraction wells have been constructed. Groundwater extraction and treatment systems are operating under an NPDES permit with the

3.7 HAZARDS AND HAZARDOUS MATERIALS

current discharge of the treated groundwater to Morrison Creek at two locations. Soil vapor extraction and treatment at the Administration Area has been completed and the system decommissioned. An in-situ groundwater remediation project has been operating at the Sigma Complex to remediate perchlorate in groundwater at the source area. The Boeing Company is looking at expanding the system to help flush out perchlorate in the vadose zone at the source area. Extracted groundwater at these source areas will be treated in vessels designed to remove perchlorate biologically and Trichloroethylene (TCE) by granular activated carbon. The first of these treatment systems commenced in summer 2010.

According to the Phase I ESA prepared for the Project site, the constituents of concern associated with the former McDonnell Douglas Test Site include perchlorate and TCE. Groundwater is being extracted and pumped to a treatment plant approximately one-mile north/northwest of the site. The monitoring wells were installed to verify the edge of the plume and monitor concentrations of the constituents of concern. The minimum depth to water in these wells is reported to have been 149 feet below ground surface.

As part of the Phase I ESA, Wallace-Kuhl & Associates interviewed Mr. Alex McDonald of the Central Valley Regional Water Quality Control Board regarding sources of groundwater contamination within the former McDonnell Douglas facility. Mr. McDonald described two groundwater plumes originating from the former McDonnell Douglas facility approximately one-mile north of the Project site. Mr. McDonald reports that both plumes are within a deeper aquifer and that a layer of clean water separates the contaminants from the ground surface. Mr. McDonald stated the clean water layer forms a barrier to vapor migration; hence, there are no vapor intrusions concerns related to the two plumes. As such, there are no hazards associated with this site that would affect the Project site.

In order to determine whether any hazards are associated with the groundwater plume (see discussion above), Wallace-Kuhl & Associates conducted a preliminary screening for vapor encroachment conditions (VEC) beneath the site using the Tier I vapor encroachment screening evaluation. The Tier I screening included performing a *Search Distance Test* to identify if there are any known or suspect contaminated properties surrounding or upgradient of the site within specific search radii, and a *Chemicals of Concern (COC) Test* (for those known or suspect contaminated properties identified within the *Search Distance Test*) to evaluate whether or not COC are likely to be present.

Based on the completion of the VEC-screening matrix, a VEC can be ruled out because a VEC does not or is not likely to exist. EDR® provided a Vapor Encroachment Screen for the site. No areas of concern were identified.

The presence of perchlorate and TCE in groundwater under the Project site associated with the groundwater plume constitutes a Recognized Environmental Condition. The responsible party has been identified and ongoing groundwater treatment and monitoring is taking place with regulatory oversight provided by the Central Valley Regional Water Quality Control Board. Given the depth to water and soil conditions, Wallace & Kuhl concluded that it is unlikely that the TCE and perchlorate plume as currently understood will prohibit the proposed development. Periodic changes to the

groundwater monitoring and remedial program may be required necessitating the abandonment and installation of wells may be required.

Aerial Imagery

Aerial imagery from Google Earth was reviewed for information regarding past conditions and land use at the Project site and in the immediate vicinity. Below is a brief summary of the aerial imagery and related site conditions:

- 1993 – The Project site is vacant, except for transmission lines, similar to the current conditions. The property is traversed by a 275-foot-wide utility easement occupied by a 230-kV Pacific Gas and Electric (PG&E) transmission line, one 230-kV Sacramento Municipal Utility District (SMUD) transmission line, and one 69-kV SMUD sub-transmission line. None of the existing surrounding urban land uses have been developed. Three ranchette-style homes are located to the north and west of the site.
- 2003 – The Project site conditions are similar to the 1993 image. Dirt roadways have formed in the northern portion of the site, leading from the northern Project site boundary south to one of the PG&E transmission towers. Grading for the existing residential subdivisions to the west of the site has begun.
- 2005 – The Project site conditions are similar to the 2003 image. Paving and lot placement at the existing residential subdivisions to the west of the site has begun. Grading for the existing residential subdivision to the north of the site has also begun.
- 2009 – The Project site conditions are similar to the 2003 image. A cluster of small utility buildings and structures is located in the northern portion of the Project site near two of the PG&E transmission towers. A well-defined dirt or gravel road continues from Big Meadow Way adjacent north of the Project site south to the group of utility buildings and structures. The existing residential subdivisions to the west and north of the site are nearly complete.
- 2010 – The Project site conditions are similar to the 2009 image. A man-made drainage channel is located in the northeastern portion of the Project site. The channel appears to flow from an existing settling pond to the north of the site approximately 560 feet south to an existing natural drainage channel.
- 2018 – The Project site conditions are nearly identical to the 2010 image. Grading and site preparation of the adjacent residential subdivisions to the north and west has begun.

Historical Land Use

The historical land use research dating back to the late 1800s revealed that the Project has remained largely undeveloped. Dry farming and livestock grazing appear to have been the historic land uses. According to the Phase I ESA, no environmental liens are associated with the Project site.

Transportation of Hazardous Materials

The transportation of hazardous materials within the City is subject to various federal, state, and local regulations. The only roadway and transportation route approved for the transportation of explosives, poisonous inhalation hazards, and radioactive materials in the City is Interstate 50.

3.7.2 REGULATORY SETTING

FEDERAL

The primary federal agencies that are responsible for overseeing regulations and policies regarding hazardous materials are the EPA, Department of Labor Occupational Safety and Health Administration (OSHA), and the Department of Transportation (DOT). Several laws governing the transport, storage, and use of hazardous materials are governed by these agencies as well as oversight for contaminated sites cleanup. Federal laws and regulations that are applicable to hazards and hazardous materials are presented below.

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act, as amended, is the basic statute regulating hazardous materials transportation in the United States. The purpose of the law is to provide adequate protection against the risks to life and property inherent in transporting hazardous materials in interstate commerce. This law gives the U.S. Department of Transportation (USDOT) and other agencies the authority to issue and enforce rules and regulations governing the safe transportation of hazardous materials (DOE 2002).

Resource Conservation and Recovery Act

The 1976 Federal Resource Conservation and Recovery Act (RCRA) and the 1984 RCRA Amendments regulate the treatment, storage, and disposal of hazardous and non-hazardous wastes. The legislation mandated that hazardous wastes be tracked from the point of generation to their ultimate fate in the environment. This includes detailed tracking of hazardous materials during transport and permitting of hazardous material handling facilities.

The 1984 RCRA amendments provided the framework for a regulatory program designed to prevent releases from USTs. The program establishes tank and leak detection standards, including spill and overflow protection devices for new tanks. The tanks must also meet performance standards to ensure that the stored material will not corrode the tanks. Owners and operators of USTs had until December 1998 to meet the new tank standards. As of 2001, an estimated 85 percent of USTs were in compliance with the required standards.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) introduced active federal involvement to emergency response, site remediation, and spill prevention, most notably the Superfund program. CERCLA was intended to be comprehensive in encompassing both the prevention of, and response to, uncontrolled hazardous substances

releases. CERCLA deals with environmental response, providing mechanisms for reacting to emergencies and to chronic hazardous material releases. In addition to establishing procedures to prevent and remedy problems, it establishes a system for compensating appropriate individuals and assigning appropriate liability. It is designed to plan for and respond to failure in other regulatory programs and to remedy problems resulting from action taken before the era of comprehensive regulatory protection.

Natural Gas Pipeline Safety Act

The Natural Gas Pipeline Safety Act authorizes the U.S. Department of Transportation Office of Pipeline Safety to regulate pipeline transportation of natural (flammable, toxic, or corrosive) gas and other gases as well as the transportation and storage of liquefied natural gas. The Office of Pipeline Safety regulates the design, construction, inspection, testing, operation, and maintenance of pipeline facilities. While the federal government is primarily responsible for developing, issuing, and enforcing pipeline safety regulations, the pipeline safety statutes provide for State assumption of the intrastate regulatory, inspection, and enforcement responsibilities under an annual certification. To qualify for certification, a state must adopt the minimum federal regulations and may adopt additional or more stringent regulations as long as they are not incompatible.

Toxic Substances Control Act

The Toxic Substances Control Act of 1976 provides the EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from Toxic Substances Control Act, including, among others, food, drugs, cosmetics and pesticides. The Toxic Substances Control Act addresses the production, importation, use, and disposal of specific chemicals including PCBs), asbestos, radon and lead-based paint.

Various sections of Toxic Substances Control Act provide authority to:

- Require, under Section 5, pre-manufacture notification for "new chemical substances" before manufacture
- Require, under Section 4, testing of chemicals by manufacturers, importers, and processors where risks or exposures of concern are found
- Issue Significant New Use Rules (SNURs), under Section 5, when it identifies a "significant new use" that could result in exposures to, or releases of, a substance of concern.
- Maintain the Toxic Substances Control Act Inventory, under Section 8, which contains more than 83,000 chemicals. As new chemicals are commercially manufactured or imported, they are placed on the list.
- Require those importing or exporting chemicals, under Sections 12(b) and 13, to comply with certification reporting and/or other requirements.
- Require, under Section 8, reporting and record-keeping by persons who manufacture, import, process, and/or distribute chemical substances in commerce.
- Require, under Section 8(e), that any person who manufactures (including imports), processes, or distributes in commerce a chemical substance or mixture and who obtains

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information which reasonably supports the conclusion that such substance or mixture presents a substantial risk of injury to health or the environment to immediately inform EPA, except where EPA has been adequately informed of such information. EPA screens all Toxic Substances Control Act b§8(e) submissions as well as voluntary "For Your Information" (FYI) submissions. The latter are not required by law, but are submitted by industry and public interest groups for a variety of reasons.

STATE

The primary state agencies that are responsible for overseeing regulations and policies regarding hazardous materials are the California Office of Emergency Services (OES), Cal EPA, DTSC, California Department of Transportation (Caltrans), California Highway Patrol (CHP), California Water Quality Control Board, and the California Air Resources Board. Several laws governing the generation, transport, and disposal of hazardous materials are administered by these agencies. State laws and regulations that are applicable to hazards and hazardous materials are presented below.

California Health and Safety Code

Cal EPA has established rules governing the use of hazardous materials and the management of hazardous wastes. Many of these regulations are embodied in the California Health and Safety Code. The code includes regulations that govern safe drinking water, substances control, land reuse and revitalization, remediation, restoration, and methamphetamine contaminated cleanups.

California Hazardous Materials Release Response Plans and Inventory Program Business Plan

When hazardous materials are improperly handled or stored, they can result in a threat to employees, public health, and/or the contamination of the environment. State and Federal Community Right-to-Know laws were passed in 1984. These laws allow public access to information about the types and amounts of chemicals being used at local businesses. The laws also require businesses to plan and prepare for a chemical emergency through the preparation of a Hazardous Materials Inventory that is certified annually and a Hazardous Materials Business Plan that is certified tri-annually. Businesses are inspected at least once every three years by a CUPA inspector to verify compliance with the California Health and Safety Code and California Code of Regulations.

A Business Emergency Response Plan and Inventory is required of any facility which handles hazardous materials or waste in amounts greater than:

- 55 gallons for liquids;
- 500 pounds for solids; or
- 200 cubic feet for compressed gases.

On October 8, 2011, Governor Brown signed Assembly Bill (AB) 408. AB 408 amends the Health & Safety Code Chapter 6.95, Section 25503.5 hazardous materials inventory reporting thresholds. With passage of this legislation, inventory reporting quantities were changed as follows:

1. For a solid or liquid hazardous material that is classified as a hazard solely as an irritant or sensitizer, the new reporting quantity is 5,000 pounds.
2. For a hazardous material that is a gas, at standard temperature and pressure, and for which the only health and physical hazards are simple asphyxiation and the release of pressure, the new reporting quantity is 1,000 cubic feet. (Reporting of gases in a cryogenic state remains unchanged).
3. For oil-filled electrical equipment that is not contiguous to an electrical facility, the new reporting quantity for the oil is 1,320 gallons.

California Code of Regulations Title 22 and Title 26

The California Code of Regulations (CCR) Title 22 provides state regulations for hazardous materials, and CCR Title 26 provides regulation of hazardous materials management. In 1996, Cal EPA established the “Unified Hazardous Waste and Hazardous Materials Management Regulatory Program” (Unified Program) which consolidated the six administrative components of hazardous waste and materials into one program.

California Government Code Section 65962.5

The provisions in Government Code Section 65962.5 are commonly referred to as the “Cortese List” (after the Legislator who authored the legislation that enacted it). The list, or a site’s presence on the list, has bearing on the local permitting process as well as on compliance with CEQA. Government Code § 65962.5 was originally enacted in 1985, and per subsection (g), the effective date of the changes called for under the amendments to this section was January 1, 1992. While Government Code Section 65962.5 refers to the preparation of a “list,” many changes have occurred related to web-based information access since 1992 and this information is now largely available on the Internet sites of the responsible organizations. Those requesting a copy of the Cortese “list” are now referred directly to the appropriate information resources contained on the Internet web sites of the boards or departments that are referenced in the statute.

Section 65962.5(a)(1) requires that DTSC “shall compile and update as appropriate, but at least annually, and shall submit to the Secretary for Environmental Protection, a list of all the following: ... (1) [a]ll hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code (“HSC”).”

The hazardous waste facilities identified in HSC § 25187.5 are those where DTSC has taken or contracted for corrective action because a facility owner/operator has failed to comply with a date for taking corrective action in an order issued under HSC § 25187, or because DTSC determined that immediate corrective action was necessary to abate an imminent or substantial endangerment.

Occupational Safety and Health Act

The Occupational Safety and Health Act of 1970 (OSH Act) was passed to prevent workers from being killed or otherwise harmed at work. The law requires employers to provide their employees with working conditions that are free of known dangers. The OSH Act created the Occupational Safety and Health Administration (OSHA), which sets and enforces protective workplace safety and health standards. OSHA also provides information, training and assistance to employers and workers.

The California Division of Occupational Safety and Health, better known as Cal/OSHA, protects and improves the health and safety of working men and women in California and the safety of passengers riding on elevators, amusement rides, and tramways – through the following activities:

- Setting and enforcing standards;
- Providing outreach, education, and assistance; and
- Issuing permits, licenses, certifications, registrations, and approvals.

LOCAL

Rancho Cordova General Plan

The Rancho Cordova General Plan contains the following goals and policies that are relevant to hazards and hazardous materials:

SAFETY ELEMENT

Goal S.1: Establish Rancho Cordova as a safe community and environment for all persons.

Policy S.1.1: Maintain acceptable levels of risk of injury, death, and property damage resulting from reasonably foreseeable safety hazards in Rancho Cordova.

Policy S.1.2: Cooperate with other local, regional, state, and federal agencies and with rail carriers in an effort to secure the safety of all residents of Rancho Cordova.

Policy S.1.3: Prepare for emergencies and disasters prior to their occurrence.

Policy S.1.4: Ensure plans are kept current to maintain Rancho Cordova as a safe community in the region.

Policy S.1.5: The City shall require written confirmation from applicable local, regional, state, and federal agencies that known contaminated sites have been deemed remediated to a level appropriate for land uses proposed prior to the City approving site development or provide an approved remediation plan that demonstrates how contamination will be remediated prior to site occupancy. This documentation will specify the extent of development allowed on the remediated site as well as any special conditions and/or restrictions on future land uses.

Goal S.5: Reduce the possibility of serious harm to residents, employees, or the environment as the result of an accidental release of toxic or hazardous substances.

Policy S.5.1: Work with public agencies and private companies to identify and work towards elimination of potential hazardous releases through compliance with State and Federal law.

Policy S.5.2: Consider the potential impact of hazardous facilities on the public and/or adjacent or nearby properties posed by reasonably foreseeable events. The City considers an event to be “reasonably foreseeable” when the probability of the event occurring is greater than one in one million per year.

Policy S.5.3: Regulate the storage of hazardous materials and waste consistent with State and Federal law.

Policy S.5.5: Separate hazardous or toxic materials from the public.

Policy S.5.6: Ensure that procedures are in place to reduce the chance of accidents in the transport of hazardous materials.

Goal S.6: Protect the community from potential harm associated with Mather Airport operations.

Policy S.6.1: Promote safe air operations at Mather Airport through cooperative implementation of the Mather Airport CLUP and similar plans and programs.

Sacramento Countywide Local Hazard Mitigation Plan

The Sacramento Countywide Local Hazard Mitigation Plan (December 2016) provides a guide to hazard mitigation planning to better protect the people and property of the County and participating jurisdictions from the effects of natural disasters and hazard events. This plan demonstrates the community’s commitment to reducing risks from hazards and serves as a tool to help decision makers direct mitigation activities and resources. The plan was also developed in order for the County and participating jurisdictions to be eligible for certain federal disaster assistance.

County of Sacramento Basic Emergency Operations Plan

The County of Sacramento Basic Emergency Operations Plan (December 2012) addresses the County’s planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies in or affecting the County of Sacramento. The Plan does not apply to normal day-to-day emergencies or the established departmental procedures used to cope with such emergencies. Rather, the Plan focuses on operational concepts and would be implemented relative to large-scale disasters, which can pose major threats to life, property and the environment requiring unusual emergency responses. The purpose of the County of Sacramento Emergency Operations Plan is to provide the basis for a coordinated response before, during, and after a disaster incident affecting the County of Sacramento.

Sacramento County Area Plan

The Sacramento County Environmental Management Department established the Sacramento County Area Plan (SCAP) as a guideline for hazardous material related accidents or occurrences.

3.7 HAZARDS AND HAZARDOUS MATERIALS

The purpose of the SCAP is “to delineate responsibilities and actions by various agencies in Sacramento County required to meet the obligation to protect the health and welfare of the populace, natural resources (environment), and the public and private properties involving hazardous materials.” The SCAP is used for making initial decisions at a hazardous materials incident. The SCAP uses Level I, Level II and Level III classifications for hazardous material incidents, which are determined by the following planning basis:

- Level of technical expertise required to abate the incident;
- Extent of Municipal, County, and State Government involved;
- Extent of evacuation of civilians; and
- Extent of injuries and/or deaths.

Certified Unified Program Agency (CUPA)

The California Environmental Protection Agency designates specific local agencies as Certified Unified Program Agencies (CUPA), typically at the county level. Sacramento County Environmental Management Department is the CUPA for Sacramento County.

The Sacramento County Environmental Management Department coordinates the overall County response to disasters and also works with other municipalities in the region as well as state and federal agencies, community based and private organizations. Sacramento County Office of Emergency Services is responsible for:

- Alerting and notifying appropriate agencies when disaster strikes;
- Coordinating response recovery activities among multiple participating agencies and jurisdictions;
- Constantly monitoring incident status and maintaining situational awareness;
- Responding to complex incidents;
- Coordinating available resources to be mobilized in times of disaster;
- Developing plans and procedures in response to and recovery from disasters;
- Developing and providing preparedness materials and presentations to the public and business community;
- Administering and coordinating the Homeland Security grants for the county of Sacramento.

3.7.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the Project will have a significant impact from hazards and hazardous materials if it will:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;

- 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;
- 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 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; and/or
- 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?

As discussed in the Initial Study (see Appendix A), impacts associated with airports and private air strips would be ***less than significant***. The Project site is not located within a very high fire hazard severity zone; therefore, the thresholds associated with the Project's proximity to state responsibility areas or lands classified as very high fire hazard severity zones are not applicable to the Project and there is no impact associated with these thresholds. As such, these CEQA topics are not relevant to the Project and will not be addressed further.

IMPACTS AND MITIGATION MEASURES

Impact 3.7-1: Project implementation has the potential to create a significant hazard through the routine transport, use, or disposal of hazardous materials or through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment (Less than Significant with Mitigation)

CONSTRUCTION PHASE IMPACTS

The Phase I ESA concluded that no environmental liens are associated with the site. As discussed previously, eight sites in the vicinity (see Table 3.7-1) are associated with the 4,000 acre former Aerojet site, including the: McDonnell Douglas – Inactive Test Site; Inactive Rancho Cordova Test Site – Southern Groundwater Contamination; Inactive Rancho Cordova Test Site – IRCTS – Administration Area; McDonnell Douglas/Aerojet Inactive (Field Point EX 26); McDonnell Douglas/Aerojet Inactive (Field Point EX 21); McDonnell Douglas/Aerojet Inactive (Field Point EX 20); McDonnell Douglas/Aerojet Inactive (Field Point EX 22); and McDonnell Douglas/Aerojet Inactive (Field Point EX 27).

According to the site history information on GeoTracker, interim remedial measures have taken place and additional actions will be necessary in the near future. Water supply issues are being addressed by pump and treat. All planned extraction wells have been constructed. Groundwater extraction and treatment systems are operating under an NPDES permit with the current discharge of the treated groundwater to Morrison Creek at two locations. Soil vapor extraction and treatment at the Administration Area has been completed and the system decommissioned. An in-situ groundwater remediation project has been operating at the Sigma Complex to remediate perchlorate in groundwater at the source area. The Boeing Company is looking at expanding the system to help flush out perchlorate in the vadose zone at the source area. Extracted groundwater at these source areas will be treated in vessels designed to remove perchlorate biologically and TCE by granular activated carbon. The first of these treatment systems commenced in summer 2010.

According to the Phase I ESA prepared for the Project site, the constituents of concern associated with the former McDonnell Douglas Test Site include perchlorate and TCE. The presence of perchlorate and TCE in groundwater under the Project site associated with the McDonnell Douglas groundwater plume constitutes a Recognized Environmental Condition. In order to determine whether any hazards are associated with the groundwater plume, Wallace-Kuhl & Associates conducted a preliminary screening for VEC beneath the site using the Tier I vapor encroachment screening evaluation; the evaluation indicated that a VEC can be ruled out because a VEC does not or is not likely to exist. No areas of concern were identified.

The responsible party has been identified and ongoing groundwater treatment and monitoring is taking place with regulatory oversight provided by the Central Valley Regional Water Quality Control Board. Given the depth to water and soil conditions, it is unlikely that the TCE and perchlorate plume as currently understood will have a significant adverse effect on the proposed

development. Periodic changes to the groundwater monitoring and remedial program may be required necessitating the abandonment and installation of wells may be required. Construction of the Project would not prohibit the ongoing groundwater monitoring or remedial program.

Additionally, construction of the Project would likely require the use of petroleum-based products (oil, gasoline, diesel fuel), and a variety of chemicals including paints, cleaners, and solvents. The use of these materials will pose a reasonable risk of release into the environment if not properly handled, stored, and transported. Mitigation Measure 3.7-1 requires the Project applicant to submit a Construction Site Management Plan, for review and approval by the City, that establishes management practices for handling hazardous materials, including fuels, paints, cleaners, solvents, etc., during construction to reduce the potential for spills and to direct the safe handling of these materials if encountered. If, during the construction process, the Project applicant or subcontractors generates hazardous waste, the applicant must register with the CUPA as a generator of hazardous waste, obtain an EPA ID# and accumulate, ship and dispose of the hazardous waste per Health and Safety Code Ch. 6.5. (California Hazardous Waste Control Law).

OPERATIONAL PHASE IMPACTS

The operational phase of the Project would occur after construction is completed and tenants and residents move in to occupy the structures and facilities on a day-to-day basis. The site would be primarily used for residential uses. Single family residential land uses do not routinely transport, use, or dispose of hazardous materials, or present a reasonably foreseeable release of hazardous materials, with the exception of common residential grade hazardous materials such as household cleaners, paint, etc. Additionally, operation of the Project would not prohibit the ongoing groundwater monitoring or remediation program discussed previously.

The commercial and residential mixed use component as well as the recreation center area and parks will likely use a variety of hazardous materials commonly found in urban areas including: paints, cleaners, cleaning solvents, and pesticides. If handled appropriately, these materials do not pose a significant risk. These facilities will store and use these materials. These materials would be stored and handled in accordance with best management practices approved by the Sacramento County Environmental Management Department. In accordance with the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program, prior to bringing hazardous materials (including 55 or more gallons for liquids, 500 or more pounds for solids, and/or 200 or more cubic feet for compressed gases) onsite, the applicant would be required to submit a Hazardous Materials Business Plan (HMBP) to Sacramento County Environmental Management Department (CUPA) for review and approval. The HMBP is required for all businesses in the County which handle or store quantities of hazardous materials, including hazardous wastes equal to or exceeding 55 gallons, 500 pounds, or 200 cubic feet of compressed gasses.

CONCLUSION

Construction and operation of the Project would not prohibit the ongoing groundwater monitoring or remedial program associated with the groundwater plume. Construction and operation of the Project may result in the release of hazardous materials into the environment. However, the Project applicant would be required to submit a Construction Site Management Plan for review

and approval by the City which would establish management practices for handling hazardous materials, including fuels, paints, cleaners, solvents, etc., during construction to reduce the potential for spills and to direct the safe handling of these materials if encountered. Additionally, the applicant would be required to submit a HMBP to the Sacramento County Environmental Management Department (CUPA) for review and approval. Overall, through compliance with existing regulations which control the use of hazardous materials, and with implementation of Mitigation Measure 3.7-1, this impact would be *less than significant*.

MITIGATION MEASURE(S)

Mitigation Measure 3.7-1: *Prior to commencement of grading, the applicant shall submit Construction Site Management Plan for review and approval by the City. The Construction Site Management Plan shall establish management practices for handling hazardous materials, including fuels, paints, cleaners, solvents, etc., during construction to reduce the potential for spills and to direct the safe handling of these materials if encountered. The City shall approve the Construction Site Management Plan prior to any earth moving.*

Impact 3.7-2: The Project is not located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would not create a significant hazard to the public or the environment (Less than Significant)

According to the Phase I ESA, the Project site is not listed on the Cortese List. A further review of regulatory databases maintained by county, state, tribal, and federal agencies found no documentation of hazardous materials violations or discharge on the property and did not identify contaminated facilities within the appropriate ASTM search distances that would reasonably be expected to impact the property. Therefore, this is considered a *less than significant* impact.

Impact 3.7-3: Project implementation would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school (Less than Significant)

The Project has limited potential for the routine transport, use, or disposal of hazardous materials as discussed above (Impact 3.7-1). The closest school (Robert J. McGarvey Elementary School) is located approximately 0.45 miles west of the western boundary of the Project site. Other schools nearby include Sunrise Elementary School (0.75 miles northwest), and Mather Heights Elementary School (2.92 miles west). The Project is not located within one-quarter mile of an existing or proposed school and the Project components would not involve the routine transport, use, or disposal of hazardous materials, or present a reasonably foreseeable release of hazardous materials. Therefore, the Project would have a *less than significant* impact with respect to emitting hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school.

Impact 3.7-4: Project implementation would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (Less than Significant)

(Note: The following discussion is associated with potential impacts of the Project on emergency response plans and/or evacuation plans. Proposed emergency vehicle access to and from the site is addressed in Section 3.13, Transportation and Circulation.)

Implementation of the Project would not result in any substantial modifications to the existing roadway system and would not interfere with potential evacuation or response routes used by emergency response teams. The Project would include the construction of internal and external access roads connecting the proposed uses to existing and future planned roadways. Primary access would be from Rancho Cordova Parkway. The Project would provide for future connections to an extension of Chrysanthy Boulevard east of the Project site.

The City is a participatory agency for the Sacramento Countywide Local Hazard Mitigation Plan, which plans for emergency management and evacuation in the event of disasters. According to the Plan, potential hazards in the County include severe weather (likely or highly likely), agricultural hazards (highly likely), bird strike (highly likely), climate change (highly likely), dam failure (unlikely), drought (likely), earthquake (occasional), flood (occasional/unlikely or highly likely), landslides (unlikely), levee failure (occasional), bank erosion (highly likely), subsidence (highly likely), volcano (unlikely), and wildfire (highly likely). The Sacramento Countywide Local Hazard Mitigation Plan does not include any specific requirements that would affect the Project.

The County of Sacramento Basic Emergency Operations Plan (December 2012) addresses the County's planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies in or affecting the County of Sacramento. The Plan focuses on operational concepts and would be implemented relative to large-scale disasters, which can pose major threats to life, property and the environment requiring unusual emergency responses. The various plans and procedures (i.e., dam failure plan, flood alert system, and evacuation procedures) for emergency response and evacuation are integrated into the Emergency Operations Plan. The Emergency Operations Plan does not include any specific requirements that would affect the Project.

The Project would also not interfere with any emergency response plan or emergency evaluation plan. The Project does not include any actions that would impair or physically interfere with the Sacramento Countywide Local Hazard Mitigation Plan. The Project site includes vehicle access to provide for of ingress and egress in the event of an emergency that must comply with city street design standards to ensure streets adequately serve emergency response. An expanded discussion of local circulation and traffic volumes is provided in the Transportation and Circulation Section of this report. This is a **less than significant** impact.

Impact 3.7-5: Project implementation would not expose people or structures to a risk of loss, injury or death from wildland fires (Less than Significant)

The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (winds, temperatures, humidity levels and fuel moisture contents) and topography (degree of slope). Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface area to mass ratio and require less heat to reach the ignition point, while fuels such as trees have a lower surface area to mass ratio and require more heat to reach the ignition point.

The site is not located within an area where wildland fires are known to occur, or within a very high, high, or moderate Fire Hazard Severity Zone (FHSZ) as indicated by the California Department of Forestry & Fire Protection (CalFire) FHSZ Maps. The site is designated as a Local Responsibility Area (Incorporated) and as a Non-Very-High-FHSZ (Incorporated) by the CalFire FHSZ maps.

Approximately 199.5 acres of the site would be preserved. The preserve area would contain aquatic habitats as well as grassland. The remainder of the site would be developed with urban uses. The Sacramento Metropolitan Fire District does not have any interface requirements for new development. The Fire District 's personnel are trained and equipped to deal with emergency, including structural or wildland fires. Development of the site would be subject to the requirements of the National Fire Protection Association's National Fire Code. Additionally, the Project will comply with the applicable standards for fire hydrants and fire sprinklers.

The Project site is surrounded by developed land uses and open space/agricultural land. Existing roadway, residential uses, and commercial uses are located to the north, northwest, and west, while undeveloped agricultural land is located to the east and south of the Project site. It is noted that future urban uses will be located to the east (Sunridge Specific Plan and SunCreek Specific Plan) and south (SunCreek Specific Plan) of the Project site. This is a *less than significant* impact.

This section describes the regulatory setting, regional hydrology and water quality impacts that are likely to result from Project implementation, and includes measures to reduce potential impacts related to stormwater drainage, flooding and water quality. This section is based in part on the following documents, reports and studies:

- *Rancho Cordova General Plan* (City of Rancho Cordova, Adopted June 26, 2006);
- *Rancho Cordova General Plan Draft Environmental Impact Report* (City of Rancho Cordova, March 2006);
- Sacramento County Water Agency 2015 Urban Water Management Plan (Brown Caldwell, 2016);
- Sunrise Douglas Community Plan/Sun Ridge Specific Plan Long-Term Water Supply Plan Revised Draft EIR (AECOM, January 2011);
- Sunrise Douglas Community Plan/Sun Ridge Specific Plan Long-Term Water Supply Plan Final EIR (AECOM, October 2011);
- Sacramento County Water Agency 2015 Urban Water Management Plan (Brown & Caldwell, June 2016);
- The Ranch Master Drainage Study [Third Submittal] (Watermark Engineering, April 30, 2019); and
- Water Supply Assessment for The Ranch at Sunridge (Sacramento County Water Agency, 2011).

A comment was received during the public review period for the Notice of Preparation regarding this topic from the Central Valley Regional Water Quality Control Board (RWQCB, July 2018). This comment is addressed within this section.

3.8.1 ENVIRONMENTAL SETTING

REGIONAL HYDROLOGY

The Project site is located in the City of Rancho Cordova, within Sacramento County near the center of the Sacramento Valley, approximately 16 miles southeast of the confluence of the American and Sacramento Rivers. The Sacramento Valley is bordered by the Coast Ranges and Delta on the west and the foothills of the Sierra Nevada to the east. Water resources in this region include rivers, streams, sloughs, marshes, wetlands, channels, harbors, and underground aquifers. The topography is generally flat, and is drained by the Sacramento River and the Yolo Bypass, which is part of the Sacramento River Flood Control Project.

Climate

Climate in the Sacramento Valley is characterized by warm, dry summers with an almost complete absence of rain, and mild winters with relatively light rains. Periods of dense and persistent low-level fog that are most prevalent between storms are characteristic of Sacramento Valley winter weather. The average winter temperature is a moderate 49 degrees Fahrenheit (°F). Most precipitation in the area results from air masses that move in from the Pacific Ocean from the west

or northwest during the winter rainy season (November to April). During the summer, daily temperatures range from 50°F to more than 100°F. The inland location and surrounding mountains shelter the area from much of the ocean breezes that keep the coastal regions moderate in temperature.

Watersheds

A watershed is a region that is bound by a divide that drains to a common watercourse or body of water. Watersheds serve an important biological function, oftentimes supporting an abundance of aquatic and terrestrial wildlife including special-status species and anadromous and native local fisheries. Watersheds provide conditions necessary for riparian habitat.

The State of California uses a hierarchical naming and numbering convention to define watershed areas for management purposes. This means that boundaries are defined according to size and topography, with multiple sub-watersheds within larger watersheds. Table 3.8-1 shows the primary watershed classification levels used by the State. The second column indicates the approximate size that a watershed area may be within a particular classification level, although variation in size is common.

TABLE 3.8-1: STATE OF CALIFORNIA WATERSHED HIERARCHY NAMING CONVENTION

<i>WATERSHED LEVEL</i>	<i>APPROXIMATE SQUARE MILES (ACRES)</i>	<i>DESCRIPTION</i>
Hydrologic Region (HR)	12,735 (8,150,000)	Defined by large-scale topographic and geologic considerations. The State of California is divided into ten HRs.
Hydrologic Unit (HU)	672 (430,000)	Defined by surface drainage; may include a major river watershed, groundwater basin, or closed drainage, among others.
Hydrologic Area (HA)	244 (156,000)	Major subdivisions of hydrologic units, such as by major tributaries, groundwater attributes, or stream components.
Hydrologic Sub-Area (HSA)	195 (125,000)	A major segment of an HA with significant geographical characteristics or hydrological homogeneity.

SOURCE: CALIFORNIA DEPARTMENT OF WATER RESOURCES, 2012.

HYDROLOGIC REGION

The Project site is located in the Sacramento River Hydrologic Region, which covers approximately 17.4 million acres (27,200 square miles) and all or large portions of Modoc, Siskiyou, Lassen, Shasta, Tehama, Glenn, Plumas, Butte, Colusa, Sutter, Yuba, Sierra, Nevada, Placer, Sacramento, El Dorado, Yolo, Solano, Lake, and Napa counties. Small areas of Alpine and Amador counties are also within the region. Geographically, the region extends south from the Modoc Plateau and Cascade Range at the Oregon border, to the Sacramento-San Joaquin Delta. The Sacramento Valley, which forms the core of the region, is bounded to the east by the crest of the Sierra Nevada and southern Cascades and to the west by the crest of the Coast Range and Klamath Mountains. Other significant features include Mount Shasta and Lassen Peak in the southern Cascades, Sutter Buttes in the south-central portion of the valley, and the Sacramento River, which is the longest river

system in the State of California with major tributaries the Pit, Feather, Yuba, Bear and American rivers. Area population centers include Sacramento, Redding, Chico, and Davis.

HYDROLOGIC UNIT

The Project site is located within the Valley-American Hydrologic Unit. For purposes of regional planning, hydrologic units are generally considered to be the appropriate watershed planning level. However, the hydrologic unit level is generally too large in terms of a planning scale for individual projects, and a hydrologic area or hydrologic subarea may be considered more appropriate.

HYDROLOGIC AREA/SUB-AREA

The Project site is located within the Morrison Creek Hydrologic Area and the Franklin Hydrologic Sub-Area. The Morrison Creek Hydrologic Area is a tributary to the Sacramento River. Storm water flows in the area captured in the local storm drains are discharged to the American River. The Franklin Hydrologic Sub-Area is naturally drained by Laguna Creek, a seasonal water tributary to the Sacramento River.

LOCAL SETTING

The 530-acre Project site is bound by existing single-family residential uses and Douglas Road to the north, vacant land and Grant Line Road to the east, vacant land and Kiefer Boulevard to the south, and Rancho Cordova Parkway, single family residential, and vacant land on the west.

The Project site is currently vacant and has been previously used for agricultural uses (cattle grazing). The topography of the site exhibits low relief topography with elevations ranging between 170 and 210 feet above mean sea level (MSL). The slopes throughout the site range from approximately zero to eight percent. The site is characterized by irregular topography, with moderate rolling hills, depressions, and areas of extensive flatlands, with wetlands, vernal pools, and seasonal drainage courses scattered throughout the site. A headwater tributary of Morrison Creek traverses the Project site, entering at the northeast corner and flowing generally to the southwest. A total of 21.53 acres of jurisdictional aquatic resources have been mapped with the Project site, including: 2.92 acres of depressional seasonal wetlands, 15.04 acres of vernal pools, 1.66 acres of riverine seasonal wetlands, 0.06 acres of riverine seasonal wet swales, 1.54 acres of intermittent drainages, and 0.30 acres of drainage basin outfalls.

The Project site is located within the Morrison Creek watershed (see Figure 3.8-1, Watersheds). Land use in the Morrison Creek watershed is a mix of rural and urban uses including grazing, agricultural, low- to high-density residential, industrial, and commercial. The portion of the watershed west of Hedge Road and Waterman Road is predominantly urban. Morrison Creek flows southwestward from near the intersection of White Rock Road and Grant Line Road to Stone Lake west of Interstate 5.

Drainage

The Master Drainage Study prepared by Watermark Engineering in 2019 describes existing drainage conditions for the Project site. Lower Morrison Creek South (LMCS) generally flows from

3.8 HYDROLOGY AND WATER QUALITY

the northeast corner to the west central property boundary of the Project. The total tributary area of LMCS entering the Project site is 1,120 acres and the 100-year, 12-hour natural flow was estimated to be 678 cfs with a mitigated flow of 662 cfs, which was used to determine water surface elevations along the undisturbed LMCS channel.

The Project site was subdivided into six sheds: three sheds that represent the developed areas north of LMCS; two development areas south of LMCS; and the sixth shed representing the LMCS corridor. Table 3.8-2 provides a summary of the shed areas that includes estimates of natural flow from each shed. The flow estimates are used only as guides for the detention basin analyses.

TABLE 3.8-2: SUMMARY OF EXISTING CONDITIONS SUBSHEDS

<i>SHED ID</i>	<i>SHED AREA (AC)</i>	<i>100-YR PEAK FLOW (CFS)_{A,B}</i>
West Basin	104.2	100
East Basin	46.0	56
PGE Basin	14.7	23
North-South Basin	50.2	58
South-South Basin	95.7	94
Remainder	218.7	N/A
Total	530	N/A

A: ESTIMATED FROM REGRESSION EQUATION DEVELOPED FOR THE SUNCREEK. SEE MODELING SECTION OF MASTER DRAINAGE STUDY IN APPENDIX J.1 FOR DETAILS.

B: CFS: CUBIC FEET PER SECOND

SOURCE: WATERMARK ENGINEERING, 2019

Stormwater Quality

Potential hazards to surface water quality include the following nonpoint pollution sources: high turbidity from sediment resulting from erosion of improperly graded construction projects, concentration of nitrates and dissolved solids from agriculture or surfacing septic tank failures, viruses, bacteria, and nutrients from pet waste and failing septic systems, oil, grease, and toxic chemicals from motor vehicles, heavy metals from roof shingles, motor vehicles, and other sources, contaminated street, lawn and impervious area run-off from urban areas, and warm water drainage discharges into cold water streams.

A critical period for surface water quality is following a rainstorm which produces significant amounts of drainage runoff into streams with low flows, resulting in poor dilution of contaminants and elevated levels in the low flowing streams. Such conditions are most frequent during the fall at the beginning of the rainy season when stream flows are near their lowest annual levels and contaminants have accumulated on impervious surfaces over the drier summer months. Besides greases, oils, pesticides, litter, and organic matter associated with such runoff, heavy metals such as copper, zinc, and cadmium can cause considerable harm to aquatic organisms when introduced to streams in low flow conditions.

Urban stormwater runoff was managed as a non-point discharge (a source not readily identifiable) under the Federal Water Pollution Control Amendments of 1972 (PL 92-500, Section 208) until the mid-1980s. However, since then, the Federal Environmental Protection Agency has continued to

develop policies and permitting which categorize urban runoff as a point source (an identifiable source) subject to National Pollution Discharge Elimination System (NPDES) permits. Rules now affect medium and large urban areas, and further rulemaking is expected as programs are developed to meet requirements of Federal water pollution control laws.

Surface water pollution is also caused by erosion. Excessive and improperly managed grading and vegetation removal associated with urban development, as well as quarrying, logging, and agricultural practices can lead to increased erosion of exposed earth and sedimentation of watercourses during rainy periods. In slower moving water bodies these same factors often cause a buildup of sediment, which ultimately reduces the capacity of the water system to percolate and recharge groundwater basins, as well as adversely affects both aquatic resources and flood control efforts.

303(D) IMPAIRED WATER BODIES

Section 303(d) of the federal Clean Water Act requires States to identify waters that do not meet water quality standards or objectives and thus, are considered "impaired." Once listed, Section 303(d) mandates prioritization and development of a Total Maximum Daily Load (TMDL). The TMDL is a tool that establishes the allowable loadings or other quantifiable parameters for a waterbody and thereby the basis for the States to establish water quality-based controls. The purpose of TMDLs is to ensure that beneficial uses are restored and that water quality objectives are achieved.

The following waterways in or near the City of Rancho Cordova are identified as impaired waterways by the State Water Resources Control Board under Section 303(d) of the Clean Water Act: American River (mercury and unknown toxicity); Elder Creek (chlorpyrifos and diazinon); Morrison Creek (diazinon); and Sacramento River (diazinon, mercury and unknown toxicity).

Chlorpyrifos and diazinon are organophosphorus pesticides used for urban and agricultural pest control, while the source of mercury for the Sacramento and American rivers is associated with legacy mining activities within their watersheds. Morrison Creek has been included in the TMDL Report for Diazinon and Chlorpyrifos Impaired Urban Creeks in Sacramento County (September 2004). The Sacramento River water quality issues with diazinon have been addressed in a TMDL for the Sacramento and Feather Rivers.

WATER RESOURCES

The Sacramento County Water Agency (SCWA) would provide water supplies to the Project through its Zone 40 conjunctive-use water supply system. The Project is identified as a subarea within Zone 40 known as the North Service Area (NSA). In the long term, SCWA anticipates the majority of water demands in the NSA (including the proposed Project) would be met with surface water. However, the year-to-year mix of surface and groundwater varies depending on a large

number of variables and surface water and groundwater supplies would be adjusted as necessary to meet the demands of the NSA as part of its conjunctive use program.¹

Groundwater Supply

An SCWA water source for the Project area is groundwater from the South American Sub-basin, which is defined by the California Department of Water Resources (DWR) Bulletin 118. According to Bulletin 118, the South American Sub-basin is defined as the area bounded on the west by Interstate 5 and the Sacramento River, on the north by the American River, on the south by the Cosumnes and Mokelumne rivers and on the east by the Sierra Nevada. The Central Basin covers a major portion of this basin.

Groundwater in the Central Basin is generally classified as occurring in a shallow aquifer (Laguna or Modesto Formation) and in a deep aquifer (Mehrten Formation). The Laguna or Modesto Formation consists of older alluvial deposits of loosely to moderately compacted sand, silt, and gravel deposited in alluvial fans. These deposits are moderately permeable and have a thickness of about 100 to 650 feet. The deeper Mehrten Formation is a sequence of fragmented volcanic rocks which crops out in a discontinuous band along the eastern margin of the basin. It is composed of black volcanic sands, stream gravels, silt, and clay inter-bedded with intervals of dense tuff breccia. The sand and gravel intervals are highly permeable and the tuff breccia intervals act as confining layers. The thickness of the Mehrten Formation is between 200 and 1,200 feet. Groundwater is located from 20 to 100 feet below the ground surface depending on when and where the measurement is taken. The base of the potable water portion of the deep aquifer is located approximately 1,400 feet below the ground surface.

Intensive use of groundwater over the past 60 years has resulted in a general lowering of groundwater elevations. Over time, isolated groundwater depressions have grown and coalesced into a single cone of depression that is centered in the southwestern portion of the basin, approximately 15 miles southwest of the Project site. Groundwater level trends through much of the basin have generally declined consistently from the 1950s and 1960s to about 1980 by 20 to 30 feet. From 1980 through 1983, water levels recovered by about 10 feet and remained stable until the beginning of the 1987-1992 drought; however, wells in the vicinity of Rancho Cordova appear to have recovered less than other wells in the basin since 1995 (generally less than 10 feet). From 1995 to 2003 most groundwater levels recovered to levels that were generally higher than levels prior to the 1987 through 1992 drought. Much of this recovery can be attributed to the increased use of surface water in the Central Basin, and the fallowing of previously irrigated agricultural lands transitioning into new urban development areas. In the central portion of the Central Basin, where the Project site is located, groundwater level trends observed in California Department of Water Resources monitoring wells generally vary between 40 feet above to 40 feet below mean sea level over the period of the 1950s through the 2000s.

¹ Revised Draft Environmental Impact Report Sunrise Douglas Community Plan/SunRidge Specific Plan Long-Term Water Supply Plan. January 2011. Page 3-41.

Recharge of the aquifer system occurs along active river and stream channels where extensive sand and gravel deposits exist, particularly along the American, Cosumnes, and Sacramento rivers. Additional recharge occurs along the eastern boundary of Sacramento County at the transition point from the consolidated rocks of the Sierra Nevada to the alluvial-deposited basin sediments. This recharge is classified as subsurface recharge along with underground flow into and out of the basin with adjacent groundwater basins. Other sources of recharge include deep percolation from applied surface water and precipitation.

The estimated long term annual sustainable yield of groundwater from the Central Basin is 273,000 acre-feet per year (AFY). Currently, groundwater extractions are estimated to be 250,000 AFY (excluding remediation).

The determination of the sustainable yield of the Central Basin (273,000 AFY) was negotiated by the Water Forum Groundwater Negotiating Team (GWNT) and involved a complex process that developed the long-term average annual pumping limit of the basin. The long-term average annual pumping limit is described as the hydro-geologic process under which groundwater can be pumped and not exceed average natural recharge over a long-term period of time. Under sustainable conditions, natural recharge is said to be able to make up for variations in the amount of pumping that occurs over the long-term, given wet and dry periods in the hydrologic record.

As a signatory to the Water Form Agreement (WFA), SCWA is committed to adhering to the long-term average sustainable yield of the Central Basin (i.e., 273,000 afy) recommended in the WFA. Geographically, the South American Sub-basin (5-21.65) is similar to the Central Basin boundaries identified in the WFA. While no specific annual groundwater pumping has been defined for SCWA in the Central Basin, SCWA's groundwater pumping from 2011 through 2015 has ranged from a low of 24,652 AFY in 2015 to a high of 34,626 AFY in 2011. In 2018, SCWA produced 21,716 AFY of groundwater for a new low. Since the historic drought, SCWA has been able to take advantage of the Vineyard Surface Water Treatment Plant and the Freeport Regional Water Authority intake facility to produce more surface water for delivery to its customers in accordance with the Water Forum Agreement.

Groundwater Quality

The thickness of the aquifer saturated with freshwater (water with less than 1,000 milligrams per liter dissolved-solids concentration) in the aquifer system varies greatly and depends, for the most part, on the depth to and permeability of the rocks that underlie continental deposits. In the Project vicinity, the base of freshwater generally coincides with the base of continental deposits. The several isolated lenses of saline water that are within the freshwater zone may be evaporation residues or estuarine water that was trapped by subsequent sedimentation. The depth to the base of freshwater is as much as 2,500 feet in some portions of the Sacramento Valley.

Freshwater is available throughout the Central Valley. The concentration of dissolved solids in the groundwater reflects the general character of water in the streams that recharge the aquifer system. Dissolved-solids concentrations in the streams, in turn, are directly related to the type of rocks that form the geologic conditions of the area. Thus, groundwater in the Sacramento Valley has generally lower dissolved-solids concentrations than other sub-regions in the Central Valley. In

general, dissolved-solids concentrations increase as the depth increases in the aquifer system. Therefore, the deeper wells are likely to produce water with larger dissolved solids concentrations than the shallower wells in the aquifer system.

The SCWA 2015 Urban Water Management Plan indicates that the groundwater quality in the South American Sub-basin (5-21.65) is generally good, although iron and manganese is common and there are some occurrences of arsenic and nitrate. Most of SCWA's Zone 40 wells have iron and manganese treatment facilities.

Surface Water

The surface water supplies associated with SCWA's conjunctive use program fall into four categories:

- 1) Water supplies available through multiple CVP contracts.
- 2) Water supplies available through State Water Resources Control Board (SWRCB) Permit 21209.
- 3) Water available through the City of Sacramento for use within the American River Place of Use (POU). It is noted that this supply is not currently available, but is anticipated in the future as part of SCWA's conjunctive use program.
- 4) Surface water transfers identified in the WSMP.

Water Distribution System

The SCWA water system consists of water treatment plants, pipelines, storage tanks, and wells. The Project would connect to SCWA existing water supply infrastructure located at the intersection of Rancho Cordova Parkway and Chrysanthy Boulevard. New water distribution pipelines and valves would be provided within the Project site, primarily within the roadway rights-of-way, to serve the proposed development.

Water Use

Constraints on SCWA's surface water supplies includes the significant variation of supplies that are available depending on the climate year type. Even though the surface water supplies are not available at a consistent level of use, SCWA has available groundwater supplies to be able to replace the reduction in surface water supplies in dry years. SCWA refers to this potential to use groundwater in addition to its surface water supplies as its conjunctive use program. While groundwater is more consistently available over different climate year types, it has been constrained by groundwater contamination plumes, some naturally occurring contaminants, and the long term need to not exceed the safe yield. Groundwater is considered to be the last priority in meeting water demands, after surface water entitlements and surface water treatment plant capacity area used. The capacity of supply and conveyance facilities is also a constraint on both surface water and groundwater supplies. SCWA has plans to construct additional water supply facilities. In general, water quality does not have a significant impact on SCWA's current and projected water supplies. The SWTP and groundwater treatment plants provide treatment to meet drinking water standards.

The water supply allocation from the CVP supply in 2015 was a historical low. The CVP allocation for the three-year 2013 to 2015 period was also the lowest historical three-year sequence. The CVP allocation for 2013 to 2015, was 100 percent, 75 percent, and 25 percent of the prior three-year average constrained use for each of the years, respectively. The CVP supply represents SCWA's most significant surface water supply source. Even with the low CVP allocation in 2015, the overall water supply was still 90 percent of normal because of the availability of other water supply sources. It is assumed that wholesale water supplies would be fully available as required to meet wholesale water demands.

It is noted that the SCWA's 2015 UWMP accounts for the demand from the proposed Project.

3.8.2 REGULATORY SETTING

There are a number of regulatory agencies whose responsibility includes the oversight of the water resources of the state and nation including the Federal Emergency Management Agency, the US Environmental Protection Agency, the State Water Resources Control Board, and the Regional Water Quality Control Board. The following is an overview of the federal, state and local regulations that may be applicable to projects within the City of Rancho Cordova.

FEDERAL AND STATE

Clean Water Act (CWA)

The Clean Water Act (CWA), initially passed in 1972, regulates the discharge of pollutants into watersheds throughout the nation. The State Water Resources Control Board (SWRCB) is responsible for implementing the Clean Water Act and does so through issuing NPDES permits to cities and counties through regional water quality control boards. Federal regulations allow two permitting options for stormwater discharges (individual permits and general permits). The Central Valley Regional Water Quality Control Board has developed a single region-wide General Permit for Discharges from Municipal Separate Stormwater Systems (MS4s) (Order No. R5-2016-0040) issued pursuant to CWA Section 402 in order to promote greater watershed/drainage shed coordination, water quality measure protections, and program implementation efficiencies throughout the Central Valley Region. The City of Rancho Cordova is regulated under the region-wide general permit through General Order No. R5-2016-0040-008 and NPDES Permit No. CAS0085324.

303(D) IMPAIRED WATER BODIES

Section 303(d) of the federal Clean Water Act requires States to identify waters that do not meet water quality standards or objectives and thus, are considered "impaired." Once listed, Section 303(d) mandates prioritization and development of a Total Maximum Daily Load (TMDL). The TMDL is a tool that establishes the allowable loadings or other quantifiable parameters for a waterbody and thereby the basis for the States to establish water quality-based controls. The purpose of TMDLs is to ensure that beneficial uses are restored and that water quality objectives are achieved.

As noted previously, the following waterways in or near the City of Rancho Cordova are identified as impaired waterways by the State Water Resources Control Board under Section 303(d) of the Clean Water Act: American River (mercury and unknown toxicity); Elder Creek (chlorpyrifos and diazinon); Morrison Creek (diazinon); and Sacramento River (diazinon, mercury and unknown toxicity).

General Order No. R5-2016-0040 includes Attachment G, Specific Provisions for Total Maximum Daily Loads Applicable to Order R5-2016-040, which includes specific permit requirements that have been devised to meet the applicable Water Quality Based Effluent Limitation and attain compliance with the applicable waste load allocation. For each TMDL, Attachment G identifies where the TMDL is applicable, the Permittees that are responsible for implementing specific provisions, any interim compliance requirements, final TMDL compliance requirements, and specific monitoring provisions and assessment requirements.

California Water Code – Porter-Cologne Act

The Federal Clean Water Act places the primary responsibility for the control of surface water pollution and for planning the development and use of water resources with the states, although this does establish certain guidelines for the States to follow in developing their programs and allows the Environmental Protection Agency to withdraw control from states with inadequate implementation mechanisms.

California’s primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Division 7 of the California Water Code) (Porter-Cologne Act). The Porter-Cologne Act grants the State Water Resources Control Board (SWRCB) and each of the RWQCBs power to protect water quality, and is the primary vehicle for implementation of California’s responsibilities under the Federal Clean Water Act. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a water quality control plan (Basin Plan) for its region. The regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State water policy. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

National Pollutant Discharge Elimination System (NPDES)

NPDES permits are required for discharges of pollutants to navigable waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, the ocean, dry stream beds, wetlands, and storm sewers that are tributary to any surface water body. NPDES

permits are issued under the Federal Clean Water Act, Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.)

The RWQCB issues these permits in lieu of direct issuance by the Environmental Protection Agency, subject to review and approval by the Environmental Protection Agency Regional Administrator. The terms of these NPDES permits implement pertinent provisions of the Federal Clean Water Act and the Act's implementing regulations, including pre-treatment, sludge management, effluent limitations for specific industries, and anti- degradation. In general, the discharge of pollutants is to be eliminated or reduced as much as practicable so as to achieve the Clean Water Act's goal of "fishable and swimmable" navigable (surface) waters. Technically, all NPDES permits issued by the RWQCB are also Waste Discharge Requirements issued under the authority of the California Water Code.

These NPDES permits regulate discharges from publicly owned treatment works, industrial discharges, stormwater runoff, dewatering operations, and groundwater cleanup discharges. NPDES permits are issued for periods of five years or less, and are therefore to be updated regularly. The rapid and dramatic population and urban growth in the Central Valley Region has caused a significant increase in NPDES permit applications for new waste discharges. To expedite the permit issuance process, the RWQCB has adopted several general NPDES permits, each of which regulates numerous discharges of similar types of wastes. Stormwater discharges from industrial and construction activities in the Central Valley Region can be covered under these general permits, which are administered jointly by the SWRCB and RWQCB.

Water Quality Control Plan for the Central Valley Region

The Water Quality Control Plan for the Central Valley Region (Basin Plan) includes a summary of beneficial water uses, water quality objectives needed to protect the identified beneficial uses, and implementation measures. The Basin Plan establishes water quality standards for all the ground and surface waters of the region. The term "water quality standards," as used in the Federal Clean Water Act, includes both the beneficial uses of specific water bodies and the levels of quality that must be met and maintained to protect those uses. The Basin Plan includes an implementation plan describing the actions by the RWQCB and others that are necessary to achieve and maintain the water quality standards.

The RWQCB regulates waste discharges to minimize and control their effects on the quality of the region's ground and surface water. Permits are issued under a number of programs and authorities. The terms and conditions of these discharge permits are enforced through a variety of technical, administrative, and legal means. Water quality problems in the region are listed in the Basin Plan, along with the causes, where known. For water bodies with quality below the levels necessary to allow all the beneficial uses of the water to be met, plans for improving water quality are included. The Basin Plan reflects, incorporates, and implements applicable portions of a number of national and statewide water quality plans and policies, including the California Water Code and the Clean Water Act.

LOCAL

Central Sacramento County Groundwater Management Plan (CSCGMP)

The Central Sacramento County Groundwater Management Plan (CSCGMP) was completed in 2006 by Central Sacramento County Groundwater Basin stakeholders, in coordination with the SCWA, to establish a framework for maintaining a sustainable groundwater resource for the various users overlying the basin in Sacramento County between the American and Cosumnes Rivers. The CSCGMP assists overlying water users in maintaining a safe, sustainable, and high quality groundwater resource within a given groundwater basin. The five basin management objectives that have been proposed for the Central Basin are listed below. Each objective focuses on managing and monitoring the basin to benefit all groundwater users in the basin and are intended to be specific enough to result in numerical criteria for the basin, but also able to be modified or adapted to new information on groundwater basin behavior over time:

- Maintain the long-term average groundwater extraction rate at or below 273,000 AFY.
- Maintain specific groundwater elevations within all areas of the basin consistent with the Water Forum.
- Protect against any potential inelastic land surface subsidence by limiting subsidence to no more than 0.007 feet per 1 foot of drawdown in the groundwater basin.
- Protect against any adverse impacts to surface water flows in the American, Cosumnes, and Sacramento rivers.
- Water quality objectives for several constituents of concern:
 - Maintain total dissolved solids (TDS) concentration of less than 1,000 milligrams per liter (mg/L);
 - Maintain nitrate (NO₃) concentration of less than 45 mg/L; and
 - Monitor volatile organic compounds (VOC) migration and consider any measurable trace of VOC in private or public wells as significant.

Sacramento Stormwater Quality Partnership (SSQP)

The permittees of the NPDES Municipal Stormwater Permit, i.e. Sacramento County and the cities of Rancho Cordova, Sacramento, Citrus Heights, Elk Grove, Galt, and Folsom, have joined together to form the SSQP. The SSQP is a collaborative partnership that protects and improves water quality in local waterways for the benefit of the community and the environment. The purpose of the SSQP is to:

- Educate and inform the public about urban runoff pollution;
- Encourage public participation in community and clean-up events;
- 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.

The permittees cooperatively participate in decision-making and goal-setting for the monitoring program, are involved in consultant selection and review, and comment on compliance reports and other work products. Annual Reports are produced that describe the activities conducted to comply with the NPDES permit.

The stormwater pollution prevention efforts needed to satisfy the NPDES permit (Order R5-Order R5-2016-0040) requirements are implemented by the SSQP through its Stormwater Quality Improvement Plan (SQIP), either jointly or by the individual permittees. The major categories of SQIP activities, conducted jointly by the SSQP, are:

- program management – including legal authority and funding, inter- and intra-agency coordination, effectiveness assessment;
- target pollutant program (including implementation of plans to target mercury and pesticides);
- monitoring program to satisfy monitoring requirements specified in the monitoring and reporting program (MRP) portion of the NPDES permit;
- planning and new development standards such as Hydromodification and LID standards;
- special studies; and
- regional public outreach.

Stormwater Quality Design Manual for Sacramento Region

The Stormwater Quality Design Manual for the Sacramento Region provides locally-adapted information for design and selection of multiple categories of stormwater quality control measures: source control, hydromodification control, treatment control, and low impact development measures. The 2018 edition of the Design Manual is based on the *2007 Stormwater Quality Design Manual for the Sacramento and South Placer Regions*, but has been revised to incorporate hydromodification management and low impact development design standards.

This Stormwater Quality Design Manual for the Sacramento Region (manual) outlines planning tools and requirements to reduce urban runoff pollution to the maximum extent practicable (MEP) from new development and redevelopment projects. The manual is primarily intended for people involved in the design or review/approval of development projects. Chapter 3 of the Manual outlines steps to select and design stormwater quality features in order to effectively incorporate stormwater management into site design and satisfy the requirements of the permitting agencies in Sacramento County

City of Rancho Cordova Municipal Code

Chapter 16.44 of the City's Municipal Code outlines the Land and Grading Erosion Control Ordinance. The purpose of this chapter is to minimize damage to surrounding properties and public rights-of-way, the degradation of the water quality of watercourses, and the disruption of natural or city-authorized drainage flows caused by the activities of clearing and grubbing, grading, filling and excavating of land, and sediment and pollutant runoff from other construction-related activities, and to comply with the provisions of the City's NPDES permit No. CAS0085324, issued by the RWQCB.

These goals will be achieved by establishing administrative procedures, minimum standards of review, and implementation and enforcement procedures for controlling erosion, sedimentation and other pollutant runoff, including construction debris and hazardous substances used on construction sites, and the disruption of existing drainage and related environmental damage caused by the aforementioned activities.

Rancho Cordova General Plan

The Rancho Cordova General Plan contains the following goals and policies that are relevant to hydrology and water quality:

NATURAL RESOURCES ELEMENT

Goal NR.3: Preserve and maintain creek corridors and wetland preserve with useable buffer zones throughout the new development areas as feasible.

Policy NR.3.1: Coordinate with property owners and local interest groups, such as the Sacramento Urban Creeks Council, to restore, enhance, and preserve creeks in Rancho Cordova.

Policy NR.3.2: In general, the City will encourage the preservation of existing location, topography, and meandering alignment of natural creeks. The modification, re-creation and realignment of creek corridors shall recreate the character of the natural creek corridor to the extent feasible, appropriate and consistent with other City policies. Channelization and the use of concrete within creek corridors shall be discouraged, but is not prohibited.

Policy NR.3.3: Encourage the creation of secondary flood control channels where the existing channel supports extensive riparian vegetation.

Policy NR.3.4: Encourage projects that contain wetland preserves or creeks, or are located adjacent to wetland preserves or creeks, to be designed for visibility and, as appropriate, access.

Goal NR.5: Protect the quantity and quality of the City's water resources.

Policy NR.5.1: Promote water conservation within existing and future urban uses.

Policy NR.5.2: Encourage the use of treated wastewater to irrigate parks, golf courses, and landscaping.

Policy NR.5.3: Protect surface and ground water from major sources of pollution, including hazardous materials contamination and urban runoff.

Policy NR.5.4: Prevent contamination of the groundwater table and surface water, and remedy existing contamination to the extent practicable.

Policy NR.5.5: Minimize erosion to stream channels resulting from new development in urban areas consistent with State law.

Policy NR.5.6: Incorporate Storm Water, Urban Runoff, and Wetland Mosquito Management Guidelines and Best Management Practices into the design of water retention structures, drainage ditches, swales, and the construction of mitigated wetlands in order to reduce the potential for mosquito-borne disease transmission.

Policy NR.5.7: Continue to cooperate and participate with the County, other cities, and the Regional Water Quality Control Board regarding compliance with the joint National Pollutant Discharge Elimination System Permit (NPDES No. CAS0085324) or any subsequent permit and support water quality improvement projects in order to maintain compliance with regional, state and federal water quality requirements.

Policy NR.5.8: The City shall require groundwater impact evaluations be conducted for the Grant Line West, Westborough, Aerojet, Glenborough, Mather and Jackson Planning Areas to determine whether urbanization of these areas would adversely impact groundwater remediation activities associated with Mather and Aerojet prior to the approval of large-scale development. Should an adverse impact be determined, a mitigation program shall be developed in consultation with applicable local, state, and federal agencies to ensure remediation activities are not impacted. This may include the provision of land areas for groundwater remediation facilities, installation/extension of necessary infrastructure, or other appropriate measures.

SAFETY ELEMENT

Goal S.2: Reduce the possibility of a flooding or drainage issue causing loss of life or damage to property.

Policy S.2.1: Support and encourage efforts to limit and reduce the potential for community flooding from the Cosumnes or American Rivers.

Policy S.2.2: Manage the risk of flooding by discouraging new development located in an area that is likely to flood.

Policy S.2.3: Discourage the creation of new parcels when the presence of easements, floodplain, marsh, or riparian habitat, and/or other features would leave insufficient land to build and operate structures. This policy shall not apply to open space lots specifically created for dedication to the City or another appropriate party for habitat protection, flood control, drainage, or wetland maintenance.

Policy S.2.4: Ensure that adequate drainage exists for both existing and new development.

INFRASTRUCTURE, SERVICES, AND FINANCE ELEMENT

Goal ISF.2: Ensure the development of quality infrastructure to meet community needs at the time they are needed.

Policy ISF.2.1: Ensure the development of public infrastructure that meets the long-term needs of residents and ensure infrastructure is available at the time such facilities are needed.

3.8.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on the environment associated with hydrology and water quality if it will:

- 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:
 - Result in substantial erosion or siltation on- or off-site;
 - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
 - 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
 - Impede or redirect flood flows;
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation; and/or
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

As described in the Initial Study (see Appendix A), impacts associated with flooding, dam inundation, and inundation by seiche, tsunami, or mudflow would be *less than significant*. These issues will not be addressed further.

IMPACTS AND MITIGATION MEASURES

Impact 3.8-1: The Project may violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality during construction (Less than Significant with Mitigation)

Grading, excavation, removal of vegetative cover, and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation. Construction activities also could result in soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas. Implementation of the Project could result in water quality impacts associated with erosion or

pollution, including the potential to violate water quality standards or waste discharge requirements during construction and, as such, result in a potentially significant impact.

The proposed Project will be required to comply with the City's Land and Grading Erosion Control Ordinance, outlined in Chapter 16.44 of the City's Municipal Code. As required by the Ordinance, projects disturbing 350 cubic yards or more of soil or one or more acres of land shall prepare an erosion and sediment control plan specifying BMPs for erosion and sediment control. This erosion and sediment control plan shall be checked in the field by the City inspector during construction.

Petroleum, when improperly managed and stored, can present health hazards and threaten the environment, particularly navigable waters and adjoining shorelines. To prevent harm to the public and the environment, the federal Oil Pollution Prevention regulation, promulgated under the authority of §311 of the Clean Water Act, sets forth requirements for prevention of, preparedness for, and response to oil discharges at specific non-transportation-related facilities. To contain potential discharges of oil, the regulation requires these facilities to develop and implement Spill Prevention Countermeasure and Control (SPCC) Plans and establishes procedures, methods, and equipment requirements.

As required by the Clean Water Act, each phase of construction will require an approved SWPPP that includes best management practices to mitigate impacts from grading, construction activities, and ensure the preservation of topsoil. The Project proponent or contractor is required to submit the SWPPP with a Notice of Intent (NOI) to the RWQCB to obtain coverage under the State Construction General Permit. The State Water Resources Control Board (SWRCB) is an agency responsible for reviewing the SWPPP with the NOI, prior to issuance coverage under the State Construction General Permit for the discharge of stormwater during construction activities. Mitigation Measure 3.5-1, introduced in Chapter 3.5, Geology and Soils, requires an approved SWPPP that includes best management practices for grading and preservation of topsoil. Mitigation Measure 3.8-1 requires the project to prepare and implement a SPCC to address any releases of hazardous, toxic, or petroleum substances during construction. Implementation of the following mitigation measures would ensure consistency with the regulatory requirements and ensure that the proposed Project would have a **less than significant** impact on construction related water quality.

MITIGATION MEASURE(S)

Mitigation Measure 3.5-1: *Prior to any site disturbance, the Project proponent shall submit a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) to the RWQCB in accordance with the NPDES General Construction Permit requirements. The SWPPP shall be designed to control pollutant discharges utilizing Best Management Practices (BMPs) and technology to reduce erosion and sediments. BMPs may consist of a wide variety of measures taken to reduce pollutants in stormwater runoff from the Project site. Measures shall include temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) that will be employed to control erosion from disturbed areas. Final selection of BMPs will be subject to approval by the City of Rancho Cordova and the RWQCB. The SWPPP will be*

kept on site during construction activity and will be made available upon request to representatives of the RWQCB. (Note: This measure is also included in Chapter 3.5.)

Mitigation Measure 3.8-1: *Prior to the commencement of construction or grading activities, the Project proponent shall submit, and obtain approval of, a Spill Prevention Countermeasure and Control Plan (SPCC) to the Sacramento County Environmental Management Department. The SPCC shall specify measures and procedures to minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during all construction activities, and shall meet the requirements specified in the Code of Federal Regulations, title 40, part 112.*

Impact 3.8-2: The Project may violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality during post-construction (Less than Significant with Mitigation)

Operation of the Project, including occupancy of the residential uses and activities associated with the residential, commercial, and parks and recreation uses, would occur once construction has finished and the residents, employees, and guests of the proposed uses are operating on-site. The long-term operations of the proposed residential and commercial uses could result in impacts to surface water quality from urban stormwater runoff. For example, the proposed Project would result in new impervious areas associated with streets, driveways, parking lots, buildings, and landscape areas in the residential and commercial portions and trails, parking lots, and activity areas in the parks and recreation components. Normal activities in these developed areas include the use of various automotive and equipment-related petroleum products (i.e. oil, grease, fuel), building products, household hazardous materials, heavy metals, pesticides, herbicides, and fertilizers and waste associated with the various allowed uses in the residential, commercial, and parks and recreation components. Within urban areas, these pollutants are generally called nonpoint source pollutants. The pollutant levels vary based on factors such as time between storm events, volume of storm event, type of land uses, and density of people.

The Master Drainage Study prepared for the Project describes the proposed drainage and water quality features (Appendix J.1). The northwestern portion of the Project would drain to LMCS and the southeast portion of the Project would drain to both LMCS and Kite Creek. The open space areas would also include detention basins that will provide stormwater management, as described in Chapter 2.0. A basin is the complete facility that will provide the stormwater management, including the permanent pool for water quality, storage for hydromodification and peak flow attenuation, and the outflow facilities. Stormwater management would include capture and treatment of summer irrigation flows, hydromodification of storm runoff, and attenuation of very large storms so that post-project flow rates are equal to or less than existing conditions. The Project includes three basins to manage runoff from the northwest portion of the Project and two basins to manage runoff from the southeast portion of the Project.

- West Basin: This basin is located in Lot H, just south of the tributary shed area and just east of Rancho Cordova Parkway. The outfall from this basin will enter LMCS where it turns south and parallels the parkway in a man-made channel.
- East Basin: This detention basin is located in Lot G, adjacent to LMCS near the middle of the development site. Outfall from this basin will be directly to LMCS or conveyed south and discharged into the creek at the proposed Crysanthy Boulevard crossing.
- PG&E Basin: This basin is located in Lot I and serves a shed area that has been minimized to comply with PG&E constraints for drainage facilities under their high-voltage power lines. The basin would be designed to create and maintain as much infiltration as can be reasonably achieved. An outflow will discharge south or west directly into LMCS.
- North South Basin: The basin, located in Lot J, will be a dry-extended basin with an outflow to LMCS upstream of the Crysanthy crossing.
- South-South Basin: All of the developed area south of LMCS will drain to this linear basin that located in Lot P along the southern boundary of Project site. The permanent pool is at the southeast corner and will drain to Kite Creek. Its outfall will be part of a larger outfall that will also serve SunCreek and will become the new headwaters of Kite Creek.

The storm drains discharging into the wet basins are planned to be below the water level of the permanent pool, which eliminates the need for access control at the outfalls. Manholes just upstream of the basin will include a slide gate so that the deep pipe can be isolated and cleaned as necessary.

With the exception of a major road crossing (Crysanthy Boulevard) and four outflows from the proposed detention basins, LMCS would remain as a meandering channel within an open space corridor. The water quality treatment would be achieved utilizing a variety of low-impact development measures outlined in the City's adopted Stormwater Quality Design Manual for the Sacramento and South Placer Regions, July 2018. Those measures include the incorporation of water quality basins.

While the Drainage Study prepared for the Project identifies several components of the approach to addressing potential pollutants, it does not identify the full range of measures that will be implemented by the Project to ensure that water quality requirements are met. Therefore, the Project has the potential to degrade water quality, including impacts associated with erosion, siltation, or pollution. Therefore, this impact is potentially significant.

The Project would be subject to the Stormwater Quality Design Manual for Sacramento and South Placer Regions, as required by Mitigation Measure 3.8-2. The Project would be subject to the required stormwater quality control measures, including source control, low impact development control, treatment control, trash capture, and hydromodification control. Table 3-3 of the Manual summarizes the various stormwater control measures that are required depending on the project type. With regard to stormwater quality, the Project would be designed to conform with current City and other local standard requirements, as discussed above.

Implementation of the following mitigation measure would reduce potential water quality impacts post-construction to a ***less than significant*** level.

MITIGATION MEASURE(S)

Mitigation Measure 3.8-2: *Before approval of the final subdivision map for all Project phases, a detailed Best Management Practice (BMP) and water quality maintenance plan shall be prepared by a qualified engineer retained by the Project applicant that meets the standards of the City's NPDES Permit (No. CAS00853254) and shall document that stormwater runoff from the Project site is treated per the standards in the Stormwater Quality Design Manual for Sacramento and South Placer Regions. Drafts of the plan shall be submitted to the City of Rancho Cordova for review and approval concurrently with development of tentative subdivision maps for all Project phases. The plan shall finalize the water quality improvements and further detail the structural and nonstructural BMPs proposed for the Project. The plan shall include the elements described below.*

- *A quantitative hydrologic and water quality analysis of proposed conditions incorporating the proposed drainage design features.*
- *Pre-development and post-development calculations demonstrating that the proposed water quality BMPs meet or exceed requirements established by the City of Rancho Cordova and including details regarding the size, geometry, and functional timing of storage and release pursuant to the "Stormwater Quality Design Manual for Sacramento and South Placer Regions."*
- *Source control programs to control water quality pollutants on the Project site, which may include but are limited to recycling, street sweeping, storm drain cleaning, household hazardous waste collection, waste minimization, prevention of spills and illegal dumping, and effective management of public trash collection areas.*
- *A pond management component for the proposed basins that shall include management and maintenance requirements for the design features and BMPs, and responsible parties for maintenance and funding.*
- *Low Impact Development (LID) and Hydromodification control measures shall be integrated into the BMP and water quality maintenance plan. These may include, but are not limited to:*
 - *Bioretention planters;*
 - *surface swales;*
 - *replacement of conventional impervious surfaces with pervious surfaces (e.g., porous pavement, green roofs);*
 - *impervious surfaces disconnection; and*
 - *trees planted to intercept stormwater.*

Impact 3.8-3: The Project would not decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin (Less than Significant with Mitigation)

(Note: The following discussion is associated with potential impacts of the proposed Project on groundwater as it relates to stormwater infiltration and groundwater recharge. Depletion of groundwater supplies as it relates to water usage is addressed in Chapter 3.14, Utilities.)

The proposed Project would result in new impervious surfaces and could reduce rainwater infiltration and groundwater recharge. Infiltration rates vary depending on the overlying soil types. In general, sandy soils have higher infiltration rates and can contribute to significant amounts of ground water recharge; clay soils tend to have lower percolation potentials; and impervious surfaces such as pavement significantly reduce infiltration capacity and increase surface water runoff.

According to the U.S. Department of Agriculture NRCS Web Soil Survey (NRCS, 2019), the soils on the Project site are classified as Fiddymont fine sandy loam, Hicksville gravelly loam, Red Bluff-Redding complex, Redding loam, and Redding gravelly loam. The permeability of the on-site soils is moderate.

Table 3.8-3 below identifies the soils in the Project site and the soils infiltration rate. The majority of the Project site has soils all have a hydrologic rating of “D”, which is indicative of soils having a very low infiltration rate (very high runoff potential) when thoroughly wet. The remaining soils have a hydrologic rating of “C”, which is indicative of soils having a low infiltration rate (high runoff potential).

TABLE 3.8-3: SOILS HYDROLOGIC RATING

DESCRIPTION	SOURCE MATERIAL	RATING
Fiddymont fine sandy loam, 1-8% slopes	Consolidated sediments of mixed rock sources	D
Hicksville gravelly loam, 0-2% slopes	Alluvium derived from mixed rock sources	C/D
Red Bluff-Redding complex, 0-5% slopes	Old mixed alluvium	C
Redding loam, 2-8% slopes	Alluvium derived from mixed sources	C
Redding gravelly loam, 0-8% slopes, MLRA 17	Alluvium derived from mixed sources	D

SOURCE: NCRS 2018.

The infiltration rate of the soils on the Project site is considered low.

The new impervious surfaces, such as pavement, concrete, and structures that would be built on the Project site, could reduce infiltration capacity, compared to the existing conditions. However, the proposed Project is designed to promote infiltration of groundwater in areas with pervious surface. The proposed drainage infrastructure would include detention basins, greenway swales, and water quality swales, which would provide opportunities for on-site groundwater infiltration. Further, the Project includes approximately 45 acres of open space, park areas, and landscape

areas, and a 199.5-acre wetland preserve. These areas would also provide opportunities for groundwater infiltration.

In addition to the low permeability and infiltration rate associated with soils on the Project site, as required by Mitigation Measure 3.8-2, the Project would be required to comply with the City's NPDES Permit, which includes LID. Further, Mitigation Measure 3.8-2 in this section requires submittal of a detailed BMP and water quality maintenance plan, which would include programs to control water quality pollutants and LID measures. These drainage design requirements aim to promote stormwater infiltration and improve stormwater quality, among other goals. Therefore, implementation of the Project would have a *less than significant* impact to groundwater recharge.

Impact 3.8-4: The Project would not 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 result in substantial erosion, siltation, surface runoff, flooding, or polluted runoff (Less than Significant)

The Project site would alter the existing drainage pattern of the Project site through grading and development of the areas proposed for residential, commercial, recreation, parks, and other uses associated with the Project, as described in Chapter 2. Development of the proposed Project, when complete, would result in new impervious surfaces and thus could result in an incremental reduction in the amount of natural soil surfaces available for the infiltration of rainfall and runoff, thereby generating additional runoff during storm events. Additional runoff could contribute to increased erosion, siltation, and pollution, an increase in flood potential of natural stream channels, or runoff that could exceed the capacity of the City's drainage system.

However, the increased rate of runoff would be attenuated using on-site and off-site facilities (including detention basins) as discussed in the Master Drainage Plan to ensure that the Project would not result in a significant change in drainage patterns or an increase in flooding potential. As discussed under Impact 3.8-3, the Project would include six basins to address stormwater. The basins have been designed and sized to accommodate stormwater and to ensure that post-Project runoff conditions do not exceed pre-Project conditions.

The West Basin, East Basin, and South-South Basin are designed as wet basins with three components. The first component is a permanent pool, which will address water quality requirements, below the lowest outfall. There will be a storage component, which will include a single orifice and single weir outfall facilities, to meet the NPDES Permit hydromodification standards. The top component of each basin is the storage area needed to store and attenuate events up to the 100-year flood. This component includes an orifice and weir designed to release flows at a rate less than pre-project flows.

The PG&E Basin and the North-South Basin are designed as dry basins that will drain within 48 hours. The basin bottoms will be designed to improve and maintain infiltration, including

enhancements to reduce ponding time and reduce the potential for outflow from summer irrigation runoff.

The Master Drainage Plan modeled each basin for 2-, 5-, 10-, and 25-year storm events and a separate analysis was completed to address 100-year flows using a regression equation to estimate 100-year flows. The Master Drainage Plan identifies potential impacts to upstream, adjacent, and downstream properties associated with the post-Project drainage pattern and runoff conditions. The results are summarized below:

Adjacent to LMCS within Project Site: Within the Project site, the Master Drainage Plan identified impacts along LMCS where there will be encroachment from development. Within the Project site, the maximum changes were +15 cfs and -18 cfs, with maximum water elevation changes of +0.03 and -0.48 feet. In addition to the information modeled in the Master Drainage Plan, Watermark Engineering provided supplemental information which identified that the impacts to the LMCS corridor within the Project site, which is in the Remainder Drainage Shed, would be minor, noting that some encroachment along the existing floodplain, such as the Chrysanthy Boulevard crossing, would result in a slight increase in the water surface elevation. The increase within the Project site would be less than 0.1 feet in all cases and would not have a significant impact.

Off-Site Changes: The Project would not result in significant changes to off-site flooding or drainage conditions. The increase in water levels within the Project site would result in insignificant backwater increases (an upstream increase of 0.02 feet at Section 96+00 which is near the upstream property line) and the increase would be less at the Project's property line. At the downstream end, downstream of Rancho Cordova Parkway, the model results indicate a slight decrease in flow (15 cfs) and a slight decrease of the water level (0.06 ft) for post-Project conditions compared to existing conditions. The Project has two discharge locations, one point located south of Lot H where LMCS exits the Project site and another located along the Project boundary where drainage flows to Kite Creek. Watermark Engineering provided data supplemental to the Master Drainage Plan which describes pre-Project and post-Project flows under 2-, 10-, and 100-Year storm events. As shown in Table 3.8-4, the Project would attenuate storm water flows exiting the Project site under all analyzed conditions from the discharge location where the Project storm waters would flow south to Kite Creek. Flows to LMCS exiting the western boundary of the Project site would increase slightly (1.8%) under 2-Year storm event conditions but would be reduced to less than pre-Project conditions under the more intense 10- and 100-Year storm event conditions.

3.8 HYDROLOGY AND WATER QUALITY

TABLE 3.8-4: PRE-PROJECT AND POST-PROJECT PEAK FLOW CONDITIONS (2-, 10-, AND 100-YEAR STORM EVENTS)

CONDITION	2-YEAR	10-YEAR	100-YEAR
<i>FLOWS SOUTH TO KITE CREEK (CFS)</i>			
Pre-Project	47	82	118
Post-Project	5	18	50
<i>FLOWS WEST TO LOWER MORRISON CREEK SOUTH AT RANCHO CORDOVA PARKWAY (CFS)</i>			
Pre-Project	274	431	680
Post-Project	279	423	665

SOURCE: WATERMARK ENGINEERING, EMAIL CORRESPONDENCE, 2019.

While the Master Drainage Plan prepared for the Project demonstrates that the basins are adequately sized to address potential flooding and drainage concerns and that off-site flows would not be significantly affected by the Project, it does not identify the full range of measures that will be implemented by the Project to address changes in the drainage pattern and associated erosion, siltation, or polluted runoff. Therefore, this impact is potentially significant.

As discussed in Impact 3.8-1, Mitigation Measure 3.5-1 would require an approved SWPPP that includes best management practices for grading, and preservation of topsoil. Further, the Project would be subject to the City's Land and Grading Erosion Control Ordinance, outlined in Chapter 16.44 of the City's Municipal Code, which requires submittal and implementation of an erosion and sediment control plan. The Project would also be subject to the Stormwater Quality Design Manual for Sacramento and South Placer Regions, as required by Mitigation Measure 3.8-2. The Project would be subject to the required stormwater quality control measures, including source control, low impact development control, treatment control, trash capture, and hydromodification control. Compliance with these standards and regulations would ensure that erosion, siltation, and polluted runoff is minimized such that the Project would not result in substantial erosion, siltation, surface runoff, flooding, or polluted runoff and that the impact would be *less than significant*.

Impact 3.8-5: The Project may conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan (Less than Significant with Mitigation)

The Water Quality Control Plan for the Central Valley Region and the CSCGMP are the two guiding documents for water quality and sustainable groundwater management in the Project area. Consistency with the two plans are discussed below.

WATER QUALITY CONTROL PLAN FOR THE CENTRAL VALLEY REGION

The Water Quality Control Plan for the Central Valley Region (Basin Plan) includes a summary of beneficial water uses, water quality objectives needed to protect the identified beneficial uses, and implementation measures. The Basin Plan establishes water quality standards for all the ground and surface waters of the region. The RWQCB regulates waste discharges to minimize and control their effects on the quality of the region's ground and surface water. Permits are issued

under a number of programs and authorities. The terms and conditions of these discharge permits are enforced through a variety of technical, administrative, and legal means. Water quality problems in the region are listed in the Basin Plan, along with the causes, where known.

As discussed in Impacts 3.8-1 and 3.8-2, impacts related to water quality during construction and operation would be less-than-significant with implementation of the mitigation measures discussed in this section. The Project would include development of on-site drainage and water quality basins to accommodate post-construction peak stormwater flows and provide for water quality treatment. Additionally, the Project would preserve approximately 199.5 acres as a wetland preserve that would be deeded to a third-party conservation entity. The Project includes approximately 14.8 acres of existing aquatic resources, including 1.85 acres of depressional seasonal wetlands, 9.97 acres of vernal pools, 1.15 acres of riverine seasonal wetlands, 1.53 acres of intermittent drainages, and 0.30 acres of drainage basin outfalls. The Project applicant would incorporate protections for the preservation of wetland resources within the preserve, including preserve fencing, long-term funding and management of the preserve in perpetuity, and protection of the preserve from drainage and runoff generated from development areas through the construction of several detention basins throughout the site; these protections would be required to be consistent with the provisions of the South Sacramento Habitat Conservation Plan requirements for preserve areas. Further, Mitigation Measure 3.8-2 would ensure that the proposed drainage and stormwater control measures reduce pollutant concentrations that will eventually flow to the receiving waters and would ensure that the Project does not conflict with implementation of the Basin Plan.

CENTRAL SACRAMENTO COUNTY GROUNDWATER MANAGEMENT PLAN (CSCGMP)

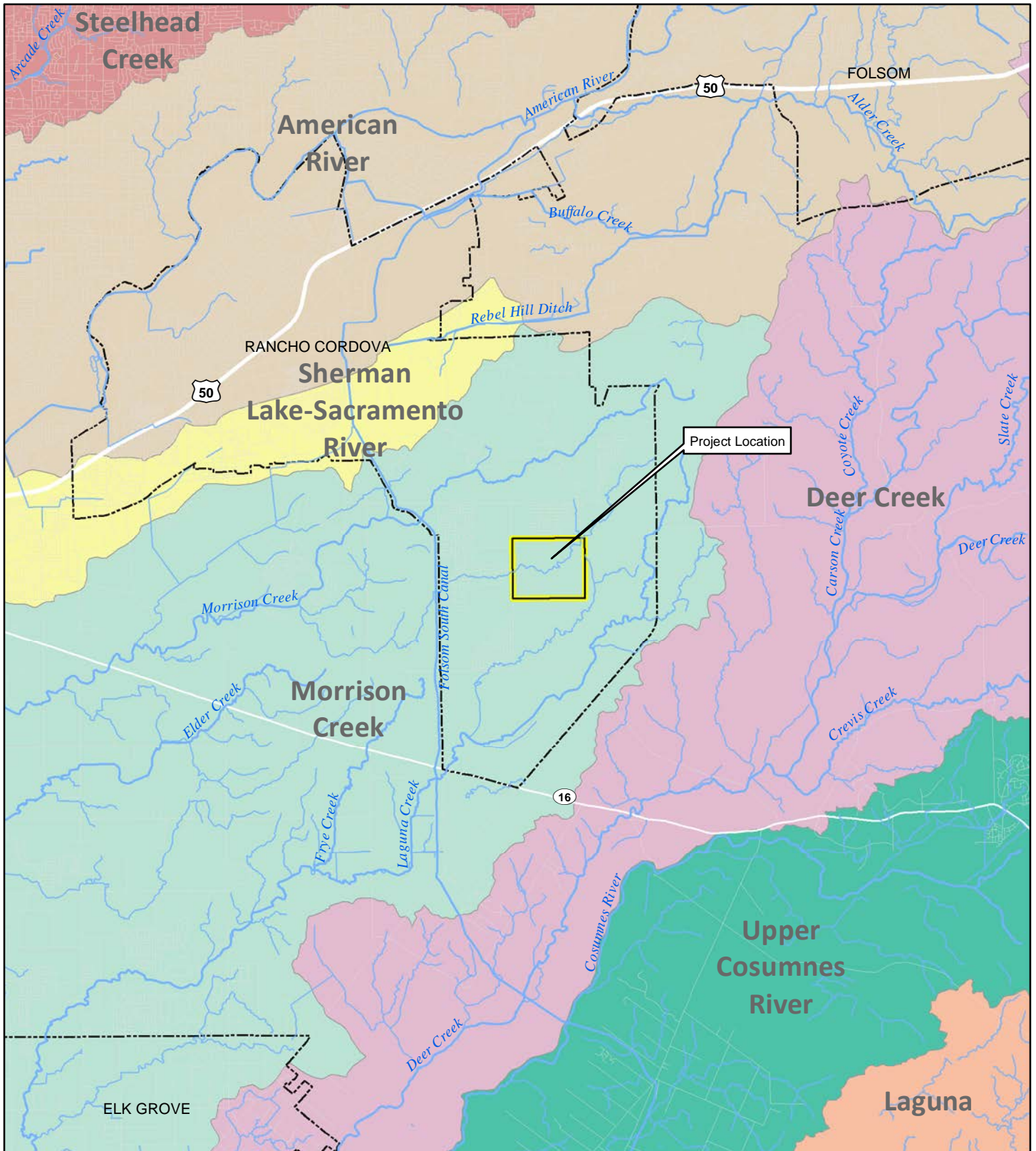
The CSCGMP establishes a framework for maintaining a sustainable groundwater resource for the various users overlying the basin in Sacramento County between the American and Cosumnes Rivers. The CSCGMP assists overlying water users in maintaining a safe, sustainable, and high quality groundwater resource within a given groundwater basin. The five basin management objectives that have been proposed for the Central Basin are listed above in the Regulatory Setting. Each objective focuses on managing and monitoring the basin to benefit all groundwater users in the basin and are intended to be specific enough to result in numerical criteria for the basin, but also able to be modified or adapted to new information on groundwater basin behavior over time.

As discussed in Impact 3.8-3, the Project would not decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin. The Project includes preserve areas, open space areas, and park areas which would allow for infiltration of groundwater on-site. Mitigation Measure 3.8-2 requires the Project to address water quality and changes to the drainage pattern through BMPs and LID measures designed to ensure that the Project is consistent with the water quality objectives and hydromodification standards of NPDES No. CAS0085324. The Project would also be subject to the applicable water quality regulations, including but not limited to the City's Land and Grading Erosion Control Ordinance and the Stormwater Quality Design Manual for Sacramento and South Placer Regions. These guiding documents and requirements would ensure that

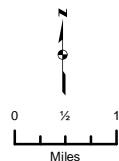
stormwater quality treatment measures are implemented and maintained throughout the life of the Project.

CONCLUSION

Overall, implementation of the proposed Project and adherence to the requirements of Mitigation Measures 3.5-1, 3.8-1, and 3.8-2 would have a ***less than significant*** impact related to conflicts with the Basin Plan and CSCGMP.



- Watershed (HUC 10)**
- American River
 - Deer Creek
 - Laguna
 - Morrison Creek
 - Sherman Lake-Sacramento River
 - Steelhead Creek
 - Upper Cosumnes River



**THE RANCH
SACRAMENTO COUNTY, CALIFORNIA**

Figure 3.8-1: Watersheds

Sources: Sacramento County; USGS National Hydrography Dataset; USGS Watershed Boundary Dataset. Map date: July 16, 2018.

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The purpose of this EIR section is to identify the existing land use conditions on Project site and the surrounding areas, analyze the Project's consistency with relevant planning documents and policies, and recommend mitigation measures to avoid or minimize the significance of potential impacts.

Information in this section is based primarily on information provided by the Project applicant, site surveys conducted by De Novo Planning Group in 2018, ground and aerial photographs, and the following reference documents:

- *Rancho Cordova General Plan* (City of Rancho Cordova, Adopted June 26, 2006);
- Rancho Cordova General Plan Draft Environmental Impact Report (City of Rancho Cordova, March 2006);
- *City of Rancho Cordova Housing Element of the General Plan 2013-2021* (City of Rancho Cordova, Adopted December 16, 2013); and
- City of Rancho Cordova Zoning Code.

Comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from the following: County of Sacramento Municipal Services Agency (July 8, 2018), Sacramento Municipal Utility District (SMUD) (August 6, 2018), and Cordova Recreation & Park District (August 3, 2018). Each of the comments related to this topic are addressed within this section.

3.9.1 ENVIRONMENTAL SETTING

PROJECT SITE

The Project site consists of approximately 530 acres located in the Rancho Cordova city limits. The Project site is bound by existing single-family residential uses and Douglas Road to the north, vacant land and Grant Line Road to the east, vacant land and Kiefer Boulevard to the south, and Rancho Cordova Parkway, single family residential, and vacant land on the west.

The Project site is currently vacant and has been previously used for agricultural uses (cattle grazing). The topography of the site exhibits low relief topography with elevations ranging between 170 and 210 feet above mean sea level (MSL). The slopes throughout the site range from approximately zero to eight percent. The site is characterized by moderate rolling hills and areas of extensive flatlands, with wetlands, vernal pools, and seasonal drainage courses scattered throughout the site. A headwater tributary of Morrison Creek traverses the Project site, entering at the northeast corner and flowing generally to the southwest. A total of 21.53 acres of jurisdictional aquatic resources have been mapped with the Project site, including: 2.92 acres of depressional seasonal wetlands, 15.04 acres of vernal pools, 1.66 acres of riverine seasonal wetlands, 0.06 acres of riverine seasonal wet swales, 1.54 acres of intermittent drainages, and 0.30 acres of drainage basin outfalls.

The property is traversed by a 275-foot-wide utility easement occupied by a 230-kV Pacific Gas and Electric (PG&E) transmission line, one 230-kV SMUD transmission line, and one 69-kV SMUD sub-transmission line. No other public utilities (water, sewer, drainage) are located on site.

The Project's regional location is shown in Figure 2.0-1 and the Project area and site boundary are shown in Figure 2.0-2.

SURROUNDING LAND USES

The Project site is bound by the Sunridge Specific Plan to the north, east, and west, and by the SunCreek Specific Plan to the south and east. Land uses anticipated to the east and south of the Project site by the Sunridge Specific Plan and the SunCreek Specific Plan include low, medium, and high density residential uses, commercial mixed uses (retail, office, and retail professional), and neighborhood parks. Other land uses located nearby include new elementary, junior and senior high schools.

3.9.2 REGULATORY SETTING

STATE

Government Code

California Government Code Section 65300 et seq. establishes the obligation of cities and counties to adopt and implement general plans. The general plan is a comprehensive, long-term, and general document that describes plans for the physical development of a jurisdiction and of any land outside its boundaries that, in the jurisdiction's judgment, bears relation to its planning. The general plan addresses a broad range of topics, including, at a minimum, land use, circulation, housing, conservation, open space, noise, and safety. In addressing these topics, the general plan identifies the goals, objectives, policies, principles, standards, and plan proposals that support the jurisdiction's vision for the area. The general plan is a long-range document that typically addresses the physical character of an area over a 20-year period. Although the general plan serves as a blueprint for future development and identifies the overall vision for the planning area, it remains general enough to allow for flexibility in the approach taken to achieve the plan's goals.

The State Zoning Law (California Government Code Section 65800 et seq.) establishes that zoning ordinances, which are laws that define allowable land uses within a specific district, are required to be consistent with the general plan and any applicable specific plans. When amendments to the general plan are made, corresponding changes in the zoning ordinance may be required within a reasonable time to ensure the land uses designated in the general plan would also be allowable by the zoning ordinance (Government Code, Section 65860, subd. [c]).

California Public Utilities Commission General Order Number 95

General Order Number 95 sets for the rules for overhead electric line construction in California. The purpose of the rules is to formulate, for the State of California, requirements for overhead line

design, construction, and maintenance, the application of which will ensure adequate service and secure safety to persons engaged in the construction, maintenance, operation or use of overhead lines and to the public in general. These rules apply to all overhead electrical supply and communication facilities that come within the jurisdiction of this Commission, located outside of buildings, including facilities that belong to non-electric utilities.

Section III summarizes the requirements for all lines, including: design, construction and maintenance; inspection; avoidance of conflicts and crossings; cooperation to avoid conflicts; joint use of poles; abandoned liens; general arrangement of liens; ground and neutrals; foreign attachments; vegetation management; pole clearance from railroad tracks; minimum clearances of wires above railroads, thoroughfares, buildings, etc.; minimum clearance of wires from other wires; and minimum clearances of wires from signs.

LOCAL

SMUD Guide for Transmission Encroachment

SMUD's Guide for Transmission Encroachment (SMUD Transmission Guide), dated January 2013, was developed to streamline SMUD's plan review process, minimize potential negative impacts to SMUD's transmission facilities and easements, and increase public safety around transmission lines. Since conditions and requirements may vary between corridors, the SMUD Transmission Guide may be supplemented with additional requirements for a specific area, as SMUD deems necessary. The SMUD Transmission Guide addresses development, trails and parks, grading, roads, drainage, fences, structures, and vegetation allowed within transmission corridors and includes requirements for access and clearances.

PG&E Electric & Gas Service Requirements 2017-2018

The Pacific Gas and Electric (PG&E) Electric & Gas Service Requirements 2017-2018 (also-known-as the "Greenbook Manual") are designed to help applicants establish gas and electric service. By reading the mandates published in the manual, applicants will understand the steps required to apply for service and the legal and safety requirements driving those steps. PG&E provides the manual to all gas and electric applicants in an effort to ensure that the company can continue to deliver safe, uniform service. The manual is a collection of requirements and policies for establishing electric and gas service to new or remodeled installations. The Greenbook Manual restricts development and landscaping where PG&E transmission lines are located.

Sacramento Area Council of Governments

The Sacramento Area Council of Governments (SACOG) is an association of local governments from six counties and 22 cities within the Sacramento Region. The counties include El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba. SACOG is responsible for the preparation of, and updates to, the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) for the region and the corresponding Metropolitan Transportation Improvement Program (MTIP). The MTP/SCS

provides a 20-year transportation vision and corresponding list of projects. The MTIP identifies short-term projects (seven-year horizon) in more detail. The MTP/SCS was adopted by the SACOG board in 2016.

METROPOLITAN TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY

The MTP/SCS is a long-range plan that addresses land use, transportation improvements, air quality, and greenhouse gas emissions in the region. The MTP/SCS supports the Sacramento Region Blueprint, which implements smart growth principles, including housing choice, compact development, mixed-use development, natural resource conservation, use of existing assets, quality design and transportation choice. It also provides increased transportation options while reducing congestion, shortening commute times, and improving air quality. The plan is based on projections for growth in population, housing, and jobs. SACOG determines the regional growth projections by evaluating baseline data (existing housing units and employees, jobs/housing ratio, and percent of regional growth share for housing units and employees), historic reference data (based upon five- and ten-year residential building permit averages and historic county-level employment statistics), capacity data (General Plan data for each jurisdiction), and current MTP data about assumptions used in the most recent MTP/SCS.

Rancho Cordova General Plan

The Rancho Cordova General Plan establishes a land use development pattern that would consist of a series of walkable neighborhoods, villages, and districts. The City envisions that development would provide a mix of housing, jobs, commercial activities and services that would be connected through a series of streets and contiguous open space areas. The General Plan is intended to reinvent the City as a regional destination, providing a full range of retail services and entertainment venues (Rancho Cordova 2006).

GENERAL PLAN LAND USE MAP

The Land Use Map portrays the anticipated uses of land in and around Rancho Cordova through land use designations. The General Plan Land Use Map designates the Project site as Planning Area (General Plan Figure LU-5). The Planning Area figure (General Plan Figure LU-6) identifies the Project site as within the SunCreek/Preserve Planning Area. As shown on General Plan Figure LU-28, the Project site is envisioned as a Residential-Mixed Density (R-MD) community served by a Local Town Center (LTC) and Parks & Open Space (P/OS) uses with portions of the site preserved as Natural Resources (NR). The General Plan land uses surrounding the site include: Low Density Residential (LDR), Medium Density Residential (MDR), P/OS, Commercial Mixed Use (CMU), and Public/Quasi-Public (P/QP) to the north; Planning Area (SunCreek/Preserve Planning Area), LDR, MDR, CMU, P/OS, and P/QP to the east, Planning Area (SunCreek/Preserve Planning Area) to the south; and NR, LDR, P/QP, and High Density Residential (HDR) to the west. The General Plan land use designations for the Project site and surrounding lands are described as follows:

Low Density Residential. The LDR category represents the traditional single-family neighborhood with a majority of single-family detached homes. This is the predominant land use category of the City's neighborhoods.

Medium Density Residential. The MDR category is generally characterized by small lot single-family detached, single-family attached (e.g., town homes, condominiums, brownstones), and small apartment complexes. Medium Density development is often found as part of a village development.

High Density Residential. The HDR is the most urban residential category available. The predominant style of development is larger multi-family housing complexes, including apartments and condominiums. Vertical mixed-use projects with residential use are typically developed in the high-density category. Parking for these facilities is usually provided in traditional surface lots located around the complex. At higher densities, parking may be in a parking structure or underground.

Commercial Mixed Use. The CMU category encourages the integration of retail and service commercial uses with office and/or residential uses. In mixed-use projects, commercial use is the predominant use on the ground floor. Parking for mixed-use projects may be combined or separated, depending on the characteristics of the project. This listing may also include hospitals and other public/quasi-public uses

Public/Quasi-Public. The P/QP category covers a variety of public and other land uses, including land owned by the City and other public agencies. Possible uses include civic buildings; schools, colleges, and universities; religious institutions; hospitals; museums; cemeteries; and others. Most buildings in this category are high profile and prominent within the community. In order to meet future community needs, new development projects should include public/quasi-public sites for future, undetermined uses.

Local Town Center. The LTC category provides retail services, restaurant, and entertainment uses within a district as described in the City's building block concept. Typical uses include a combination of general retail, restaurant, office, and residential uses. This category may also include large retail stores, lodging, entertainment, public/quasi-public, and indoor and outdoor recreational facilities. Residential densities are medium to high in nature. Development is pedestrian friendly with gathering places for both daytime and nighttime activities

Residential-Mixed Density. The R-MD designation is intended to include the range of densities associated with typical neighborhood development.

Commercial Mixed Use. The CMU category encourages the integration of retail and service commercial uses with office and/or residential uses. In mixed-use projects, commercial use is the predominant use on the ground floor. Parking for mixed-use projects may be combined or separated, depending on the characteristics of the project. This listing may also include hospitals and other public/quasi-public uses.

Parks and Open Space. Land within the P/OS category is designed to be used for both active and passive recreational activities, such as parks, lakes, golf courses, and trails. Typically, parklands are under the jurisdiction of the Cordova Recreation and Park District; however, they may be commercial recreational facilities that are principally oriented toward outdoor uses. Typically, public open space lands will be administered by the City, but may be held in either public or private ownership. Land within this category may also be used for detention basins, creek ways, and other more passive uses when collocated next to active recreational uses or when open spaces serve two uses, such as a ball field in the summer and a detention basin in the winter.

Natural Resources. Land within the NR category is set aside as natural habitat and typically has no urban development on it. Often, open space trails will be sited adjacent to NR areas.

SunCreek/Preserve Planning Area. The General Plan indicates that the SunCreek Specific Plan was adopted for the southern portion and the Preserve at Sunridge application (now The Ranch) covers the northern portion of the SunCreek/Preserve Planning Area. This Planning Area would contain a mix of low, medium and high density residential units in a series of approximately 12 walkable neighborhoods served by local and community parks, neighborhood and village centers, schools and other public/quasi-public uses. The Planning Area includes a local town center development south of the intersection of Chrysanthy Boulevard and Rancho Cordova Parkway. The adopted and proposed plans also call for two or three commercial mixed-use developments, which are located along the major roadways of the Planning Area and facilitate use of the area's transit system. Actual location and opportunities for additional retail in the Project area will be determined with subsequent land planning. The Planning Area will also contain wetland preserves and creek/drainage corridors and provide connections to the City's open space and trail system, as well as a site for a combined high school and middle school campus. The General Plan also identifies conceptual circulation and transit plans for this area, as well as constraints associated with the aquatic resources present in the Planning Area.

GENERAL PLAN LAND USE POLICIES

General Plan goals and policies applicable to environmental issues associated with land use are summarized below. General Plan policies associated with specific environmental topics (aesthetics, air quality, biological resources, cultural resources, geology/soils, hazards, hydrology/water quality, housing, noise, parks, public services, transportation, utilities, etc.) are discussed in the relevant chapters of this EIR and a summary of the Project's consistency with General Plan policies and actions applicable to this individual development Project is summarized in Appendix G.

Goal LU.1: Achieve a balanced and integrated land use pattern throughout the community.

Policy LU.1.1: Utilize and maintain the Land Use Map to designate the location and extent of each land use designation within the Planning Area.

Policy LU.1.3: Maintain a strong jobs-housing ratio, with a diverse job base and corresponding housing stock, within the Planning Area. Improve the relationship and proximity of jobs to housing and commercial services.

Policy LU.1.4: Promote high quality, efficient, and cohesive land utilization that minimizes negative impacts (e.g., traffic congestion and visual blight) and environmental hazards (e.g. flood, soil instability) on adjacent neighborhoods and infrastructure and preserve existing and future residential neighborhoods from encroachment of incompatible activities and land uses.

Policy LU.1.5: Maintain consistency between the land use categories of this General Plan and the City Zoning Code.

Policy LU.1.6: Ensure adequate provisions for development of civic uses (public/quasi-public uses).

Policy LU.1.7: Promote higher density and intensity land uses that support transit within one-half mile of major transit stations. Development should be pedestrian- and transit-friendly with direct connections to transit. Large, expansive parking fields that separate the retail from the station are prohibited.

Policy LU.1.8: While agricultural uses are anticipated to be phased out within the City limits, the City recognizes the right of these uses to continue as long as their individual owners/farmers desire.

Goal LU.2: Establish growth patterns based on smart growth principles and the City building blocks concept.

Policy LU.2.1: Ensure future land use and growth within the Planning Area adheres to the City's nine smart growth principles, as described in this Element.

Policy LU.2.2: Promote new development and redevelopment in accordance with the building blocks concepts of neighborhoods, villages, and districts.

Policy LU.2.3: Encourage the clustering of similar uses into areas or districts that have common needs and that are compatible with one another, in order to maximize their efficiency and identity for Rancho Cordova. Uses to consider clustering include the following:

- Entertainment area (Performing Arts Center, local theaters, and studios);
- Sports/recreation facilities (e.g. bowling alleys and major sports facilities);
- Hospitals and other care facilities;
- Youth activity centers;
- Amphitheatres; and
- Regional shopping opportunities.

Policy LU.2.4: Use Community Plans, Specific Plans, and development projects to promote pedestrian movement via direct, safe, and pleasant routes that connect destinations inside and outside the plan or project area.

Policy LU.2.5: Phase growth based on infrastructure capacity, infrastructure financing, and the timing of the design, approval/permitting, and construction of transportation facilities and other infrastructure.

Policy LU.2.6: Discourage the over concentration of retail shopping facilities in a single location in order to ensure neighborhood services are distributed and integrated into the City's neighborhoods and that market demand is met without diminish the viability of nearby commercial properties with the same customer base.

Policy LU.2.7: Promote sustainable development that reduces the impact of projects on energy, water, and transportation systems. Encourage sustainable development to occur in ways that complement the built form.

Goal LU.6: Ensure development of the Planning Areas consistent with the City's vision.

Policy LU.6.2: Ensure subsequent detailed land planning for those Planning Areas with Conceptual Land Plans.

City of Rancho Cordova Zoning Code

The Project site is currently zoned Agricultural 80 (AG80) by the Rancho Cordova Zoning Map. The Project is requesting a rezone to The Ranch Special Planning Area (SPA).

SPECIAL PLANNING AREA

A special planning area is a land use zone and implementing document that allows for the development of unique and imaginative projects that are otherwise not possible under the current provisions of the zoning code or to protect unique environmental, historic, architectural, and other features that require special consideration. A special planning area may be adopted to accomplish the following:

- A. Protect a unique environmental, historical, architectural, or other significant site feature that cannot be adequately protected by adoption of another land use zone.
- B. Allow the development of an exceptional project design that cannot be built under an existing zoning district or due to constraints of existing development standards.

The council may approve or approve with conditions an application for a special planning area after finding all of the following. If the council does not make all of these findings, the special planning area shall not be approved.

- A. The proposed special planning area is consistent with the goals, policies, and objectives of the General Plan.

- B. The proposed special planning area meets the requirements set forth in Chapter 23.149.
- C. The special planning area is needed because the project is not possible under the existing zoning requirements.

SunCreek Specific Plan

The SunCreek Specific Plan land uses adjacent to the Project site include: High Density Residential (HDR), Medium Density Residential (MDR), Village Center (VC), Public/Quasi-Public (P/QP), Wetland, Wetland Buffer/Trail/Open Space, and Detention Basin to the east; and Low Density Residential (LDR), MDR, HDR, VC, Wetland Buffer/Trail/Open Space, and Wetland to the south. The SunCreek Specific Plan land use designations for the surrounding lands are described as follows:

Low Density Residential. The LDR category includes dwelling units in configurations up to six dwelling units per gross acre (exclusive of open space and adjacent collector streets). The density range allows substantial flexibility in selecting dwelling unit types and parcel configurations to suit particular site conditions and housing needs.

Medium Density Residential. The MDR category will provide a mix of housing types and densities ranging from 6.1 to 12 dwelling units per gross acre. MDR includes single-family homes, duplexes and half-plexes, court housing, garden apartments, townhouses and condominiums. The most typical housing type will be small lot single-family detached, single-family attached (e.g., town homes, condominiums, brownstones), and small apartment complexes. The density range allows substantial flexibility in selecting dwelling unit types and parcel configurations to suit particular site conditions and housing needs.

High Density Residential. The HDR development includes apartments and condominiums at densities of 26 to 40 dwelling units per acre. In order to be compliant with current state law regarding Regional Housing Needs Allocation (RHNA) requirements ensuring the availability of adequate high density zoned land, all High Density Residential acres in the SunCreek Specific plan area are designated as RHNA acres. The builder/developer must receive written authorization from the City to build at densities less than 26 units to the acre. With this authorization, High Density development may achieve as low as 18.1 dwelling units per acre where sites are constrained by size, configuration, access, parking standards, open space standards and other factors reflecting the actual market for multi-family housing.

Village Center. The VC category provides retail services, restaurant, entertainment and office employment uses as described in the City's building block concept. The VC areas serve the daily shopping needs of residents and may include small- and medium-size grocery stores, drug stores, restaurants, banks, and other similar uses. Development is pedestrian friendly with gathering places for both daytime and nighttime activities.

Public/Quasi-Public. The P/QP category includes a variety of public and other land uses, including land owned by the City and other public agencies. Possible uses include civic buildings; schools, colleges, and universities; religious institutions; hospitals; museums; cemeteries; and others.

Note that the SunCreek Specific Plan does not contain descriptions for the Wetland Buffer/Trail/Open Space and Wetland land use categories as these areas are permanent open space which do not allow for urban development.

South Sacramento Habitat Conservation Plan

The South Sacramento County Habitat Conservation Plan (SSHCP) is a regional effort that provides development and infrastructure projects with streamlined, predictable federal and state permitting processes while creating a Preserve System to protect habitat, open space, and agricultural lands. The SSHCP allows project proponents within the SSHCP Area to simplify and expedite the state and federal Endangered Species Act (ESAs) permitting process. In addition to streamlining the ESAs permitting processes, a separate but parallel multi-tiered permitting program has been developed to streamline Clean Water Act Section 404 and 401 permitting process and a Master Streambed Alteration Agreement will be prepared to address Section 1602 of the California Fish and Game Code. The SSHCP allows Sacramento County (the County), the City of Rancho Cordova, City of Galt, Sacramento County Water Agency, and the Southeast Connector Joint Powers Authority (collectively referred to as the Plan Permittees) to receive an Incidental Take Permit (ITP) for activities and projects they conduct. In addition, the three local Land Use Authority Permittees (the County, Galt, and Rancho Cordova) have the ability to extend incidental take coverage provided by the SSHCP ITPs to activities and projects implemented by Third-Party Project Proponents that are under the jurisdiction of that Land Use Authority Permittee. This will allow Third-Party Project Proponents to avoid the extensive negotiation and processing currently required to obtain individual project permits under the CESA from the CDFW and project ESA compliance from the USFWS.

The SSHCP Area (317,655 acres) is located in the southern portion of Sacramento County. The SSHCP Area includes portions of unincorporated Sacramento County, Galt, and the southern half of Rancho Cordova.

The SSHCP Conservation Strategy mitigates to the maximum extent practicable the impacts of Covered Activities, including all direct and indirect impacts on Covered Species and their habitats. The SSHCP Conservation Strategy provides for conservation of 28 Covered Species and 17 land cover types, avoids or minimizes impacts of Covered Activities, mitigates for the impacts of Covered Activities on the Covered Species and their habitats on the basis of species and habitat needs, provides a regional approach to the mitigation of impacts and the conservation of species and their habitats, protects wetlands and waters of the Plan Area, conserves natural communities in the Plan Area, and provides take authorization for the 28 Covered Species, with the exception that direct injury or mortality of white-tailed kite and greater sandhill crane is not covered by the ITP and the SSHCP plans for full avoidance and protection of all slender Orcutt grass and Sacramento Orcutt grass occurrences.

The SSHCP includes Avoidance and Minimization Measures (AMMs) as conditions on Covered Activities. Each condition contains several AMMs that are intended to eliminate or reduce direct or indirect effects to species that could result from implementation of a Covered Activity. In addition,

the SSHCP provides species-specific take and avoidance measures to avoid or minimize effects of Covered Activities on specific SSHCP Covered Species. Species-specific AMMs include species surveys, preconstruction surveys, and construction monitoring.

The Rancho Cordova City Council adopted the SSHCP in October 2018.

3.9.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the Project will have a significant impact on land use and planning if it will:

- Physically divide an established community; and/or
- 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.

As discussed in the Initial Study, the Project includes development of residential, commercial, parks, and open space uses, including a natural resource preserve. The site is currently undeveloped and surrounded by existing and planned residential and other urban uses. The Project is consistent with the surrounding uses and would not physically divide an established community. Therefore, impacts associated with division of an established community would be *less than significant*. This issue will not be addressed further.

IMPACTS AND MITIGATION MEASURES

Impact 3.9-1: Implementation of the Project would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project adopted to avoid or mitigate an environmental effect (Less than Significant with Mitigation)

RANCHO CORDOVA GENERAL PLAN

The Rancho Cordova General Plan currently designates the Project site as the SunCreek/Preserve Planning Area. As part of the Project, the applicant is requesting a General Plan Amendment to establish specific General Plan land use designations, LDR, MDR, HDR, C, P/OS, and NR in order to implement the General Plan's land use concept for the Project's portion of the SunCreek/Preserve Planning Area.

The LDR category in the General Plan establishes a density of between 2.1 and 6.0 dwelling units per acre. At a density of approximately 3.50 units per acre (112 units on 31.98 acres), the proposed low density portion of the Project complies with the City's existing General Plan LDR levels. The MDR category in the General Plan establishes a density of between 6.1 and 18.0 dwelling units per acre. At a density of approximately 6.34 units per acre (1,360 units on 214.36 acres), the proposed medium density portion of the Project complies with the City's existing General Plan MDR levels. The HDR category in the General Plan establishes a density of between 18.0 and 40.0 dwelling units

per acre. At a density of approximately 30.0 units per acre (253 units on 8.43 acres), the proposed high density portion of the Project complies with the City's existing General Plan HDR designation.

In evaluating the proposed General Plan amendments for potential environmental impacts related to consistency with land use plans, policies, and regulations, several General Plan policies must be examined for consistency.

The Project is consistent with General Plan policies related to land use, including those identified above under the Regulatory Setting. The Project is consistent with Land Use Policy LU.1.3 by providing a town center job base and corresponding housing stock in proximity to commercial services. The proposed development keeps with the building block concepts of neighborhoods, villages, and districts consistent with Goal LU UD.1 and Policy UD.1.1. The Project is also consistent with Economic Development Policy ED.1.8 and Housing Policies H.1.1 and H.1.3 as the Project would provide a mix of residential unit types and sizes. The Project does not propose growth beyond the areas envisioned for urbanization on the Rancho Cordova General Plan Land Use Map and is consistent with the capacity of the site envisioned by the General Plan (a maximum of 9,263 dwelling units and 1,331 employees in the 1,762-acre planning area).

The Project is consistent with Natural Resources goals, policies, and actions that implement Goals NR.1, NR.2, and NR.3 which aim to protect special-status species and habitat in accordance with state and federal law and preserve and maintain creek corridors and wetland preserves with useable buffer zones throughout the new development areas as feasible. The Project would preserve approximately 199.5 acres as a wetland preserve that would be deeded to a third-party conservation entity. The Project includes approximately 14.8 acres of existing aquatic resources, including 1.85 acres of depressional seasonal wetlands, 9.97 acres of vernal pools, 1.15 acres of riverine seasonal wetlands, 1.53 acres of intermittent drainages, and 0.30 acres of drainage basin outfalls. The wetland preserve runs the length of the Project and would provide for connectivity with lands designated to be preserved as Natural Resources as shown on General Plan Figure LU-5. The Project applicant would incorporate protections for the preservation of wetland resources within the preserve, including preserve fencing, long-term funding and management of the preserve in perpetuity, and protection of the preserve from drainage and runoff generated from development areas through the construction of several detention basins throughout the site.

Land Use Policy LU.2.3 states that the clustering of similar uses into areas or districts that have common needs and that are compatible with one another should be encouraged, in order to maximize their efficiency and identity for Rancho Cordova. The Project includes clustered residential and mixed use areas in order to maintain the important aquatic and open space resources on the Project site.

The proposed general plan amendment will ensure the Project's consistency with the City's General Plan requirements. This is considered a ***less than significant*** impact and no mitigation is required.

ZONING CODE

Current zoning for the Project site is AG80. The applicant is requesting a rezone to SPA. The Ranch SPA zoning will establish development standards and design guidelines to ensure quality and consistency in the design and implementation of the Project. The SPA document is regulatory in nature and will serve as zoning for the Project site. Development plans, subdivision maps, and site plans for the Project must be consistent with both the SPA and the City of Rancho Cordova General Plan. With the requested rezone and required SPA consistency, the Project would be consistent with the City's Zoning Code and this impact would be *less than significant*.

METROPOLITAN TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY

The MTP/SCS provides a long-term regional plan for growth that is intended to address transportation, growth, air quality, and sustainability in the region. As discussed under Impact 3.6-3, the Project is designated with the Developing Community place type and is referred to as the "Ranch at Sunridge" in the MTP/SCS. The Project is consistent with the general uses envisioned for the site in the MTP/SCS. The proposed average net residential density (10 units/acre) meets SACOG's MTP/SCS consistency requirements, which include the requirement that projects located in a Developing Community meet or exceed the average net density described for the specific Development Community, as it exceeds with the average net density of 7 units/acre described for the the Ranch at Sunridge (MTP/SCS Appendix E-3, p. 137). The area proposed for residential development is less than initial plans for the site due to significant preservation of open space and wetland resources, which is consistent with the environmental principles of the SCS. Employment-generating uses include the proposed senior clubhouse, commercial parcel, multi-family parcels, and parks and recreation uses, and are consistent with the commercial and public uses envisioned by the MTP/SCS (MTP/SCS Appendix E-3, p. 137). A SPA Handbook has been prepared for the Project, which acts in a similar capacity to a Specific Plan, and is consistent with the MTP/SCS. The Project provides for a high level of bicycle and pedestrian connectivity throughout the Project site, including non-auto connections to the parks, open space, and trails features of the Project. An open space and wetland preserve area is provided, preserving wetlands and aquatic resources on the site. A range of housing types (including single family market rate and senior units at a range of densities and lot sizes, senior congregate care units, and multifamily units) will serve a broad spectrum of households. As described in Sections 3.2, Air Quality, 3.6, Greenhouse Gases and Energy, and 3.13, Transportation and Circulation, of this Draft EIR, comprehensive features and measures are provided by the Project to reduce GHG emissions, including use of renewable energy for the residential component of the Project, an EV charging network, and use of energy-efficient and water-conserving building and design practices. The Project does not conflict with the MTP/SCS. This is considered a *less than significant* impact and no mitigation is required.

ELECTRICAL TRANSMISSION LINE REGULATIONS

The applicable electrical transmission line regulations include the NESC, General Order Number 95, PGE's Electric & Gas Service Requirements, and the SMUD Transmission Guide. The property is traversed by a 275-foot-wide utility easement occupied by a 230-kV PG&E transmission line, one 230-kV SMUD transmission line, and one 69-kV SMUD sub-transmission line. The lines run from the

northeastern portion of the site to the southwestern portion of the site. See Figure 2.0-4 in Chapter 2.0 for the site plan which shows the easement. The majority of the proposed urban uses would not be located in the immediate vicinity of these transmission lines because the proposed preserve, open space, or park areas would be located within the utility easement area.

The Project would provide underground electrical infrastructure. SMUD and PG&E would continue to be responsible for the operation and maintenance of the current transmission lines, consistent with the NESC and General Order Number 95. The development of the proposed underground facilities would be completed consistent with PG&E's Electric & Gas Service Requirements and SMUD's Transmission Guide.

The Project includes various open space features that would be located under the existing SMUD and PG&E transmission lines. SMUD considers pedestrian trails, bicycle trails, equestrian trails, and recreational parks and sports fields to be acceptable secondary uses within its transmission easements provided that these improvements are designed and constructed so as not to impact SMUD's ability to enjoy its full rights within its easement. The SMUD Transmission Guide addresses development, trails and parks, grading, roads, parking, drainage, fences, structures, and vegetation allowed within transmission corridors and includes requirements for access and clearances. Once the proposed electrical infrastructure is developed, SMUD would be allowed access to the facilities for operation and maintenance. The PG&E's Electric & Gas Service Requirements does not allow trees to be planted within the transmission line right-of-way, but does allow grass and shrubs, as well as small trees outside of the right-of-way. The Project applicant would be responsible for ensuring that development of the facilities, including providing appropriate fencing, structures, and vegetation, is completed consistent with the SMUD Transmission Guide and the PG&E Electric & Gas Service Requirements. A tree planting plan and/or park plan has not been completed for the Project. Mitigation Measure 3.9-1 requires compliance with the requirements for the SMUD Transmission Guide to ensure that the proposed park and landscaped areas comply with the requirements. With implementation of Mitigation Measure 3.9-1, the Project would be consistent with the applicable electrical transmission line regulations.

PLANS, POLICIES, AND REGULATIONS ADOPTED TO ADDRESS OTHER IMPACTS

The Project's consistency with applicable federal, state, and local plans, policies, and regulations associated with aesthetics, air quality, biological resources, cultural and tribal cultural resources, geology and soils, greenhouse gases and energy, hazards and hazardous materials, hydrology and water quality, noise, public services and recreation, transportation and circulation, and utilities are addressed in the respective sections of this Draft EIR.

CONCLUSION

Overall, the Project would be consistent with the land use plans, policies, and regulations adopted to address environmental impacts, including the Rancho Cordova General Plan, the City's Zoning Code, and the MTP/SCS. However, mitigation would be required to ensure the Project is consistent with the SMUD Transmission Guide and the PG&E Electric and Gas Service Requirements. With implementation of Mitigation Measure 3.9-1, the Project will have a *less than significant* impact.

MITIGATION MEASURE(S)

Mitigation Measure 3.9-1: *The proposed open space areas located under the SMUD transmission line that traverses the site shall be designed and maintained in accordance with SMUD's Guide for Transmission Encroachment. According to the Guide, certain improvements, for safety and liability reasons, are typically not allowed within transmission corridors. These include, but not limited to the following:*

- *Buildings or structures;*
- *Covered parking;*
- *Excavation, elevation or grade changes;*
- *Light Standards over 15' tall;*
- *Parallel Utilities;*
- *Playground Equipment;*
- *Stockpiling of materials;*
- *Storage of combustibles;*
- *Swimming pools, spas, gazebos, etc.;*
- *Tall tree species (over 15' at maturity);*
- *Trash enclosures; and*
- *Water Detention and/or Retention Basins.*

The proposed open space areas located under the PG&E transmission line that traverses the site shall be designed and maintained in accordance with the PG&E Electric and Gas Service Requirements.

Future improvement plans that include the transmission lines shall be consistent with the items outlined in Chapter 5, Trails and Parks, of the Guide, as well as other applicable Chapters. This requirement shall be noted on the Project improvement plans, subject to review and approval by the City of Rancho Cordova.

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This section provides a general description of the existing noise sources in the Project vicinity, a discussion of the regulatory setting, and identifies potential noise impacts associated with the Project. Project impacts are evaluated relative to applicable noise level criteria and to the existing ambient noise environment. Mitigation measures have been identified for significant noise-related impacts.

The Cordova Recreation & Park District submitted a comment the public review period for the Notice of Preparation on August 3, 2018. The comment related to noise is addressed within this section.

3.10.1 ENVIRONMENTAL SETTING

KEY TERMS

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given area consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of noise.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, defined as ten times the logarithm of the ratio of the sound pressure squared over the reference pressure squared.
CNEL	Community noise equivalent level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic acoustic signal, expressed in cycles per second or Hertz.
Impulsive	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
L_{dn}	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
L_{eq}	Equivalent or energy-averaged sound level.
L_{max}	The highest root-mean-square (RMS) sound level measured over a given period of time.
L_(n)	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L ₅₀ is the sound level exceeded 50 percent of the time during the one-hour period.
Loudness	A subjective term for the sensation of the magnitude of sound.
Noise	Unwanted sound.
SEL	Sound exposure levels. A rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy into a one-second event.

FUNDAMENTALS OF ACOUSTICS

Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second or Hertz (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels, but are expressed as dB, unless otherwise noted.

The decibel scale is logarithmic, not linear. In other words, two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound, and twice as loud as a 60-dBA sound.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}), which corresponds to a steady-state A weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The L_{eq} is the foundation of the composite noise descriptor, L_{dn} , and shows very good correlation with community response to noise.

The day/night average level (L_{dn}) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, it tends to disguise short-term variations in the noise environment. CNEL is similar to L_{dn} , but includes

a +5-dB penalty for evening noise. Table 3.10-1 lists several examples of the noise levels associated with common situations.

TABLE 3.10-1: TYPICAL NOISE LEVELS

<i>COMMON OUTDOOR ACTIVITIES</i>	<i>NOISE LEVEL (DBA)</i>	<i>COMMON INDOOR ACTIVITIES</i>
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft)	--100--	
Gas Lawn Mower at 1 m (3 ft)	--90--	
Diesel Truck at 15 m (50 ft), at 80 km/hr (50 mph)	--80--	Food Blender at 1 m (3 ft) Garbage Disposal at 1 m (3 ft)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft)	--70--	Vacuum Cleaner at 3 m (10 ft)
Commercial Area Heavy Traffic at 90 m (300 ft)	--60--	Normal Speech at 1 m (3 ft)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

SOURCE: CALTRANS, TECHNICAL NOISE SUPPLEMENT, TRAFFIC NOISE ANALYSIS PROTOCOL. SEPTEMBER 2013.

EFFECTS OF NOISE ON PEOPLE

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction;
- Interference with activities such as speech, sleep, and learning; and
- Physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual’s past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a 1 dBA change cannot be perceived;
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference;
- A change in level of at least 5-dBA is required before any noticeable change in human response would be expected; and

3.10 NOISE

- A 10-dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of approximately 6 dB per doubling of distance from the source, depending on environmental conditions (i.e. atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

EXISTING NOISE AND VIBRATION ENVIRONMENTS

Existing and Surrounding Land Uses

North: The Sunridge Park Village residential area is located directly north of the Project site, south of Douglas Road and east of Sunrise Boulevard. A mix of industrial uses and additional residential communities are located north of Douglas Road.

East: The land directly to the east of the Project site is vacant.

South: The land directly to the south of the Project site is vacant.

West: The Anatolia and Anatolia Village residential areas are located directly to the west of the Project site. Another residential community is also under construction along with Rancho Cordova Parkway, which is being extended from Douglas Road to Chrysanthy Boulevard.

Existing Ambient Noise Levels

To quantify the existing ambient noise environment in the Project vicinity, short-term and continuous (24-hour) noise level measurements were conducted on the Project site on August 28th and 29th, 2018. The noise measurement locations are shown on Figure 3.10-1. The noise level measurement survey results are provided in Table 3.10-2. Appendix A of Appendix H shows the complete results of the noise monitoring survey.

TABLE 3.10-2: SUMMARY OF EXISTING BACKGROUND NOISE MEASUREMENT DATA

SITE	LOCATION	DATE/TIME	L _{DN}	AVERAGE MEASURED HOURLY NOISE LEVELS, DB					
				DAYTIME (7AM-10PM)			NIGHTTIME (10PM-7AM)		
				L _{EQ}	L ₅₀	L _{MAX}	L _{EQ}	L ₅₀	L _{MAX}
Continuous (24-hour) Noise Level Measurements									
LT-1	31 ft. from centerline of Rancho Cordova Pkwy.	08/28/18 - 08/29/18	52	51	40	72	44	34	63
LT-2	North boundary of Project site, behind 12368 Pawcatuk Way	08/28/18 - 08/29/18	45	44	37	61	38	35	50
Short-Term Noise Level Measurements									
ST-1	140 ft. from centerline of Rancho Cordova Pkwy.	08/28/18 10:58 AM	NA	53	49	64	Construction to west is primary noise source.		

SOURCE: SAXELBY ACOUSTICS, 2019.

The sound level meters were programmed to collect hourly noise level intervals at each site during the survey. The maximum value (L_{max}) represents the highest noise level measured during an interval. The average value (L_{eq}) represents the energy average of all of the noise measured during an interval. The median value (L_{50}) represents the sound level exceeded 50 percent of the time during an interval.

Larson Davis Laboratories (LDL) Model 820, Model 812, and Model 831 precision integrating sound level meters were used for the ambient noise level measurement survey. The meters were calibrated before and after use with an LDL Model CAL200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

Existing Traffic Noise Environment at Off-Site Receptors

To predict existing noise levels due to traffic, the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. The model is based upon the Calveno reference noise emission factors for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA model was developed to predict hourly L_{eq} values for free-flowing traffic conditions.

Traffic volumes for existing conditions were obtained from the traffic data prepared for the Project (Kimley-Horn, 2018). Truck percentages and vehicle speeds on the local area roadways were estimated from field observations.

Traffic noise levels are predicted at the sensitive receptors located at the closest typical setback distance along each Project-area roadway segment. Where traffic noise barriers are predominately along a roadway segment, a -5 dB offset was included in the noise prediction model to account for various noise barrier heights. A -5 dB offset was also applied where outdoor activity areas are shielded by intervening buildings. In some locations, sensitive receptors may be located at distances which vary from the assumed calculation distance and may experience shielding from intervening barriers or sound walls. However, the traffic noise analysis is believed to be representative of the majority of sensitive receptors located closest to the Project-area roadway segments analyzed in this report.

Table 3.10-3 shows the existing traffic noise levels in terms of L_{dn} at closest sensitive receptors along each roadway segment. A complete listing of the FHWA Model input data is contained in Appendix B of Appendix H.

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TABLE 3.10-3: EXISTING TRAFFIC NOISE LEVELS

ROADWAY	SEGMENT	EXTERIOR TRAFFIC NOISE LEVEL, DB L _{DN}
Jackson Rd.	Bradshaw Rd. to Excelsior Rd.	67.4
Jackson Rd.	Excelsior Rd. to Eagles Nest Rd.	67.1
Jackson Rd.	Eagles Nest Rd. to Sunrise Blvd.	66.1
Jackson Rd.	Sunrise Blvd. to Grant Line Rd.	67.1
Excelsior Rd.	Kiefer Blvd. to Jackson Rd.	60.0
Kiefer Blvd.	Grant Line Rd. to Jackson Rd./SR-16	55.1
International Dr.	Zinfandel Dr. to Sunrise Blvd.	65.2
Mather Blvd.	Femoyer St. to Douglas Rd.	58.1
Douglas Rd.	Mather Blvd. to Sunrise Blvd.	66.3
Douglas Rd.	Sunrise Blvd. to Grant Line Rd.	61.0
White Rock Rd.	Zinfandel Dr. to Sunrise Blvd.	65.3
White Rock Rd.	Sunrise Blvd. to Grant Line Rd.	60.9
White Rock Rd.	Grant Line Rd. to Prairie City Rd.	67.3
Mather Field Rd.	Folsom Blvd. to US 50 WB Ramp	65.7
Mather Field Rd.	US 50 WB Ramp to US 50 EB Ramp	68.7
Mather Field Rd.	US 50 to International Dr.	69.5
Zinfandel Dr.	Folsom Blvd. to US 50 WB	57.0
Zinfandel Dr.	US 50 to White Rock Rd.	66.6
Zinfandel Dr.	White Rock Rd. to International Rd.	65.8
Zinfandel Dr.	International Rd. to Douglas Rd.	59.6
Sunrise Blvd.	US 50 WB Ramp to US 50 EB Ramp	64.3
Sunrise Blvd.	US 50 to Folsom Blvd.	67.1
Sunrise Blvd.	Folsom Blvd. to White Rock Rd.	69.4
Sunrise Blvd.	White Rock Rd. to Douglas Rd.	69.3
Sunrise Blvd.	Douglas Rd. to Jackson Rd.	64.6
Sunrise Blvd.	Jackson Rd. to Grant Line Rd.	66.8
Grant Line Rd.	White Rock Rd. to Douglas Rd.	69.8
Grant Line Rd.	Douglas Rd. to Jackson Rd.	64.7
Grant Line Rd.	Jackson Rd. to Sunrise Blvd.	64.3

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM KIMLEY HORN AND SAXELBY ACOUSTICS. 2019.

3.10.2 REGULATORY SETTING

FEDERAL

There are no federal regulations related to noise that apply to the Project.

STATE

California Environmental Quality Act

The California Environmental Quality Act (CEQA) Guidelines, Appendix G, indicate that a significant noise impact may occur if a project exposes persons to noise or vibration levels in excess of local general plans or noise ordinance standards, or cause a substantial permanent or temporary increase in ambient noise levels. CEQA standards are discussed more below under the Thresholds of Significance section.

California State Building Code

The State Building Code, Title 24, Part 2 of the State of California Code of Regulations establishes uniform minimum noise insulation performance standards to protect persons within new buildings which house people, including hotels, motels, dormitories, apartment houses and dwellings other than single-family dwellings. Title 24 mandates that interior noise levels attributable to exterior sources shall not exceed 45 dB L_{dn} or CNEL in any habitable room.

Title 24 also mandates that for structures containing noise-sensitive uses to be located where the L_{dn} or CNEL exceeds 60 dB, an acoustical analysis must be prepared to identify mechanisms for limiting exterior noise to the prescribed allowable interior levels. If the interior allowable noise levels are met by requiring that windows be kept closed, the design for the structure must also specify a ventilation or air conditioning system to provide a habitable interior environment

Rancho Cordova General Plan

The Rancho Cordova General Plan Noise Element includes the following goals, policies, and actions regarding noise that are applicable to the Project:

NOISE ELEMENT - GOALS AND POLICIES

Goal N-1: Ensure that all new development will be free of noise disturbances.

Policy N-1.1: Establish standards and policies consistent with those in Tables N-1 and N-2 to govern maximum sound levels in new development.

Policy N-1.2: Ensure that the indoor and outdoor areas of new projects will be located, constructed, and/or shielded from noise sources in compliance with the City's noise standards to the maximum extent feasible.

Policy N-1.7: To the extent feasible and appropriate, the City shall require the use of temporary construction noise control measures for public and private projects that may include the use of temporary noise barriers, temporary relocation of noise-sensitive land uses or other appropriate measures.

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NOISE ELEMENT - NOISE COMPATIBILITY STANDARDS

Table N-1 (Figure 3.10-2) of the General Plan shows the maximum allowable daytime and nighttime noise levels from non-transportation sources. Table N-2 (Figure 3.10-3) gives an overview of maximum interior and exterior traffic noise exposure for land use categories that are applied throughout the City.

FIGURE 3.10-2: GENERAL PLAN TABLE N-1: CITY NOISE STANDARDS – NOISE LEVEL PERFORMANCE STANDARDS FOR NEW PROJECTS AFFECTED BY OR INCLUDING NON-TRANSPORTATION NOISE SOURCES

Stationary Noise Source	Noise Level Descriptor	Daytime Maximum (7 a.m. to 10 p.m.)	Nighttime Maximum (10 p.m. to 7 a.m.)
Typical	Hourly Leq, dB	55	45
Tonal, impulsive, repetitive, or consist primarily of speech or music	Hourly Leq, dB	50	40

The City may impose noise level standards which are more or less restrictive than those specified above based upon determination of existing low or high ambient noise levels.

SOURCE: TABLE N-1 OF THE CITY OF RANCHO CORDOVA GENERAL PLAN NOISE ELEMENT

FIGURE 3.10-3: GENERAL PLAN TABLE N-2: MAXIMUM TRANSPORTATION NOISE EXPOSURE

Land Use	Outdoor Activity Areas ¹ Ldn/CNE L, dB	Interior Spaces	
		Ldn/CNEL, dB	Leq, dB ²
Residential	60 ³	45	--
Residential subject to noise from railroad tracks, aircraft overflights, or similar noise sources which produce clearly identifiable, discrete noise events (e.g., the passing of a single train)	60 ³	40 ⁵	--
Transient lodging	60 ⁴	45	--
Hospitals, nursing homes	60 ³	45	--
Theaters, auditoriums, music halls	--	--	35
Churches, meeting halls	60 ³	--	40
Office buildings	--	--	45
Schools, libraries, museums	--	--	45
Playgrounds, neighborhood parks	70	--	--

¹ Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use. Where it is not practical to mitigate exterior noise levels at patio or balconies of apartment complexes, a common area such as a pool or recreation area may be designated as the outdoor activity area.

² As determined for a typical worst-case hour during periods of use.

³ Where it is not possible to reduce noise in outdoor activity areas to 60 dB Ldn/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB Ldn/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

⁴ In the case of hotel/motel facilities or other transient lodging, outdoor activity areas such as pool areas may not be included in the project design. In these cases, only the interior noise level criterion will apply.

⁵ The intent of this noise standard is to provide increased protection against sleep disturbance for residences located near railroad tracks.

SOURCE: TABLE N-2 OF THE CITY OF RANCHO CORDOVA GENERAL PLAN NOISE ELEMENT

City of Rancho Cordova Municipal Code Chapter 6.68

Chapter 6.68 of the Rancho Cordova Municipal Code identifies performance standards for noise. The maximum exterior noise level for Residential Districts is set at 55 dBA. This standard is 5.0 dBA lower between 10:00 p.m. and 7:00 a.m. The following table from Section 6.68.070, subsection B (Figure 3.10-4) outlines allowable exterior noise standard exceedances in any one hour.

FIGURE 3.10-4: CITY OF RANCHO CORDOVA MUNICIPAL CODE. SECTION 6.68.070(B)

Cumulative Duration of the Intrusive Sound	Allowance Decibels
1. Cumulative period of 30 minutes per hour	0
2. Cumulative period of 15 minutes per hour	+ 5
3. Cumulative period of 5 minutes per hour	+10
4. Cumulative period of 1 minute per hour	+15
5. Level not to be exceeded for any time per hour	+20

SOURCE: TABLE N-2 OF THE CITY OF RANCHO CORDOVA GENERAL PLAN NOISE ELEMENT

The limits specified in subsection B are reduced by five dBA for noises which are impulsive or consist of speech or music. If the existing ambient noise level exceeds the first four categories in subsection B, then the allowable noise exterior limit shall be increased by five-dBA increments to encompass the ambient noise level.

Furthermore, the interior noise level in any residential dwelling unit located in a mixed-use building or development shall not exceed 45 dBA for a cumulative period of more than five minutes in any hour, 50 dBA for a cumulative period of more than one minute in any hour, or 55 dBA for any period of time. There is a slight reprieve in that the allowable noise limit shall be increased by five-dBA increments to encompass the ambient noise level if the existing ambient noise level exceeds the standard.

Exemptions to the interior and exterior noise standards are outlined in Section 6.68.090 of the City’s Municipal Code. A list of the exemptions is provided here:

- A. School bands, school athletic and school entertainment events;
- B. Outdoor gatherings, public dances, shows and sporting and entertainment events, provided said events are conducted pursuant to a license or permit by the city;
- C. Activities conducted on parks, public playgrounds and school grounds, provided such parks, playgrounds and school grounds are owned and operated by a public entity or private school;
- D. Any mechanical device, apparatus or equipment related to or connected with emergency activities or emergency work;
- E. Noise sources associated with construction, repair, remodeling, demolition, paving or grading of any real property, provided said activities do not take place between the hours

of 8:00 p.m. and 6:00 a.m. on weekdays and Friday commencing at 8:00 p.m. through and including 7:00 a.m. on Saturday; Saturdays commencing at 8:00 p.m. through and including 7:00 a.m. on the next following Sunday and on each Sunday after the hour of 8:00 p.m.; provided, however, when an unforeseen or unavoidable condition occurs during a construction project and the nature of the project necessitates that work in process be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work after 8:00 p.m. and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner;

- F. Noise sources associated with agricultural operations, provided such operations do not take place between the hours of 8:00 p.m. and 6:00 a.m.;
- G. All mechanical devices, apparatus or equipment which are utilized for the protection or salvage of agricultural crops during periods of adverse weather conditions or when the use of mobile noise sources is necessary for pest control;
- H. Noise sources associated with maintenance of residential area property, provided said activities take place between the hours of 6:00 a.m. and 8:00 p.m. on any day except Saturday or Sunday, or between the hours of 7:00 a.m. and 8:00 p.m. on Saturday or Sunday;
- I. Any activity, to the extent provisions of Chapter 65 of Title 42 of the United States Code and Articles 3 and 3.5 of Chapter 4 of Part 1 of Division 9 of the Public Utilities Code of the state of California preempt local control of noise regulations and land use regulations related to noise control of airports and their surrounding geographical areas, any noise source associated with the construction, development, manufacture, maintenance, testing or operation of any aircraft engine, or of any weapons system or subsystems which are owned, operated or under the jurisdiction of the United States, or any other activity to the extent regulation thereof has been preempted by state or federal law or regulation;
- J. Any noise sources associated with the maintenance and operation of aircraft or airports which are owned or operated by the United States. [Ord. 38-2007 § 1 (Exh. 1(E)); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 254 § 1 (part), 1976].

3.10.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the Project will have a significant impact related to noise if it will result in:

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- Generation of excessive groundborne vibration or groundborne noise levels.
- For a Project located within the vicinity of a private airstrip or 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, exposure of people residing or working in the area to excessive noise levels resulting from the proposed Project.

Determination of a Significant Increase in Noise Levels

The noise standards applicable to the Project include the relevant portions of the Rancho Cordova General Plan and the City's Municipal Code described in the Regulatory Framework Section above (Section 3.10.2), and the following standards. Generally, a project may have a significant effect on the environment if it will substantially increase the ambient noise levels for adjoining areas or expose people to severe noise levels. In practice, more specific professional standards have been developed. These standards state that a noise impact may be considered significant if it would generate noise that would conflict with local project criteria or ordinances, or substantially increase noise levels at noise sensitive land uses. The potential increase in traffic noise from the project is a factor in determining significance. Research into the human perception of changes in sound level indicates the following:

- A 3-dB change is barely perceptible,
- A 5-dB change is clearly perceptible, and
- A 10-dB change is perceived as being twice or half as loud.

A limitation of using a single noise level increase value to evaluate noise impacts is that it fails to account for pre-Project-noise conditions. Table 3.10-4 is based upon recommendations made by the Federal Interagency Committee on Noise (FICON) to provide guidance in the assessment of changes in ambient noise levels resulting from aircraft operations. The recommendations are based upon studies that relate aircraft noise levels to the percentage of persons highly annoyed by the noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, it has been accepted that they are applicable to all sources of noise described in terms of cumulative noise exposure metrics such as the L_{dn} .

TABLE 3.10-4: SIGNIFICANCE OF CHANGES IN NOISE EXPOSURE

<i>AMBIENT NOISE LEVEL WITHOUT PROJECT, L_{dn}</i>	<i>INCREASE REQUIRED FOR SIGNIFICANT IMPACT</i>
<60 dB	+5.0 dB or more
60-65 dB	+3.0 dB or more
>65 dB	+1.5 dB or more

SOURCE: FEDERAL INTERAGENCY COMMITTEE ON NOISE (FICON)

Based on the Table 3.10-4 data, an increase in the traffic noise level of 5 dB or more would be significant where the pre-Project noise levels are less than 60 dB L_{dn} , or 3 dB or more where existing noise levels are between 60 to 65 dB L_{dn} . Extending this concept to higher noise levels, an increase in the traffic noise level of 1.5 dB or more may be significant where the pre-Project traffic noise level exceeds 65 dB L_{dn} . The rationale for the Table 3.10-4 criteria is that, as ambient noise levels increase, a smaller increase in noise resulting from a project is sufficient to cause annoyance.

Vibration Standards

Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person’s perception to the vibration will depend on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities in inches per second. Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of peak particle velocities.

The City not have specific policies pertaining to vibration levels. However, vibration levels associated with construction activities and railroad operations are addressed as potential noise impacts associated with Project implementation.

Human and structural response to different vibration levels is influenced by several factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 3.10-5 indicates that the threshold for damage to structures ranges from 0.2 to 0.6 peak particle velocity in inches per second (in/sec p.p.v). 0.2 in/sec p.p.v. is considered a safe criterion that would protect against architectural or structural damage. The general threshold at which human annoyance could occur is noted as 0.1 in/sec p.p.v.

TABLE 3.10-5: EFFECTS OF VIBRATION ON PEOPLE AND BUILDINGS

PEAK PARTICLE VELOCITY		HUMAN REACTION	EFFECT ON BUILDINGS
MM/SEC.	IN./SEC.		
0.15-0.30	0.006-0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
2.0	0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
2.5	0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of “architectural” damage to normal buildings
5.0	0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of “architectural” damage to normal dwelling-houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize “architectural” damage
10-15	0.4-0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause “architectural” damage and possibly minor structural damage.

SOURCE: CALTRANS. TRANSPORTATION RELATED EARTHBOEN VIBRATIONS. TAV-02-01-R9601 FEBRUARY 20, 2002.

IMPACTS AND MITIGATION MEASURES

Impact 3.10-1: The Project may result in exposure of persons to or generation of substantial temporary or permanent increase in ambient noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies – Project Operation (Less than Significant)

EXTERIOR TRAFFIC NOISE IMPACTS – EXISTING RECEPTORS

To predict noise levels due to Project traffic, the FHWA Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. Traffic volumes for existing conditions were obtained from the traffic data prepared for the Project (Kimley-Horn, 2018). Truck percentages and vehicle speeds on the local area roadways were estimated from field observations.

Implementation of the Project would result in an increase in traffic volumes on the local roadway network, and consequently, an increase in noise levels from traffic sources along affected segments. Tables 3.10-6 and 3.10-7 show the predicted traffic noise level increases on the local roadway network for Existing, Existing plus Project, Cumulative No Project, and Cumulative plus Project conditions. The tables also show the criterion for a significant increase for each roadway segment, which varies depending on the Existing and Cumulative condition noise levels without the Project. Appendix B of Appendix H provides the complete inputs and results of the FHWA traffic noise modeling.

TABLE 3.10-6: EXISTING AND EXISTING PLUS PROJECT TRAFFIC NOISE LEVELS

ROADWAY	SEGMENT	NOISE LEVELS (L_{DN} , dB) AT NEAREST SENSITIVE RECEPTORS				
		EXISTING	EXISTING + PROJECT	CHANGE	CRITERION 1	SIGNIFICANT?
Jackson Rd.	Bradshaw Rd. to Excelsior Rd.	67.4	67.4	0.0	+1.5 dB	No
Jackson Rd.	Excelsior Rd. to Eagles Nest Rd.	67.1	67.2	0.1	+1.5 dB	No
Jackson Rd.	Eagles Nest Rd. to Sunrise Blvd.	66.1	66.2	0.1	+1.5 dB	No
Jackson Rd.	Sunrise Blvd. to Grant Line Rd.	67.1	67.2	0.1	+1.5 dB	No
Excelsior Rd.	Kiefer Blvd. to Jackson Rd.	60.0	60.0	0.0	+3 dB	No
Kiefer Blvd.	Grant Line Rd. to Jackson Rd./SR-16	55.1	55.1	0.0	+5 dB or > 60 dB	No
International Dr.	Zinfandel Dr. to Sunrise Blvd.	65.2	66.1	0.9	+1.5 dB	No
Mather Blvd.	Femoyer St. to Douglas Rd.	58.1	58.5	0.4	+5 dB or > 60 dB	No
Douglas Rd.	Mather Blvd. to Sunrise Blvd.	66.3	66.5	0.2	+1.5 dB	No
Douglas Rd.	Sunrise Blvd. to Grant Line Rd.	61.0	61.2	0.2	+3 dB	No
White Rock Rd.	Zinfandel Dr. to Sunrise Blvd.	65.3	65.3	0.0	+1.5 dB	No
White Rock Rd.	Sunrise Blvd. to Grant Line Rd.	60.9	61.0	0.1	+3 dB	No
White Rock Rd.	Grant Line Rd. to Prairie City Rd.	67.3	67.4	0.1	+1.5 dB	No

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ROADWAY	SEGMENT	NOISE LEVELS (L_{DN} , dB) AT NEAREST SENSITIVE RECEPTORS				
		EXISTING	EXISTING + PROJECT	CHANGE	CRITERION ¹	SIGNIFICANT?
Mather Field Rd.	Folsom Blvd. to US 50 WB Ramp	65.7	65.7	0.0	+1.5 dB	No
Mather Field Rd.	US 50 WB Ramp to US 50 EB Ramp	68.7	68.7	0.0	+1.5 dB	No
Mather Field Rd.	US 50 to International Dr.	69.5	69.5	0.0	+1.5 dB	No
Zinfandel Dr.	Folsom Blvd. to US 50 WB	57.0	57.1	0.1	+5 dB or > 60 dB	No
Zinfandel Dr.	US 50 to White Rock Rd.	66.6	66.8	0.2	+1.5 dB	No
Zinfandel Dr.	White Rock Rd. to International Rd.	65.8	66.1	0.3	+1.5 dB	No
Zinfandel Dr.	International Rd. to Douglas Rd.	59.6	59.6	0.0	+5 dB or > 60 dB	No
Sunrise Blvd.	US 50 WB Ramp to US 50 EB Ramp	64.3	64.5	0.2	+3 dB	No
Sunrise Blvd.	US 50 to Folsom Blvd.	67.1	67.3	0.2	+1.5 dB	No
Sunrise Blvd.	Folsom Blvd. to White Rock Rd.	69.4	69.8	0.4	+1.5 dB	No
Sunrise Blvd.	White Rock Rd. to Douglas Rd.	69.3	70.2	0.9	+1.5 dB	No
Sunrise Blvd.	Douglas Rd. to Jackson Rd.	64.6	66.1	1.5	+3 dB	No
Sunrise Blvd.	Jackson Rd. to Grant Line Rd.	66.8	67.1	0.3	+1.5 dB	No
Grant Line Rd.	White Rock Rd. to Douglas Rd.	69.8	69.9	0.1	+1.5 dB	No
Grant Line Rd.	Douglas Rd. to Jackson Rd.	64.7	64.7	0.0	+3 dB	No
Grant Line Rd.	Jackson Rd. to Sunrise Blvd.	64.3	64.3	0.0	+3 dB	No

¹ WHERE EXISTING NOISE LEVELS ARE LESS THAN 60 DB AN INCREASE OF 5 DB WOULD BE A SIGNIFICANT INCREASE. ADDITIONALLY, ANY INCREASE CAUSING NOISE LEVELS TO EXCEED THE CITY'S NORMALLY ACCEPTABLE 60 DB LDN NOISE LEVEL STANDARD AT AN EXISTING OUTDOOR ACTIVITY AREA OF A RESIDENTIAL USE WOULD ALSO BE SIGNIFICANT. WHERE EXISTING NOISE LEVELS EXCEED 60 DB BUT ARE LESS THAN 65 DB, AN INCREASE OF 3 DB OR MORE WOULD BE SIGNIFICANT. WHERE EXISTING NOISE LEVELS EXCEED 65 DB, AN INCREASE OF 1.5 DB OR MORE WOULD BE SIGNIFICANT.

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM KIMLEY HORN AND SAXELBY ACOUSTICS. 2019.

TABLE 3.10-7: CUMULATIVE AND CUMULATIVE + PROJECT TRAFFIC NOISE LEVELS

ROADWAY	SEGMENT	NOISE LEVELS (L_{DN} , dB) AT NEAREST SENSITIVE RECEPTORS				
		CUMULATIVE	CUMULATIVE + PROJECT	CHANGE	CRITERION ¹	SIGNIFICANT?
Jackson Rd.	Bradshaw Rd. to Excelsior Rd.	70.0	70.0	0.0	+1.5 dB	No
Jackson Rd.	Excelsior Rd. to Eagles Nest Rd.	70.0	70.0	0.0	+1.5 dB	No
Jackson Rd.	Eagles Nest Rd. to Sunrise Blvd.	68.7	68.7	0.0	+1.5 dB	No
Jackson Rd.	Sunrise Blvd. to Grant Line Rd.	69.1	69.1	0.0	+1.5 dB	No
Excelsior Rd.	Kiefer Blvd. to Jackson Rd.	62.9	62.9	0.0	+3 dB	No
Kiefer Blvd.	Grant Line Rd. to Jackson Rd./SR-16	58.8	59.0	0.2	+5 dB or > 60 dB	No
International Dr.	Zinfandel Dr. to Sunrise Blvd.	68.8	68.8	0.0	+1.5 dB	No
Mather Blvd.	Femoyer St. to Douglas Rd.	63.9	64.2	0.3	+3 dB	No
Douglas Rd.	Mather Blvd. to Sunrise Blvd.	71.1	71.4	0.3	+1.5 dB	No
Douglas Rd.	Sunrise Blvd. to Grant Line Rd.	66.1	66.8	0.7	+1.5 dB	No

ROADWAY	SEGMENT	NOISE LEVELS (L_{DN} , dB) AT NEAREST SENSITIVE RECEPTORS				
		CUMULATIVE	CUMULATIVE + PROJECT	CHANGE	CRITERION ¹	SIGNIFICANT?
White Rock Rd.	Zinfandel Dr. to Sunrise Blvd.	67.6	67.7	0.1	+1.5 dB	No
White Rock Rd.	Sunrise Blvd. to Grant Line Rd.	67.7	67.7	0.0	+1.5 dB	No
White Rock Rd.	Grant Line Rd. to Prairie City Rd.	71.5	71.7	0.2	+1.5 dB	No
Mather Field Rd.	Folsom Blvd. to US 50 WB Ramp	67.0	67.0	0.0	+1.5 dB	No
Mather Field Rd.	US 50 WB Ramp to US 50 EB Ramp	69.6	69.7	0.1	+1.5 dB	No
Mather Field Rd.	US 50 to International Dr.	70.8	70.8	0.0	+1.5 dB	No
Zinfandel Dr.	Folsom Blvd. to US 50 WB	57.2	57.3	0.1	+5 dB or > 60 dB	No
Zinfandel Dr.	US 50 to White Rock Rd.	68.2	68.2	0.0	+1.5 dB	No
Zinfandel Dr.	White Rock Rd. to International Rd.	67.7	67.8	0.1	+1.5 dB	No
Zinfandel Dr.	International Rd. to Douglas Rd.	61.6	61.8	0.2	+3 dB	No
Sunrise Blvd.	US 50 WB Ramp to US 50 EB Ramp	64.6	64.6	0.0	+3 dB	No
Sunrise Blvd.	US 50 to Folsom Blvd.	67.4	67.5	0.1	+1.5 dB	No
Sunrise Blvd.	Folsom Blvd. to White Rock Rd.	69.4	69.5	0.1	+1.5 dB	No
Sunrise Blvd.	White Rock Rd. to Douglas Rd.	71.3	71.5	0.2	+1.5 dB	No
Sunrise Blvd.	Douglas Rd. to Jackson Rd.	67.6	67.7	0.1	+1.5 dB	No
Sunrise Blvd.	Jackson Rd. to Grant Line Rd.	69.1	69.1	0.0	+1.5 dB	No
Grant Line Rd.	White Rock Rd. to Douglas Rd.	73.5	73.10	0.2	+1.5 dB	No
Grant Line Rd.	Douglas Rd. to Jackson Rd.	70.1	70.3	0.2	+1.5 dB	No
Grant Line Rd.	Jackson Rd. to Sunrise Blvd.	66.7	66.8	0.1	+1.5 dB	No
Kiefer Blvd.	Eagles Nest Rd. to Sunrise Blvd.	58.6	58.6	0.0	+5 dB or > 60 dB	No
Kiefer Blvd.	Sunrise Blvd. to Rancho Cordova Pkwy.	62.8	62.8	0.0	+3 dB	No
Chrysanthy Blvd.	Sunrise Blvd. to Rancho Cordova Pkwy.	56.1	57.1	1.0	+5 dB or > 60 dB	No
Rancho Cordova Pkwy.	Chrysanthy Blvd. to Kiefer Blvd.	60.8	61.1	0.3	+3 dB	No

¹ WHERE EXISTING NOISE LEVELS ARE LESS THAN 60 dB AN INCREASE OF 5 dB WOULD BE A SIGNIFICANT INCREASE. ADDITIONALLY, ANY INCREASE CAUSING NOISE LEVELS TO EXCEED THE CITY'S NORMALLY ACCEPTABLE 60 dB LDN NOISE LEVEL STANDARD AT AN EXISTING OUTDOOR ACTIVITY AREA OF A RESIDENTIAL USE WOULD ALSO BE SIGNIFICANT. WHERE EXISTING NOISE LEVELS EXCEED 60 dB BUT ARE LESS THAN 65 dB, AN INCREASE OF 3 dB OR MORE WOULD BE SIGNIFICANT. WHERE EXISTING NOISE LEVELS EXCEED 65 dB, AN INCREASE OF 1.5 dB OR MORE WOULD BE SIGNIFICANT.

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM KIMLEY HORN AND SAXELBY ACOUSTICS. 2019.

Based upon data in Tables 3.10-6 and 3.10-7, the Project is predicted to result in a maximum traffic noise level increase of 1.5 dBA. As shown in Tables 3.10-6 and 3.10-7, some noise-sensitive receptors located along the Project-area roadways are currently exposed to exterior traffic noise levels exceeding the City of Rancho Cordova 60 dB L_{dn} exterior noise level standard for residential

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uses. These receptors would continue to experience elevated exterior noise levels with implementation of the Project. For example, sensitive receptors under Existing conditions located adjacent to Sunrise Boulevard between Douglas Road and Jackson Road experience an exterior noise level of 64.6 dB L_{dn} . Under Existing plus Project conditions, exterior traffic noise levels are predicted to be approximately 66.1 dB L_{dn} . Exterior noise levels in both scenarios exceed the City's exterior noise level standard of 60 dB L_{dn} . However, the Project's contribution of 1.5 dB would not exceed the FICON criterion of 3 dB where existing ambient noise levels without the Project are between 60 and 65 dB L_{dn} . For all segments that exceed the City's exterior noise level standard under Existing plus Project and Cumulative plus Project conditions, the Project would not cause a significant increase in noise levels as shown in Tables 3.10-6 and 3.10-7. Therefore, this would be a **less than significant** impact.

EXTERIOR TRAFFIC NOISE IMPACTS – PROPOSED RECEPTORS

The FHWA traffic noise prediction model was used to model traffic noise levels at the proposed residential land uses under Cumulative plus Project conditions based on the traffic volumes provided by Kimley Horn. Table 3.10-8 shows the predicted traffic noise levels at the proposed residential uses adjacent to the major Project-area arterial roadways. Table 3.10-8 also indicates the property line noise barrier heights required to achieve compliance with an exterior noise level standard of 60 dB L_{dn} .

TABLE 3.10-8: CUMULATIVE + PROJECT TRANSPORTATION NOISE LEVELS AT PROPOSED RESIDENTIAL USES

SEGMENT	APPROXIMATE RESIDENTIAL SETBACK, FEET ¹	ADT	PREDICTED TRAFFIC NOISE LEVELS, DB L_{DN} ²					
			NO WALL	6' WALL	7' WALL	8' WALL	9' WALL	10' WALL
<i>CHRYSANTHY BOULEVARD</i>								
Project site, Rancho Cordova Pkwy. to Americanos Blvd.	90	14,651	64	58	57	56	55	54
<i>RANCHO CORDOVA PARKWAY</i>								
Project site, north of Chrysanthy Blvd.	100	22,140	66	61	60	59	58	57
Project site, south of Chrysanthy Blvd.	525	8,965	52	46	45	44	44	43

NOTES: ADT = AVERAGE DAILY TRIPS

¹ SETBACK DISTANCES ARE MEASURED IN FEET FROM THE CENTERLINES OF THE ROADWAYS TO THE CENTER OF RESIDENTIAL BACKYARDS.

² THE MODELED NOISE BARRIERS ASSUME FLAT SITE CONDITIONS WHERE ROADWAY ELEVATIONS, BASE OF WALL ELEVATIONS, AND BUILDING PAD ELEVATIONS ARE APPROXIMATELY EQUIVALENT. SOUND WALL HEIGHT MAY BE ACHIEVED THROUGH THE USE OF A WALL AND EARTHEN BERM TO ACHIEVE THE TOTAL HEIGHT (I.E. 6-FOOT WALL ON 2-FOOT BERM IS EQUIVALENT TO AN 8-FOOT TALL WALL). SOURCE: FHWA-RD-77-108 WITH INPUTS FROM KIMLEY HORN AND SAXELBY ACOUSTICS. 2019.

The complete inputs and results to the FHWA traffic noise prediction model and barrier calculations are contained in the Noise Study Appendix B (see Appendix H of this EIR). The modeled noise barriers assume flat site conditions where roadway elevations, base of wall elevations, and building pad elevations are approximately equivalent.

Table 3.10-8 shows that residences along Chrysanthy Boulevard will be exposed to noise levels of 64 dB L_{dn} in the backyard areas and residences along Rancho Cordova Parkway north of Chrysanthy Boulevard would be exposed to noise levels of 66 dB L_{dn} in the backyard areas; these noise levels exceed the City's threshold of 60 dB for outdoor activity areas of residential uses. Table 3.10-8 indicate that noise barriers six to seven feet in height would generally be sufficient to achieve compliance with the City's 60 dB L_{dn} exterior noise level standard for the proposed residential uses. The Project has been designed to minimize noise to rear yards through including landscaped setbacks from the roadways and use of six-foot soundwalls along Chrysanthy Boulevard and along the segment of Rancho Cordova Parkway where residential uses are proposed. The soundwalls would reduce noise levels along Rancho Cordova Parkway to acceptable levels of 58 dB L_{dn} . The soundwalls would reduce noise levels at residences north of Chrysanthy Boulevard to 61 dB L_{dn} , which is within the City's conditionally acceptable exterior noise standard of 65 dB L_{dn} . The SPA Handbook does provide for use of measures other than soundwalls, such as building orientation and use of noise-attenuating features, provided that a site-specific acoustical analysis is conducted that demonstrates that the alternative methods would ensure that noise levels do not exceed the City's noise standards. This impact is *less than significant*.

INTERIOR TRAFFIC NOISE IMPACTS

Modern construction typically provides a 25-dB exterior-to-interior noise level reduction with windows closed. Therefore, sensitive receptors exposed to exterior noise of 70 dB L_{dn} , or less, will typically comply with the City's 45 dB L_{dn} interior noise level standard. Additional noise reduction measures, such as acoustically-rated windows, are generally required for exterior noise levels exceeding 70 dB L_{dn} .

It should be noted that exterior noise levels are typically 2 to 3 dB higher at second floor locations. Additionally, noise barriers do not reduce exterior noise levels at second floor locations. The proposed residential uses are predicted to be exposed to unmitigated first floor exterior transportation noise levels ranging between 52 to 66 dB L_{dn} . Therefore, second floor facades are predicted to be exposed to exterior noise levels of up to 55 to 69 dB L_{dn} .

This analysis assumes that mechanical ventilation will be provided to allow residents to keep doors and windows closed, as desired for acoustical isolation. Based upon a 25-dB exterior-to-interior noise level reduction, interior noise levels are predicted to range between 30 to 44 dB L_{dn} . Accordingly, predicted interior noise levels along the first row of residential uses closest to Chrysanthy Boulevard and Rancho Cordova Parkway would comply with the City's 45 dB L_{dn} interior noise level standard. Therefore, additional interior noise control measures would not be required for these residential uses and impacts to interior noise levels associated with traffic noise would be *less than significant*.

COMMERCIAL USE NOISE

The Project includes approximately 32,000 square feet of commercial uses in the northwestern portion of the Project site. Substantial sources of noise from commercial mixed uses are generated

mainly by heating, ventilation, and air conditioning (HVAC) equipment and loading and unloading activities. Because residential land uses would be placed in close proximity to commercial mixed-use development, these sensitive receptors could be exposed to higher noise levels. However, typical rooftop-mounted HVAC units which are shielded by building parapets do not generate noise levels exceeding 45 dBA L_{eq} at ground floor receptors. Second floor receptors do not receive the same degree of shielding and may experience higher levels of noise. Limited volumes of small delivery vehicle traffic would occur at small loading/unloading areas in the commercial areas and, thus, could be a periodic source of noise to nearby or adjacent sensitive receptors for short periods. The SPA Handbook addresses the Project's potential to expose sensitive receptors to noise levels that exceed the City's standards through requiring future commercial uses to be designed, to minimize the potential to expose existing or future residences to noise levels in excess of the City's standards, through location and/or of noise-generating uses such as loading docks, equipment storage and repair facilities, and generators. Therefore, this impact is ***less than significant***.

PARKS USE NOISE

The Project includes 19.24 acres of public and private park and recreation facilities. Noise-generating activities occurring at the proposed park and recreation facilities would depend on facility type. Daytime noise associated with neighborhood parks typically includes intermittent noise such as adults' and children's voices, opening and closing of vehicle doors in parking lots, and use of landscape maintenance equipment. Typical noise levels from park playgrounds or athletics fields are approximately 55 dBA L_{eq} at a distance of 100 feet.

Recreational facilities at the community park could generate additional noise extending into the evening and nighttime hours during competitive sporting events (e.g., soccer games, football games, softball games, and track and field events). Noise sources commonly associated with these types of events include elevated voices from crowds, exterior public-address systems, and musical instruments. If an amplified speaker system is used during sporting events, additional increases in ambient noise levels could occur. Activities occurring during the more noise-sensitive evening and nighttime hours may result in increased levels of annoyance and sleep disruption for occupants of nearby residential dwellings. The specific site design has not been determined for the future recreation facilities, including Lot D (public park) which could accommodate competitive sporting events and other uses that may involve amplified sound. The SPA Handbook addresses potential noise impacts associated with parks and recreation uses by requiring a site-specific acoustical analysis to be performed to evaluate the potential noise generated by recreation facilities that include potential noise generating uses (e.g., competitive sports fields and other uses anticipated to involve amplified sound or large crowds) and, if potential noise levels would exceed City standards, by requiring a noise reduction plan to ensure that noise-generating uses are sited and designed in a manner that meets the City's noise standards. Therefore, adherence to the requirements of the SPA Handbook would ensure that future parks and recreation uses do not exceed the City's noise standards and would ensure that this impact is ***less than significant***.

Impact 3.10-2: The Project may result in exposure of persons to or generation of substantial temporary increase in ambient noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies – Project Construction (Less than Significant)

During the construction of the Project, including roads, water, sewer lines, and related infrastructure, noise from construction activities would add to the noise environment in the Project vicinity. Existing receptors to the proposed construction activities are located adjacent north and west of the site along Cregan Court, Erato Circle, Choteau Circle, and Pawcatuck Way. Table 3.10-9 shows typical construction equipment noise at 25 and 50 feet.

TABLE 3.10-9: CONSTRUCTION EQUIPMENT NOISE

TYPE OF EQUIPMENT	MAXIMUM LEVEL, dB	
	25 FEET	50 FEET
Backhoe	84	78
Compactor	89	83
Compressor (air)	84	78
Concrete Saw	96	90
Dozer	88	82
Dump Truck	82	76
Excavator	87	81
Generator	87	81
Jackhammer	94	89
Pneumatic Tools	91	85

SOURCE: ROADWAY CONSTRUCTION NOISE MODEL USER’S GUIDE. FEDERAL HIGHWAY ADMINISTRATION. FHWA-HEP-05-054. JANUARY 2006.

As indicated in Table 3.10-9, activities involved in construction would generate maximum noise levels ranging from 76 to 90 dBA L_{max} at a distance of 50 feet. Noise would also be generated during the construction phase by increased truck traffic on area roadways. A significant Project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from construction sites. This noise increase would be of short duration and would likely occur primarily during daytime hours.

Construction activities would be temporary in nature and are exempt from noise regulation during the hours of 6:00 a.m. to 8:00 p.m. on weekdays and 7:00 a.m. to 8:00 p.m. on Saturdays and Sundays as outlined in the City’s Municipal Code for noise standard exemptions. Specifically, as noted previously, Section 6.68.090(E) of the City’s Municipal Code exempts the following from the interior and exterior noise standards:

- E. Noise sources associated with construction, repair, remodeling, demolition, paving or grading of any real property, provided said activities do not take place between the hours of 8:00 p.m. and 6:00 a.m. on weekdays and Friday commencing at 8:00 p.m. through

and including 7:00 a.m. on Saturday; Saturdays commencing at 8:00 p.m. through and including 7:00 a.m. on the next following Sunday and on each Sunday after the hour of 8:00 p.m.; provided, however, when an unforeseen or unavoidable condition occurs during a construction project and the nature of the project necessitates that work in process be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work after 8:00 p.m. and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner;

Construction activities which occur during the aforementioned hours of operation are exempt from the City's noise standards. While construction activities as described above are exempt from the City's noise standards, Chapter 3 of the SPA Handbook establishes noise standards, including the requirement that construction staging areas, including equipment staging, equipment and materials storage, and soil stockpiling for grading activities, shall be located centrally within each phase of Project development and shall be setback from residential dwellings to the maximum extent feasible and that construction equipment be fitted with factory-equipped mufflers and maintained in good working order. The SPA Handbook also requires construction activities to adhere to the City's Municipal Code requirements, including the specified hours of operation for construction activities. Adherence to these hours of operation would ensure that construction noise levels occur during normal daytime hours and do not conflict with the City's noise standards. Implementation of the requirements included in the SPA Handbook will minimize noise impacts to residential uses by requiring compliance with the City's noise standards, ensuring that construction staging areas, including equipment and materials storage, are located away from residences, and that noise from all construction equipment is reduced through requiring that the equipment be fitted with factory-equipped mufflers and maintained in good working order and will ensure that these potential impacts are reduced to a *less-than-significant* level.

Impact 3.10-3: The Project may result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels (Less than Significant)

Typical residential, commercial, and recreation activities would not result in excessive groundborne vibration or groundborne noise levels. However, Project construction could result in groundborne vibration or noise levels. Sensitive receptors which could be impacted by construction-related vibrations, especially vibratory compactors/rollers, are located approximately 25 feet or further from the Project area.

Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural damage. Table 3.10-10 shows the typical vibration levels produced by construction equipment.

TABLE 3.10-10: VIBRATION LEVELS FOR VARYING CONSTRUCTION EQUIPMENT

TYPE OF EQUIPMENT	P.P.V. @ 25 FEET (IN/SEC)	P.P.V. @ 100 FEET (IN/SEC)
Large Bulldozer	0.089	0.011
Loaded Trucks	0.076	0.010
Small Bulldozer	0.003	0.000
Auger/drill Rigs	0.089	0.011
Jackhammer	0.035	0.004
Vibratory Hammer	0.070	0.009
Vibratory Compactor/roller	0.210	0.026

SOURCE: FEDERAL TRANSIT ADMINISTRATION, TRANSIT NOISE AND VIBRATION IMPACT ASSESSMENT GUIDELINES, MAY 2006.

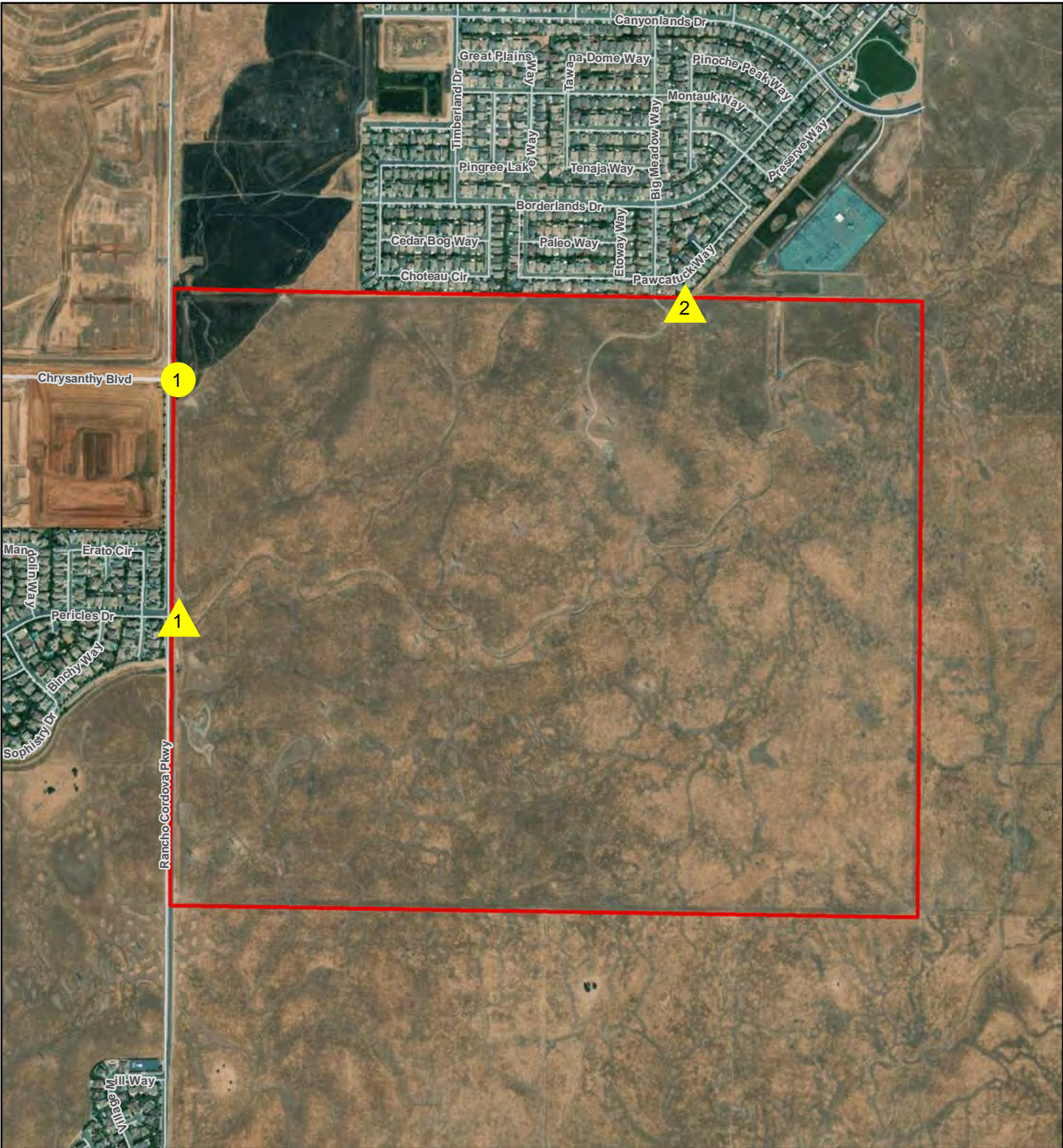
With the exception of vibratory compactors, the Table 3.10-10 data indicate that construction vibration levels anticipated for the Project are less than the 0.2 in/sec threshold at a distance of 25 feet. Use of vibratory compactors within 26 feet of the adjacent buildings could cause vibrations in excess of 0.2 in/sec. Sensitive receptors which could be impacted by construction-related vibrations, especially vibratory compactors/rollers, are located approximately 25 feet or further from the Project area.

The SPA Handbook requires that any compaction required less than 26 feet from the adjacent residential structures to the north shall be accomplished by using static drum rollers which use weight instead of vibrations to achieve soil compaction or, as an alternative, construction vibration monitoring could be conducted to ensure that construction vibrations do not cause damage to any adjacent structures. Adherence to this requirement will ensure that potential vibration impacts are reduced to a *less-than-significant* level.


Impact 3.10-4: The Project would not expose people residing or working in the Project area to excessive noise levels as a result of nearby airstrips or airports (Less than Significant)

There are no private airstrips in the Project vicinity. Mather Airport is located approximately three miles from the Project site. Based upon the Sacramento County Land Use Compatibility Planning Noise Contours for Mather Airport, the Project site is located outside of the 60 dB CNEL noise contour. In addition, the Sacramento County Airport System has implemented noise abatement procedures, including guidelines for flights during nighttime hours, to limit aircraft noise exposure in the surrounding communities. Therefore, this is a *less-than-significant* impact.


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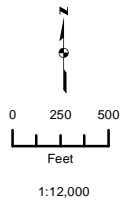
Legend

 Project Location (APN 067-004-0008)

Noise Monitoring Locations

 Noise Measurement Site - Long Term

 Noise Measurement Site - Short Term



**THE RANCH
SACRAMENTO COUNTY, CALIFORNIA**

**Figure 3.10-1.
Noise Measurement Sites**

Data sources: Saxelby Acoustics, 10/2/2018; Sacramento County GIS; ArcGIS Online World Imagery Map Service. Map date: March 19, 2019.

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The purpose of this EIR section is to analyze and disclose the anticipated growth in population that would result from Project implementation, analyze the Project's consistency with relevant planning documents and policies related to population and housing, and recommend mitigation measures to avoid or minimize the significance of potential impacts.

Information in this section is based primarily on information provided by the Project applicant in the Project application package submitted to the City, site surveys conducted by De Novo Planning Group in 2018, ground and aerial photographs, and the following reference materials:

- *Rancho Cordova General Plan* (City of Rancho Cordova, Adopted June 26, 2006);
- *Rancho Cordova General Plan Draft Environmental Impact Report* (City of Rancho Cordova, March 2006);
- *City of Rancho Cordova Housing Element* (City of Rancho Cordova, Adopted December 16, 2013);
- City of Rancho Cordova Zoning Ordinance;
- *Metropolitan Transportation Plan/Sustainable Communities Strategy* (Sacramento Area Council of Governments (SACOG), Adopted February 18, 2016);
- U.S. Census data (U.S. Census, 2018); and
- California Department of Finance Population and Housing Estimates (E-5 Reports) (California Department of Finance, 2018).

No comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic.

3.11.1 ENVIRONMENTAL SETTING

DEMOGRAPHICS

POPULATION TRENDS

The City of Rancho Cordova incorporated in July 2003. As shown in Table 3.11-1, U.S. Census data indicates that the City of Rancho Cordova experienced strong population growth from 2000 to 2010, increasing from 53,065 to 64,776 persons at an annual average increase of 2.2 percent. The rate of growth between 2010 and 2016 has remained relatively stable. The City's population has increased during this decade to a population of 74,210 in 2018.

TABLE 3.11-1: POPULATION GROWTH – RANCHO CORDOVA

YEAR	POPULATION	ANNUAL AVERAGE CHANGE
2000	53,065	--%
2010	64,776	2.2%
2018	74,210	1.8%

SOURCES: US CENSUS, 2018; CALIFORNIA DEPARTMENT OF FINANCE, 2018.

3.11 POPULATION AND HOUSING

HOUSING STOCK

Table 3.11-2 summarizes the growth of the City’s housing stock from the years 2000 to 2018, based on information from the US Census and California Department of Finance. The number of housing units has increased from 20,542 in 2000 to 27,584 in 2018, an average annual increase of 1.03 percent.

TABLE 3.11 -2: HOUSING UNIT GROWTH – RANCHO CORDOVA

YEAR	HOUSING UNITS	ANNUAL AVERAGE CHANGE
2000	20,542	--
2010	25,479	2.40%
2018	27,584	1.03%

SOURCES: US CENSUS, 2018; CALIFORNIA DEPARTMENT OF FINANCE, 2018; SACOG, 2001.

PERSONS PER DWELLING UNIT

The average number of persons residing in a dwelling unit in Rancho Cordova is 2.84 (California Department of Finance, 2018). The 2013-2017 American Community Survey 5-Year Estimates data provides more detail regarding household sizes in the City, reporting average household sizes of 2.84 persons per owner-occupied households, 2.89 persons per renter-occupied households, 2.08 persons per owner-occupied householders (60 years and older), and 2.05 persons per renter-occupied householders (60 years and older).

GROWTH PROJECTIONS

As part of the Sacramento Region Blueprint process, the Sacramento Area Council of Governments (SACOG) produced regional growth projections through 2035. The City is projected to have approximately 69,252 housing units and 134,377 employees by 2035. The Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) adopted by SACOG in 2016 projects that Rancho Cordova will have 67,300 jobs by 2036

The City’s General Plan estimates the population of Rancho Cordova will grow to 267,275 by 2030 and 310,568 by 2050. The City’s General Plan EIR estimates that the Rancho Cordova will have a total of 126,241 residential units and 195,021 employees at buildout (which is approximately 2050).

3.11.2 REGULATORY SETTING

SACRAMENTO AREA COUNCIL OF GOVERNMENTS

SACOG is an association of local governments from six counties and 22 cities within the Sacramento Region. The counties include El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba. SACOG is responsible for the preparation of, and updates to, the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) for the region.

Metropolitan Transportation Plan/Sustainable Communities Strategy

The 2016 MTP/SCS is a long-range plan for transportation improvements in the region, as well as policies and strategies to reduce greenhouse gas emissions, and was adopted by SACOG in 2016. The MTP/SCS addresses the needs of the current population of 2.3 million residents, by improving the conditions of existing roads and adding more sidewalks, bike lanes, and restoring, maintaining and expanding transit, making it possible for more people to have many choices for how they get around and live independently as they age. The 2016 MTP/SCS also plans for the future by including roads and transit projects where new houses and jobs are added to serve today's children as they grow up and for new residents anticipated to move here over the next few decades. The plan is based on projections for growth in population, housing, and jobs. SACOG determines the regional growth projections by evaluating baseline data (existing housing units and employees, jobs/housing ratio, and percent of regional growth share for housing units and employees), historic reference data (based upon five- and ten-year residential building permit averages and historic county-level employment statistics), capacity data (General Plan data for each jurisdiction), and current MTP data about assumptions used in the most recent MTP/SCS. SACOG staff then meets with each jurisdiction to discuss and incorporate more subjective considerations about planned growth for each area. Finally, SACOG makes a regional growth forecast for new homes and new jobs, based upon an economic analysis provided by a recognized expert in order to estimate regional growth potential based on market analysis and related economic data. This growth forecast is then incorporated into the MTP/SCS.

Regional Housing Needs Plan

California General Plan law requires each city and county to have land zoned to accommodate a fair share of the regional housing need. The share is known as the Regional Housing Needs Allocation (RHNA) and is based on a Regional Housing Needs Plan (RHNP) developed by councils of government. SACOG is the lead agency for developing the RHNP for a six-county area that includes Sacramento County and the City of Rancho Cordova. The latest housing allocation for the City of Rancho Cordova covers the nearly eight-year period from 2013 through 2021 and consists of 7,008 units (770 extremely low, 770 very low, 1,079 low, 1,303 moderate, and 3,087 above moderate income). The City is not required to make development occur; however, the City must facilitate housing production by ensuring that land is available and that unnecessary development constraints have been removed. The City prepared and adopted an updated Housing Element in 2016 to address the 2013-2021 RHNA.

RANCHO CORDOVA GENERAL PLAN

The Rancho Cordova General Plan establishes planned land uses for the Suncreek/Preserve Planning Area on page 83 of Chapter II, Land Use. General Plan Figure LU-28 shows the Conceptual Land Plan for the Suncreek/Preserve Planning Area, which designates the Project site with Residential-Mixed Density, Local Town Center, Natural Resources, and Park and Open Space. The buildout assumptions for the entire Suncreek/Preserve Planning Area include up to:

3.11 POPULATION AND HOUSING

- 9,263 dwelling units
- 21,236 people
- 1,331 employees

The City of Rancho Cordova General Plan contains the following goals and policies that are relevant to population and housing:

ECONOMIC DEVELOPMENT ELEMENT

Goal ED.1: Diversify Rancho Cordova's economy by facilitating and encouraging land uses that provide substantial and sustainable fiscal benefits to the City and residents.

Policy ED.1.8: Provide a variety of housing types in Rancho Cordova to support a diverse economy, including workforce housing, move-up housing, and executive housing.

HOUSING ELEMENT

Goal H.1: Seek a balance of housing opportunities appropriate for the range of jobs available and planned in the City.

Policy H.1.1: Improve the City's jobs-housing balance through ensuring that housing development in Rancho Cordova provides opportunities for all income levels in order to serve the full range of available and projected jobs in the City.

Policy H.1.3: Promote a broader range of housing options for executives.

Policy H.1.5: Developers of new residential projects within the newly developing areas of the City (generally in the large, vacant areas south of Highway 50) shall prepare an Affordable Housing Plan (Plan) for the project for City review and approval that identifies the project's plan for providing affordable housing.

Goal H.3: Promote housing diversity through providing a range of high-quality housing choices for the community, including single-family homes, duplexes, townhomes/condominiums, live-work units, mixed-use, multi-family, executive housing, and mobile homes, that serve all households, ranging from the workforce to executives to seniors and other special needs groups.

Policy H.3.1: Ensure that neighborhoods are developed in a balanced, sustainable manner, avoiding over-concentration of affordable housing or oversized rental complexes and providing a range of housing prices and rents.

Policy H.3.2: Provide a range of senior housing opportunities, including senior developments with single-story homes, independent living, assisted living, skilled nursing, and shared housing, and pursue opportunities and funding to convert existing apartment complexes to senior housing facilities.

Policy H.3.3: Provide housing for the special needs populations, including housing accessible for persons with disabilities (including veterans as a primary target group), large households, the homeless, and single-parent households.

3.11.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Based on the standards established by Appendix G of the California Environmental Quality Act (CEQA) Guidelines, the Project will have a significant impact on population and housing if it will:

- 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.

As discussed in the Initial Study, the Project site is currently undeveloped and does not contain housing. The Project would not displace housing or people. There is *no impact*, and these topics will not be further addressed in the EIR.

IMPACTS AND MITIGATION MEASURES

Impact 3.11-1: Project implementation would not induce substantial population growth (Less than Significant)

Section 15126.2(d) of the CEQA Guidelines requires that an EIR evaluate the growth-inducing impacts of a proposed action. A growth-inducing impact is defined by the CEQA Guidelines as:

The way in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth...It is not assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment.

Based on the CEQA Guidelines, growth inducement is any growth that exceeds planned growth of an area and results in new development that would not have taken place without implementation of the Project. A project can have direct or indirect growth inducement potential. Direct growth inducement would result if a project, for example, involved construction of new housing. A project would have indirect growth inducement potential if it established substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises) or if it would involve a construction effort with substantial short-term employment opportunities that would indirectly stimulate the need for additional housing and services to support the new employment demand (*Napa Citizens for Honest Government v. Napa County Board of Supervisors* (2001) 91 Cal.App.4th 342). Similarly, a project would indirectly induce growth if it would remove an obstacle

to additional growth and development, such as removing a constraint on a required public service. A project providing an increased water supply or wastewater treatment/collection in an area where this service historically limited growth could be considered growth-inducing.

The CEQA Guidelines further explain that the environmental effects of induced growth are considered indirect impacts of the proposed action. These indirect impacts or secondary effects of growth may result in significant, adverse environmental impacts. Potential secondary effects of growth include increased demand on other community and public services and infrastructure, increased traffic and noise, and adverse environmental impacts such as degradation of air and water quality, degradation or loss of plant and animal habitat, and conversion of agricultural and open space land to developed uses.

Growth inducement may constitute an adverse impact if the growth is not consistent with or accommodated by the land use plans and growth management plans and policies for the area affected. Local land use plans provide for land use development patterns and growth policies that allow for the orderly expansion of urban development supported by adequate urban public services, such as water supply, roadway infrastructure, sewer service, and solid waste service.

COMPONENTS OF GROWTH

The timing, magnitude, and location of land development and population growth in a region are based on various interrelated land use and economic variables. Key variables include regional economic trends, market demand for residential and non-residential uses, land availability and cost, the availability and quality of transportation facilities and public services, proximity to employment centers, the supply and cost of housing, and regulatory policies or conditions. Since the general plan of a community defines the location, type, and intensity of growth, it is the primary means of regulating development and growth in California.

GROWTH EFFECTS OF THE PROJECT

Direct Population Growth: The Project would be a residential and commercial mixed use development, resulting in the addition of up to 1,725 residential units, including 737 age restricted single-family units, 735 non-age restricted single-family units, and up to 253 multifamily units, 38 of which would be age-restricted multifamily units. This would allow for a maximum population of approximately 4,319 residents, as described in Chapter 2.0, Project Description. Development of the Project site for residential uses was accounted for in the SACOG MTP/SCS and in the City's General Plan.

The Rancho Cordova General Plan designates land uses to ensure a balance between new residential development and jobs-creating uses. As described in Section 3.9, Land Use, the Project site is designated as Suncreek/Preserve Planning Area by the General Plan, which is anticipated to accommodate 9,263 dwelling units and 1,331 jobs on 1,762 acres. The General Plan EIR, certified in June 2006, identifies that the Project site was planned to accommodate 2,624 units on 303.5

acres of the 530-acre site, as well as a village center, parks, and a wetland preserve (City of Rancho Cordova General Plan Draft EIR, 2006, p. 4.0-6).

The Project does not exceed the growth assumptions for the Project site as anticipated by the General Plan and General Plan EIR. The Project includes a mix of residential densities, a commercial mixed use component, parks and open space areas, and a nature preserve. As such, the proposed uses are consistent with the SunCreek/Preserve Planning Area Draft Land Use Concept Map.

Indirect Population Growth: As described above, projects that include employment generating uses have the potential to result in indirect population growth through the creation of jobs or the extension of infrastructure into areas that were not previously served. Implementation of the Project would provide job growth to the area. It is anticipated that local employment would be increased to provide administrative, management, visitor-serving areas, and retail services. The Project is expected to require both full-time and part-time employees. It is anticipated that the employment growth would be met both by existing residents and through the attraction of new residents.

The future employment growth associated with the Project is consistent with the growth anticipated in the City's General Plan, as well as the SACOG 2016 MTP/SCS (see Section 3.9, Impact 3.9-1 for further discussion of General Plan and MTP/SCS consistency).

The Project would not remove any barriers to growth. Growth within the Project area has been anticipated by the City ever since its incorporation in 2003 and adoption of the General Plan in 2006. The Project site is bound by the Sunridge Specific Plan to the north, east, and west, and by the SunCreek Specific Plan to the south and east. Much of the utilities infrastructure that would be extended to serve the Project site is currently developed and stubbed adjacent to the Project site. Additionally, public services providers have anticipated development of the site and adjacent areas. Existing school facilities are located in the vicinity of the site, and a fire station was also constructed west of the site in order to serve the existing and future uses within the Project area.

CONCLUSION

The Project would not result in direct or indirect population growth beyond the City's planned capacity. Therefore, the Project is not anticipated to exceed the planned growth (directly or indirectly) in the area beyond what is projected for the City of Rancho Cordova General Plan. While the Project will result in growth, it will accommodate planned growth and it is not anticipated to significantly induce new growth. Therefore, this impact is *less than significant*.

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This section describes and evaluates potential impacts associated with the provision of police protection, fire protection and emergency services, schools, parks and recreation, and other services for the Project. This section is based in part on the following documents:

- *Rancho Cordova General Plan* (City of Rancho Cordova, Adopted June 26, 2006);
- *Rancho Cordova General Plan Draft Environmental Impact Report* (City of Rancho Cordova, March 2006);
- School Accountability Report Card (Elk Grove Unified School District, 2017-2018);
- Facilities Master Plan 2015-2025 Update (Elk Grove Unified School District, February 2016);
- *Master Plan for New Development in Incorporated Areas* (Cordova Recreation & Parks District, 2014); and
- *Preliminary District-Wide Facilities Distribution Plan* (Cordova Recreation & Park District, 2017).

A comment was received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from the Cordova Recreation & Park District (CRPD, August 2018). This comment is addressed within this section.

3.12.1 ENVIRONMENTAL SETTING

POLICE PROTECTION

The Rancho Cordova Police Department is contracted through the Sacramento County Sheriff's Department (SCSD). SCSD has a paid staff of 2,332 persons, consisting of 1,789 officers and 543 nonsworn members. SCSD also has a reserve force of 168 officers and approximately 621 community volunteers. SCSD is funded through Sacramento County tax revenues and special Federal and local grants and SCSD and the City have agreed that funding for the Rancho Cordova Police Department will occur using revenues from the City's General Fund, which is the primary source of revenue for law enforcement services.

The City adopted an agreement with SCSD when the City was incorporated in 2003 stating that all law enforcement for Rancho Cordova will be provided by the SCSD and law enforcement services for Rancho Cordova are provided by the SCSD's East Division. The contracted services include patrol, traffic enforcement, investigations, and administrative services.

The Police Department is located at 2897 Kilgore Road, approximately 4.0 miles northwest of the Project site. The Police Department is organized into three components: the Administrative Services Bureau, which include the budget coordinator, equipment manager, and volunteer coordinator; the Investigations and Community Services Bureau, which includes the detective unit, problem-oriented police unit, traffic enforcement, and crime prevention center; and Patrol Operations Bureau. As part of the City's contract with SCSD, the City pays the salaries of 86 total staff, who work solely for the City. This staff includes one captain, five lieutenants, six patrol sergeants, 29 patrol officers, four detectives/investigators, and other patrol, administrative, and

support staff.¹ The City's goal is to provide one police officer for every 1,000 citizens. Using the City's estimated population of 74,210 residents and the 77 police officers, the City currently meets its goal of one officer for every 1,000 citizens.

One important measurement of service delivery is response time to emergency calls-for-service. The Police Department Service Delivery Plan calls for emergency call response within 5 minutes or less for Priority One calls. A Priority One call is a violent crime against a person or an emergency requiring an immediate response to save a life. The Police Department maintains an average response time for Priority One calls for service of 5 minutes or less. Daily assessments are conducted on a call-by-call basis, with the goal of improving the department's response times.

The California Highway Patrol (CHP) provides traffic regulation enforcement, emergency management, and vice assistance on state highways, all Federal interstate highways, and other major roadways in unincorporated portions of the eastern Sacramento County area. The Project site is located within the Valley Division, which oversees Interstate 80, Interstate 5, U.S. 50, and State Route 99. The Valley Division includes 16 area offices, three resident posts, one commercial inspection facility, one transportation management center, three communications/dispatch centers and is staffed with 785 uniformed officers and 250 non-uniformed personnel.

FIRE PROTECTION AND EMERGENCY SERVICES

The Sacramento Metropolitan Fire District (SMFD) currently provides fire protection services to unincorporated areas of Sacramento County and to the Cities of Rancho Cordova and Citrus Heights. SMFD offers fire protection, fire suppression, inspection, plan checking, emergency transportation and medical services, public education, advanced life support, and rescue services to the unincorporated portions of Sacramento County. SMFD was formed in 2000 by consolidation of the American River Fire District and the Sacramento County Fire Protection District.

As the largest fire district in Sacramento County, SMFD currently operates 42 stations and provides service through 664 uniformed and support personnel to nearly 745,000 people in a 359-square mile area. SMFD operates ten transporting Advanced Life Support medics, seven reserve transporting medics, 38 engine companies, five truck companies, 24 grass engines, two crash rescue rigs, six water tenders, four swift water rescue bikes, five swift water rescue inflatable rubber boats, five air units, three reserve firefighter engine companies, and two reserve firefighter grass engines. Many of SMFD's engines are paramedic staffed and all responding units provide coverage by emergency medical technicians. SMFD's personnel are trained and equipped to deal not only with emergency medical alarms and structural or wildland fires, but also with swift water

¹ Personal Communication with Jeff Schelldorf, Lieutenant, Rancho Cordova Police Department. March 7, 2019.

emergencies, confined space incidents, technical rescues, hazardous materials incidents, and crash fire rescue.

To improve response times for fire districts within Sacramento County, the County Department of Emergency Medical Services developed a Joint Powers Authority (JPA) for a unified-dispatch system to respond to fire and emergency-related incidents. Under the JPA, the closest unit available is dispatched to an incident, and fire district boundaries are not considered when an incident occurs. The JPA, known as the Regional Fire and Rescue Training Authority, is made up of the California Office of Emergency Services–Fire and Rescue Branch, SMFD, and the Sacramento Fire Department.

Rancho Cordova represents only a portion of the overall SMFD service area, which includes Orangevale, Citrus Heights, Fair Oaks, Arden Arcade, Rio Linda, and South Sacramento. SMFD's Fire Administration Office is located at 2101 Hurley Way in Sacramento. SMFD operates a total of six fire stations that serve Rancho Cordova:

- Station 61—10595 Folsom Boulevard, Rancho Cordova
- Station 62—3646 Bradshaw Road, Sacramento
- Station 63—12397 Folsom Boulevard, Rancho Cordova
- Station 65—11201 Coloma Road, Rancho Cordova
- Station 66—3180 Kilgore Road, Rancho Cordova
- Station 68—4381 Anatolia Drive, Rancho Cordova

First-response service to the Project site would be provided by Station 68, approximately 0.85 miles west of the western Project boundary. Station 68 operates one engine company.

The Insurance Services Office (ISO) rating is the recognized classification for a fire department or district's ability to defend against major fires. According to the ISO, newly developing urban areas should have a fire station opened within 1.5 miles of all commercial development and 2.5 miles from all residential development when "build-out" exceeds 20% of the planning area. A rating of 10 generally indicates no protection, whereas an ISO rating of 1 indicates high firefighting capability. The SMFD's ISO rating is currently a class 3 for hydrant areas and class 3y for non-hydrant areas and a response time of five minutes for emergency calls, where staffing levels are adequate. The SMFD currently meets this goal.

Funding for fire services and facilities resulting from new construction is facilitated through SMFD's Capital Fire Facilities Fee Schedule and property tax revenue. The SMFD continuously monitors trends that impact property values in order to develop realistic projections of property tax revenues upon which budgeting and service level decisions can be made. To the extent that property tax revenues expected to be generated by new development would not be sufficient to fund the expected operating cost to provide service, Metro Fire will explore alternative funding mechanisms to ensure that adequate service is provided and to avoid any degradation of service to existing communities.

The Capital Fire Facilities Fee was established through State Assembly Bill 1600, which provides the authority for SMFD to fund the full cost of providing new fire services and facilities to new development within its service area. The fee is used exclusively to defray costs and mitigate the impact associated with property acquisition, site preparations, design, construction, and equipping new fire stations that are required to serve new development. The Capital Fire Facilities Fee became effective in June 2003 and remains in effect until December 2020. Additional funds are generated by ambulance transport fees, and service fees (mostly from fire prevention plan checking charges).

In July 2003, the City began collecting the new Capital Fire Facilities Fee for SMFD. The Capital Fire Facilities Fee is assessed by the City's Public Works Department when improvement plans are submitted.

SCHOOLS

Elk Grove Unified School District

The Project site is located within the Elk Grove Unified School District (EGUSD) boundary. EGUSD is the fifth largest school district in California and the largest in northern California. Located in southern and eastern Sacramento County, EGUSD covers 320 square miles and has been in existence for over 41 years. The EGUSD boundaries encompass the entire City of Elk Grove, portions of the Cities Sacramento and Rancho Cordova, and most of southern Sacramento County.

EGUSD had a 2016–2017 school year enrollment of 63,297 students. EGUSD has 64 schools: 39 elementary schools, nine middle schools, nine high schools, four alternative education schools, an adult school, a special education school, and one charter school. In addition to the schools listed above, EGUSD has several elementary school sites and combined middle school/high school sites planned in the Sunrise-Douglas area, with opening dates to be determined, based on market conditions and associated student generation. In cases where school capacity is exceeded, students would be redirected to other schools in the EGUSD.

As shown on the EGUSD 2016–2017 school attendance boundaries map, students living in the Project site in early stages of Project development, before the Suncreek Specific Plan schools are constructed, would attend Sunrise Elementary School, Katherine Albiani Middle School, and Pleasant Grove High School. Other alternative or redirect (i.e., continuation) schools that students living in the Project site may attend include T. R. Smedberg Middle School, Sheldon School, Elk Grove Charter School, Las Flores Independent Study School, and the Elk Grove Virtual Academy. Table 3.12-1 identifies the 2016–2017 school-year enrollments for these schools.

TABLE 3.12-1: ELK GROVE UNIFIED SCHOOL DISTRICT: SCHOOL INVENTORY AND 2016/2017 ENROLLMENT

SCHOOL	ENROLLMENT	CAPACITY
Sunrise Elementary (K-6)	1,328	1,426
Katherine Albiani Middle (7-8)	1,440	1,424
Pleasant Grove High (9-12)	2,544	2,477
T. R. Smedberg Middle (7-8)	1,196	1,329
Sheldon (K-12)	2,389	3,142
Elk Grove Charter (9-12)	287	N/A
Las Flores Independent Study (K-12)	228	N/A
Total	9,412	N/A

NOTE: ELK GROVE VIRTUAL ACADEMY DOES NOT HAVE A SCHOOL ACCOUNTABILITY REPORT CARD.

SOURCE: ELK GROVE UNIFIED SCHOOL DISTRICT, SCHOOL ACCOUNTABILITY REPORT CARDS FROM 2017-2018 SCHOOL YEAR.

Sunrise Elementary is located at 11821 Cobble Brook Drive, approximately 0.75 miles northwest of the Project site, and serves elementary school students in grades K–5. The buildings were completed and occupied in August 2007. The campus currently includes seven permanent buildings and six relocatable buildings (which house 39 classrooms - 35 grade 1-6, three pre-k/kindergarten, and two special education), a multipurpose room, a library, a computer lab, a Learning Center, and an administration building. The portable buildings on the Sunrise Elementary campus will be eligible for state modernization funding in 2025, and the permanent buildings will be eligible as of 2030.

Katherine Albiani Middle School is located at 9140 Bradshaw Road, approximately 10.1 miles southwest of the Project site, and serves students in grades 6–8. Katherine L. Albiani Middle School opened in August 2005 and currently includes ten permanent buildings which house 48 classrooms (including 44 regular and four special education), a multipurpose room, a library, a dance room, a music room, and an administration building. Katherine Albiani Middle School will not be eligible for modernization funding between 2015 and 2025. All of the buildings on the campus will be eligible for state modernization funding beginning in 2028.

Pleasant Grove High School is located at 9531 Bond Road, approximately 10.2 miles southwest of the Project site. The high school serves students in grades 9–12. Pleasant Grove High School was opened in August 2005 and currently provides 19 permanent buildings with 86 regular classrooms and four special education classrooms, four relocatable buildings under 20 years old, two relocatable rooms over 20 years old, five computer labs, administrative and student services offices, two gyms, and a multipurpose room. The library serves both the Pleasant Grove High School and Katherine Albiani Middle School. In 2007, five additional portables were added to the northwest corner of campus to accommodate student growth. An agricultural facility with two barns was completed in 2011. Pleasant Grove High School will not be eligible for modernization funding between 2015 and 2025. All of the buildings on the campus will be eligible for state modernization funding by 2028.

The EGUSD is funded by approximately 50% state and 50% local sources. The district can receive local funding through developer impact fees, tax revenue from Mello-Roos districts, and General Obligation bonds. Developer impact fees are the major source of funding for the district. Based on

3.12 PUBLIC SERVICES AND RECREATION

its facility needs assessment, EGUSD demonstrated the need to levy Level II developer fees that are higher than the statutory fee. As of July 2018, Level II fees for residential construction are \$5.65 per square foot and \$0.56 per square foot for commercial construction. Developer fees may be used to finance new schools and equipment, and to reconstruct existing facilities to maintain adequate housing for all the district’s students. Mello-Roos districts are defined tax areas usually associated with new residential subdivisions, which are often used for additional school taxes.

PARKS AND RECREATION SYSTEM

Park planning in the City is an interagency and interjurisdictional process. At the broadest level, the Sacramento County Regional Parks (SCRP) manages the regional park system. Parks in Rancho Cordova are planned and operated by the CRPD.

The CRPD is located in the east-central portion of Sacramento County, south of the American River, and is bisected by U.S. 50. CRPD encompasses 75 square miles. The Project site lies in the CRPD planning area. CRPD has the primary responsibility of providing recreation facilities and services within the Cordova Planning Area, which includes Rancho Cordova and the Project site. CRPD’s jurisdiction extends south beyond the boundaries of Rancho Cordova and Project site to Jackson Road and Grant Line Road. CRPD has developed six park categories— mini parks; neighborhood parks; community parks; regional parks; linear parkways, greenbelts and open space; and bicycle trails—to meet the recreational needs of the community. The classification of each category is based on CRPD’s determination of use, function, acreage, service area, and population served. CRPD administers a total of 438 acres, which includes 18 neighborhood parks, six community parks, four community swimming pools, the Cordova Community Center at Hagan Community Park on Chase Drive, the Cordova Senior Center on Routier Road, Mather Sports Complex, the Cordova Public Shooting Center on Douglas Road, and the Cordova Golf Course on Jackson Road. The Parkway is located in the CRPD planning area. Table 3.12-2 includes the names, locations, and short descriptions of existing CRPD facilities.

TABLE 3.12-2: EXISTING CORDOVA RECREATION & PARK DISTRICT FACILITIES

<i>FACILITY NAME</i>	<i>LOCATION</i>	<i>DESCRIPTION OF FACILITIES</i>
Ahlstrom Park	Zinfandel Dr. and Cordova Ln., Rancho Cordova	7 acres with Little League baseball field and picnic tables
Alexander Bike Trail	Bear Hollow Dr., Rancho Cordova	2.49-acre special use area with bike trail segment, benches, and landscaping
Anatolia Bike Trail	Anatolia Dr., Rancho Cordova	4.6-acre special use area with bike trail, benches, and landscaping
Argonaut Park	Anatolia Dr. and Herodian Dr., Rancho Cordova	5.9 acres with group picnic area, barbeques, half basketball court, softball field, soccer field, and playground
Cordova Community Center	2197 Chase Dr., Rancho Cordova	Multi-use facility with meeting rooms, gymnasiums, ball fields
Cordova Golf Course	9425 Jackson Rd., Sacramento	Pro shop, lighted driving range, practice putting green, electric carts, hand carts, golf club rentals, and restaurant
Cordova Senior Center	3480 Routier Rd., Rancho Cordova	Full schedule of senior activities (e.g., watercolors, arts and crafts, yoga, and adult exercise)
Cordova Shooting Center	11551 Douglas Rd., Rancho Cordova	Outdoor shooting range featuring covered shooting positions, rental firearms, and a variety of classes

<i>FACILITY NAME</i>	<i>LOCATION</i>	<i>DESCRIPTION OF FACILITIES</i>
Countryside Park	Glenmoor Dr., Rancho Cordova	2 acres with picnic tables and tot lot
Dave Roberts Community Park	Benita Dr. and Mapola Way, Rancho Cordova	13 acres with a lighted softball field, tennis courts, regulation soccer field, and playground
Eagle's Nest Park	Anatolia Dr. and Chrysanthy Blvd., Rancho Cordova	3.7 acres with basketball court, open play fields, group picnic area, individual picnic areas, playground, and tennis courts. Adjacent to private community-owned recreation center
Federspiel Park	Aramon Dr. and Chassella Way, Rancho Cordova	4 acres with swimming pool, bantam soccer field, picnic tables, and playground
Gold River Park	Gold Country Blvd. and Poker Flat Dr., Gold River	6 acres with picnic tables, horseshoe pits, tot lot, playground, and bantam soccer field
Gold Station Park	Gold Station Rd., Gold River	2.2 acres with picnic tables, playground, and bantam soccer field
Hagan Community Park	2197 Chase Dr., Rancho Cordova	75 acres with Cordova Community Center, three swimming pools, eight tennis courts, group picnic areas, baseball fields, soccer fields, basketball court, playgrounds, tot lots, fitness course, and scale model stream railroad. Also provides access to the Jedediah Smith memorial Trail and foot access to the American River
Henley Park	Henley Dr., Rosemont	One-half acre with picnic tables and tot lot
Heron Landing Community Park	Justinian Dr. & Sunrise Blvd., Rancho Cordova	20 acres with sports fields, tennis court, picnic facilities, 2 playgrounds, restrooms, showers, and spray park
Independence Park	Brittan Way and School St., Mather	11 acres with picnic tables, restrooms, and playground
Larchmont Community Park	Linda Rio Dr., Sacramento	14 acres with two tennis courts, one bantam soccer field, one regulation soccer field, group picnic area, and playground
Larchmont-Rossmoor Park	Ambassador Dr., Sacramento	3 acres with softball field, soccer field, picnic tables, and playground
Lincoln Village Community Park	3480 Routier Rd., Sacramento	17 acres with a lighted softball field, four tennis courts, swimming pool, basketball court, group picnic area, and the Cordova Senior Center
Manlove Park	Rose Parade Way and Spellbinder Ct., Rosemont	3 acres with picnic tables and tot lot
Mather Sports Complex	3755 Schriever Ave., Mather	Aerobics, open gym, racquetball, weight rooms, and walking and jogging facility
Primrose Park	Off Hedge Rd. and Jackson Hwy., Rosemont	2.4 acres with picnic tables and tot lot with play structure
Prospect Hill Park	Gold Flat Dr. and Prospect Hill Dr., Rancho Cordova	7 acres with picnic tables, basketball court, bantam soccer field, and tot lot
Renaissance Park	3125 Mowbray Way, Rancho Cordova	Group picnic area, playground, half basketball court
Riviera East Park	Mira Del Rio Dr., Sacramento	9 acres with two tennis courts, bantam soccer field, basketball court, group picnic area, and tot lot
Rosemont Community Park	Americana Way, Rosemont	17 acres with four tennis courts, two Little League fields, softball field, playground, tot lot, and group picnic areas
Rosemont North Park	Huntsman Dr. and Premier Way, Rosemont	3 acres with picnic tables and playground
Rosswood Park	Roseport Way and Rose Brook Way, Rosemont	1 acre with picnic tables and tot lot
Salmon Falls Park	Salmon Falls Dr., Sacramento	One-quarter acre, no permanent facilities
Sandpiper Park	Appolon Way near Steccato Dr., Rancho Cordova	5 acres with open play fields, group picnic area, individual picnic areas, playground, and bike trail access
Sonoma Park	Bear Hollow Dr., Rancho Cordova	4 acres with concrete walkways, tot lot, playground, and covered group picnic area

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<i>FACILITY NAME</i>	<i>LOCATION</i>	<i>DESCRIPTION OF FACILITIES</i>
Stone Creek Bike Trail	Azienda Dr., Rancho Cordova	49.24-acre special use area with bike bath, picnic tables, and directional signage
Stone Creek Community Park	Spoto Dr., Rancho Cordova	21 acres with large and small group picnic areas, restrooms, concrete walkways, playground, water feature, basketball court, soccer fields, softball/youth baseball field, amphitheater, and modular skateboard features
Sunridge Park	4041 Borderlands Dr., Rancho Cordova	7 acres with basketball court, multiuse field, picnic facilities, and playground
Sunriver Park	Klamath River Dr., Rancho Cordova	4.5 acres with picnic tables, ball field, basketball court, and tot lot
Taylor Park	West La Loma Dr., Rancho Cordova	3 acres with a tot lot, playground, and picnic tables
Tuscany Park	Corvina Dr., Rancho Cordova	4.5 acres with covered group picnic area, playground, soccer field, half basketball court, horseshoe pit, softball/youth baseball field, and concrete walkways
Veterans Park	Mather Blvd., Mather	6.4 acres with a playground, tennis courts, basketball court, and a group picnic area
The Village Green Park	3141 Bridgeway Dr., Rancho Cordova	2 acres with spray park, restrooms, amphitheater, and sitting areas
Waterbrook Park	Waterbrook Dr., Rancho Cordova	One-tenth acre with playground
White Rock Park	10488 White Rock Rd., Rancho Cordova	12 acres with a swimming pool, two tennis courts, group picnic areas, playground, and basketball court
Mather Regional Park and Mather Lake	Eagles Nest Rd., Mather	18-hole golf course, picnic sites, hiking trails, wildlife viewing, bird watching, and fishing

SOURCE: CRPD DISTRICT INVENTORY & ASSESSMENT PLAN, 2012; PRELIMINARY DISTRICT-WIDE FACILITIES DISTRIBUTION PLAN, 2017; PARKS & FACILITIES LIST: [HTTPS://CRPD.COM/PARKS](https://CRPD.COM/PARKS) ACCESSED APRIL 4, 2019

In fall 2005, CRPD adopted new standards that include a requirement of 5 acres of parkland per 1,000 residents, and the addition of performance standards for specific types of open space. Using the new standard of 5 acres per 1,000 residents, the projected 2020 CRPD population (158,767 residents) contained in the CRPD Master Plan, and the total parkland in the CRPD (630.20 acres²), CRPD provides approximately 4.0 acres per 1,000 residents.

The existing park facilities nearest the Project site are located to the northwest of the Project site: Argonaut Park, Eagles Nest Park, Kavala Ranch Park, Sandpiper Park, and Sunridge Park.

LIBRARY SERVICES

Library services in the City of Rancho Cordova are provided by the Sacramento Public Library. The Rancho Cordova library branch is located at 9845 Folsom Boulevard, Sacramento, CA 95827. This library has a book drop, computer workstations, and a meeting room with tables, chairs, kitchen, and projector screen.

² Cordova Recreation & Park District: District Inventory & Assessment Plan – Final Draft. 2012.

3.12.2 REGULATORY SETTING

STATE

California Fire Code

The California Fire Code contains regulations relating to construction and maintenance of buildings and the use of premises. Topics addressed in the Code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions to protect and assist first responders, industrial processes, and many other general and specialized fire safety requirements for new existing buildings and premises.

California Health and Safety Code

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code. This includes regulations for building standards (as also set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

California Code of Regulations

The California Code of Regulations, Title 5 Education Code, governs all aspects of education within the State.

Leroy F. Greene School Facilities Act of 1998 (Senate Bill 50)

The “Leroy F. Greene School Facilities Act of 1998,” also known as Senate Bill No. 50 or SB 50 (Chapter 407, Statutes of 1998), governs a school district’s authority to levy school impact fees. This comprehensive legislation, together with the \$9.2 billion education bond act approved by the voters in November 1998 known as “Proposition 1A”, reformed methods of school construction financing in California. SB 50 instituted a new school facility program by which school districts can apply for state construction and modernization funds. It imposed limitations on the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development and provided the authority for school districts to levy fees at three different levels:

- **Level I** fees are the current statutory fees allowed under Education Code 17620. This code section provides the basic authority for school districts to levy a fee against residential and commercial construction for the purpose of funding school construction or reconstruction of facilities. These fees vary by district for residential construction and commercial construction and are increased biannually.
- **Level II** fees are outlined in Government Code Section 65995.5, allowing school districts to impose a higher fee on residential construction if certain conditions are met. These conditions include having a substantial percentage of students on multi-track year-round scheduling, having an assumed debt equal to 15–30 percent of the district’s bonding

capacity (percentage is based on revenue sources for repayment), having at least 20 percent of the district's teaching stations housed in relocatable classrooms, and having placed a local bond on the ballot in the past four years which received at least 50 percent plus one of the votes cast. A Facility Needs Assessment must demonstrate the need for new school facilities for unhoused pupils is attributable to projected enrollment growth from the construction of new residential units over the next five years.

- **Level III** fees are outlined in Government Code Section 655995.7. If State funding becomes unavailable, this code section authorizes a school district that has been approved to collect Level II fees to collect a higher fee on residential construction. This fee is equal to twice the amount of Level II fees. However, if a district eventually receives State funding, this excess fee may be reimbursed to the developers or subtracted from the amount of state funding.

Quimby Act

California Government Code Section 66477, Subdivision Map Act, referred to as the Quimby Act, permits local jurisdictions to require the dedication of land and/or the payment of in-lieu fees solely for park and recreation purposes. The required dedication and/or fees are based upon the residential density, parkland cost, and other factors. Land dedication and fees collected pursuant to the Quimby Act may be used for acquisition, improvement, and expansion of park, playground, and recreational facilities or the development of public school grounds.

LOCAL

City of Rancho Cordova General Plan

The City of Rancho Cordova General Plan contains the following goals, policies, and standards that are relevant to public services:

INFRASTRUCTURE, SERVICES, AND FINANCE ELEMENT

Goal ISF.2: Ensure the development of quality infrastructure to meet community needs at the time they are needed.

Policy ISF.2.1: Ensure the development of public infrastructure that meets the long-term needs of residents and ensure infrastructure is available at the time such facilities are needed.

Policy ISF.2.2: Coordinate with independent public service providers, including schools, parks and recreation, utility, transit, and other service districts, in developing service and financial planning strategies.

Policy ISF.2.3: Ensure that adequate funding is available for all infrastructure and public facilities, and make certain that the cost of improvements is equitably distributed.

Policy ISF.2.4: Ensure the development of public infrastructure that meets the long-term needs of residents and ensure infrastructure is available at the time such facilities are needed.

Goal ISF.3: Provide a full range of local services that meet local needs.

Policy ISF.3.1: Foster the provision of comprehensive services targeted to meet the needs of the City's growing population.

Policy ISF.3.2: Support enhanced library services for existing and future residents and employees that exceed regional and national standards.

Policy ISF.3.3: Foster the provision of comprehensive services targeted to meet the needs of the City's growing population.

Goal ISF.4: Provide educational options that result in well educated children and adults in the City of Rancho Cordova.

Policy ISF.4.1: Encourage school districts to locate and site facilities in an integrated manner with the rest of the community.

SAFETY ELEMENT

Goal S.7: Design neighborhoods and buildings in a manner that prevents crime and provides security and safety for people and property.

Policy S.7.1: Use Crime Prevention Through Environmental Design (CPTED) principles in the design of projects and buildings.

Goal S.8: Maintain effective and community-oriented law enforcement.

Policy S.8.1: Monitor and review the level of police staffing provided in the City to ensure that sufficient staffing and resources are available to serve local needs.

Policy S.8.2: Develop law enforcement programs through community partnerships, which reduce, as well as prevent, crime.

Policy S.8.3: Plan and develop law enforcement facilities according to overall need and the distribution of growth within the City.

Policy S.8.4: Use education and crime prevention as integral parts of the practice of law enforcement.

Goal S.9: Reduce the probability of fire damage to all of the City's structures.

Policy S.9.1: Cooperate with the Sacramento Metropolitan Fire District (SMFD) to reduce fire hazards, assist in fire suppression, and ensure efficient emergency medical response.

Policy S.9.2: Provide infill development with adequate off-site improvements to meet onsite fire flow requirements.

Policy S.9.3: Consider establishing mitigation fees to fund adequate fire protection and emergency medical response facilities, if such fees are critical and necessary to meet the facility funding needs of SMFD and existing methods of financing are inadequate.

3.12.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the Project will have a significant impact on public services if it would result in:

Substantial adverse physical impacts associated with the provision of new or physically altered government facilities, and/or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:

- Fire Protection
- Police Protection
- Schools
- Parks
- Other public facilities

IMPACTS AND MITIGATION MEASURES

Impact 3.12-1: The Project is not anticipated to result in substantial adverse physical impacts associated with the provision of or need for new or physically altered police facilities (Less than Significant)

The Rancho Cordova Police Department would provide first-response service for the Project. New development in the City is responsible for the full cost of additional facilities and equipment necessary as a result of that development. The Project applicant would be required to comply with City Ordinance No. 13-2003, which levies a special tax on all taxable parcels in the Project area. This tax would be included in new homeowners' property taxes and would be used to pay for new facilities and equipment and the startup costs incurred to hire and train each of the new police officers necessary to serve Project development.

The Rancho Cordova Police Department has established guidelines to enhance law enforcement and emergency response. These guidelines include the use of design measures to increase the opportunity for residents and occupants of buildings to see into areas deemed as potential sites for crime. In addition, the City encourages the use of "Crime Prevention Through Environmental Design" principles, such as maximizing visibility of parking areas and building entrances, defining property lines and distinguishing private spaces from public spaces using landscape plantings,

gateway treatments, and fences, and prohibiting entry or access using window locks, dead bolts, and interior door hinges, in the design of residences and commercial buildings.

The Rancho Cordova Police Department reviewed the revised Project application materials. The Police Department's review did not identify any specific police department facility improvements that would be required to serve the Project, but did recommend specific Project design and access features and noted that, based on an estimate of 2.28 people per home, that the Project would require an additional 1.87 officers (Rancho Cordova Police Department, June 21, 2018). It is noted that the 2.28 people per home rate was provided in a letter regarding the Project from the Rancho Cordova Police Department on June 21, 2018. This rate differs from Chapter 2.0, Project Description, of this Draft EIR which estimates the Project may have a population of 4,319. This population would result in the Project requiring an additional 4.3 officers. The Project would not include development of any police department facilities. New or expanded facilities would not be required to serve the Project. Impact fees from new development are collected based upon projected impacts from each development. The adequacy of impact fees is reviewed on an annual basis to ensure that the fee is commensurate with the service. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the Project, would fund costs associated with police services.

The Project would be required to contribute to the funding of additional police facilities, services, and equipment necessary to serve the Project and would incorporate the Rancho Cordova Police Department guidelines into Project designs. However, the Project does not include development of any police department facilities and police department facilities are not anticipated to be constructed or expanded off-site in association with the Project. Therefore, the project's impacts associated with substantial adverse physical impacts related to the construction, provision, or need for police facilities would be *less than significant*.

Impact 3.12-2: The Project is not anticipated to result in substantial adverse physical impacts associated with the provision of or need for new or physically altered fire protection facilities (Less than Significant)

Funding for fire services and facilities resulting from new construction is facilitated through SMFD's Capital Fire Facilities Fee Schedule. The fee is used exclusively to defray costs associated with property acquisition, site preparation, design, construction, and equipping new fire stations that are required to serve new development. Additional funds are generated by ambulance transport fees and service fees (mostly from fire prevention plan checking charges).

SMFD outlines fire prevention standards to be incorporated into new residential and commercial development. These standards include access arrangements, fire hydrant placement, fire flow availability and requirements, and plan submittal requirements. SMFD also requires installation of automatic fire sprinklers in all new commercial construction that exceeds 3,599 square feet and some residential properties exceeding 2,999 square feet. In addition, as required by the City

General Plan, new commercial development, industrial development, and multifamily residential development with five or more units must incorporate on-site fire suppression systems into Project designs. On-site equipment and design would be reviewed and approved by SMFD prior to issuance of building permits. SMFD reviewed the Project application and revised Project application materials. SMFD's review did not identify any specific fire protection facility improvements that would be required to serve the Project, but did identify specific Project design and access requirements necessary for SMFD to serve the Project (SMFD, February 21, 2018; SMFD, June 21, 2018); these requirements have been incorporated into the Project design.

The Project would not include development of any fire department facilities. New or expanded facilities would not be required to serve the Project. Impact fees from new development are collected based upon projected impacts from each development. The adequacy of impact fees is reviewed on an annual basis to ensure that the fee is commensurate with the service. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the Project, would fund costs associated with fire services.

The Project would be required to contribute to the funding of additional fire protection facilities, services, and equipment necessary to serve the Project and would incorporate SMFD requirements into Project designs. However, the Project does not include development of any fire protection facilities and fire protection department facilities are not anticipated to be constructed or expanded off-site as a result of the Project. Therefore, the Project's impacts associated with substantial adverse physical impacts related to the construction, provision, or need for fire protection facilities would be *less than significant*.

Impact 3.12-3: The Project has the potential to require the new or physically altered school facilities, the construction of which may cause substantial adverse physical environmental impacts (Less than Significant)

The Project site is within the boundaries of EGUSD. The Project includes residential units that would directly increase the student population in the area. The Project may indirectly increase the number of persons in the area as a result of employment potential; however, it is not possible to determine at this time whether employment opportunities would be utilized by the existing population with existing students in the schools or if employees would be recruited from outside the region, bringing new students to Rancho Cordova.

The Project would include the development of up to 1,725 residential units, including 737 age restricted single-family units, 735 non-age restricted single-family units, and up to 253 multifamily units (38 of which would be age-restricted). The Project's non-age-restricted residential component would directly cause population growth and increase enrollment in the local school district. Table

3.12-3 shows the anticipated number of elementary, middle, and high school students that would be generated by the non-age restricted portion of the Project.

TABLE 3.12-3: ELK GROVE UNIFIED SCHOOL DISTRICT STUDENT GENERATION (NON-AGE-RESTRICTED UNITS)

<i>PROPOSED LAND USE</i>	<i>GENERATION RATE</i>	<i>PROJECTED NUMBER OF STUDENTS</i>
<i>ELEMENTARY SCHOOL</i>		
735 Single-Family Dwellings	0.3952 students/unit	290
215 Multi-Family Dwellings	0.2405 students/unit	51
<i>Subtotal</i>		<i>341</i>
<i>MIDDLE SCHOOL</i>		
735 Single-Family Dwellings	0.1111 students/unit	81
215 Multi-Family Dwellings	0.0649 students/unit	13
<i>Subtotal</i>		<i>94</i>
<i>HIGH SCHOOL</i>		
735 Single-Family Dwellings	0.2045 students/unit	150
215 Multi-Family Dwellings	0.1297 students/unit	27
<i>Subtotal</i>		<i>177</i>
Total		612

SOURCE: ELK GROVE UNIFIED SCHOOL DISTRICT DEVELOPMENT FEE JUSTIFICATION STUDY / SCHOOL FACILITIES NEEDS ANALYSIS, 2018.

Utilizing the student generation rates provided in the EGUSD Development Fee Justification Study / School Facilities Needs Analysis, the proposed non-age restricted units would be expected to generate approximately up to 341 new elementary school students, up to 94 new middle school students, and up to 177 new high school students, for a total of 612 students generated at the EGUSD.

As required by state law, the Project applicant would pay the state-mandated school impact fees to EGUSD. As of August 2018, Level II fees for residential development are \$5.65 per square foot and \$0.61 per square foot for commercial/industrial construction in the EGUSD boundaries. The City would determine the assessable square footage that would be subject to the fee at the time of development. 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). The Project would not include development of any school facilities. The EGUSD Facilities Master Plan indicates that inadequacies of its facilities will be mitigated by adding facilities, a change in program, or adjustments to enrollment. It is anticipated that facility construction and expansion may result in environmental impacts associated with aesthetics, air quality, biological resources, cultural and tribal resources, energy, geology and soils, greenhouse gases, hazards and hazardous materials, hydrology and water quality, noise, public services, recreation, transportation and circulation, and utilities, depending on the location and facility design. However, while new or expanded future facilities that may serve the Project and other future projects in the area may result in environmental impacts associated with construction or expansion, the specific facilities to serve the Project are not known and greater specificity regarding impacts cannot be provided at this time. As previously noted, 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, the Project’s payment of the required school impact fee would reduce the Project’s impacts associated with school facilities to *less than significant*.

Impact 3.12-4: The Project has the potential to require the construction of park and recreational facilities which may cause substantial adverse physical environmental impacts (Less than Significant)

The Project would directly increase the number of persons in the area as a result of employment potential, and residential uses. The Project includes up to 1,725 residential units, including 737 age restricted single-family units, 735 non-age restricted single-family units, and up to 253 multifamily units (38 of which would be age-restricted). The Project is projected to increase the population by an estimated 4,013 residents, based on the number of units planned for development. However, for the purposes of collecting fees to mitigate for increase park demands (Quimby Act), the California Government Code Section 66477 states: *The amount of land dedicated or fees paid shall be based upon the residential density, which shall be determined on the basis of the approved or conditionally approved tentative map or parcel map and the average number of persons per household. There shall be a rebuttable presumption that the average number of persons per household by units in a structure is the same as that disclosed by the most recent available federal census or a census taken pursuant to Chapter 17 (commencing with Section 40200) of Part 2 of Division 3 of Title 4.* The Project’s parkland dedication and open space dedication requirements, calculated by the City consistent with Municipal Code Chapter 22.40, are outlined in Table 3.12-4.

TABLE 3.12-4: PARKLAND DEDICATION REQUIREMENTS

DESIGNATION	UNITS	QUIMBY PPH ¹	POPULATION	QUIMBY DEDICATION RATE	REQUIRED DEDICATION
Market-rate Single Family Units	735	2.95	2,168	5 acres/ 1,000 persons	10.840
Market-rate Multi-family Units	215	1.54	331	5 acres/ 1,000 persons	1.660
Age-restricted Senior Single Family Units	737	2.00	1,474	5 acres/ 1,000 persons	7.370
Age-restricted Senior Multi-family Units	38	1.04	40	5 acres/ 1,000 persons	0.198
<i>Totals</i>	<i>1,725</i>	<i>--</i>	<i>4,013</i>	<i>--</i>	<i>20.060</i>

NOTES: ¹ QUIMBY POPULATION CALCULATIONS ARE PERFORMED CONSISTENT WITH MUNICIPAL CODE CHAPTER 22.40. DUE TO THE PRESCRIBED POPULATION PER HOUSEHOLD FACTORS, THESE CALCULATIONS DIFFER FROM THE POPULATION ESTIMATES FOR THE PROJECT IN CHAPTER 2.

SOURCE: CITY OF RANCHO CORDOVA, 2019

As shown in Table 3.12-4, the Project would be required to dedicate 20.06 acres of parkland and 4.014 acres of open space. Park and recreation facilities totaling 20.3075 acres would be provided by the Project. In addition to these facilities, the Project would dedicate approximately 4.4 acres of public open space (portions of Lots R, S, Q and/or Lot U) to complement the active recreation uses associated with the 10.78-acre public park on Lot D and approximately 2.5 miles of public trails would be developed throughout the Project site. Within the age-restricted portion of the Project, approximately 7.17 acres would be dedicated for recreational purposes. The recreation center

(4.19 net acres) would include a clubhouse serving as a recreation, community gathering, activity, and information hub for residents. A separate 1.58-acre community garden (Lot B) and a 1.4-acre linear park would be provided within the age-restricted community. In addition, multiple paseos would be provided throughout the age-restricted community to provide connectivity and off-road walkability. In addition to the proposed park lots, the Project would provide parks and recreation facilities on approximately 0.2575 acres within Village 23 to serve the proposed multifamily use.

In fall 2005, CRPD adopted new standards that include a requirement of 5 acres of parkland per 1,000 residents, and the addition of performance standards for specific types of open space. The addition of 19.24 acres of park and recreation facilities space falls short of the five acre per 1,000 goal by 0.23 acres. However, the passive uses associated with Lot S and the public walking trails would result in adequate parkland to meet the standards. New or expanded off-site park facilities would not be required to serve the Project. The environmental impacts of development of the proposed on-site park and recreation facilities are addressed as part of the proposed Project and are analyzed throughout this EIR. Development of the park sites is anticipated as part of the Project and is included in the impact discussions associated with development of the Project site included in this Draft EIR, including analysis of impacts associated with aesthetics, air quality, biological resources, cultural and tribal cultural resources, geology and soils, greenhouse gases and energy, hazards and hazardous materials, hydrology and water quality, land use and planning, population and housing, public services and recreation, transportation and circulation, and utilities. For example, as shown in Figure 2.0-4 in Chapter 2.0, a 10.96-acre park site would be located in the north-central portion of the Project site. This large park area may include recreational fields. The potential lighting and noise impacts resulting from operation of this and other proposed parks are discussed in Section 3.1, Aesthetics, and Section 3.10, Noise and Vibration, of this EIR. Potential adverse environmental impacts associated with development of the Project, including the proposed park sites, are discussed in Sections 3.1 through 3.14 and 4.0 of this Draft EIR. The Project does not propose any off-site parks and no expansion or development of off-site parks is anticipated as part of the Project.

The City collects impact fees for parks from new development based upon projected impacts from the development. The Project applicant would be required to pay the in-lieu parkland fee, dedicate land for parkland uses, or provide a combination of dedication and in-lieu fees, as determined by the City. The Project is not anticipated to result in any significant environmental impacts associated with park and recreation facilities, beyond those discussed in Sections 3.1 through 3.14 and 4.0 of this Draft EIR, therefore, this impact is considered *less than significant*.

Impact 3.12-5: The Project would not 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 (Less than Significant)

As stated previously, the Project will directly, and may indirectly increase the number of persons in the area as a result of employment potential and visitor-serving uses. It is not anticipated that the

Project would result in a significant increase in the use of existing neighborhood and regional parks or other recreational facilities from people associated with the employment potential and visitor-serving uses. The Project does, however, include extensive new recreational facilities for the community and residents, which offset any new demand for parks or recreational facilities that could result from the employment potential and residential uses and would reduce the Project's potential to result in substantial physical deterioration of existing parks and recreation facilities.

The Project would not significantly increase the use of an existing park, or other recreational facility such that any substantial physical deterioration of existing facilities would occur or be accelerated. As such, the Project would have a *less-than-significant* impact relative to this topic.

Impact 3.12-6: The Project is not anticipated to result in substantial adverse physical impacts associated with the provision of or need for new or physically altered other public facilities (Less than Significant)

Sacramento County, as a regional government, provides countywide services, including public health, elections, and criminal prosecutions. The Project would increase demand for other public facilities within the City of Rancho Cordova, such as libraries and community buildings. However, given that the additional population increase associated with the Project is a small percentage of the population of the City as a whole, significant impacts due to increased demand on libraries and community facilities are not expected. Additionally, the Project includes a 21,000 square-foot community clubhouse in the age-restricted portion of the Project. The environmental impacts of construction of this clubhouse are addressed as part of the proposed Project and considered throughout this EIR. Overall, construction of other public or community facilities would not be warranted.

The Project will bring residents and could bring employees to the area which may require the use of other public services such as libraries, etc. The City collects impact fees from new development based upon projected impacts from each development, including impacts on other public services (i.e., libraries, community facilities, etc.). The City also reviews the adequacy of impact fees on an annual basis to ensure that the fee is commensurate with services provided. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the Project, would fund capital and labor costs associated with these other public services.

The Project would not trigger the need for new facilities or expansion of existing facilities associated with other public services and facilities, such as libraries and community buildings. Consequently, new or expanded facilities for other public services are not proposed at this time or required to serve the Project. The Project would not result in the need for new facilities for other public services, thus it will have a *less-than-significant* impact relative to this topic.

This section of the EIR analyzes the potential impacts of the Project on the surrounding transportation system including freeways, roadways, bicycle/pedestrian facilities, and transit facilities/services. This section identifies the significant impacts of the Project and recommends mitigation measures to lessen their significance. Information in this section is derived from the following:

- City of Rancho Cordova General Plan (adopted June 2006);
- Sacramento Regional Transit (RT) website (<http://www.sacrt.com/>);
- *Highway Capacity Manual* Transportation Research Board (2010);
- Memorandum RE: Jaeger Ranch Supplemental Traffic Analyses, Draft Traffic Impact Analysis Services (Kimley-Horn, February 2019);
- Memorandum RE: Jaeger Ranch Traffic Impact Study, Draft Other Considerations (Kimley-Horn, August 2018);
- Sacramento Area Council of Governments (SACOG) 2036 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS);
- Traffic Impact Analysis, Jaeger Ranch, City of Rancho Cordova, California (Kimley-Horn, August 2018);
- Memorandum RE: Jaeger Ranch Supplemental Traffic Analyses, Draft Trip Generation Memorandum (Kimley-Horn, June 2019); and
- *Trip Generation Manual, 9th Edition* (Institute of Transportation Engineers [ITE], 2012).

Comments were received during the public review period for the Notice of Preparation (NOP) regarding this topic from the following: County of Sacramento Department of Transportation (July 8, 2019) and Cordova Recreation & Park District (August 3, 2018). Each of the comments related to this topic is addressed within this section, and comments are included within Appendix A.

ANALYSIS METHODS

The traffic analysis was performed in accordance with the County of Sacramento's traffic study guidelines¹ and standards established by the Circulation Element of the City of Rancho Cordova's General Plan².

Level of Service Definitions

Analysis of transportation facility significant environmental impacts is based on the concept of Level of Service (LOS). The LOS of a facility is a qualitative measure used to describe operational conditions. LOS ranges from A (best), which represents minimal delay, to F (worst), which represents heavy delay and a facility that is operating at or near its functional capacity.

Intersection Analysis

LOS was determined using methods defined in the *Highway Capacity Manual (HCM) 2010* and appropriate traffic analysis software. The HCM includes procedures for analyzing side-street stop

¹ *Traffic Impact Analysis Guidelines, July 2004*, County of Sacramento.

² *City of Rancho Cordova General Plan: Circulation Element*, May 2015, City of Rancho Cordova

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controlled (SSSC), all-way stop controlled (AWSC), and signalized intersections. The SSSC procedure defines LOS as a function of average control delay for each minor street approach movement. The AWSC and signalized intersection procedure defines LOS as a function of average control delay for the intersection as a whole. Table 3.13-1 presents intersection LOS definitions as defined in the HCM.

TABLE 3.13-1: INTERSECTION LOS CRITERIA

LOS	DESCRIPTION	AVERAGE CONTROL DELAY PER VEHICLE (SECONDS)	
		SIGNALIZED INTERSECTIONS	UNSIGNALIZED INTERSECTIONS
A	Little or no delays	≤ 10.0	≤ 10.0
B	Short traffic delays	> 10.0 TO 20.0	> 10.0 TO 15.0
C	Average traffic delays	> 20.0 TO 35.0	> 15.0 TO 25.0
D	Long traffic delays	> 35.0 TO 55.0	> 25.0 TO 35.0
E	Very long traffic delays	> 55.0 TO 80.0	> 35.0 TO 50.0
F	Extreme traffic delays with intersection capacity exceeded	> 80.0	> 50.0

SOURCE: HIGHWAY CAPACITY MANUAL (TRANSPORTATION RESEARCH BOARD, 2010).

Roadway Segment Analysis

The analysis of roadway segments involves the comparison of daily segment volumes to the LOS criteria provided in the County's traffic impact analysis guidelines. The criteria provide maximum volumes for given service levels for various facility types. Table 3.13-2 replicates the County's roadway segment LOS criteria.

TABLE 3.13-2: ROADWAY SEGMENT LOS CRITERIA

FACILITY TYPE	# LANES	MAXIMUM VOLUME FOR GIVEN LOS				
		A	B	C	D	E
Residential	2	600	1,200	2,000	3,000	4,500
Residential Collector w/ Frontage	2	1,600	3,200	4,800	6,400	8,000
Residential Collector w/o Frontage	2	6,000	7,000	8,000	9,000	10,000
Arterial, Low Access Control	2	9,000	10,500	12,000	13,500	15,000
	4	18,000	21,000	24,000	27,000	30,000
	6	27,000	31,500	36,000	40,500	45,000
Arterial, Moderate Access Control	2	10,800	12,600	14,400	16,200	18,000
	4	21,600	25,200	28,800	32,400	36,000
	6	32,400	37,800	43,200	48,600	54,000
Arterial, High Access Control	2	12,000	14,000	16,000	18,000	20,000
	4	24,000	28,000	32,000	36,000	40,000
	6	36,000	42,000	48,000	54,000	60,000
Rural, 2-lane highway	2	2,400	4,800	7,900	13,500	22,900
Rural, 2-lane road, 24'-36' of pavement, paved shoulders	2	2,200	4,300	7,100	12,200	20,000
Rural, 2-lane road, 24'-36' of pavement, no shoulders	2	1,800	3,600	5,900	10,100	17,000

SOURCE: TRAFFIC IMPACT ANALYSIS GUIDELINES, TABLE 2, COUNTY OF SACRAMENTO DEPARTMENT OF TRANSPORTATION, JULY 2004.

DATA COLLECTION

To establish existing conditions, new traffic counts were collected for the study intersections and roadway segments. Twenty-seven (27) new weekday AM (7:00 to 9:00 AM) and PM (4:00 to 6:00 PM) peak-period intersection turning movement traffic counts were collected on September 28, 2017, with amendments in December 2018. Twenty-nine (29) new roadway segment counts were conducted on September 28, 2017.

Existing (2017) peak hour turn movement volumes are presented in Figure 3.13-3, and the traffic count data sheets are provided in Appendix A of Appendix I.1. Analysis worksheets for this scenario are provided in Appendix B of Appendix I.1.

3.13.1 ENVIRONMENTAL SETTING

PROJECT LOCATION

The Project site consists of approximately 530 acres located in the City of Rancho Cordova city limits. The Project site is bound by existing single-family residential uses and Douglas Road to the north, vacant land and Grant Line Road to the east, vacant land and Kiefer Boulevard to the south, and Rancho Cordova Parkway, single family residential, and vacant land on the west.

Rancho Cordova Parkway provides access to the site from south of Chrysanthy Boulevard. Rancho Cordova Parkway is currently paved north of Chrysanthy Boulevard, but is not paved along the Project frontage. The Project location, study intersections, and study segments are depicted in Figure 3.13-1. Figure 3.13-2 illustrates the existing study intersections facilities, traffic control, and lane configurations.

PROJECT AREA ROADWAYS

The following are descriptions of the primary roadways in the vicinity of the Project.

United States Route 50 (US-50) is an east-west interstate facility located approximately five-miles north of the Project. US-50 connects Rancho Cordova to Sacramento to the west and El Dorado County to the east. Primary access to the Project site from US-50 is provided at the Sunrise Boulevard, Zinfandel Drive, and Mather Field Road interchanges. Near Zinfandel Drive, US-50 carries approximately 170,000 vehicles per day³ with five lanes in each direction.

Jackson Road (State Route [SR] 16) is an expressway connecting Amador County and Sacramento County located along the southern edge of Rancho Cordova's city limits. Jackson Road connects with US-50 west of the Project site. South of the Project site, between Sunrise Boulevard and Grant Line Road, Jackson Road carries approximately 13,000 vehicles per day.

Sunrise Boulevard is a north-south arterial which connects the Project site to north Rancho Cordova and Placer County.

³ Caltrans Traffic Counts, 2015. <http://www.dot.ca.gov/trafficops/census/>

Zinfandel Drive is a north-south arterial which connects the Project site to US-50, as well as the commercial, industrial, and residential areas northwest of the Project site.

Chrysanthy Boulevard is a local roadway adjacent to and through the Project site. The Project would include construction of the segment of Chrysanthy Boulevard from Rancho Cordova Parkway/Jaeger Road to the eastern extent of the Project site. Traffic lights will be constructed at intersections within the Project as deemed necessary.

Rancho Cordova Parkway/Jaeger Road is a local roadway adjacent to the western edge of the Project site. The Project is required to widen Rancho Cordova Parkway along the Project extents from two to four lanes.

STUDY FACILITIES

The following transportation facilities are included in this evaluation:

Existing (2017) Intersections

1. Jackson Rd/SR-16 @ Bradshaw Rd
2. Jackson Rd/SR-16 @ Excelsior Rd
3. Jackson Rd/SR-16 @ Eagles Nest Rd
4. Jackson Rd/SR-16 @ Sunrise Blvd
5. Jackson Rd/SR-16 @ Grant Line Rd
6. Rancho Cordova Pkwy @ Chrysanthy Blvd
7. Florin Rd @ Sunrise Blvd
8. Grant Line Rd @ Kiefer Blvd
9. Grant Line Rd @ Sunrise Blvd
10. Douglas Rd @ Zinfandel Dr
11. Douglas Rd @ Sunrise Blvd
12. Douglas Rd @ Grant Line Rd
13. Mather Field Rd @ Folsom Blvd
14. Mather Field Rd @ US-50 Westbound (WB) Ramps
15. Mather Field Rd @ US-50 Eastbound (EB) Ramps
16. Mather Field Rd @ International Dr
17. Zinfandel Dr @ International Dr
18. Zinfandel Dr @ White Rock Rd
19. Zinfandel Dr @ US-50 EB Ramps
20. Zinfandel Dr @ US-50 WB Ramps
21. Sunrise Blvd @ White Rock Rd
22. Sunrise Blvd @ Folsom Blvd
23. Sunrise Blvd @ US-50 EB Ramps
24. Sunrise Blvd @ US-50 WB Ramps
25. Sunrise Blvd @ Zinfandel Dr
26. White Rock Rd @ Grant Line Rd

27. White Rock Rd @ Prairie City Rd

Additional Cumulative (2040) Intersections

28. Rancho Cordova Pkwy @ Folsom Blvd
29. Rancho Cordova Pkwy @ White Rock Rd
30. Rancho Cordova Pkwy @ Rio Del Oro Pkwy
31. Rancho Cordova Pkwy @ Douglas Rd
32. Rancho Cordova Pkwy @ Kiefer Blvd
33. Rancho Cordova Pkwy @ Grant Line Rd
34. Americanos Blvd @ International Dr
35. Americanos Blvd @ Centennial Dr
36. Americanos Blvd @ Douglas Rd
37. Americanos Blvd @ Chrysanthy Blvd
38. Americanos Blvd @ Kiefer Blvd
39. Chrysanthy Blvd @ Sunrise Blvd
40. Chrysanthy Blvd @ Grant Line Rd

Existing (2017) Roadway Segments

1. Jackson Rd/SR-16 between Bradshaw Rd and Excelsior Rd
2. Jackson Rd/SR-16 between Excelsior Rd and Eagles Nest Rd
3. Jackson Rd/SR-16 between Eagles Net Rd and Sunrise Blvd
4. Jackson Rd/SR-16 between Sunrise Blvd and Grant Line Rd
5. Excelsior Rd between Jackson Rd/SR-16 and Kiefer Blvd
6. Kiefer Blvd between Grant Line Rd and Jackson Rd/SR-16
7. International Dr between Zinfandel Dr and Sunrise Blvd
8. Mather Blvd between Femoyer St and Douglas Rd
9. Douglas Rd between Mather Blvd and Sunrise Blvd
10. Douglas Rd between Sunrise Blvd and Grant Line Rd
11. White Rock Rd between Zinfandel Dr and Sunrise Blvd
12. White Rock Rd between Sunrise Blvd and Grant Line Rd
13. White Rock Rd between Grant Line Rd and Prairie City Rd
14. Mather Field Rd between Folsom Blvd and US-50 WB Ramps
15. Mather Field Rd between US-50 WB Ramps and US-50 EB Ramps
16. Mather Field Rd between US-50 EB Ramps and International Dr
17. Zinfandel Dr between Folsom Blvd and US-50 Westbound Ramps
18. Zinfandel Dr between US-50 EB Ramps and White Rock Rd
19. Zinfandel Dr between White Rock Rd and International Dr
20. Zinfandel Dr between International Dr and Douglas Rd
21. Sunrise Blvd between US-50 WB Ramps and US-50 EB Ramps
22. Sunrise Blvd between US-50 EB Ramps to Folsom Blvd
23. Sunrise Blvd between Folsom Blvd and White Rock Rd

24. Sunrise Blvd between White Rock Rd and Douglas Rd
25. Sunrise Blvd between Douglas Rd and Jackson Rd/SR-16
26. Sunrise Blvd between Jackson Rd/SR-16 and Grant Line Rd
27. Grant Line Rd between White Rock Rd and Douglas Rd
28. Grant Line Rd between Douglas Rd and Jackson Rd/SR-16
29. Grant Line Rd between Jackson Rd/SR-16 and Sunrise Blvd

Additional Cumulative (2040) Roadway Segments

30. Kiefer Blvd between Eagles Nest Rd and Sunrise Blvd
31. Kiefer Blvd between Sunrise Blvd and Rancho Cordova Pkwy
32. Kiefer Blvd between Rancho Cordova Blvd and Americanos Blvd
33. Kiefer Blvd between Americanos Blvd and Grant Line Rd
34. Chrysanthy Blvd between Sunrise Blvd and Rancho Cordova Pkwy
35. Chrysanthy Blvd between Rancho Cordova Pkwy and Americanos Blvd (Within Project)
36. Chrysanthy Blvd between Americanos Blvd and Grant Line Rd
37. Rancho Cordova Pkwy between Folsom Blvd and White Rock Rd
38. Rancho Cordova Pkwy between White Rock Rd and Rio Del Oro Pkwy
39. Rancho Cordova Pkwy between Rio Del Oro Pkwy and Douglas Rd
40. Rancho Cordova Pkwy between Douglas Rd and Chrysanthy Blvd
41. Rancho Cordova Pkwy between Chrysanthy Blvd and Kiefer Blvd
42. Rancho Cordova Pkwy between Kiefer Blvd and Grant Line Rd
43. Americanos Blvd between International Dr and Centennial Dr
44. Americanos Blvd between Centennial Dr and Douglas Rd
45. Americanos Blvd between Douglas Rd and Chrysanthy Blvd
46. Americanos Blvd between Chrysanthy Blvd and Kiefer Blvd

EXISTING PEDESTRIAN AND BICYCLE FACILITIES

This section describes the existing pedestrian and bicycle facilities in the study area.

Pedestrian Facilities

The City of Rancho Cordova has an extensive system of multi-use pathways, sidewalks, and crosswalks available for use by pedestrians. Pedestrian facilities do not exist along the east side of Rancho Cordova Parkway along the Project frontage as this area has not been developed. However, sidewalks exist along the west side of Rancho Cordova Parkway along nearly the entire Project frontage. Sidewalks have not yet been constructed for approximately 0.11 miles of the western Project frontage (located at the northwestern corner of the Project site) as this portion of Rancho Cordova Parkway has not yet been constructed.

Additionally, pedestrian facilities are located along the roadways of the adjacent residential subdivisions to the north and west. Separated pedestrian paths are located on the east side of

Sunrise Boulevard, which is located west of the Project site. Similarly, separated pedestrian paths are located on the south side of Douglas Road, which is located north of the Project site.

BICYCLE FACILITIES

The following types of bicycle facilities exist within the City of Rancho Cordova:

- Shared-use paths (Class I) – are paved trails that are separated from roadways, and allow for shared use by both cyclists and pedestrians.
- On-street bike lanes (Class II) – are designated for use by bicycles by striping, pavement legends, and signs.
- On-street bike routes (Class III) – are designated by signage for shared bicycle use with vehicles but do not include any additional pavement width.

Class II bike lanes are located along both sides of Rancho Cordova Parkway along the Project frontage. Bicycle facilities have not yet been constructed for approximately 0.11 miles of the western Project frontage (located at the northwestern corner of the Project site) as this portion of Rancho Cordova Parkway has not yet been constructed.

Additionally, Class III bike routes are located along the roadways of the adjacent residential subdivisions to the north and west. Class II bike lanes are located on both sides of Sunrise Boulevard and Douglas Road in the Project vicinity.

TRANSIT SERVICE

Transit service in the City of Rancho Cordova is provided by Sacramento Regional Transit (RT) (local) and Rancho CordoVan (paratransit).

According to the SacRT website (<http://www.sacrt.com/>), the following bus routes exist in the study area: 1, 21, 22, 23, 24, 25, 28, 29, 72, 74, 75, 80, 82, 93, 95, 103, and 109. Additionally, the SacRT Gold Line light rail route follows US-50 in the City.

The Rancho CordoVan currently operates three routes that serve the Villages of Zinfandel (commonly known as Stone Creek), Anatolia neighborhoods, Kavala Ranch, and Sunridge Park. These routes operate Monday through Friday in the mornings and evenings to provide access to light rail at the Zinfandel RT Light Rail Station.

EXISTING (2017) CONDITION OPERATIONS

Intersections

Table 3.13-3 presents the peak hour intersection operating conditions for this analysis scenario. As indicated in the table, the study intersections operate from LOS A to LOS F during the AM and PM peak hours.

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TABLE 3.13-3: EXISTING (2017) INTERSECTION LOS

LOCATION	CONTROL	EXISTING (2017)			
		AM PEAK HOUR		PM PEAK HOUR	
		DELAY (SECS)	LOS	DELAY (SECS)	LOS
1. Jackson Rd/SR-16 @ Bradshaw Rd	Signal	122.2	F	79.1	F
2. Jackson Rd/SR-16 @ Excelsior Rd	Signal	74.1	E	51.8	D
3. Jackson Rd/SR-16 @ Eagles Nest Rd	SSSC	17.2 (89.1 NB)	F	20.1 (253.1 NB)	F
4. Jackson Rd/SR-16 @ Sunrise Rd	Signal	66.0	E	44.3	D
5. Jackson Rd/SR-16 @ Grant Line Rd	Signal	113.8	F	136.4	F
6. Rancho Cordova Pkwy @ Chrysanthy Blvd	Signal	Does Not Exist			
7. Florin Rd @ Sunrise Blvd	Signal	9.5	A	10.6	B
8. Grant Line Rd @ Kiefer Blvd	Signal	15.2	C	27.2	D
9. Grant Line Rd @ Sunrise Blvd	Signal	113.1	F	52.1	D
10. Douglas Rd @ Zinfandel Dr	Signal	44.3	D	19.1	B
11. Douglas Rd @ Sunrise Blvd	Signal	28.4	C	41.5	D
12. Douglas Rd @ Grant Line Rd	Signal	12.0	B	15.6	B
13. Mather Field Rd @ Folsom Blvd	Signal	27.5	C	51.7	D
14. Mather Field Rd @ US-50 WB Ramps	Signal	142.9	F	22.1	C
15. Mather Field Rd @ US-50 EB Ramps	Signal	53.5	D	24.3	C
16. Mather Field Rd @ International Dr	Signal	10.9	B	23.9	C
17. Zinfandel Dr @ International Dr	Signal	22.4	C	32.9	C
18. Zinfandel Dr @ White Rock Rd	Signal	33.4	C	39.1	D
19. Zinfandel Dr @ US-50 EB Ramps	Signal	85.1	F	23.2	C
20. Zinfandel Dr @ US-50 WB Ramps	Signal	29.7	C	18.1	B
21. Sunrise Blvd @ White Rock Rd	Signal	35.7	D	56.5	E
22. Sunrise Blvd @ Folsom Blvd	Signal	36.6	D	41.5	D
23. Sunrise Blvd @ US-50 EB Ramps	Signal	23.9	C	23.0	C
24. Sunrise Blvd @ US-50 WB Ramps	Signal	15.3	B	17.8	B
25. Sunrise Blvd @ Zinfandel Dr	Signal	112.8	F	58.6	E
26. White Rock Rd @ Grant Line Rd	Signal	6.1	A	13.4	B
27. White Rock Rd @ Prairie City Rd	Signal	61.5	E	59.4	E

NOTES: **BOLD** REPRESENTS UNACCEPTABLE OPERATIONS. AWSC = ALL WAY STOP CONTROL. SSSC = SIDE STREET STOP CONTROL.

SOURCE: KIMLEY-HORN, 2018.

Roadway Segments

Table 3.13-4 presents the peak hour intersection operating conditions for this analysis scenario. As indicated in the table, the study roadway segments operate from LOS A to LOS F.

TABLE 3.13-4: EXISTING (2017) ROADWAY SEGMENT LOS

ROADWAY SEGMENT	EXISTING (2017)				
	# LANES	FACILITY TYPE	DAILY VOL.	V/C RATIO	LOS
1. Jackson Rd/SR-16: Bradshaw Rd and Excelsior Rd	2	Arterial M	12,341	0.69	B
2. Jackson Rd/SR-16: Excelsior Rd and Eagles Nest Rd	2	Rural Hwy	11,760	0.51	D
3. Jackson Rd/SR-16: Eagles Nest Rd and Sunrise Blvd	2	Rural Hwy	11,806	0.52	D
4. Jackson Rd/SR-16: Sunrise Blvd and Grant Line Rd	2	Rural Hwy	14,980	0.65	E
5. Excelsior Rd: Jackson Rd/SR-16 and Kiefer Blvd	2	Arterial M	4,552	0.25	A
6. Kiefer Blvd: Grant Line Rd and Jackson Rd/SR-16	2	Rural S	941	0.05	A
7. International Dr: Zinfandel Dr and Sunrise Blvd	6	Arterial M	11,246	0.21	A
8. Mather Blvd: Femoyer St and Douglas Rd	2	Arterial M	5,540	0.31	A
9. Douglas Rd: Mather Blvd and Sunrise Blvd	2	Arterial M	12,404	0.69	B
10. Douglas Rd: Sunrise Blvd and Grant Line Rd	2	Arterial M	7,510	0.42	A
11. White Rock Rd: Zinfandel Dr and Sunrise Blvd	6	Arterial M	15,943	0.30	A
12. White Rock Rd: Sunrise Blvd and Grant Line Rd	2	Rural NS	3,533	0.21	B
13. White Rock Rd: Grant Line Rd and Prairie City Rd	4	Arterial M	15,436	0.43	A
14. Mather Field Rd: Folsom Blvd and US-50 WB Ramps	4	Arterial M	22,543	0.63	B
15. Mather Field Rd: US-50 WB Ramps and US-50 EB Ramps	4	Arterial M	35,028	0.97	E
16. Mather Field Rd: US-50 EB Ramps and International Dr	6	Arterial M	42,228	0.78	C
17. Zinfandel Dr: Folsom Blvd and US-50 WB Ramps	4	Arterial M	22,380	0.62	B
18. Zinfandel Dr: US-50 EB Ramps and White Rock Rd	6	Arterial M	50,515	0.94	E
19. Zinfandel Dr: White Rock Rd and International Dr	6	Arterial M	23,685	0.44	A
20. Zinfandel Dr: International Dr and Douglas Rd	4	Arterial M	13,705	0.38	A
21. Sunrise Blvd: US-50 WB Ramps and US-50 EB Ramps	6	Arterial M	67,276	1.25	F
22. Sunrise Blvd: US-50 EB Ramps to Folsom Blvd	6	Arterial M	53,504	0.99	E
23. Sunrise Blvd: Folsom Blvd and White Rock Rd	6	Arterial M	41,238	0.76	C
24. Sunrise Blvd: White Rock Rd and Douglas Rd	6	Arterial M	30,941	0.57	A
25. Sunrise Blvd: Douglas Rd and Jackson Rd/SR-16	4	Arterial M	22,635	0.63	B
26. Sunrise Blvd: Jackson Rd/SR-16 and Grant Line Rd	2	Rural S	11,748	0.59	D
27. Grant Line Rd: White Rock Rd and Douglas Rd	2	Rural NS	12,804	0.75	E
28. Grant Line Rd: Douglas Rd and Jackson Rd/SR-16	2	Rural S	8,524	0.43	D
29. Grant Line Rd: Jackson Rd/SR-16 and Sunrise Blvd	2	Rural S	7,745	0.39	D

NOTE: **BOLD** REPRESENTS UNACCEPTABLE OPERATIONS.

SOURCE: KIMLEY-HORN, 2018.

3.13.2 REGULATORY SETTING

Existing transportation polices, laws, and regulations that would apply to the Project are summarized below. This information provides a context for the impact discussion related to the

Project's consistency with applicable regulatory conditions and development of significance criteria for evaluating Project impacts.

SACOG MTP/SCS

SACOG is responsible for the preparation of, and updates to, the 2016 MTP/SCS and the corresponding Metropolitan Transportation Improvement Program (MTIP) for the six-county Sacramento region. The MTP/SCS provides a 20-year transportation vision and corresponding list of projects. The MTIP identifies short-term projects (7-year horizon) in more detail. The current MTP/SCS was adopted by the SACOG board in 2016.

Senate Bill 743

Senate Bill 743, passed in 2013, requires the California Governor's Office of Planning and Research (OPR) to develop new guidelines that address traffic metrics under CEQA. As stated in the legislation, upon adoption of the new guidelines, "automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the guidelines, if any."

In December 2018, after over five years of stakeholder-driven development through over 200 stakeholder meetings, public convenings, and other outreach events, the California Natural Resources Agency certified and adopted the CEQA Guidelines update package, including the Guidelines section implementing Senate Bill 743 (§ 15064.3). However, because the NOP for the Project was released in July 2018 and because lead agencies are not required to replace the LOS threshold until July 2020, this Draft EIR relies on the previous 2018 version of the CEQA Guidelines related to analysis of transportation impacts. As such, VMT analysis is not required or included in this section.

Sacramento County General Plan

The Circulation Element of the latest County of Sacramento General Plan includes the following relevant provisions:

***CI-9:** Plan and design the roadway system in a manner that meets Level of Service (LOS) D on rural roadways and LOS E on urban roadways, unless it is infeasible to implement project alternatives or mitigation measures that would achieve LOS D on rural roadways or LOS E on urban roadways. The urban areas are those areas within the Urban Service Boundary as shown in the Land Use Element of the Sacramento County General Plan. The areas outside the Urban Service Boundary are considered rural.*

***CI-35:** The applicant/developer of land development projects shall be responsible to install bicycle and pedestrian facilities in accordance with Sacramento County Improvement Standards and may be responsible to participate in the fair share funding of regional multi-use trails identified in the Sacramento County Bicycle Master Plan.*

Sacramento County's traffic study guidelines provide guidelines for the implementation of the General Plan provisions: "The County defines the minimum acceptable operation level for its roadways and intersections to be LOS D for rural areas and LOS E for urban areas. The urban areas are those areas within the Urban Service Boundary as shown in the Land Use Element of the Sacramento County General Plan. The areas outside the Urban Service Boundary are considered rural."

All of the Sacramento County study facilities are within the Urban Services Boundary. Therefore, LOS E is the minimum acceptable LOS for all County facilities.

Rancho Cordova General Plan

The Circulation Element of the Rancho Cordova's General Plan includes the following relevant provisions:

***Policy C.1.2:** Seek to maintain operations on all roadways and intersections at Level of Service D or better at all times, including peak travel times, unless maintaining this Level of Service would, in the City's judgment, be infeasible and/or conflict with the achievement of other goals. Congestion in excess of Level of Service D may be accepted in these cases, provided that provisions are made to improve traffic flow and/or promote non-vehicular transportation as part of a development project or a City-initiated project. Please see Policy C.1.3 for additional policy guidance related to this issue.*

Examples of system improvements which may be accepted when Level of Service D cannot be maintained include the following, where the improvement or funding is in excess of standard City requirements:

- *Development of on- or off-street bicycle or pedestrian circulation (not including sidewalks that are constructed as part of roadway improvements);*
- *Providing or funding public transportation facilities or services;*
- *Other features as determined appropriate by the City.*

***Policy C.1.3:** Recognize that regional traffic beyond the City's control, as well as circulation system decisions made prior to incorporation or by other agencies, will make it infeasible to achieve the City's desired Level of Service on all roadways. Subject development projects which affect these roadways to the provisions of Policy C.1.2 to provide offsetting improvements to the vehicular and/or non-vehicular transportation system.*

City of Rancho Cordova Pedestrian Master Plan

Adopted in 2011, the Pedestrian Master Plan strengthens the City's existing policy framework by providing specific information related to pedestrian infrastructure and demand, as well as updated policy language. Additionally, the Pedestrian Master Plan includes an implementation chapter that outlines the highest-priority pedestrian projects in Rancho Cordova and the estimated cost to complete them. The Pedestrian Master Plan addresses the overall state of the pedestrian network as well as an assessment of the level of effort needed to improve the network citywide.

The Pedestrian Master Plan includes the following goals:

Goal 1: *Improve the pedestrian network to increase pedestrian activity in Rancho Cordova.*

Goal 2: *Provide universally safe and equal access.*

Goal 3: *Establish and enhance routes to school that will enable and encourage more students to safely walk to school.*

Goal 4: *Develop pedestrian-supportive encouragement and enforcement programs.*

Goal 5: *Pursue innovative funding sources and partnership opportunities to enhance pedestrian facilities, and provide education and encouragement opportunities.*

City of Rancho Cordova Bicycle Master Plan

Adopted in 2016, the Bicycle Master Plan provides a strategy for the development of a comprehensive bicycle transportation network, support facilities, and support education, encouragement, enforcement and evaluation programs. The Bicycle Master Plan documents what bicycling is like now in Rancho Cordova, reasons for improvements, and a strategy to make the City safer and more comfortable to bicycle for recreation and transportation for all ages and abilities.

The Bicycle Master Plan includes the following goals:

Goal 1: *Develop a continuous, convenient, and family friendly bikeway network as described in the Bicycle Master Plan.*

Goal 2: *Ensure new development extends the bicycle network to all neighborhoods and attractors.*

Goal 3: *Ensure adequate support facilities throughout Rancho Cordova's bicycle network.*

Goal 4: *Increase awareness of bicyclist safety and responsibility through education and enforcement of bicyclists and drivers.*

Goal 5: *Eliminate all traffic fatalities and reduce the number of bicycle related injuries by 50 percent by 2027.*

Goal 6: *Pursue innovative funding sources and partnership opportunities to enhance bicycle facilities, and provide education and encouragement opportunities.*

Goal 7: *Increase the percentage of all trips made by bicyclists from 1.1 percent to 2.2 percent in Rancho Cordova by 2021.*

Goal 8: *Establish Rancho Cordova as a destination for recreational bicycling through creation of a signature trail network and encouragement of bicycling and bicycling events.*

City of Rancho Cordova Transit Master Plan

Adopted in 2006, the purpose of the Transit Master Plan is to provide a multi-modal approach to support mobility as presented in the City of Rancho Cordova's General Plan. The City of Rancho Cordova Transit Master Plan is the first of several planning documents that are intended to detail the City's recently adopted General Plan. The Transit Master Plan proposes a system of city, neighborhood and regional services. The "Signature Service" will connect residents to businesses, shopping and recreation, and will provide a branding mechanism that will serve broader economic planning goals. According to Figure 1 of the Transit Master Plan, the Signature Service would generally follow Rancho Cordova Parkway, adjacent west of the Project site. The nearest Signature Transit Station to the Project site would be located at the intersection of Chrysanthy Boulevard and Rancho Cordova Parkway.

City of Rancho Cordova Municipal Code

Section 17.64.100, Bicycle parking requirements, of the City's Municipal Code outlines the bicycle parking requirements for all new construction, additions of ten percent or more floor area to existing buildings, and changes in land use classification. Single-family homes, duplexes, and multi-family dwellings of less than four units are exempt. Short- and long-term bicycle parking requirements are as follows:

1. *Short-term bicycle parking.* If a land use or project is anticipated to generate visitor traffic, the project must provide permanently anchored bicycle racks within 50 feet of the visitor's entrance. To enhance security and visibility the bicycle racks shall be readily visible to passers-by. The bicycle capacity of the racks must equal an amount equivalent to five percent of all required motorized vehicle parking. There shall be a minimum of one rack with capacity for two bicycles.
2. *Long-term bicycle parking.* Buildings with over ten tenant-occupants (e.g., multi-family tenants, owners, employees) shall provide secure bicycle parking for five percent of required motorized vehicle spaces, with a minimum of one space. Acceptable parking facilities shall be convenient from the street and include one or a combination of the following:
 - a. Covered, lockable enclosures with permanently anchored racks for bicycles,
 - b. Lockable bicycle rooms with permanently anchored racks,
 - c. Lockable, permanently anchored bicycle lockers.
3. In the case of residential development, a standard garage is sufficient, if available.

3.13.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

This section describes the thresholds or criteria that determine whether the Project causes a significant impact on the roadway, bicycle, pedestrian, or transit systems. These thresholds are based on policies from the Rancho Cordova General Plan and recommended thresholds from the CEQA Guidelines.

The Project would have a significant impact if it would:

- Conflict with an applicable program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities:
 - Roadway/Signalized Intersections:
 - result in a roadway or a signalized intersection operating at an acceptable LOS to deteriorate to an unacceptable LOS:
 - LOS E within the unincorporated area,
 - LOS D within the City, except if additional features are provided consistent with General Plan policy,
 - Require roadway widening,
 - Require traffic signalization based on the peak hour traffic signal analysis;
 - increase the volume-to-capacity (V/C) ratio by more than 0.05 at a roadway or at a signalized intersection that is operating at an unacceptable LOS without the Project.
 - Unsignalized Intersections:
 - result in an unsignalized intersection movement/approach operating at an acceptable LOS to deteriorate to an unacceptable LOS, and also cause the intersection to meet a traffic signal warrant; or
 - for an unsignalized intersection that meets a signal warrant, increase the delay by more than 5 seconds at a movement/approach that is operating at an unacceptable LOS without the Project.
 - Transit: conflict with an applicable program, plan, ordinance, or policy addressing the transit system; and/or
 - Bicycle and Pedestrian: conflict with an applicable program, plan, ordinance, or policy addressing the bicycle and pedestrian system;
- Substantially increase hazards due to geometric design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); and/or
- Result in inadequate emergency access.

METHODOLOGY

Project Trip Generation and Distribution

Project-generated vehicle trips are approximated using data included in *Trip Generation, 9th Edition*, published by the Institute of Transportation Engineers (ITE).

The land use considered for this analysis included 735 market rate single family detached units (SFR), 215 multi-family housing units, 737 age-restricted senior single family units, 38 age-restricted senior multifamily units, and 32,000 square feet of commercial uses for the Project site. This land use type is understood to have trip characteristics that generate fewer daily trips when compared to non-age restrictive land use types. In fact, the daily trip rate for the senior single family units is 61% less than

the daily trip rate for the market-rate single family units. In addition, the AM and PM peak hour trip rates for senior single family units are 71% and 73% less than the AM peak hour and PM peak hour trip rates for the market-rate single family units, respectively.

To represent this development, ITE Land Use Codes 210 (Single Family Detached Housing), 220 (Apartment), 251 (Senior Adult Housing - Detached), 252 (Senior Adult Housing - Attached), and 820 (Shopping Center) were applied. Internal capture rates of 2.84% and 8.92% were applied to the AM and PM peak hours, respectively. For the commercial uses, a pass-by reduction of 34% was applied for the PM peak hour, in accordance with the Trip Generation Handbook. The anticipated trip generation characteristics for the Project are presented in Table 3.13-5.

TABLE 3.13-5: PROPOSED PROJECT TRIP GENERATION

LAND USE (ITE CODE)	SIZE	DAILY TRIPS	AM PEAK HOUR			PM PEAK HOUR		
			TOTAL	IN	OUT	TOTAL	IN	OUT
Single-Family Detached Housing (210)	735 DU	6,796	537	136	411	716	451	265
Apartment (220)	215 DU	1,225	105	21	84	114	74	40
Senior Adult Housing – Detached (251)	737 DU	2,519	158	55	103	181	110	71
Senior Adult Housing – Attached (252)	38	112	8	3	5	10	6	4
Shopping Center (820)	32,000 KSF	954	23	14	9	81	39	42
Total		11,606	841	229	612	1,102	680	422

SOURCE: KIMLEY-HORN, 2019.

As shown in Table 3.13-5, the Project is estimated to generate approximately 11,606 new daily trips, with 841 and 1,102 trips occurring during the AM and PM peak hours, respectively.

The Project trip distribution percentages are provided in Figure 3.13-4. The assignments of Project trips are depicted in Figure 3.13-5.

Rancho Cordova Parkway Widening Trigger Analysis

The need to widen Rancho Cordova Parkway from two lanes to four lanes along the Project extents was analyzed between Existing (2017) and Cumulative (2040) Plus Proposed Project conditions. This trigger analysis incorporated not only the development assumptions that would increase traffic along this roadway segment, but also the connection of the roadway south to Grant Line Road and north to US-50.

Peak Hour Traffic Signal Warrant Analysis

The need for traffic signalization was assessed based on the peak-hour warrant methodologies noted in Section 4.C of the *California Manual on Uniform Traffic Control Devices (CaMUTCD), 2014 Edition with April 2017 revisions* (CaMUTCD). The peak-hour traffic signal warrant analysis was performed for the two unsignalized intersections in the Existing (2017) scenario, including the SSSC intersection at Jackson Road and Eagles Nest Road (Intersection #3), and the AWSC intersection at Grant Line Road and Kiefer Boulevard (Intersection #8).

IMPACTS AND MITIGATION MEASURES

Impact 3.13-1: Under Existing (2017) Plus Project conditions, Project may conflict with an applicable program, plan, ordinance or policy addressing the circulation system – Roadway Segments and Intersections (Significant and Unavoidable)

As previously discussed, the number of trips anticipated to be generated by the Project was derived using the *Trip Generation Manual, 9th Edition*, published by the ITE. These trips were assigned to the roadway network based on existing traffic volumes, output from the SACSIM travel demand model, and professional judgment. Using these volumes, LOS were determined at the study facilities. Existing (2017) Plus Proposed Project peak hour turn movement volumes are presented in Figure 3.13-6. LOS were then determined at the study facilities. Analysis worksheets for this scenario are provided in Appendix C of Appendix I.1.

Intersections

Table 3.13-6 presents the intersection operating conditions for this analysis scenario. As indicated in the table, the study intersections operate from LOS A to LOS F during the AM and PM peak hours.

As reflected in Table 3.13-6, the addition of the Project results in potentially significant impacts at five study intersections:

- Intersection #3, Jackson Road at Eagles Nest Road (located in the County of Sacramento);
- Intersection #9, Grant Line Road at Sunrise Boulevard (located in the County of Sacramento);
- Intersection #11, Douglas Road at Sunrise Boulevard;
- Intersection #21, Sunrise Boulevard at White Rock Road; and
- Intersection #25, Sunrise Boulevard at Zinfandel Drive.

Following Table 3.13-6 is a discussion of each potentially significant impact associated with the study intersections.

TABLE 3.13-6: EXISTING (2017) PLUS PROJECT INTERSECTION LOS

LOCATION	CONTROL	EXISTING (2017)				EXISTING (2017) PLUS PROJECT			
		AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR	
		DELAY (SECS)	LOS	DELAY (SECS)	LOS	DELAY (SECS)	LOS	DELAY (SECS)	LOS
1. Jackson Rd/SR-16 @ Bradshaw Rd	Signal	122.2	F	79.1	F	126.1	F	80.1	F
2. Jackson Rd/SR-16 @ Excelsior Rd	Signal	74.1	E	51.8	D	59.1	E	43.2	D
3. Jackson Rd/SR-16 @ Eagles Nest Rd	SSSC	17.2 (89.1 NB)	F	20.1 (253.1 NB)	F	18.0 (95.3 NB)	F	19.1 (ECL NB)	F
4. Jackson Rd/SR-16 @ Sunrise Rd	Signal	66.0	E	44.3	D	69.3	E	47.0	D
5. Jackson Rd/SR-16 @ Grant Line Rd	Signal	113.8	F	136.4	F	114.1	F	136.9	F
6. Rancho Cordova Pkwy @ Chrysanthy Blvd	Signal	Does Not Exist				1.4	A	1.2	A
7. Florin Rd @ Sunrise Blvd	Signal	9.5	A	10.6	B	9.8	A	11.1	B
8. Grant Line Rd @ Kiefer Blvd	Signal	15.2	C	27.2	D	15.2	C	27.2	D
9. Grant Line Rd @ Sunrise Blvd	Signal	113.1	F	52.1	D	120.9	F	54.9	D
10. Douglas Rd @ Zinfandel Dr	Signal	44.3	D	19.1	B	44.8	D	19.3	B
11. Douglas Rd @ Sunrise Blvd	Signal	28.4	C	41.5	D	35.0	D	63.7	E
12. Douglas Rd @ Grant Line Rd	Signal	12.0	B	15.6	B	12.4	B	16.4	B
13. Mather Field Rd @ Folsom Blvd	Signal	27.5	C	51.7	D	27.2	C	51.1	D
14. Mather Field Rd @ US-50 WB Ramps	Signal	142.9	F	22.1	C	142.5	F	22.0	C
15. Mather Field Rd @ US-50 EB Ramps	Signal	53.5	D	24.3	C	53.6	D	24.4	C
16. Mather Field Rd @ International Dr	Signal	10.9	B	23.9	C	10.8	B	23.9	C
17. Zinfandel Dr @ International Dr	Signal	22.4	C	32.9	C	23.7	C	35.2	D
18. Zinfandel Dr @ White Rock Rd	Signal	33.4	C	39.1	D	33.9	C	40.7	D
19. Zinfandel Dr @ US-50 EB Ramps	Signal	85.1	F	23.2	C	88.7	F	25.7	C
20. Zinfandel Dr @ US-50 WB Ramps	Signal	29.7	C	18.1	B	29.6	C	18.0	B
21. Sunrise Blvd @ White Rock Rd	Signal	35.7	D	56.5	E	33.2	C	61.9	E
22. Sunrise Blvd @ Folsom Blvd	Signal	36.6	D	41.5	D	38.0	D	42.2	D
23. Sunrise Blvd @ US-50 EB Ramps	Signal	23.9	C	23.0	C	23.7	C	22.7	C
24. Sunrise Blvd @ US-50 WB Ramps	Signal	15.3	B	17.8	B	15.5	B	18.5	B
25. Sunrise Blvd @ Zinfandel Dr	Signal	112.8	F	58.6	E	117.7	F	70.2	E
26. White Rock Rd @ Grant Line Rd	Signal	6.1	A	13.4	B	6.1	A	13.5	B
27. White Rock Rd @ Prairie City Rd	Signal	61.5	E	59.4	E	63.2	E	61.8	E

NOTE: **BOLD** REPRESENTS UNACCEPTABLE OPERATIONS. **SHADED** REPRESENTS A POTENTIALLY SIGNIFICANT IMPACT. AWSC: ALL WAY STOP CONTROL. SSS: SIDE STREET STOP CONTROL. ECL: EXCEEDS CALCULABLE LIMIT.

SOURCE: KIMLEY-HORN, 2018.

INTERSECTION #3, JACKSON ROAD AT EAGLES NEST ROAD

As shown in Table 3.13-6, this intersection operates at unacceptable LOS F during the AM and PM peak hours without the Project, and the Project adds more than five seconds of delay to the northbound left turn movement during the AM and PM peak hours. This is a potentially significant impact.

The significant impact at Intersection #3 during the AM and PM peak hours can be mitigated by converting the intersection from side street stop controlled to signalized, which would result in the intersection operating at LOS B during the AM and PM peak hours as shown in Table 3.13-7. Mitigation Measure 3.13-1 requires the Project applicant to fund the Project's fair-share of converting this intersection from a side street stop controlled intersection to a signalized intersection. However, since the identified improvement falls under the jurisdiction of the County, neither the City nor the Project applicant would have control over the timing or implementation of this improvement. Thus, this impact would remain **significant and unavoidable**. If the County allows the improvement to move forward, the impact would be classified as significant in the short-term, but eventually would be reduced to a less-than-significant level in the long-term.

INTERSECTION #9, GRANT LINE ROAD AT SUNRISE BOULEVARD

As shown in Table 3.13-6, this intersection operates at unacceptable LOS F during the AM peak hour without the Project, and the Project adds more than five seconds of delay to the intersection. This is a potentially significant impact.

The significant impact at this intersection during the AM peak hour can be mitigated by changing the southbound approach to include a right turn lane and an all-purpose lane, which would result in the intersection operating at LOS D or better during the AM and PM peak hours as shown in Table 3.13-7. The intersection improvements would include restriping the southbound approach to move the bicycle lane from its existing location between the two travel lanes to the right shoulder and add hatching for the right turns, consistent with the Optional Through Right and Right-Turn-Only lane configuration included in Figure 9C-4a (CA) of the CaMUTCD. Mitigation Measure 3.13-2 requires the Project applicant to fund the Project's fair-share of the southbound approach improvements to this intersection. However, since the identified improvement falls under the jurisdiction of the County, neither the City nor the Project applicant would have control over their timing or implementation. Thus, this impact would remain **significant and unavoidable**. If the County allows the improvement to move forward, the impact would be classified as significant in the short-term, but eventually would be reduced to a less-than-significant level in the long-term.

INTERSECTION #11, DOUGLAS ROAD AT SUNRISE BOULEVARD

As shown in Table 3.13-6, this intersection operates at LOS D during the PM peak hour without the Project, and the Project results in LOS E. This is a potentially significant impact.

The significant impact at this intersection during the PM peak hour can be mitigated through Mitigation Measure 3.13-3, which requires signal timing optimization and the addition of a right-

turn overlap signal phase for the eastbound right-turn, overlapping with the northbound left-turn movement. As shown in Table 3.13-7, Mitigation Measure 3.13-3, included below, results in the intersection operating at LOS D or better during the AM and PM peak hours. With implementation of Mitigation Measure 3.13-3, this impact is *less than significant*.

INTERSECTION #21, SUNRISE BOULEVARD AT WHITE ROCK ROAD

As shown in Table 3.13-2, this intersection operates at unacceptable LOS E during the PM peak hour without the Project, and the Project adds more than five seconds of delay to the intersection. This is a potentially significant impact.

The significant impact at this intersection during the PM peak hour can be mitigated through Mitigation Measure 3.13-4, which requires optimizing the signal timings. As shown in Table 3.13-7, Mitigation Measure 3.13-4, included below, results in the intersection operating at LOS D or better during the AM and PM peak hours. With implementation of Mitigation Measure 3.13-4, this impact is *less than significant*.

INTERSECTION #25, SUNRISE BOULEVARD AT ZINFANDEL DRIVE

As shown in Table 3.13-6, this intersection operates at unacceptable LOS E during the PM peak hour without the Project, and the Project adds more than five seconds of delay to the intersection. This is a potentially significant impact.

The significant impact at this intersection during the PM peak hour can be mitigated by Mitigation Measure 3.13-5, which requires restriping the eastbound and westbound approaches to include a left turn lane and through-right lane. As shown in Table 3.13-7, Mitigation Measure 3.13-5, included below, results in the intersection operating at LOS D or better during the AM and PM peak hours. With implementation of Mitigation Measure 3.13-5, this impact is *less than significant*.

TABLE 3.13-7: INTERSECTION LOS – EXISTING (2017) PLUS PROJECT MITIGATED CONDITION

INTERSECTION	EXISTING (2017) PLUS PROJECT				EXISTING (2017) PLUS PROJECT – WITH MITIGATION			
	AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR	
	DELAY (SEC)	LOS	DELAY (SEC)	LOS	DELAY (SEC)	LOS	DELAY (SEC)	LOS
3. Jackson Rd/SR-16 @ Eagles Nest Rd	18.0 (95.3 NB)	F	19.1 (ECL NB)	F	19.5	B	15.7	B
9. Grant Line Rd @ Sunrise Blvd	120.9	F	54.9	D	61.9	E	32.1	C
11. Douglas Rd @ Grant Line Rd	35.0	D	63.7	E	35.0	D	53.2	D
21. Sunrise Blvd @ White Rock Rd	33.2	C	61.9	E	33.2	C	54.3	D
25. Sunrise Blvd @ Zinfandel Dr	117.7	F	70.2	E	89.0	F	54.5	D

NOTES: **BOLD** REPRESENTS UNACCEPTABLE OPERATIONS. **SHADED** REPRESENTS A POTENTIALLY SIGNIFICANT IMPACT. ECL = EXCEEDS CALCULABLE LIMIT.

ANALYSIS WORKSHEETS FOR THE PROPOSED MITIGATION MEASURES FOR THIS SCENARIO ARE PROVIDED IN APPENDIX F OF APPENDIX I.1.

SOURCE: KIMLEY-HORN, 2018.

Roadway Segments

Table 3.13-8 presents the roadway segment operating conditions for this analysis scenario. As indicated in the table, the study roadway segments operate from LOS A to LOS F.

As shown in Table 3.13-8, the addition of the Project results in a potentially significant impact at one study segment: Roadway Segment #22, Sunrise Boulevard between US-50 and Folsom Boulevard.

SEGMENT #22, SUNRISE BOULEVARD BETWEEN US 50 AND FOLSOM BOULEVARD

As shown in Table 3.13-8, this roadway segment operates at unacceptable LOS E without the Project and the Project increases the volume-to-capacity ratio by more than 0.05. This is a potentially significant impact. The General Plan DEIR indicated that widening beyond 6 lanes would not be consistent with the City's vision for Sunrise Blvd as articulated in the General Plan, including the Circulation Plan, which doesn't anticipate local roads wider than 6 lanes.

The GP EIR addressed this for roadway segments with the following explanation "*In addition, during the development of the Roadway System Sizing Map and the General Plan, the City Council identified that no local roadway would be designed larger than a 6-lane facility, given that large roadway facilities (8 lanes and greater) conflicts with pedestrian and bicycle use and results in the "barrier effect" of such roadways dividing portions of the City.*" Therefore, widening this segment would conflict with the General Plan and impacts to Roadway Segment #22 would remain **significant and unavoidable**.

CONCLUSION

Under the Existing (2017) Plus Project condition, the addition of the Project results in potentially significant impacts at five study intersections, including: Intersection #3, Jackson Road at Eagles Nest Road, Intersection #9, Grant Line Road at Sunrise Boulevard, Intersection #11, Douglas Road at Sunrise Boulevard, Intersection #21, Sunrise Boulevard at White Rock Road, and Intersection #25, Sunrise Boulevard at Zinfandel Drive, and unacceptable operations at on roadway segment, Roadway Segment #22, Sunrise Boulevard between US-50 and Folsom Boulevard.

Implementation of Mitigation Measure 3.13-1 would result in acceptable operations at Intersection #3, Mitigation Measure 3.13-2 would result in acceptable operations at Intersection #9, Mitigation Measure 3.13-3 would result in acceptable operations at Intersection #11, Mitigation Measure 3.13-4 would result in acceptable operations at Intersection #21, and Mitigation Measure 3.13-5 would result in acceptable operations at Intersection #25 and would reduce impacts at these five intersections to less than significant. However, the improvement identified in Mitigation Measures 3.13-1 and 3.13-2 fall under the jurisdiction of the County; therefore, neither the City nor the Project applicant would have control over the timing or implementation of these improvements. If the County allows the improvements to Intersections #3 and #9 to move forward, the impacts to these intersections would be classified as significant in the short-term, but eventually would be reduced to a less-than-significant level in the long-term.

TABLE 3.13-8: EXISTING (2017) PLUS PROJECT ROADWAY SEGMENT LOS

ROADWAY SEGMENT	EXISTING (2017)					EXISTING (2017) PLUS PROJECT					LOS THRESH -OLD
	# LANES	FACILITY TYPE	DAILY VOL.	V/C	LOS	# LANES	FACILITY TYPE	DAILY VOL.	V/C	LOS	
1. Jackson Rd/SR-16: Bradshaw Rd and Excelsior Rd	2	Arterial M	12,341	0.69	B	2	Arterial M	12,443	0.69	B	E
2. Jackson Rd/SR-16: Excelsior Rd and Eagles Nest Rd	2	Rural Hwy	11,760	0.51	D	2	Rural Hwy	11,965	0.52	D	E
3. Jackson Rd/SR-16: Eagles Net Rd and Sunrise Blvd	2	Rural Hwy	11,806	0.52	D	2	Rural Hwy	12,011	0.52	D	D
4. Jackson Rd/SR-16: Sunrise Blvd and Grant Line Rd	2	Rural Hwy	14,980	0.65	E	2	Rural Hwy	15,082	0.66	E	E
5. Excelsior Rd: Jackson Rd/SR-16 and Kiefer Blvd	2	Arterial M	4,552	0.25	A	2	Arterial M	4,552	0.25	A	E
6. Kiefer Blvd: Grant Line Rd and Jackson Rd/SR-16	2	Rural S	941	0.05	A	2	Rural S	941	0.05	A	D
7. International Dr: Zinfandel Dr and Sunrise Blvd	6	Arterial M	11,246	0.21	A	6	Arterial M	13,909	0.26	A	D
8. Mather Blvd: Femoyer St and Douglas Rd	2	Arterial M	5,540	0.31	A	2	Arterial M	6,052	0.34	A	D
9. Douglas Rd: Mather Blvd and Sunrise Blvd	2	Arterial M	12,404	0.69	B	2	Arterial M	13,019	0.72	C	D
10. Douglas Rd: Sunrise Blvd and Grant Line Rd	2	Arterial M	7,510	0.42	A	2	Arterial M	7,920	0.44	A	D
11. White Rock Rd: Zinfandel Dr and Sunrise Blvd	6	Arterial M	15,943	0.30	A	6	Arterial M	16,148	0.30	C	D
12. White Rock Rd: Sunrise Blvd and Grant Line Rd	2	Rural NS	3,533	0.21	B	2	Rural NS	3,635	0.21	A	E
13. White Rock Rd: Grant Line Rd and Prairie City Rd	4	Arterial M	15,436	0.43	A	4	Arterial M	15,743	0.44	B	D
14. Mather Field Rd: Folsom Blvd and US-50 WB Ramps	4	Arterial M	22,543	0.63	B	4	Arterial M	22,645	0.63	E	D
15. Mather Field Rd: US-50 WB Ramps and US-50 EB Ramps	4	Arterial M	35,028	0.97	E	4	Arterial M	35,130	0.98	C	D
16. Mather Field Rd: US-50 EB Ramps and International Dr	6	Arterial M	42,228	0.78	C	6	Arterial M	42,433	0.79	B	D
17. Zinfandel Dr: Folsom Blvd and US-50 WB Ramps	4	Arterial M	22,380	0.62	B	4	Arterial M	22,687	0.63	E	D
18. Zinfandel Dr: US-50 EB Ramps and White Rock Rd	6	Arterial M	50,515	0.94	E	6	Arterial M	52,563	0.97	E	D
19. Zinfandel Dr: White Rock Rd and International Dr	6	Arterial M	23,685	0.44	A	6	Arterial M	25,733	0.48	A	D
20. Zinfandel Dr: International Dr and Douglas Rd	4	Arterial M	13,705	0.38	A	4	Arterial M	13,807	0.38	A	D
21. Sunrise Blvd: US-50 WB Ramps and US-50 EB Ramps	6	Arterial M	67,276	1.25	F	6	Arterial M	70,041	1.30	F	D
22. Sunrise Blvd: US-50 EB Ramps to Folsom Blvd	6	Arterial M	53,504	0.99	E	6	Arterial M	56,986	1.06	F	D
23. Sunrise Blvd: Folsom Blvd and White Rock Rd	6	Arterial M	41,238	0.76	C	6	Arterial M	45,540	0.84	D	D
24. Sunrise Blvd: White Rock Rd and Douglas Rd	6	Arterial M	30,941	0.57	A	6	Arterial M	38,725	0.72	C	D
25. Sunrise Blvd: Douglas Rd and Jackson Rd/SR-16	4	Arterial M	22,635	0.63	B	4	Arterial M	31,546	0.88	D	D
26. Sunrise Blvd: Jackson Rd/SR-16 and Grant Line Rd	2	Rural S	11,748	0.59	D	2	Rural S	12,567	0.63	E	E
27. Grant Line Rd: White Rock Rd and Douglas Rd	2	Rural NS	12,804	0.75	E	2	Rural NS	13,111	0.77	E	D
28. Grant Line Rd: Douglas Rd and Jackson Rd/SR-16	2	Rural S	8,524	0.43	D	2	Rural S	8,524	0.43	D	D
29. Grant Line Rd: Jackson Rd/SR-16 and Sunrise Blvd	2	Rural S	7,745	0.39	D	2	Rural S	7,745	0.39	D	E

NOTE: **BOLD** REPRESENTS UNACCEPTABLE OPERATIONS. **SHADED** REPRESENTS A POTENTIALLY SIGNIFICANT IMPACT. AWSC: ALL WAY STOP CONTROL. SSS: SIDE STREET STOP CONTROL. ECL: EXCEEDS CALCULABLE LIMIT.

SOURCE: KIMLEY-HORN, 2018.

The unacceptable operation at Roadway Segment #22 is an existing deficiency and the segment currently has the maximum number of lanes for the General Plan designation and, as discussed above, the City has determined that widening to larger than a 6-lane facility would conflict with bicycle and pedestrian use. Therefore, there is no feasible construction mitigation and no alternative mitigation that has been identified as feasible. Overall, under the Existing (2017) Plus Project condition, impacts to Intersections #3 and #9 and Roadway Segment #22 would be **significant and unavoidable**.

MITIGATION MEASURE(S)

Mitigation Measure 3.13-1: *Intersection #3, Jackson Road at Eagles Nest Road: The intersection shall be converted from side street stop controlled to signalized. Prior to issuance of the occupancy permit for the 400th dwelling unit, the Project applicant shall fund its fair share of the improvement. The Project's fair share of the improvement is 1.69 percent.*

Mitigation Measure 3.13-2: *Intersection #9, Grant Line Road at Sunrise Boulevard: The southbound approach shall be changed to include a right turn lane and an all-purpose lane. This would require restriping the southbound approach to move the bicycle lane from its existing location between the two travel lanes to the right shoulder and add hatching for the right turns, consistent with the Optional Through Right and Right-Turn-Only lane configuration included in Figure 9C-4a (CA) of the CaMUTCD⁴. Prior to issuance of the occupancy permit for the 400th dwelling unit, the Project applicant shall fund its fair share of the improvement. The Project's fair share of the improvement is 2.46 percent.*

Mitigation Measure 3.13-3: *Intersection #11, Douglas Road at Sunrise Boulevard: Signal timing optimization shall be completed at this intersection. Additionally, a right-turn overlap signal phase shall be added for the eastbound right-turn, overlapping with the northbound left-turn movement. The improvement shall be completed prior to issuance of the occupancy permit for the 400th dwelling unit.*

Mitigation Measure 3.13-4: *Intersection #21, Sunrise Boulevard at White Rock Road: Signal timing optimization shall be completed at this intersection. The improvement shall be completed prior to issuance of the occupancy permit for the 400th dwelling unit.*

Mitigation Measure 3.13-5: *Intersection #25, Sunrise Boulevard at Zinfandel Drive: The eastbound and westbound approaches shall be restriped to include a left turn lane and through-right lane. The improvement shall be completed prior to issuance of the occupancy permit for the 400th dwelling unit.*

⁴ California MUTCD 2014 Edition. Chapter 9C-Markings: Part 9 Traffic Control for Bicycle Facilities. November 2014

Impact 3.13-2: Under Cumulative (2040) Plus Project conditions, Project may conflict with an applicable program, plan, ordinance or policy addressing the circulation system – Roadway Segments and Intersections (Significant and Unavoidable)

Future traffic estimates were prepared using the modified SACSIM travel demand model developed by the City of Rancho Cordova for the 2040 General Plan. The difference between the resulting traffic estimate and the 2012 baseline model results (the growth) was then added to Existing (2017) traffic volumes to establish Cumulative (2040) traffic estimates. Using these volumes and network changes, LOS were determined at the study facilities. Analysis worksheets for this scenario are provided in Appendix D of Appendix I.1.

The future roadway network and additional study facilities for the Cumulative (2040) scenario are shown in Figure 3.13-7. Figures 3.13-8a and 3.13-8b depict the assumed lane geometries for the Cumulative (2040) scenario. Cumulative peak hour turning movement volumes are presented in Figures 3.13-9a and 3.13-9b. Table 3.13-9 presents the peak hour intersection operating conditions for this analysis scenario. As indicated in Table 3.13-9, the study intersections operate from LOS A to LOS F during the AM and PM peak hours.

Table 3.13-1 presents the roadway segment operating conditions for this analysis scenario. As indicated in the table, the study roadway segments operate from LOS A to LOS F.

Cumulative (2040) Plus Project Trip Distribution

As previously discussed, the number of trips anticipated to be generated by the Project was derived using the *Trip Generation Manual, 9th Edition*, published by the ITE. The Project trips were assigned to the future roadway network based on modified SACSIM travel demand model, as provided by the City of Rancho Cordova. Using these volumes, levels of service were determined at the study facilities.

The Cumulative (2040) Plus Project trip distribution and trip assignment are shown in Figure 3.13-10, Figure 3.13-11a, and Figure 3.13-11b. The Cumulative (2040) Plus Proposed Project peak hour turning movement volumes are presented in Figures 3.13-12a and 3.13-12b. Analysis worksheets for this scenario are provided in Appendix E of Appendix I.1.

Intersections

Table 3.13-9 presents the peak hour intersection operating conditions for the Cumulative (2040) scenario under baseline and plus project conditions. As reflected in Table 3.13-9, the addition of the Project results in potentially significant impacts at five study intersections. Analysis worksheets for the mitigations for this scenario are provided in Appendix F of Appendix I.1. Following Table 3.13-9 is a discussion of each potentially significant impact.

3.13 TRANSPORTATION AND CIRCULATION

TABLE 3.13-9: CUMULATIVE (2040) BASELINE AND PLUS PROJECT INTERSECTION LOS

LOCATION	CONTROL	CUMULATIVE (2040) BASELINE				CUMULATIVE (2040) PLUS PROJECT			
		AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR	
		DELAY (SECS)	LOS	DELAY (SECS)	LOS	DELAY (SECS)	LOS	DELAY (SECS)	LOS
1. Jackson Rd/SR-16 @ Bradshaw Rd	Signal	146.9	F	194.9	F	147.6	F	195.8	F
2. Jackson Rd/SR-16 @ Excelsior Rd	Signal	66.4	E	53.8	D	67.2	E	54.8	D
3. Jackson Rd/SR-16 @ Eagles Nest Rd	Signal	11.0	B	14.1	B	11.2	B	14.4	B
4. Jackson Rd/SR-16 @ Sunrise Rd	Signal	104.6	F	53.9	D	105.3	F	54.7	D
5. Jackson Rd/SR-16 @ Grant Line Rd	Signal	114.7	F	62.7	E	118.7	F	65.9	E
6. Rancho Cordova Pkwy @ Chrysanthy Blvd	Signal	11.8	B	10.6	B	19.3	B	14.8	B
7. Florin Rd @ Sunrise Blvd	Signal	9.8	A	12.6	B	9.8	A	12.9	B
8. Grant Line Rd @ Kiefer Blvd	Signal	20.8	C	18.5	B	21.2	C	18.9	B
9. Grant Line Rd @ Sunrise Blvd	Signal	150.1	F	109.2	F	151.5	F	108.7	F
10. Douglas Rd @ Zinfandel Dr	Signal	145.2	F	35.3	D	161.7	F	43.9	D
11. Douglas Rd @ Sunrise Blvd	Signal	97.1	F	107.6	F	114.5	F	109.6	F
12. Douglas Rd @ Grant Line Rd	Signal	14.3	B	22.1	C	14.5	B	23.9	C
13. Mather Field Rd @ Folsom Blvd	Signal	46.3	D	142.2	F	46.1	D	141.2	F
14. Mather Field Rd @ US-50 WB Ramps	Signal	30.1	C	12.4	B	30.1	C	12.5	B
15. Mather Field Rd @ US-50 EB Ramps	Signal	28.5	C	6.1	A	29.3	C	6.2	A
16. Mather Field Rd @ International Dr	Signal	6.8	A	9.6	A	6.8	A	9.7	A
17. Zinfandel Dr @ International Dr	Signal	45.3	D	68.2	E	45.1	D	72.4	E
18. Zinfandel Dr @ White Rock Rd	Signal	41.7	D	71.2	E	43.2	D	72.9	E
19. Zinfandel Dr @ US-50 EB Ramps	Signal	79.4	E	166.4	F	83.7	F	170.7	F
20. Zinfandel Dr @ US-50 WB Ramps	Signal	13.2	B	9.8	A	13.2	B	9.8	A
21. Sunrise Blvd @ White Rock Rd	Signal	65.5	E	120.1	F	66.8	E	125.9	F
22. Sunrise Blvd @ Folsom Blvd	Signal	41.2	D	56.5	E	41.6	D	56.6	E
23. Sunrise Blvd @ US-50 EB Ramps	Signal	14.0	B	11.4	B	14.0	B	11.5	B
24. Sunrise Blvd @ US-50 WB Ramps	Signal	11.3	B	15.4	B	11.5	B	15.6	B
25. Sunrise Blvd @ Zinfandel Dr	Signal	209.8	F	93.9	F	215.0	F	101.3	F
26. White Rock Rd @ Grant Line Rd	Signal	11.4	B	41.6	D	11.7	B	45.8	D
27. White Rock Rd @ Prairie City Rd	Signal	140.3	F	157.0	F	144.8	F	171.0	F
28. Rancho Cordova Pkwy @ Folsom Blvd	Signal	15.4	B	42.1	D	15.4	B	42.1	D

LOCATION	CONTROL	CUMULATIVE (2040) BASELINE				CUMULATIVE (2040) PLUS PROJECT			
		AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR	
		DELAY (SECS)	LOS	DELAY (SECS)	LOS	DELAY (SECS)	LOS	DELAY (SECS)	LOS
29. Rancho Cordova Pkwy @ White Rock Rd	Signal	32.6	C	27.0	C	32.5	C	27.3	C
30. Rancho Cordova Pkwy @ Rio Del Oro Pkwy	Signal	22.1	C	20.7	C	22.3	C	20.9	C
31. Rancho Cordova Pkwy @ Douglas Rd	Signal	16.9	D	16.4	B	20.3	C	37.5	D
32. Rancho Cordova Pkwy @ Kiefer Blvd	Signal	21.9	C	19.7	B	21.6	C	19.4	B
33. Rancho Cordova Pkwy @ Grant Line Rd	Signal	8.0	A	8.0	A	8.0	A	8.0	A
34. Americanos Blvd @ International Dr	Signal	6.8	A	5.8	A	6.7	A	5.8	A
35. Americanos Blvd @ Centennial Dr	Signal	18.7	B	16.5	B	18.7	B	16.5	B
36. Americanos Blvd @ Douglas Rd	Signal	22.2	C	19.6	B	22.2	C	19.6	B
37. Americanos Blvd @ Chrysanthy Blvd	Signal	19.2	B	19.3	B	19.9	B	19.4	B
38. Americanos Blvd @ Kiefer Blvd	Signal	8.0	A	8.0	A	8.0	A	8.0	A
39. Chrysanthy Blvd @ Sunrise Blvd	Signal	12.4	B	4.4	A	14.0	B	5.0	A
40. Chrysanthy Blvd @ Grant Line Rd	Signal	7.0	A	3.2	A	8.7	A	3.9	A

NOTES: **BOLD** REPRESENTS UNACCEPTABLE OPERATIONS. **SHADED** REPRESENTS A POTENTIALLY SIGNIFICANT IMPACT. AWSC = ALL WAY STOP CONTROL. SSSC = SIDE STREET STOP CONTROL. ECL = EXCEEDS CALCULABLE LIMIT.

SOURCE: KIMLEY-HORN, 2018.

3.13 TRANSPORTATION AND CIRCULATION

INTERSECTION #10, DOUGLAS ROAD AT ZINFANDEL DRIVE

As shown in Table 3.13-9, this intersection operates at unacceptable LOS F during the AM peak hour without the Project, and the Project adds more than five seconds of delay to the intersection during the AM peak hour. This is a potentially significant impact.

The significant impact at this intersection during the AM peak hour can be mitigated by converting the westbound right turn from permitted to a free right turn with a receiving lane, which results in the intersection operating at LOS D during the AM and PM peak hours as shown in Table 3.13-10. Mitigation Measure 3.13-6, included below, requires the Project applicant to fund the Project’s fair-share of these improvements to the intersection. However, since the identified improvement falls under the jurisdiction of the County; therefore, neither the City nor the Project applicant would have control over their timing or implementation. Thus, this impact would remain **significant and unavoidable**. If the County allows the improvement to move forward, the impact would be classified as significant in the short-term, but eventually would be reduced to a less-than-significant level in the long-term.

TABLE 3.13-10: INTERSECTION LOS – CUMULATIVE (2040) PLUS PROJECT MITIGATED CONDITION

INTERSECTION	CUMULATIVE (2040) PLUS PROJECT				CUMULATIVE (2040) PLUS PROJECT – WITH MITIGATION			
	AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR	
	DELAY (SEC)	LOS	DELAY (SEC)	LOS	DELAY (SEC)	LOS	DELAY (SEC)	LOS
10. Douglas Rd @ Zinfandel Dr	161.7	F	43.9	D	51.7	D	43.0	D
11. Douglas Rd @ Sunrise Blvd	114.5	F	109.6	F	114.5	F	109.6	F
21. Sunrise Blvd @ White Rock Rd	66.8	E	125.9	F	66.8	E	125.9	F
25. Sunrise Blvd @ Zinfandel Dr	215.0	F	101.3	F	215.0	F	101.3	F
27. White Rock Rd @ Prairie City Rd	144.8	F	171.0	F	36.7	D	31.8	C

NOTES: **BOLD** REPRESENTS UNACCEPTABLE OPERATIONS. **SHADED** REPRESENTS A POTENTIALLY SIGNIFICANT IMPACT.

SOURCE: KIMLEY-HORN, 2018.

INTERSECTION #11, DOUGLAS ROAD AT SUNRISE BOULEVARD

As shown in Table 3.13-9, this intersection operates at unacceptable LOS F during the AM peak hour without the Project, and the Project adds more than five seconds of delay to the intersection during the AM peak hour. This is a potentially significant impact.

As shown in Table 3.13-10, signal timing optimization required by Mitigation Measure 3.13-3 is not enough to mitigate the Project impacts to acceptable conditions in the Cumulative (2040) Plus Project condition. It is noted that signal timing optimization would reduce impacts in the Existing (2017) Plus Project condition, as shown in Table 3.13-7. The intersection of Douglas Road and Sunrise Boulevard is fully built out according to the City’s General Plan. The City’s General Plan Draft EIR indicates that widening beyond six lanes would not be consistent with the City’s vision for Sunrise Boulevard as articulated in the General Plan, including the Circulation Plan, which doesn’t anticipate local roads wider than six lanes. The General Plan Draft EIR addressed this for roadway segments

with the following explanation "*In addition, during the development of the Roadway System Sizing Map and the General Plan, the City Council identified that no local roadway would be designed larger than a 6-lane facility, given that large roadway facilities (8 lanes and greater) conflicts with pedestrian and bicycle use and results in the "barrier effect" of such roadways dividing portions of the City.*" The significant impact at Intersection #11 during the AM peak hour cannot be feasibly mitigated. Therefore, this impact is **significant and unavoidable**.

INTERSECTION #21, SUNRISE BOULEVARD AT WHITE ROCK ROAD

As shown in Table 3.13-9, this intersection operates at unacceptable LOS F during the AM peak hour without the Project, and the Project adds more than five seconds of delay to the intersection during the AM peak hour. This is a potentially significant impact.

As shown in Table 3.13-10, signal timing optimization, as required by Mitigation Measure 3.13-4, is not enough to mitigate the Project impacts to acceptable conditions in the Cumulative (2040) Plus Project condition. It is noted that signal timing optimization would reduce impacts in the Existing (2017) Plus Project condition, as shown in Table 3.13-7. Further, the intersection of Sunrise Boulevard and White Rock Road is fully built out according to the City's General Plan. The City's General Plan Draft EIR indicates that widening beyond six lanes would not be consistent with the City's vision for Sunrise Boulevard as articulated in the General Plan, including the Circulation Plan, which doesn't anticipate local roads wider than six lanes. The General Plan Draft EIR addressed this for roadway segments with the following explanation "*In addition, during the development of the Roadway System Sizing Map and the General Plan, the City Council identified that no local roadway would be designed larger than a 6-lane facility, given that large roadway facilities (8 lanes and greater) conflicts with pedestrian and bicycle use and results in the "barrier effect" of such roadways dividing portions of the City.*" The significant impact at this intersection during the PM peak hour cannot be feasibly mitigated. Therefore, this impact is **significant and unavoidable**.

INTERSECTION #25, SUNRISE BOULEVARD AT ZINFANDEL DRIVE

As shown in Table 3.13-9, this intersection operates at unacceptable LOS F during the AM peak hour without the Project, and the Project adds more than five seconds of delay to the intersection during the AM peak hour. This is a potentially significant impact.

As shown in 3.13-10, signal timing optimization, as required by Mitigation Measure 3.13-5, is not enough to mitigate the Project impacts to acceptable conditions in the Cumulative (2040) Plus Project condition. It is noted that signal timing optimization would reduce impacts in the Existing (2017) Plus Project condition, as shown in Table 3.13-7. The intersection of Sunrise Boulevard and Zinfandel Drive is fully built out according to the City's General Plan. The City's General Plan Draft EIR indicates that widening beyond six lanes would not be consistent with the City's vision for Sunrise Boulevard as articulated in the General Plan, including the Circulation Plan, which doesn't anticipate local roads wider than six lanes. The General Plan Draft EIR addressed this for roadway segments with the following explanation "*In addition, during the development of the Roadway System Sizing Map and the General Plan, the City Council identified that no local roadway would be designed larger*

than a 6-lane facility, given that large roadway facilities (8 lanes and greater) conflicts with pedestrian and bicycle use and results in the “barrier effect” of such roadways dividing portions of the City.” The significant impact at this intersection during the AM peak hour cannot be feasibly mitigated. Therefore, this impact is **significant and unavoidable**.

INTERSECTION #27, WHITE ROCK ROAD AT PRAIRIE CITY ROAD

As shown in Table 3.13-9, this intersection operates at unacceptable LOS F during the AM and PM peak hour without the Project, and the Project adds more than five seconds of delay to the intersection during the PM peak hour. This is a potentially significant impact.

The significant impact at this intersection during the PM peak hour can be mitigated with the implementation of Mitigation Measure 3.13-7, which requires addition of a second southbound right-turn lane and the addition of a right-turn overlap signal phase for the southbound right-turn. As shown in Table 3.13-10, Mitigation Measure 3.13-8, included below, results in the intersection operating at LOS D during the AM and PM peak hours. Therefore, this impact would be reduced to **less than significant**.

Roadway Segments

Table 3.13-11 presents the roadway segment operating conditions for this analysis scenario. As indicated in Table 3.13-11, the study roadway segments operate from LOS A to LOS F. Table 3.13-11 presents the roadway segment operating conditions for the Cumulative (2040) scenario. As indicated in Table 3.3-11, the study roadway segments operate from LOS A to LOS F under Cumulative (2040) baseline. As shown in the table, the addition of the Project results in a potentially significant impact at two roadway segments: Roadway Segment #9, Sunrise Boulevard between White Rock Road and Douglas Road, and Roadway Segment #24, Sunrise Boulevard between White Rock Road and Douglas Road.

ROADWAY SEGMENT #9 – DOUGLAS ROAD BETWEEN MATHER BOULEVARD AND SUNRISE BOULEVARD

As shown in Table 3.13-11, the addition of the proposed Project results in a potentially significant impact at Roadway Segment #9, Douglas Road between Mather Boulevard and Sunrise Boulevard. Roadway Segment #9 operates at unacceptable LOS F without the Project, and the Project increases the volume to capacity ratio by more than 0.05. This is a potentially significant impact.

Mitigation Measure 3.13-8 requires the Project applicant to contribute its fair share towards the widening of Douglas Road to the City’s maximum allowable capacity of six lanes. With this improvement, the roadway would operate at an acceptable LOS. However, since the identified improvement falls partially under the jurisdiction of the County, neither the City nor the Project applicant would have control over the timing or implementation of this improvement. Thus, this impact would remain **significant and unavoidable**. If the County allows the improvement to move forward, the impact would be classified as significant in the short-term, but eventually would be reduced to a less-than-significant level in the long-term.

ROADWAY SEGMENT #24 – SUNRISE BOULEVARD BETWEEN WHITE ROCK ROAD AND DOUGLAS ROAD

As shown in Table 3.13-11, the addition of the Project results in a potentially significant impact at Roadway Segment #24, Sunrise Boulevard between White Rock Road and Douglas Road. Roadway Segment #24 operates at unacceptable LOS E without the Project, and the Project increases the volume to capacity ratio by more than 0.05. This is a potentially significant impact.

Roadway Segment #24 operates unacceptably without the Project and currently has the maximum number of lanes for the General Plan designation. The City's General Plan Draft EIR indicates that widening beyond six lanes would not be consistent with the City's vision for Sunrise Boulevard as articulated in the General Plan, including the Circulation Plan, which doesn't anticipate local roads wider than six lanes. The General Plan Draft EIR addressed this for roadway segments with the following explanation "*In addition, during the development of the Roadway System Sizing Map and the General Plan, the City Council identified that no local roadway would be designed larger than a 6-lane facility, given that large roadway facilities (8 lanes and greater) conflicts with pedestrian and bicycle use and results in the "barrier effect" of such roadways dividing portions of the City.*" Therefore, further road widening to mitigate this impact would conflict with the General Plan and no alternative feasible measures have been identified by the City. Therefore, this impact is **significant and unavoidable**.

RANCHO CORDOVA PARKWAY (PROJECT EXTENT)

In addition to roadway segment operations, the need to widen Rancho Cordova Parkway from two lanes to four lanes along the Project extents was analyzed between Existing (2017) and Cumulative (2040) Plus Project conditions. This trigger analysis incorporated not only the development assumptions that would increase traffic along this roadway segment, but also the connection of the roadway south to Grant Line Road and north to US-50. According to the analysis, the roadway segment would need to be widened by 2034; this would equate to approximately 570 single-family residential and 566 active adult residential dwelling units that can be constructed before the roadway segment is required to be widened. This is a potentially significant impact.

Mitigation Measure 3.13-9 requires the Project applicant to widen Rancho Cordova Parkway from two lanes to four lanes along the Project extents. With this improvement, this impact would be reduced to **less than significant**.

TABLE 3.13-11: CUMULATIVE (2040) PLUS PROJECT ROADWAY SEGMENT LOS

ROADWAY SEGMENT	CUMULATIVE (2040) BASELINE					CUMULATIVE (2040) PLUS PROJECT					LOS THRESH -OLD
	# LANES	FACILITY TYPE	DAILY VOL.	V/C	LOS	# LANES	FACILITY TYPE	DAILY VOL.	V/C	LOS	
1. Jackson Rd/SR-16: Bradshaw Rd and Excelsior Rd	4	Arterial M	22,600	0.63	B	4	Arterial M	22,702	0.63	B	E
2. Jackson Rd/SR-16: Excelsior Rd and Eagles Nest Rd	4	Arterial M	22,740	0.63	B	4	Arterial M	22,945	0.64	B	E
3. Jackson Rd/SR-16: Eagles Nest Rd and Sunrise Blvd	2	Rural Hwy	21,500	0.94	E	2	Rural Hwy	21,705	0.95	E	D
4. Jackson Rd/SR-16: Sunrise Blvd and Grant Line Rd	4	Arterial H	23,690	0.59	A	4	Arterial H	23,690	0.59	A	E
5. Excelsior Rd: Jackson Rd/SR-16 and Kiefer Blvd	2	Arterial M	8,950	0.50	A	2	Arterial M	8,950	0.50	A	E
6. Kiefer Blvd: Grant Line Rd and Jackson Rd/SR-16	2	Rural S	2,180	0.11	A	2	Rural S	2,282	0.11	B	D
7. International Dr: Zinfandel Dr and Sunrise Blvd	6	Arterial M	25,690	0.48	A	6	Arterial M	25,997	0.48	A	D
8. Mather Blvd: Femoyer St and Douglas Rd	4	Arterial M	20,870	0.58	A	4	Arterial M	22,406	0.62	B	D
9. Douglas Rd: Mather Blvd and Sunrise Blvd	4	Arterial M	37,150	1.03	F	4	Arterial M	39,915	1.11	F	D
10. Douglas Rd: Sunrise Blvd and Grant Line Rd	6	Arterial M	24,290	0.45	A	6	Arterial M	28,694	0.53	A	D
11. White Rock Rd: Zinfandel Dr and Sunrise Blvd	6	Arterial M	27,540	0.51	A	6	Arterial M	27,847	0.52	A	D
12. White Rock Rd: Sunrise Blvd and Grant Line Rd	6	Arterial M	16,960	0.31	A	6	Arterial M	16,960	0.31	A	E
13. White Rock Rd: Grant Line Rd and Prairie City Rd	4	Expwy	41,330	0.57	A	4	Expwy	42,559	0.59	A	D
14. Mather Field Rd: Folsom Blvd and US-50 WB Ramps	6	Arterial M	30,420	0.56	A	6	Arterial M	30,522	0.57	A	D
15. Mather Field Rd: US-50 WB Ramps and US-50 EB Ramps	6	Arterial M	43,380	0.80	D	6	Arterial M	44,199	0.82	D	D
16. Mather Field Rd: US-50 EB Ramps and International Dr	6	Arterial M	56,560	1.05	F	6	Arterial M	57,379	1.06	F	D
17. Zinfandel Dr: Folsom Blvd and US-50 WB Ramps	6	Arterial M	23,730	0.44	A	6	Arterial M	23,935	0.44	A	D
18. Zinfandel Dr: US-50 EB Ramps and White Rock Rd	6	Arterial M	72,230	1.34	F	6	Arterial M	73,152	1.35	F	D
19. Zinfandel Dr: White Rock Rd and International Dr	6	Arterial M	37,080	0.69	B	6	Arterial M	38,002	0.70	C	D
20. Zinfandel Dr: International Dr and Douglas Rd	4	Arterial M	21,600	0.60	A	4	Arterial M	22,829	0.63	B	D
21. Sunrise Blvd: US-50 WB Ramps and US-50 EB Ramps	6	Arterial M	71,160	1.32	F	6	Arterial M	71,979	1.33	F	D
22. Sunrise Blvd: US-50 EB Ramps to Folsom Blvd	6	Arterial M	58,150	1.08	F	6	Arterial M	58,969	1.09	F	D
23. Sunrise Blvd: Folsom Blvd and White Rock Rd	6	Arterial M	41,350	0.77	C	6	Arterial M	42,374	0.78	C	D
24. Sunrise Blvd: White Rock Rd and Douglas Rd	6	Arterial M	49,190	0.91	E	6	Arterial M	51,955	0.96	E	D
25. Sunrise Blvd: Douglas Rd and Jackson Rd/SR-16	4	Arterial M	45,470	1.26	F	4	Arterial M	46,085	1.28	F	D
26. Sunrise Blvd: Jackson Rd/SR-16 and Grant Line Rd	4	Arterial M	20,170	0.50	A	4	Arterial M	20,272	0.51	A	E
27. Grant Line Rd: White Rock Rd and Douglas Rd	4	Expwy	30,330	0.42	A	4	Expwy	31,559	0.44	A	D
28. Grant Line Rd: Douglas Rd and Jackson Rd/SR-16	4	Arterial H	29,380	0.73	C	4	Arterial H	30,814	0.77	C	D
29. Grant Line Rd: Jackson Rd/SR-16 and Sunrise Blvd	4	Arterial H	13,480	0.34	A	4	Arterial H	13,890	0.35	A	E

ROADWAY SEGMENT	CUMULATIVE (2040) BASELINE					CUMULATIVE (2040) PLUS PROJECT					LOS THRESH -OLD
	# LANES	FACILITY TYPE	DAILY VOL.	V/C	LOS	# LANES	FACILITY TYPE	DAILY VOL.	V/C	LOS	
30. Kiefer Blvd: Eagles Nest Rd and Sunrise Blvd	2	Arterial M	2,080	0.12	A	2	Arterial M	2,080	0.12	A	E
31. Kiefer Blvd: Sunrise Blvd and Rancho Cordova Pkwy	4	Arterial M	15,140	0.42	A	4	Arterial M	15,140	0.42	A	D
32. Kiefer Blvd: Rancho Cordova Blvd and Americanos Blvd	2	Arterial M	7,790	0.43	A	2	Arterial M	7,790	0.43	A	D
33. Kiefer Blvd: Americanos Blvd and Grant Line Rd	2	Arterial M	4,170	0.23	A	2	Arterial M	4,170	0.23	A	D
34. Chrysanthy Blvd: Sunrise Blvd and Rancho Cordova Pkwy	2	Arterial M	5,740	0.32	A	2	Arterial M	7,276	0.40	A	D
35. Chrysanthy Blvd: Rancho Cordova Pkwy and Americanos Blvd (Within Project)	2	Arterial M	6,150	0.34	A	2	Arterial M	14,651	0.81	D	D
36. Chrysanthy Blvd: Americanos Blvd and Grant Line Rd	2	Arterial M	7,070	0.39	A	2	Arterial M	8,606	0.48	A	D
37. Rancho Cordova Pkwy: Folsom Blvd and White Rock Rd	6	Arterial M	46,310	0.86	D	6	Arterial M	47,437	0.88	D	D
38. Rancho Cordova Pkwy: White Rock Rd and Rio Del Oro Pkwy	4	Arterial M	42,680	1.19	F	4	Arterial M	44,114	1.23	F	D
39. Rancho Cordova Pkwy: Rio Del Oro Pkwy and Douglas Rd	4	Arterial M	17,310	0.48	A	4	Arterial M	19,154	0.53	A	D
40. Rancho Cordova Pkwy: Douglas Rd and Chrysanthy Blvd	4	Arterial M	15,790	0.44	A	4	Arterial M	22,140	0.62	B	D
41. Rancho Cordova Pkwy: Chrysanthy Blvd and Kiefer Blvd	2	Arterial M	8,350	0.46	A	4	Arterial M	8,965	0.25	A	D
42. Rancho Cordova Pkwy: Kiefer Blvd and Grant Line Rd	2	Arterial M	7,190	0.40	A	2	Arterial M	7,600	0.42	A	D
43. Americanos Blvd: International Dr and Centennial Dr	2	Arterial M	4,850	0.27	A	2	Arterial M	4,850	0.27	A	D
44. Americanos Blvd: Centennial Dr and Douglas Rd	2	Arterial M	1,970	0.11	A	2	Arterial M	1,970	0.11	A	D
45. Americanos Blvd: Douglas Rd and Chrysanthy Blvd	2	Arterial M	4,850	0.27	A	2	Arterial M	5,055	0.28	A	D
46. Americanos Blvd: Chrysanthy Blvd and Kiefer Blvd	2	Arterial M	2,800	0.16	A	2	Arterial M	2,800	0.16	A	D

NOTE: **BOLD** REPRESENTS UNACCEPTABLE OPERATIONS. **SHADED** REPRESENTS A POTENTIALLY SIGNIFICANT IMPACT.

SOURCE: KIMLEY-HORN, 2018.

CONCLUSION

Under the Cumulative (2040) Plus Project condition, the addition of the Project results in potentially significant impacts at five study intersections, including: Intersection #10, Douglas Road at Zinfandel Drive, Intersection #11, Douglas Road at Sunrise Boulevard, Intersection #21, Sunrise Boulevard at White Rock Road, Intersection #25, Sunrise Boulevard at Zinfandel Drive and Intersection #27, White Rock Road at Prairie City Road, and two roadway segments, Roadway Segment #9, Sunrise Boulevard between White Rock Road and Douglas Road, and Roadway Segment #24, Sunrise Boulevard between White Rock Road and Douglas Road. The Project also results in a potentially significant impact to Rancho Cordova Parkway along the Project extent.

Mitigation Measure 3.13-7 would result in acceptable operations at Intersection #10 and Mitigation Measure 3.13-9 would widen Rancho Cordova Parkway to accommodate proposed and planned traffic. However, even with signal timing optimization, the impacts to Intersections #11, #21, and #25 would be significant. The improvement identified in Mitigation Measure 3.13-7 falls under the jurisdiction of the County; therefore, neither the City nor the Project applicant would have control over the timing or implementation of this improvement to Intersection #10. Further, Roadway Segment #24 has been built out consistent with the General Plan designation and additional capacity for this roadway is not envisioned by the General Plan. and, as discussed above, the City has determined that widening to larger than a 6-lane facility would conflict with bicycle and pedestrian use. While there may be potential to improve circulation conditions through additional connectivity along Sunrise Boulevard and further build out of the City's General Plan network, this would require an update to the General Plan to address long-range transportation planning to address adverse cumulative conditions regardless of Project implementation. Therefore, under the Cumulative (2040) Plus Project condition, impacts to Intersection #10, #11, #21, and #25 and Roadway Segment #24 would remain **significant and unavoidable**. If the County allows the improvements Intersection #10 to move forward, the impacts would be classified as significant in the short-term, but eventually would be reduced to a less-than-significant level in the long-term.

MITIGATION MEASURE(S)

Mitigation Measure 3.13-6: *Intersection #10, Douglas Road at Zinfandel Drive: Prior to issuance of the occupancy permit for the 400th dwelling unit, the Project shall pay its fair-share for the westbound right turn to be converted from permitted to a free right turn with a receiving lane. The Project's fair share of the improvement is 10.61 percent.*

Mitigation Measure 3.13-7: *Intersection #27, White Rock Road at Prairie City Road: A second southbound right-turn lane shall be added at this intersection, and a right-turn overlap signal phase shall be added for the southbound right-turn. The Project's fair share of the improvement is 4.77 percent. The improvement fair-share shall be paid prior to issuance of the occupancy permit for the 400th dwelling unit.*

Mitigation Measure 3.13-8: *Roadway Segment #9, Douglas Road between Mather Boulevard and Sunrise Boulevard: Prior to issuance of the occupancy permit for the 400th dwelling unit, the Project*

shall pay its fair-share for the widening of Douglas Boulevard to six lanes. The Project's fair share of the improvement is 10.05 percent.

Mitigation Measure 3.13-9: *Rancho Cordova Parkway shall be widened from two to four lanes along the project extents. The improvement shall be reflected on the Project's improvement plans. The improvement shall be completed before the 570th market rate single family detached unit and the 566th age-restricted senior unit is constructed.*

Impact 3.13-3: Project implementation would not conflict with an applicable program, plan, ordinance, or policy addressing the transit system (Less than Significant)

Development in the Project area could result in an increase in demand for transit service. As noted previously, transit service in the City of Rancho Cordova is provided by SacRT (local) and Rancho CordoVan (paratransit). Additionally, the SacRT Gold Line light rail route follows US-50 in the City. These SacRT bus routes and the SacRT Gold Line do not directly serve the Project site. The Rancho CordoVan currently operates three routes that serve the Villages of Zinfandel (commonly known as Stone Creek), Anatolia neighborhoods, Kavala Ranch and Sunridge Park. These routes operate Monday through Friday in the mornings and evenings to provide access to light rail at the Zinfandel RT Light Rail Station.

The City's Transit Master Plan proposes a system of city, neighborhood and regional services, including a "Signature Service" to connect residents to businesses, shopping and recreation, and will provide a branding mechanism that will serve broader economic planning goals. As shown on Figure 1 of the Transit Master Plan, the Signature Service would generally follow Rancho Cordova Parkway, adjacent to the western boundary of the Project site and a Signature Transit Station is planned at the intersection of Chrysanthy Boulevard and Rancho Cordova Parkway. The Transit Master Plan does not contain policies for new development but does recommend that the City partner with the development community in the early stages of Project development in order to focus land use strategies that will support a robust transit system.

The City has reviewed the Project for consistency with the City's transit goals and requirements. The Project proposes a Signature Transit Station, consistent with the Transit Master Plan, and has implemented transit-supportive features. The Project would include ample pedestrian and bicycle amenities and connections. For example, one of the Project objectives is to implement the City's Bicycle and Pedestrian Master Plans through providing an on-site bicycle and pedestrian network that is accessible by the general public and provides opportunities for connectivity with bicycle and pedestrian facilities on adjacent properties. This extensive network provides non-vehicle connectivity throughout the site, as described in Chapter 2, and increases accessibility of the proposed transit station.

The Project also provides for high density development and a mix of uses, including the multifamily component and commercial components of the Project, adjacent the proposed Signature Transit Station, which will be located along Rancho Cordova Parkway south of Chrysanthy Boulevard.

The Project incorporates appropriate features to implement the City's Transit Master Plan and would not conflict with any applicable program, plan, ordinance, or policy addressing the transit system. Therefore, impacts associated with transit would be *less than significant*.

Impact 3.13-4: Project implementation would not conflict with an applicable program, plan, ordinance, or policy addressing the bicycle and pedestrian system (Less than Significant)

The applicable bicycle and pedestrian system plans for the Project are the City's Bicycle Master Plan and the City's Pedestrian Master Plan. Additionally, Section 17.64.100 of the City's Municipal Code outlines the bicycle parking requirements for all new construction, additions of ten percent or more floor area to existing buildings, and changes in land use classification. Consistency with each Plan and the Municipal Code is discussed in detail below.

BICYCLE FACILITIES

Figure 4-1 of the Bicycle Master Plan shows pedestrian generators in the City. According to the figure, none of the pedestrian generators are located on or immediately adjacent to the Project site, although existing and future school and park areas to the west of the site are located in the Project vicinity. The Project would include pedestrian generators, such as park and recreational areas.

Additionally, Figure 4-3 of the Bicycle Master Plan shows the long-range vision of the City's regional trail system. A City Bike Route is shown traversing the Project site from the northeastern corner to the southwestern corner of the site. Other City Bike Routes and Regional Trails are also shown in the Project vicinity. The Project includes development of over two miles of bicycle facilities throughout the Project site, including several connections to existing and proposed regional trails. The Project is proposing to construct one 10-foot to 12-foot wide Class I bike trail connecting to an existing trail in the northeastern portion of the Project and two recreational trails connecting to pedestrian and bicycle facilities on the eastern and western portions of the Project. The Project proposes that these facilities be incorporated into the City's Bicycle Master Plan.

Further, Chapter 4 of the Bicycle Master Plan outlines the goals, programs, and projects of the Plan. Most of the goals are broad and not applicable to individual development projects. The goals that are most applicable to the Project include Goals 2 and 3, reproduced below:

***Goal 2:** Ensure new development extends the bicycle network to all neighborhoods and attractors.*

***Goal 3:** Ensure adequate support facilities throughout Rancho Cordova's bicycle network.*

As discussed above, the Project would include pedestrian generators (i.e., attractors), such as park and recreational areas. The Project proposes an extensive on- and off-street network of bike lanes and trails that extends to all neighborhoods and attractors and ensures connectivity between the residential uses, parks and recreation uses, and commercial uses, as well as providing connections to adjacent roadways to provide access for bicyclists accessing the Project from other areas.

With respect to providing support facilities, such as bicycle parking as required by the Municipal Code, the SPA Handbook requires bicycle support facilities to be included in the multifamily, parks, recreation, and commercial uses, indicating that bicycle support facilities shall include bicycle parking facilities and may include bicycle lockers, showers for employment-generating uses, or bicycle-related signage. It is anticipated that bicycle parking for the single-family homes would be provided in the garages of each unit. The Zoning Code notes that this is sufficient. The Project is consistent with the applicable requirements related to bicycle facilities and the impact would be *less than significant*.

PEDESTRIAN FACILITIES

Chapter 3 of the Pedestrian Master Plan outlines the goals, programs, and projects of the Plan. Similar to the goals of the Bicycle Master Plan, most of the goals are broad and not applicable to individual development projects. The goals that are most applicable to the Project include Goals 1 and 3, reproduced below:

Goal 1: Improve the pedestrian network to increase pedestrian activity in Rancho Cordova.

Goal 3: Establish and enhance routes to school that will enable and encourage more students to safely walk to school.

The Project includes development of sidewalks, stop signs, standard pedestrian crossing warning signs, lane striping to provide a bicycle lane along applicable roadways, bicycle parking, signs to identify pedestrian and bicycle paths, pedestrian signal heads, and an off-street trail network. In addition, the Project will construct a tunnel crossing for the Class I trail Chrysanthy Boulevard within the Project site, three pedestrian push button crossings within the Project site, and one pedestrian push button crossing along Rancho Cordova Parkway adjacent to the Project site.

Sidewalks will be constructed as part of the frontage improvements along all new roadway construction for Jaeger Road/Rancho Cordova Parkway and Chrysanthy Boulevard in conformance with City design standards. Circulation and access to all proposed public spaces will include sidewalks that meet Americans with Disabilities Act standards. The proposed pedestrian facilities would increase pedestrian connectivity to existing and planned facilities and destinations in the City. Further, the proposed bicycle and pedestrian facilities could be used by existing and future students as routes to schools in the Project vicinity. Overall, the Project is consistent with applicable requirements related to pedestrian facilities and the impact would be *less than significant*.

Impact 3.13-5: Project implementation would not substantially increase hazards due to geometric design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (Less than Significant)

No site circulation or access issues have been identified that would cause a traffic safety problem/hazard or any unusual traffic congestion or delay. The majority of the existing and future land uses would be compatible with the Project uses (i.e., residential, commercial, and public/quasi-public uses). While there are agricultural uses, primary livestock grazing, in the Project vicinity, the

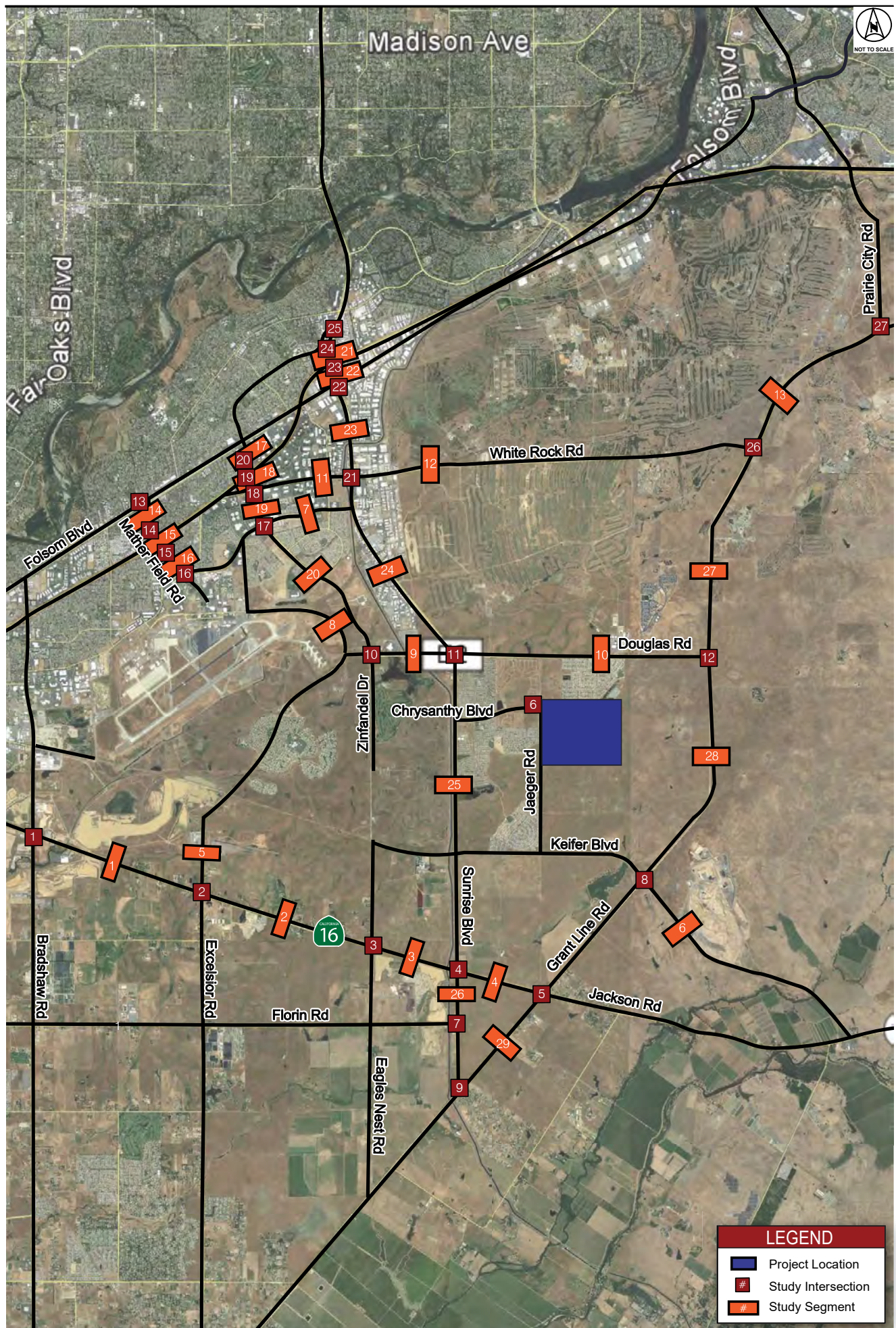
Project does not have any features that are anticipated to result in any substantial increase in hazards associated with such uses.

All accesses, roads, and intersections would be designed to City standards that accommodate turning requirements for fire trucks, emergency services vehicles, and other large vehicles. There are no safety, capacity, or sight distance issues identified for the Project access roadways. Therefore, impacts associated with design features and emergency access would be considered *less than significant*.

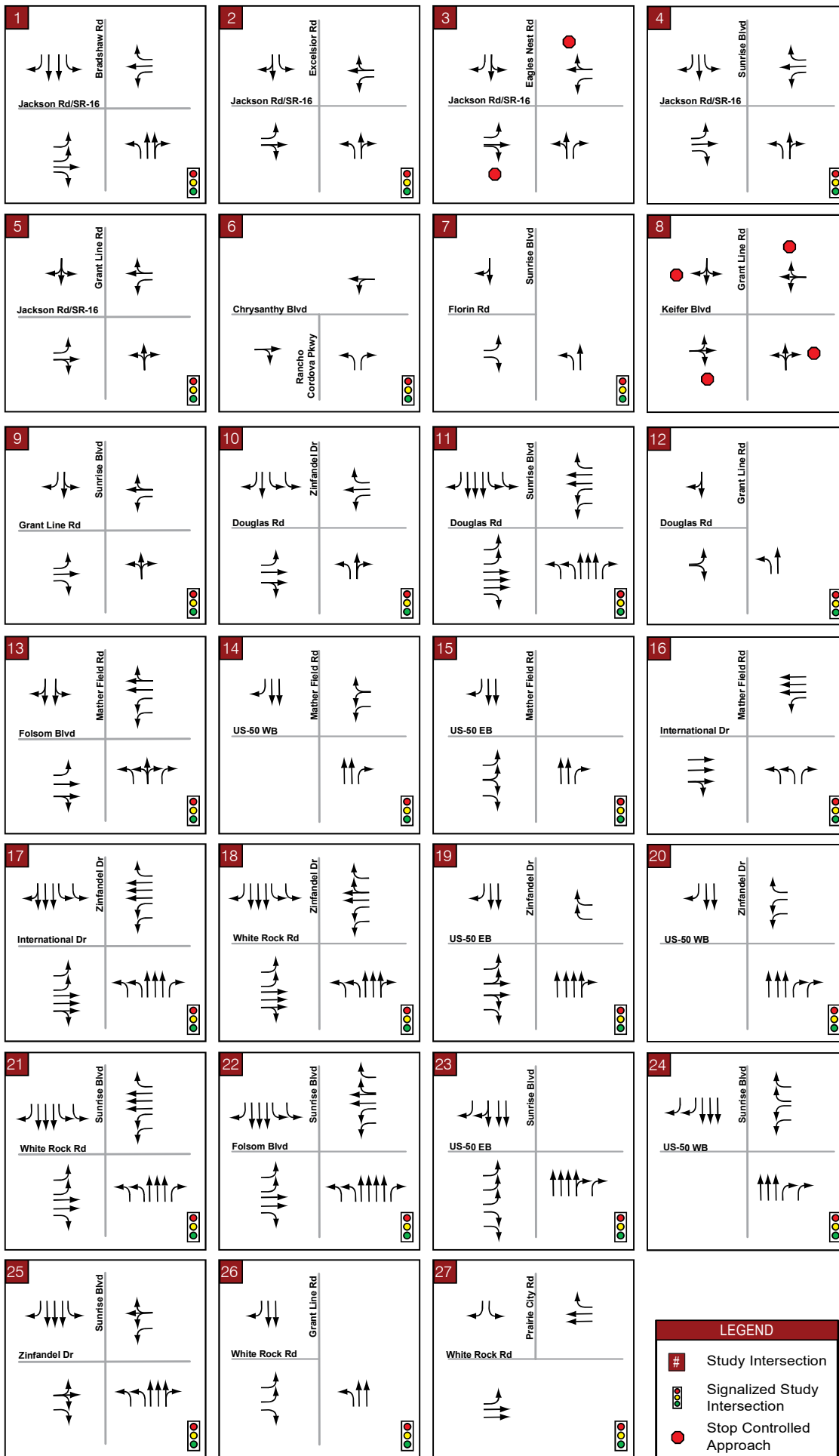
Impact 3.13-6: Project implementation would result in adequate emergency vehicle access (Less than Significant)

On-site infrastructure associated with the Project would include the construction of internal and external access roads and a network of bicycle and pedestrian trails. Primary access would be from Rancho Cordova Parkway. The Project would provide for future connections to an extension of Chrysanthy Boulevard east of the Project site.

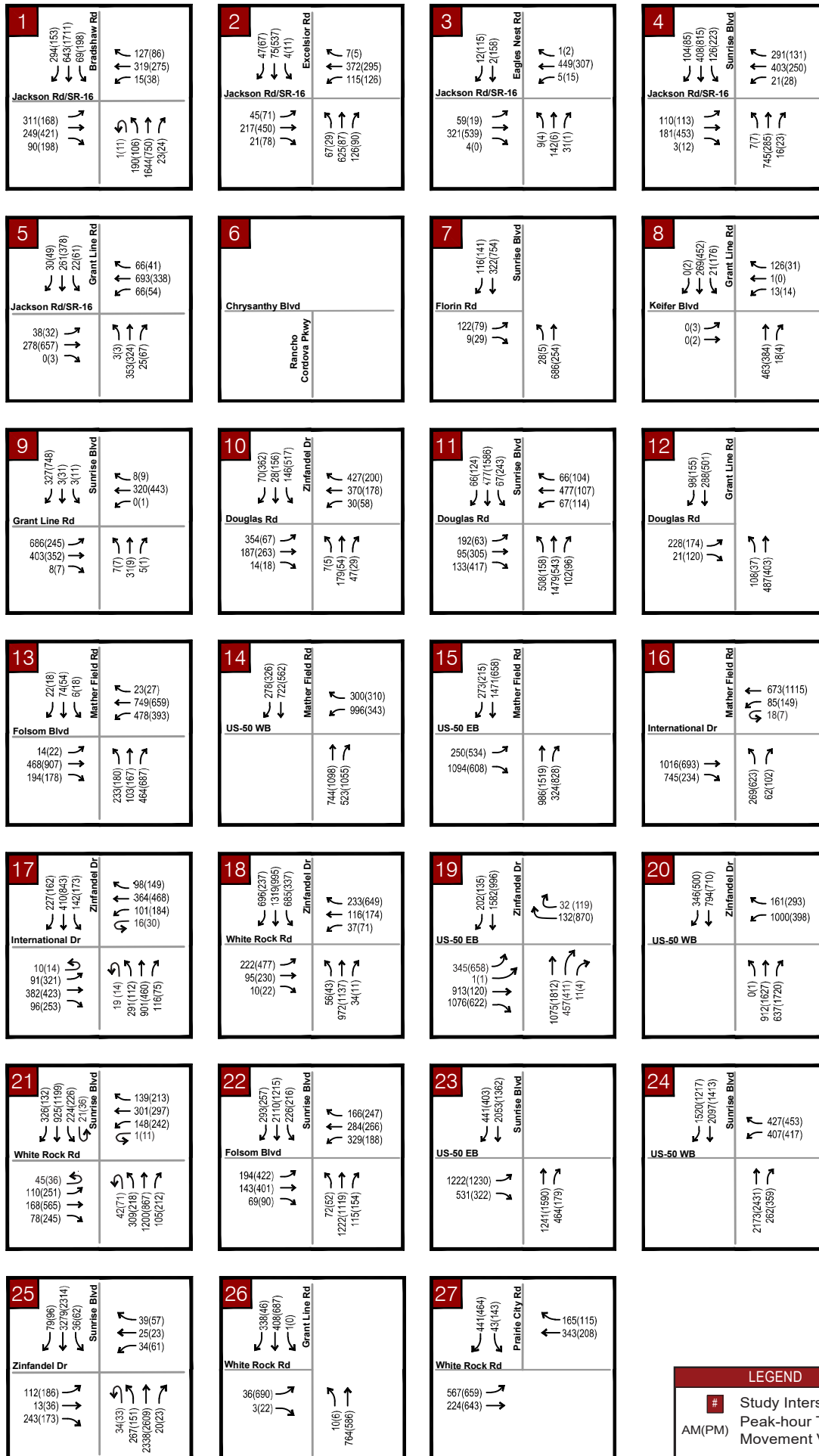
The site plan for the Project was qualitatively reviewed by Kimley-Horn for general access and on-site circulation. According to the site plan, primary access to the site will be provided from Chrysanthy Boulevard at the intersection of Rancho Cordova Parkway/Jaeger Road. The combination of these access points, as well as the on-site circulation system, appears to provide adequate access to/from Chrysanthy Boulevard, Rancho Cordova Parkway and the surrounding transportation network. Additional access will be provided in the future as Chrysanthy Boulevard, Rancho Cordova Parkway, and Americanos Boulevard are constructed and extended. Sacramento Metropolitan Fire Department and the Rancho Cordova Police Department have reviewed the Project application and tentative subdivision map in 2018 and their requirements regarding access, including roadway widths, entry widths, access to courts and dead-end streets, have been incorporated into the proposed Tentative Subdivision Map and more detailed requirements are required as standard Conditions of Approval to ensure that the standard requirements are reflected on improvement plans. Therefore, this is considered a *less than significant* impact.



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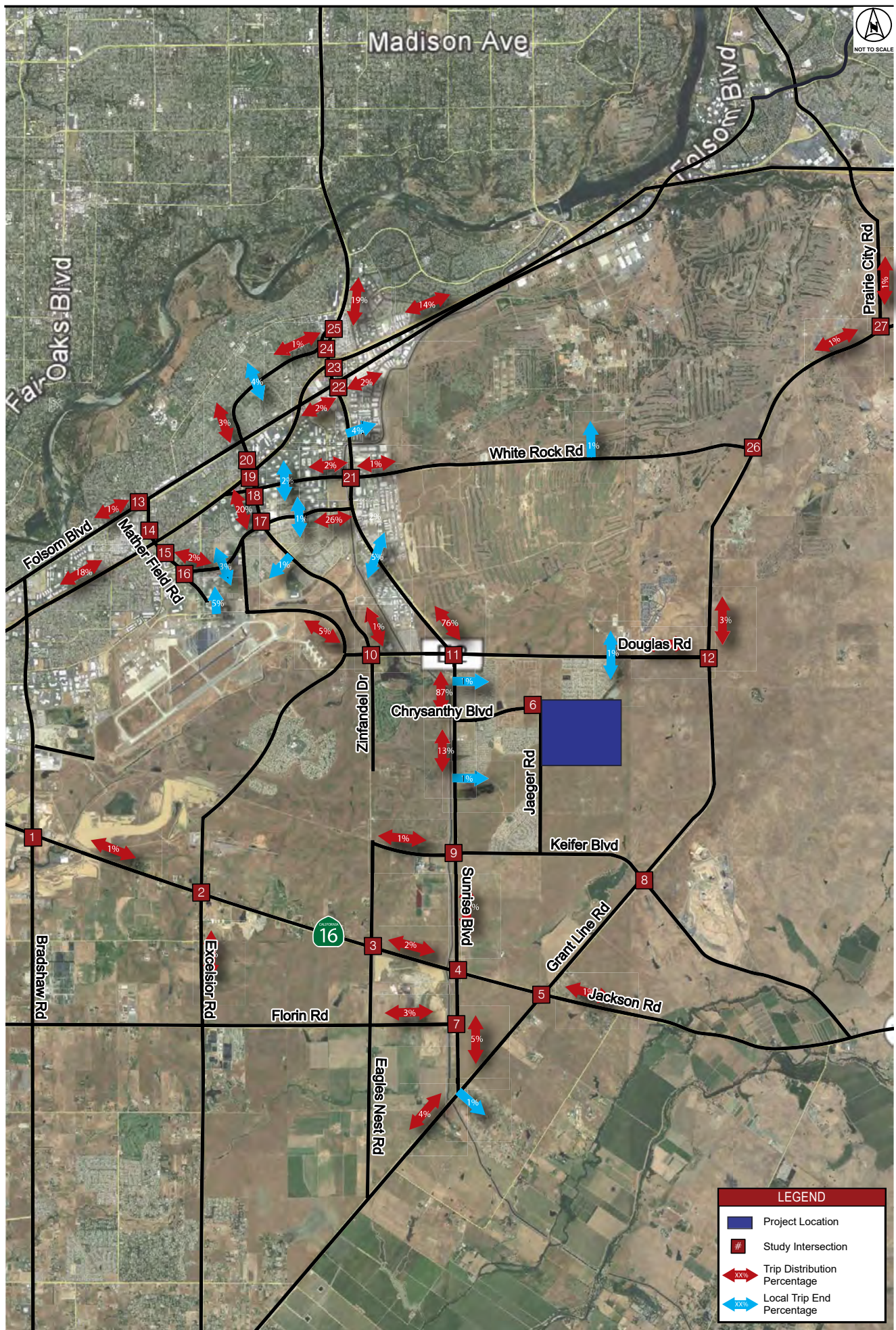
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LEGEND

Study Intersection
 AM(PM) Peak-hour Turning Movement Volumes

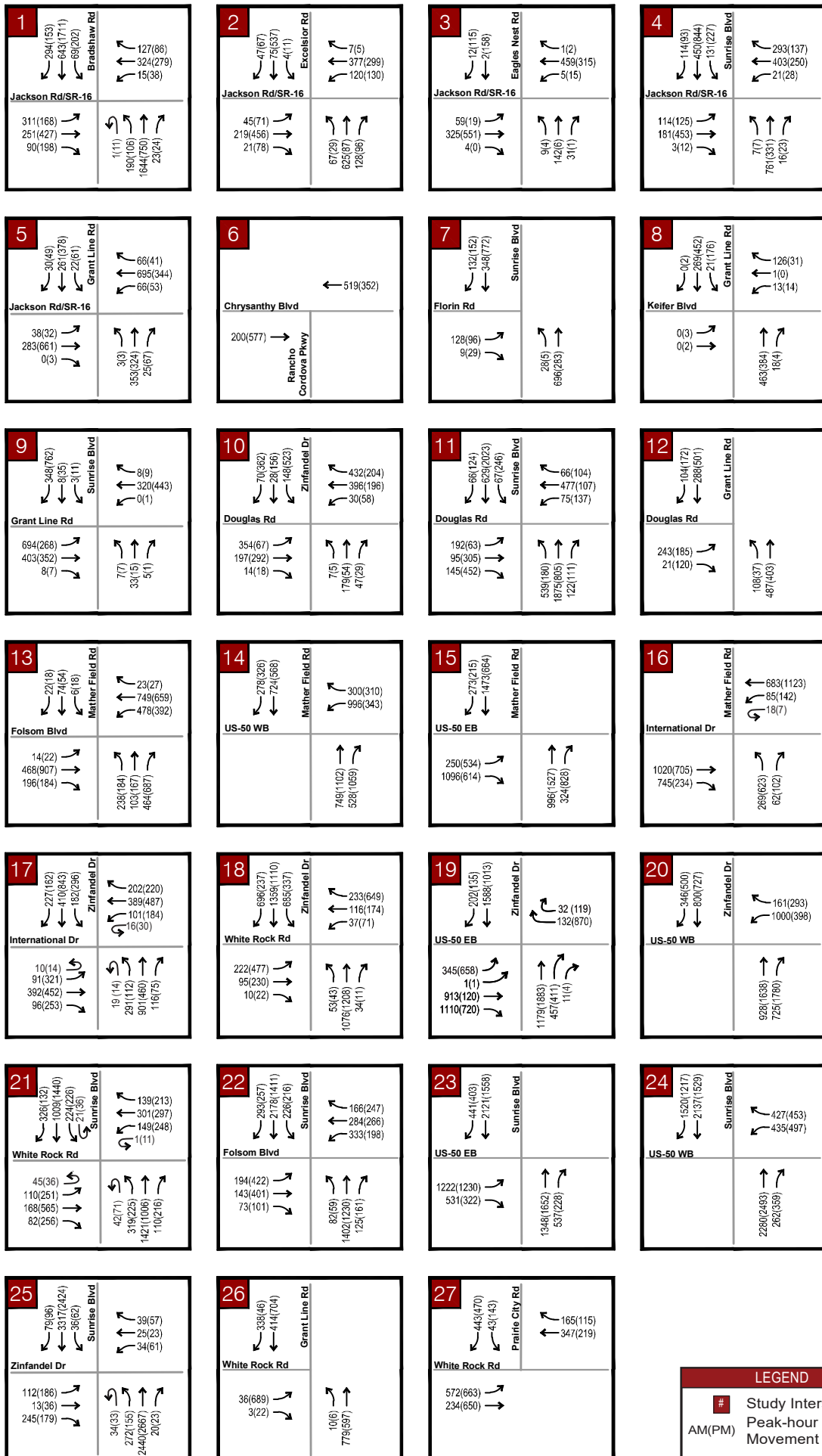
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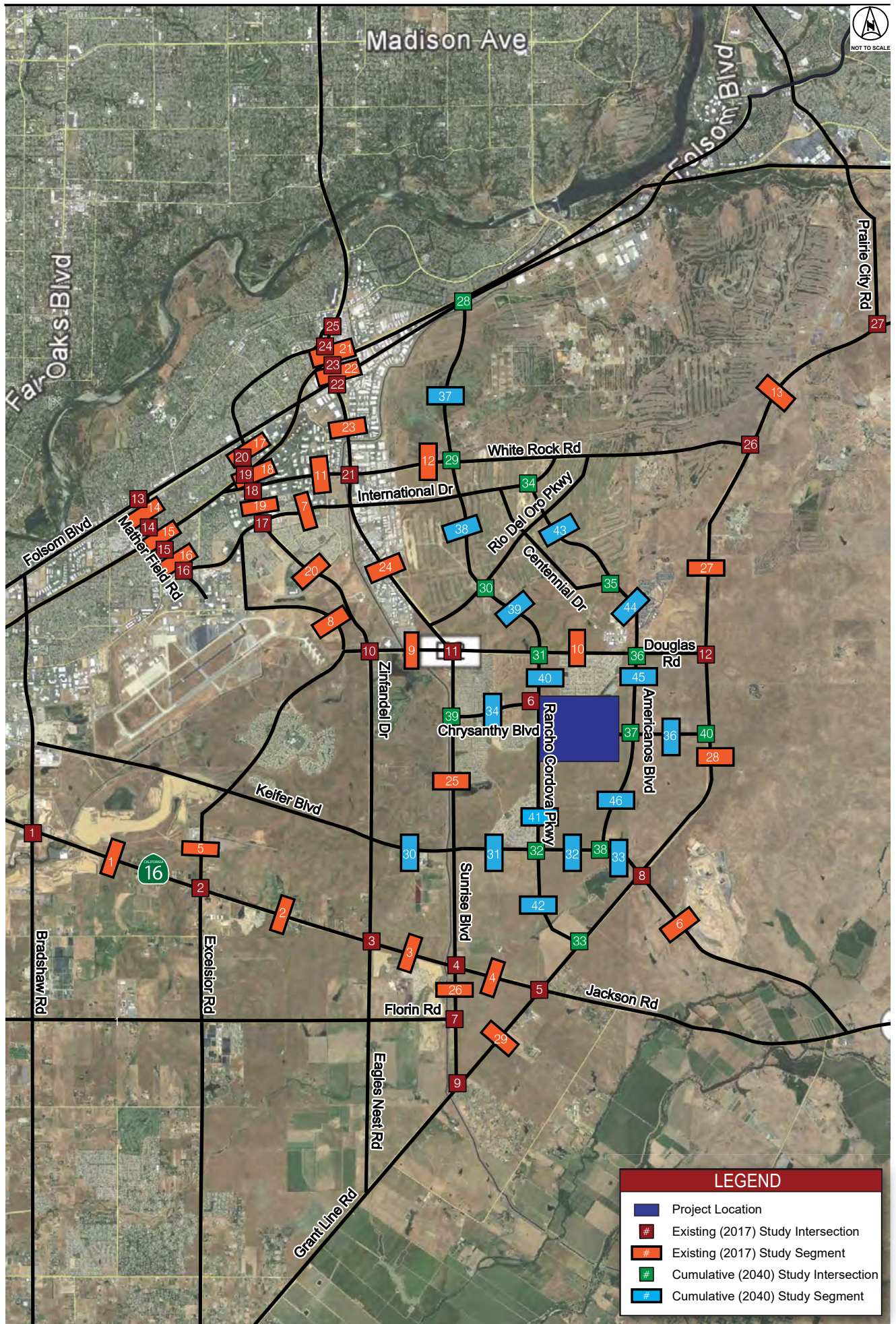
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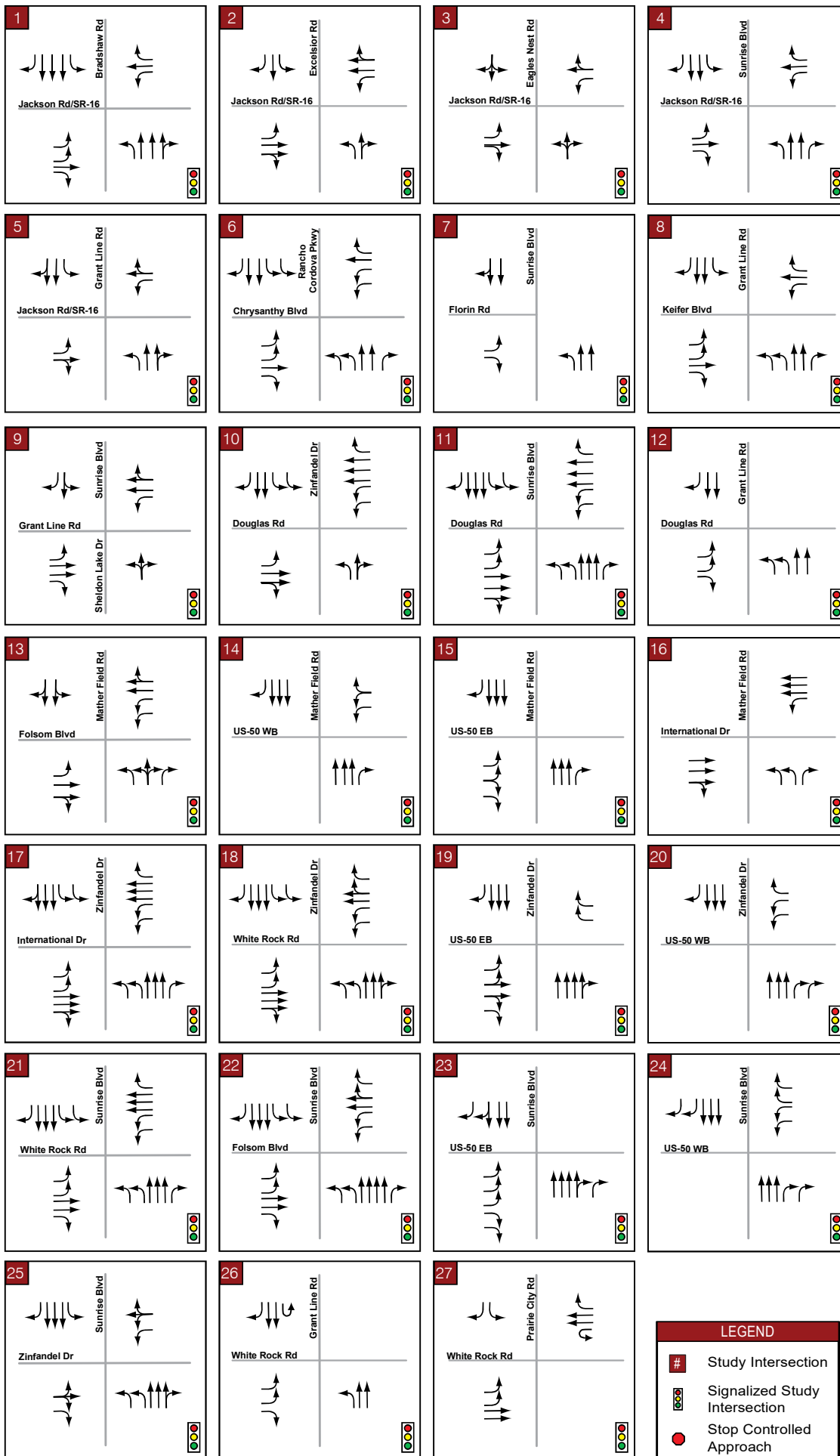


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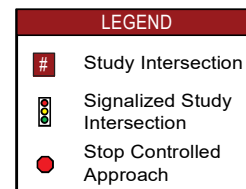
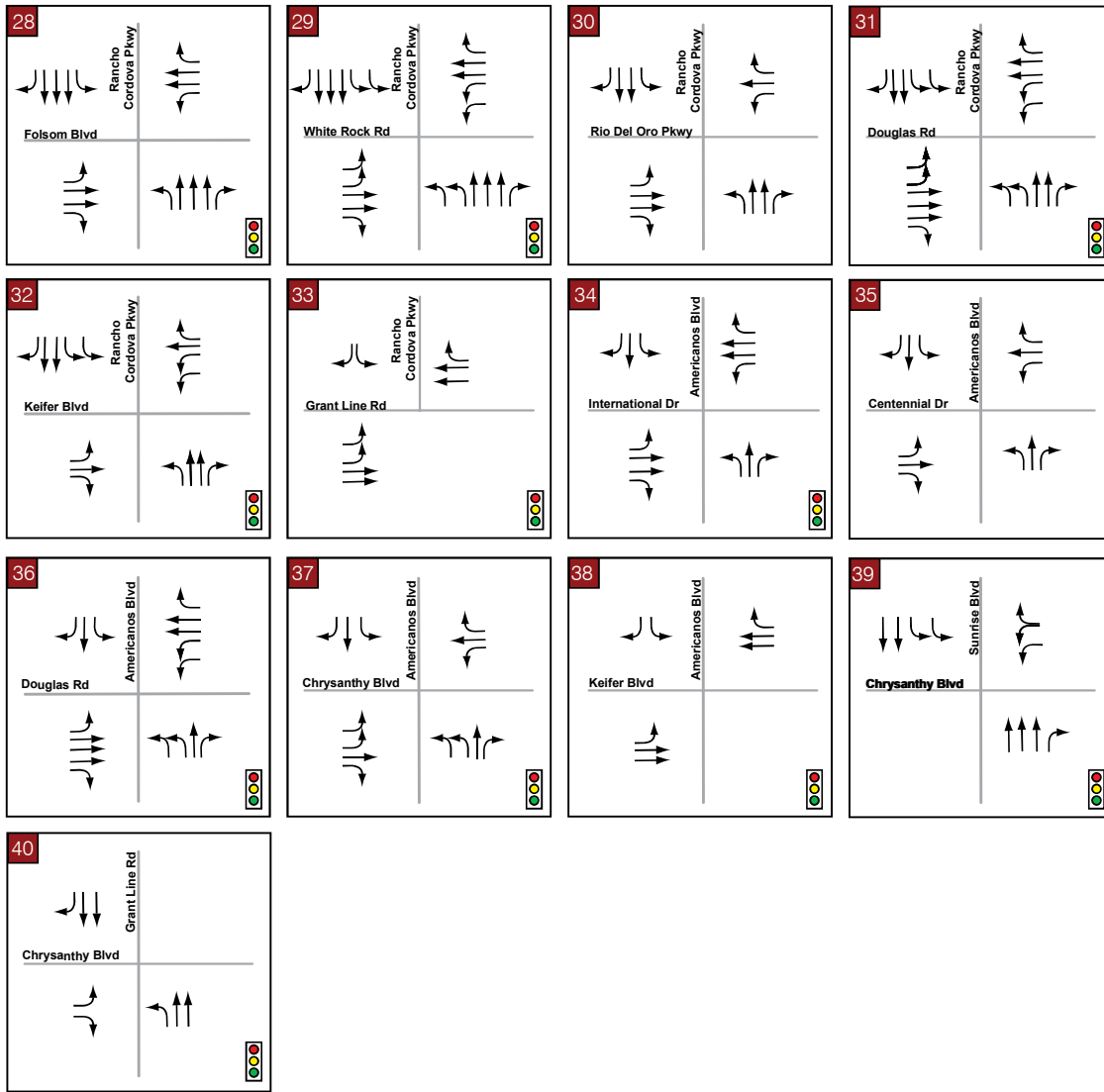


LEGEND	
	Project Location
	Existing (2017) Study Intersection
	Existing (2017) Study Segment
	Cumulative (2040) Study Intersection
	Cumulative (2040) Study Segment

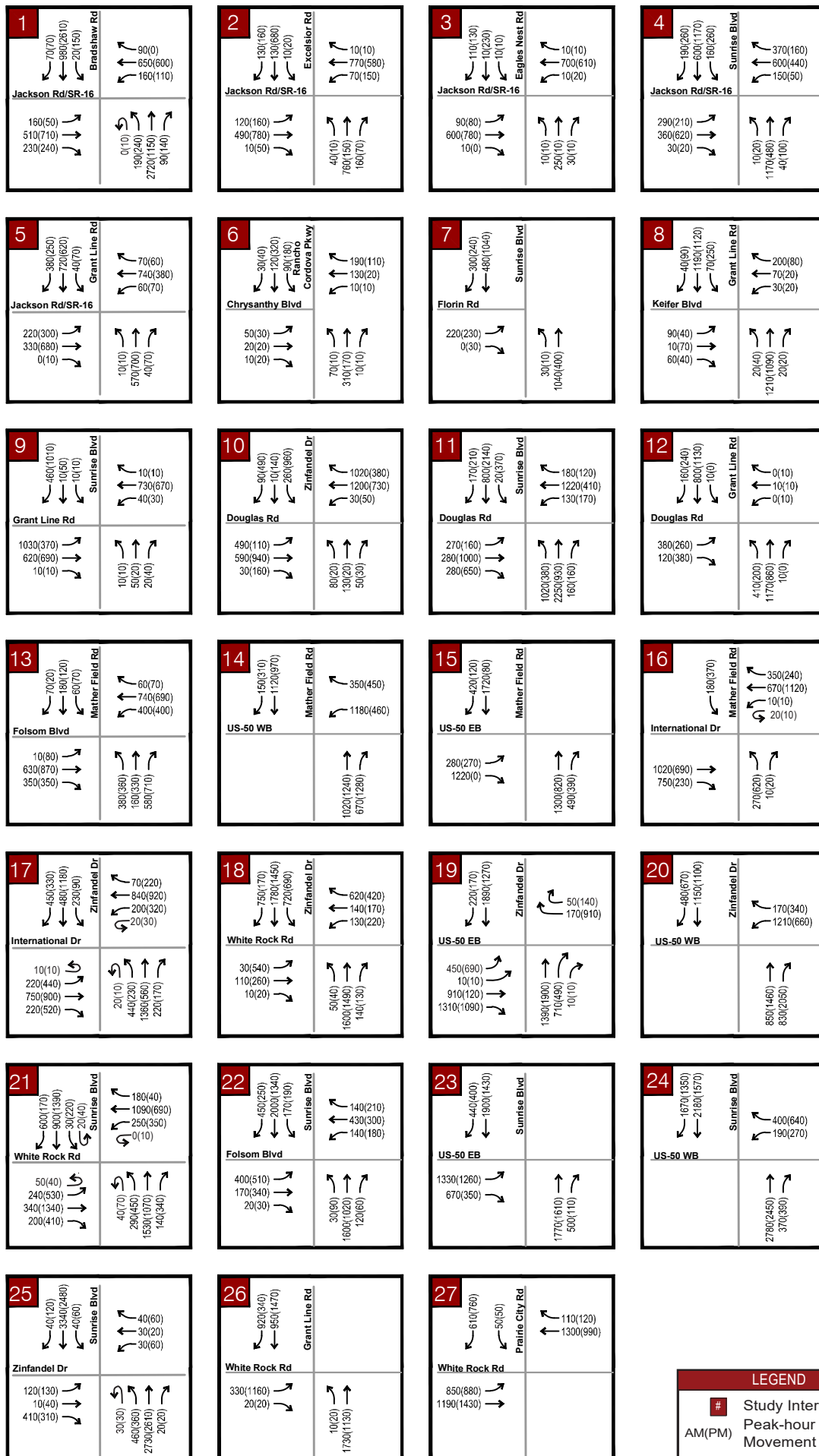
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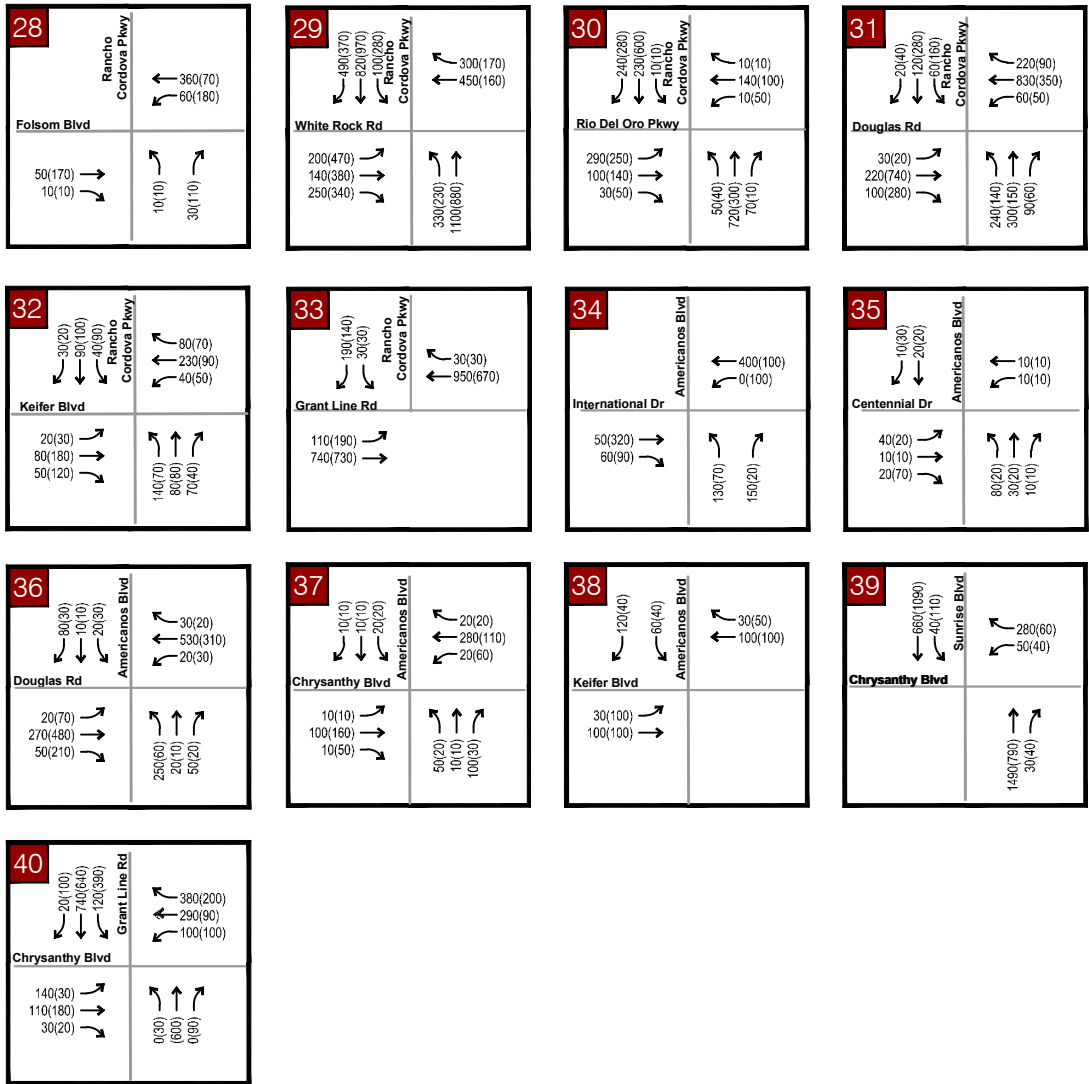
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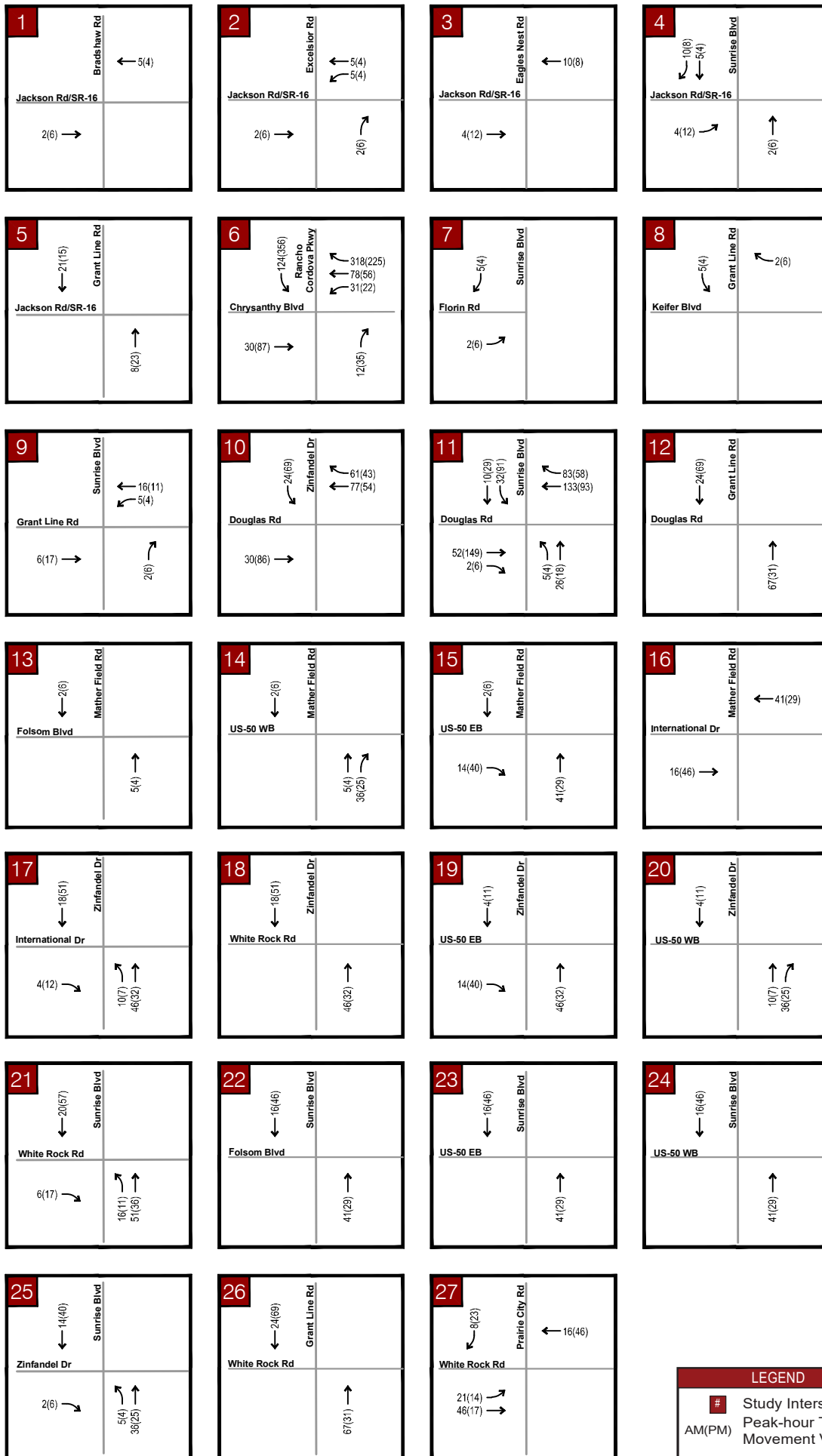
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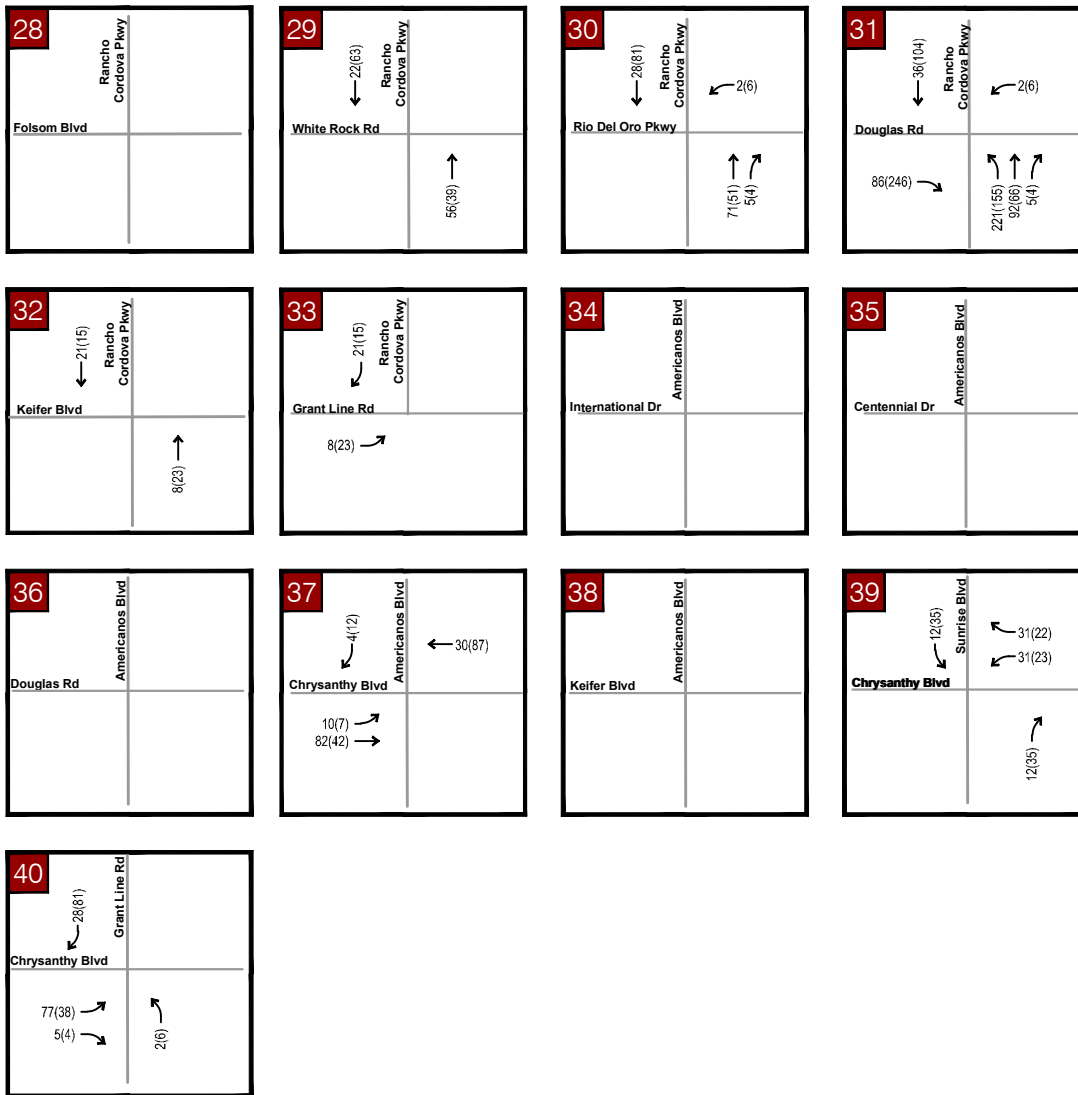
LEGEND	
#	Study Intersection
AM(PM)	Peak-hour Turning Movement Volumes

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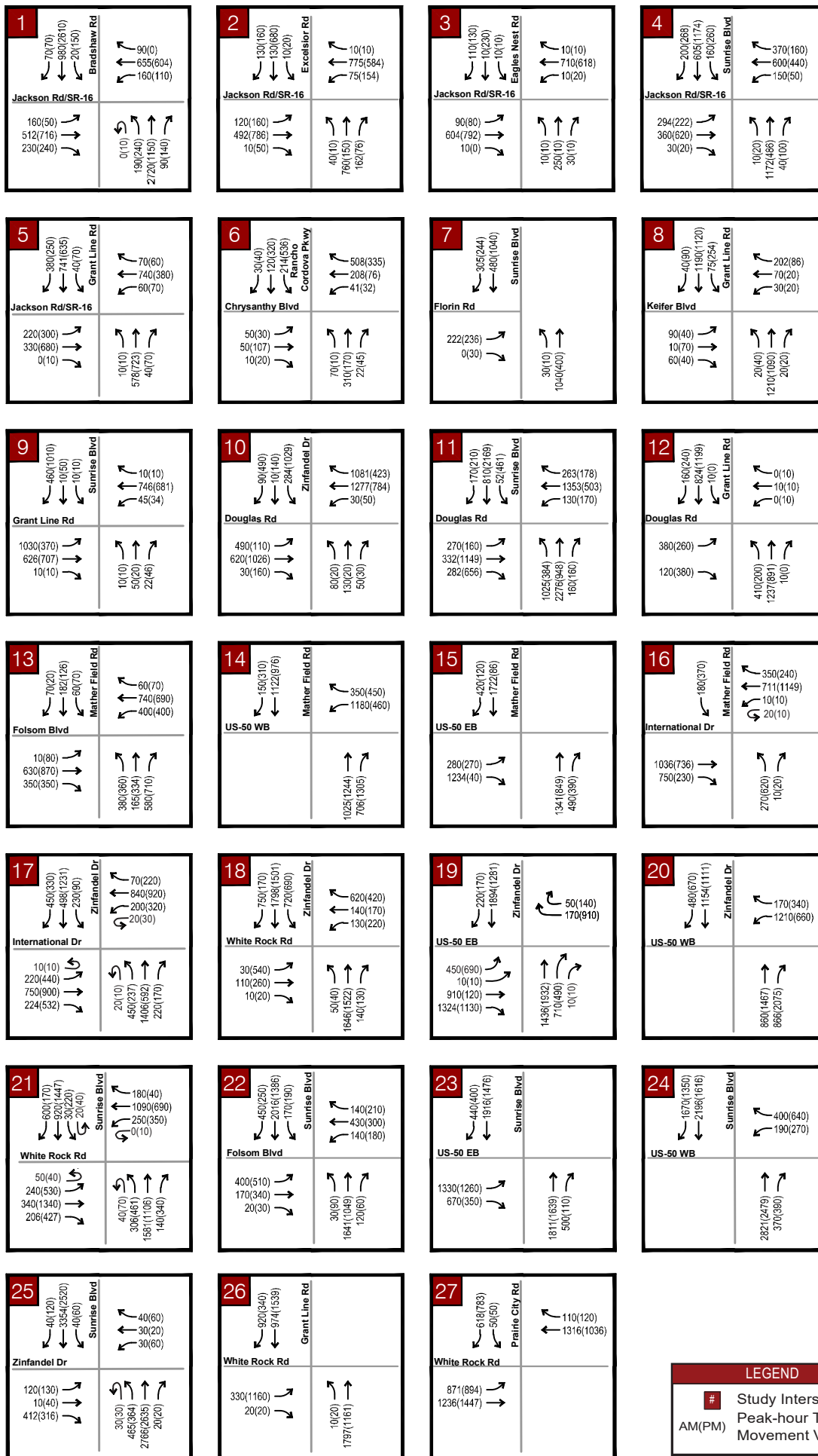
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Study Intersection
 AM(PM) Peak-hour Turning Movement Volumes

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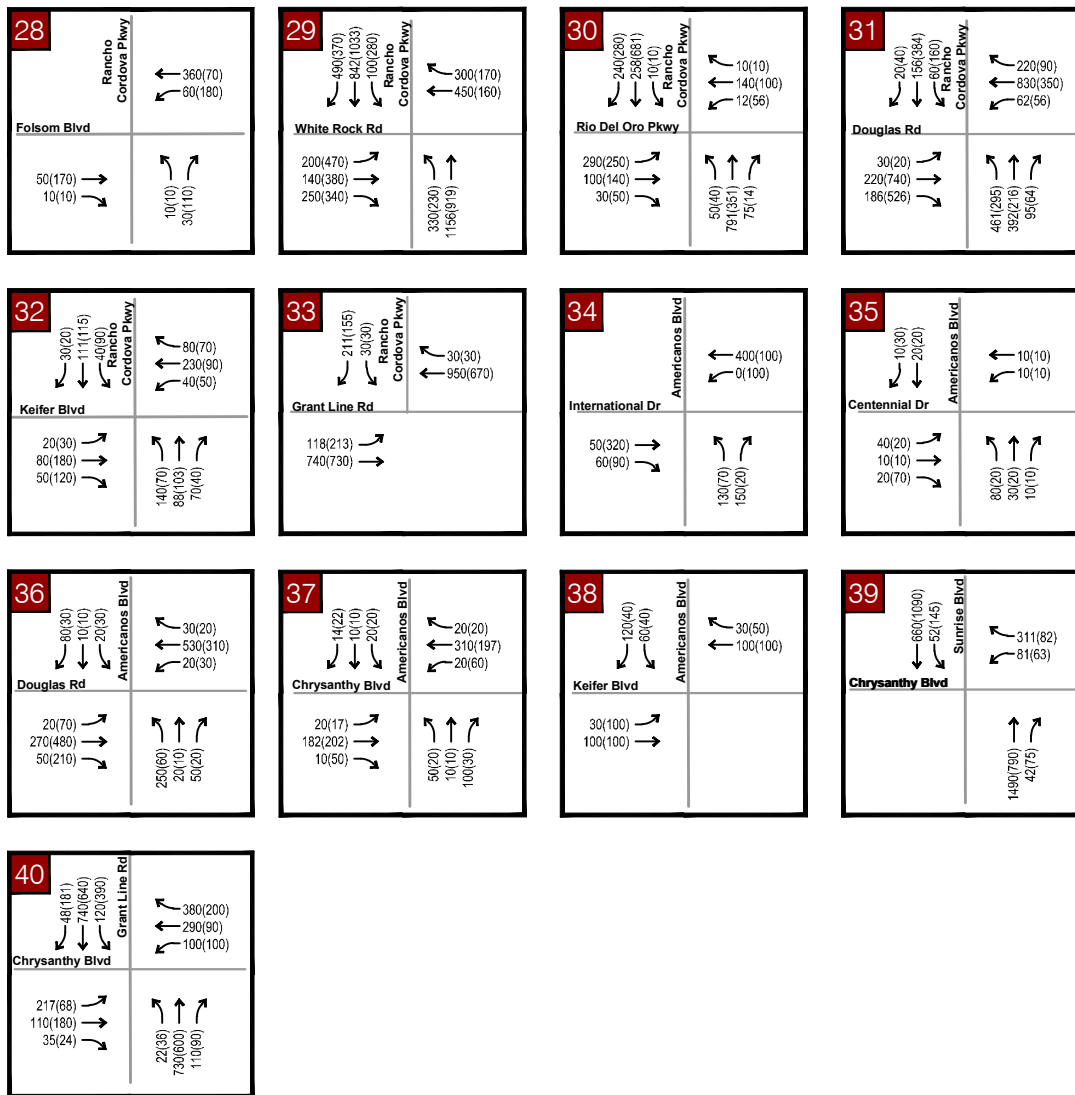


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Study Intersection

AM(PM) Peak-hour Turning Movement Volumes

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LEGEND	
#	Study Intersection
AM(PM)	Peak-hour Turning Movement Volumes

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This section describes the regulatory setting, impacts associated with wastewater services, water services, and solid waste disposal that are likely to result from Project implementation, and measures to reduce potential impacts to wastewater, water supplies and solid waste. A discussion of the proposed project's storm drainage and flood control facilities is included in Section 3.8, Hydrology and Water Quality. Therefore, storm water drainage and infrastructure are not addressed in this EIR section. This section is based in part on the following documents, reports and studies:

- *Rancho Cordova General Plan* (City of Rancho Cordova, Adopted June 26, 2006);
- *Rancho Cordova General Plan Draft Environmental Impact Report* (City of Rancho Cordova, March 2006);
- Sacramento County Water Agency Water Supply Assessment for The Ranch at Sunridge (Sacramento County Water Agency, 2011);
- *Sunrise Douglas Community Plan/Sun Ridge Specific Plan Long-Term Water Supply Plan Revised Draft EIR* (AECOM, January 2011);
- *Sunrise Douglas Community Plan/Sun Ridge Specific Plan Long-Term Water Supply Plan Final EIR* (AECOM, October 2011);
- The Ranch Level 2 Sewer Study, 5th Submittal (CTA Engineering & Surveying, 2019);
- *Sacramento County Water Agency 2015 Urban Water Management Plan* (SCWA, 2016);
- *Zone 40 Water Supply Master Plan Amendment for the Cordova Hills Project* (SCWA, 2011);
- *Sacramento Area Sewer District Sewer System Management Plan* (SASD, 2019);
- *Sacramento Area Sewer District Sewer System Capacity Plan* (SASD, 2011); and
- *Sacramento Regional County Sanitation District 10-year Strategic Plan 2016-2026* (Regional San, 2016).

Comments were received during the public review period for the Notice of Preparation regarding this topic from the following: Central Valley Regional Water Quality Control Board (RWQCB) (July 2018), and Sacramento Area Sewer District (August 2018). Each of the comments related to this topic are addressed within this section.

3.14.1 WASTEWATER SERVICES

EXISTING SETTING

Wastewater Conveyance and Treatment

Sanitary-sewer service for the Project would be provided by Sacramento Area Sewer District (SASD) and the Sacramento Regional County Sanitation District (Regional San). SASD operates and maintains the laterals and main line pipes for wastewater conveyance and collection from the source to the Regional San interceptors. Regional San 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 near Elk Grove.

The main SASD collection system includes over 3,000 miles of sewer pipelines ranging in size from 6 to 75 inches in diameter. The collection system pipelines are categorized based on size, function, and hydraulic capacity. Sewer collectors generally receive flow directly from individual homes and businesses and are designed to carry less than one mgd of peak wet-weather flow (PWWF). In general, collector sewers are 10 inches and smaller in diameter and comprise the majority (over 85 percent) of the pipes in the collection system. Trunk sewers carry one mgd of PWWF or more to the Regional San interceptor system. Trunk sewers are generally 12 inches in diameter.

Regional San evaluated the environmental impacts of constructing trunk and interceptor sewers that would serve most of the Sacramento region (including the Project) at a program level in the *Sacramento Regional County Sanitation District Interceptor Master Plan 2000, Draft Program Environmental Impact Report* (State Clearinghouse [SCH] #2001112085). The EIR was certified by Regional San and the master plan was approved in March 2003.

The purpose of the *Sacramento Regional County Sanitation District Interceptor System Master Plan 2000* (Regional San 2003a) (Regional San Interceptor Master Plan 2000) is to identify near- and long-term improvements needed for the regional wastewater conveyance system. The master plan describes the regional interceptor projects, along with their timing and costs, so that existing and future deficiencies in the regional system can be more accurately identified and predicted and strategic approaches to remedying these deficiencies can be developed. The plan uses information regarding population growth, wastewater flow generation, and actual system responses to wet weather.

Wastewater flows collected from the Regional San interceptors are ultimately transported into the SRWTP. Wastewater conveyed to the SRWTP is treated to a secondary level and is ultimately discharged into the Sacramento River. Currently, the SRWTP has a National Pollutant Discharge Elimination System (NPDES) permit issued by the Central Valley RWQCB for discharge of up to 181 mgd of treated effluent into the Sacramento River.

The *Sacramento Regional Wastewater Treatment Plant 2020 Master Plan* (Regional San 2001) (2020 Master Plan) provides a phased program of recommended wastewater treatment facilities and management programs to accommodate planned growth and to meet existing and anticipated regulatory requirements through the year 2020. The master plan addresses both public health and environmental protection issues while providing reliable service at affordable rates for Regional San customers. The key goals of the master plan are to provide sufficient capacity to meet growth projections and an orderly expansion of SRWTP facilities, comply with applicable water quality standards, and provide for the most cost-effective facilities and programs from a watershed perspective.

The 2020 Master Plan relies on the Sacramento Area Council of Government's (SACOG's) population projections to determine SRWTP capacity requirements within the Regional San service area, which includes the Project, through 2020 (Regional San 2003b:3-22). The 2020 Master Plan projected that the population in the Regional San service area would be 1,549,502 persons by 2020 (Regional San 2003b:5-5). The population projections used in the master plan do not

represent a buildout population total for Regional San; rather, they represent the amount of growth expected within the Regional San service area.

Wastewater flows increased relatively rapidly after the SRWTP first opened in the 1980s, with continued growth through the early 2000s and reached a peak of around 155 mgd ADWF around 2005. Since that time, flows have been substantially reduced through water conservation, closure of water intensive industries, and other factors. In 2010, the WRWTP treated approximately 141 mgd average dry weather flow (ADWF) (Regional San, Echo Water Project Draft EIR, 2014). In recent years, ADWFs have ranged from approximately 120 mgd (as reported in Order R5-2016-0020 (NPDES NO. CA0077682)) to 127 mgd, as reported in the 2017 State of the District Report, (Regional San, 2017) and Final Budget Fiscal Year 2018-19 (Regional San, 2018). In development of the Echo Water Project Draft EIR, the District reviewed its projections and concluded that 181 mgd ADWF provides sufficient capacity for the next 40 plus years (Regional San, Echo Water Project Draft EIR, 2014).

Order R5-2016-0020 (NPDES NO. CA0077682) regulates the discharge of secondary treated municipal wastewater and allows an average dry weather discharge flow of 181 mgd to the Sacramento River, within the Sacramento-San Joaquin Delta (Delta). The existing secondary treatment at the SRWTP consists of preliminary screening and grit removal, primary sedimentation, a pure oxygen activated sludge treatment system, and chlorination for disinfection and dechlorination. SRWTP's current permitted discharge is 181 mgd (average dry weather flow) and flows at the time of Order R5-2016-0200 averaged 120 mgd. Regional San is currently upgrading the SRWTP to replace the pure oxygen activated sludge system with a biological nutrient removal activated sludge system in order to meet new effluent limits for ammonia and nitrate by May 11, 2021. In addition, tertiary filtration facilities and chlorine contact chamber will be added to meet new disinfection requirements by May 9, 2023.

REGULATORY SETTING - WASTEWATER

Clean Water Act (CWA) / National Pollutant Discharge Elimination System (NPDES) Permits

The CWA is the cornerstone of water quality protection in the United States. The statute employs a variety of regulatory and non-regulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water."

The CWA regulates discharges from "non-point source" and traditional "point source" facilities, such as municipal sewage plants and industrial facilities. Section 402 of the Act creates the NPDES regulatory program which makes it illegal to discharge pollutants from a point source to the waters of the United States without a permit. Point sources must obtain a discharge permit from the proper authority (usually a state, sometimes EPA, a tribe, or a territory). NPDES permits cover industrial and municipal discharges, discharges from storm sewer systems in larger cities, storm

water associated with numerous kinds of industrial activity, runoff from construction sites disturbing more than one acre, mining operations, and animal feedlots and aquaculture facilities above certain thresholds.

Permit requirements for treatment are expressed as end-of-pipe conditions. This set of numbers reflects levels of three key parameters: (1) biochemical oxygen demand (BOD), (2) total suspended solids (TSS), and (3) pH acid/base balance. These levels can be achieved by well-operated sewage plants employing "secondary" treatment. Primary treatment involves screening and settling, while secondary treatment uses biological treatment usually in the form of "activated sludge."

All so-called "indirect" dischargers are not required to obtain NPDES permits. An indirect discharger is one that sends its wastewater into a city sewer system, so it eventually goes to a sewage treatment plant. Although not regulated under NPDES, "indirect" discharges are covered by another CWA program called pretreatment. "Indirect" dischargers send their wastewater into a city sewer system, which carries it to the municipal sewage treatment plant, through which it passes before being discharged to surface water.

Rancho Cordova General Plan

The Rancho Cordova General Plan contains the following goal and policies that are relevant to wastewater:

INFRASTRUCTURE, SERVICES, AND FINANCE ELEMENT

Goal ISF.2: Ensure the development of quality infrastructure to meet community needs at the time they are needed.

Policy ISF.2.1: Ensure the development of public infrastructure that meets the long-term needs of residents and ensure infrastructure is available at the time such facilities are needed.

Policy ISF.2.2: Coordinate with independent public service providers, including schools, parks and recreation, utility, transit, and other service districts, in developing service and financial planning strategies.

Policy ISF.2.3: Ensure that adequate funding is available for all infrastructure and public facilities, and make certain that the cost of improvements is equitably distributed.

Policy ISF.2.4: Ensure the development of public infrastructure that meets the long-term needs of residents and ensure infrastructure is available at the time such facilities are needed.

Policy ISF.2.6: Ensure that sewage conveyance and treatment capacity are available in time to meet the demand created by new development, or are guaranteed to be built by bonds or other sureties.

THRESHOLDS OF SIGNIFICANCE - WASTEWATER

Consistent with Appendix G of the CEQA Guidelines, the Project will have a significant impact on the environment associated with wastewater facilities if it will:

1. Require or result in the relocation or construction of new or expanded wastewater facilities, the construction or relocation of which could cause significant environmental effects; and/or
2. Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the projects projected demand in addition to the providers existing commitments.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-1: The Project would not result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the projects projected demand in addition to the providers existing commitments, or require or result in the relocation or construction of new or expanded wastewater facilities, the construction or relocation of which could cause significant environmental effects (Less than Significant)

The SASD manages the local pipe system for the collection of wastewater in most of Sacramento County, but does not treat the wastewater. Once the wastewater reaches the Regional San interceptors and pipes, Regional San manages and treats the wastewater. New sewer conveyance pipelines would be provided within the Project site, primarily within the roadway right-of-ways, to serve the proposed development. The Project would connect to existing SASD sewer infrastructure located at the intersection of Rancho Cordova Parkway and Chrysanthy Boulevard. Sewer flows from the Project would be conveyed by SASD facilities to Regional San interceptor, collector, and trunk facilities and would then be conveyed to the SRWTP for treatment. Off-site improvements may include upgrades to the existing sewer lift station that serves the eastern part of Rancho Cordova. The impacts of development of the proposed wastewater system are discussed throughout this EIR.

Proposed sewer system improvements to serve Project needs include 8-inch in-tract gravity sewer pipes that will collect Project sewer flows from individual lots and convey the flows to a 12- to 21-inch trunk main sewer pipe in Chrysanthy Boulevard that will extend from the eastern Project boundary to the western boundary of the Project, and a 24-inch gravity sewer that will connect the trunk main in Chrysanthy Boulevard to the existing trunk main in Rancho Cordova Parkway, with the existing manhole located immediately adjacent the Project site in Rancho Cordova Parkway.

The trunk sewer pipe in Chrysanthy Boulevard will collect flows from the approved Arista Del Sol and Cordova Hills developments to the east of the Project site, consistent with the SASD 2010 System Capacity Plan Expansion Trunk Sheds, as amended in 2015. The Arista Del Sol development is located adjacent to the Project's eastern boundary. The SASD's planned improvements account for future approved growth in the southern area of the City and adjacent area, including the Project, Arista Del Sol, and Cordova Hills Phase 1. The Project also includes upgrades to the existing SASD S-132 pump station, located southwest of Chrysanthy Boulevard and Anatolia Drive. The planned improvements are required in order to provide sewer services to the Project and

approved planned development in southern Rancho Cordova, and would not induce urban growth in the area.

The improvements to S-132 pump station would occur within the existing developed footprint of the S-132 pump station facility and may include new equipment and modifications to, or replacement of, existing equipment, such as replacement of pumps, electrical equipment, and the diesel generator. These improvements would result in short-term, temporary environmental effects, primarily noise and air quality impacts associated with construction equipment and vehicles.

Development of Project will result in 1,967.6 Equivalent Single-Family Dwelling (ESDs) resulting in PWWF of 1.613 mgd. The upstream projects to the east, Arista Del Sol, which is 137.2 acres and part of the approved SunCreek Specific Plan, and Cordova Hills Phase 1, which includes an approximately 342-acre area that is part of a larger approximately 2,669-acre development with an approved Master Plan, will result in 899.1 ESDs and 0.697 mgd and 3,290 ESDs and 2.5 mgd, respectively. Therefore, the total combined ESDs and PWWF are 6,156.7 ESDs and 4.1801 mgd, respectively, exiting the Project site at Ranch Cordova Parkway. The ESD calculations for the Project and Arista del Sol are provided in Table A-1 of the Level 2 Sewer Study provided as Appendix J.2.

The proposed trunk main will exit into an existing 24-inch sewer line stubbed at the intersection of Rancho Cordova Parkway and Chrysanthy Boulevard. The existing 24-inch sewer line discharges into Aerojet Interceptor 1B (36-inch trunk main) flowing westerly into SASD facility S-132 lift station. The SASD system capacity plan shows the Project will sewer to the west. Interim facilities or pump station are not expected to be required for the proposed project. See Appendix J.2 for the Level 2 Sewer Study, the latter of which contains the Study assumptions and criteria (i.e., sewer flow calculations and design flows).

The Level 2 Sewer Study completed for the Project demonstrates the ability of the proposed gravity system to serve the project. System components are sized for ultimate conditions. SASD staff has identified that there is adequate capacity in existing downstream sewer facilities to serve Project needs (SASD email dated September 17, 2018 is included in Appendix J.2.).

The SRWTP has a permitted capacity of 181 mgd. Over the last two decades, Regional San has seen a decrease in ADWFs in its system and at the SRWTP due to water conservation, closure of water intensive industries, and other factors. Regional San's review of the SRWTP capacity as part of the Echo Water Project Draft EIR indicated that the existing capacity of 181 mgd is adequate to accommodate growth anticipated over the next 40 plus years in Regional San's service area. The Project would increase flows to the SRWTP, consistent with planned growth projections for the SRWTP's service area, but would not cause it to exceed the permitted capacity and would not require the construction or relocation of Regional San facilities.

In conclusion, the current capacity of the SASD and Regional San facilities would be sufficient to handle the wastewater flow from the proposed project. As a result, the Project would not have adverse impacts to wastewater treatment capacity.

The Project would develop all of the necessary sewer infrastructure within the Project site and would provide improvements to the SASD S-132 pump station, as previously described. The Project would not result in environmental impacts associated with Project development, including provision of sewer infrastructure, beyond those described in this Draft EIR. Therefore, a ***less than significant*** impact would occur related to requiring or resulting in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

3.14.2 WATER SUPPLIES

EXISTING SETTING

Water Service Area

The Sacramento County Water Agency (SCWA) would provide water supplies to the Project through its Zone 40 conjunctive-use water supply system. The Project is identified as a subarea within Zone 40 known as the North Service Area (NSA).

The Zone 40 Water Supply Master Plan (WSMP) and the 2016 Water System Infrastructure Plan (2016 WSIP) identify anticipated improvements to serve the Project and nearby planned development. In the 2016 WSIP, proposed pipelines are shown on along Jaeger Road/Rancho Cordova Parkway, Chrysanthy Boulevard, and Douglas Road in the Project vicinity. Additionally, the proposed Rio Del Oro Storage Tank (ST-7) is located north of the Project site along Douglas Road. Further, the Sunrise Douglas Water Treatment Plant (GW-14) and Anatolia Water Treatment Plant (GW-15) are proposed to the south and west of the Project site, respectively.

SCWA was created in 1952 for the purpose of controlling and conserving storm, flood, and other surface waters for any beneficial use for lands and inhabitants and producing, storing, transmitting, and distributing groundwater. The SCWA Board of Directors created zones within the agency to finance, construct, acquire, reconstruct, maintain, operate, extend, repair, or otherwise improve any work for common benefit to each zone. There are currently eight zones within the SCWA: 11A, 11B, 11C, 12, 13, 40, 41, and 50.

The City of Rancho Cordova and a portion of the City's planning area are located within SCWA's Zone 40. Zone 40 was created in 1985 as a special benefit zone to supplement available groundwater supplies to support new and projected development within the zone and to establish the framework for a conjunctive use program that would utilize both surface water and underlying groundwater. Zone 40 consists of approximately 86,000 acres of agricultural, residential, and industrial land in central Sacramento County. The northern edge of the 100-year floodplain of Deer Creek is also located to the east and southeast. Interstate 5 forms the western boundary and the Douglas Road and Grant Line Road areas form the southern boundary.

The water demands associated with the Project have been included and addressed in the latest SCWA 2015 Urban Water Management Plan (UWMP) (SCWA, 2016) and in the development of the Zone 40 "conjunctive use" program as described in the Zone 40 WSMP.

Sacramento County Water Agency Water Supplies

SCWA uses purchased surface water, self-supplied surface water, groundwater, and recycled water as its sources of water supply. The Department of Water Resources (DWR) defines purchased water as water purchased from other suppliers, including non-self-supplied surface water. The water demands of the Project will be met with groundwater and surface water. Both of these sources are discussed in detail below.

SURFACE WATER

The surface water supplies associated with SCWA's conjunctive use program fall into four categories:

- 1) Water supplies available through multiple CVP contracts.
- 2) Water supplies available through State Water Resources Control Board (SWRCB) Permit 21209.
- 3) Water available through the City of Sacramento for use within the American River Place of Use (POU). It is noted that this supply is not currently available, as described below, but is anticipated in the future as part of SCWA's conjunctive use program.
- 4) Surface water transfers identified in the WSMP.

SCWA's primary sources of supply for surface water are the U.S. Bureau of Reclamation (USBR) CVP and SWRCB Permit 21209. Until such time as the SWRCB Bay Delta Water Rights Hearings are concluded, other parties that could be affected by SCWA's surface water supply needs include: CVP contractors, State Water Project (SWP) contractors, water rights holders subject to Term 91¹ conditions, and riparian diverters downstream of SCWA's point of diversion. The point of diversion is at a site near the community of Freeport on the Sacramento River.

The source of supply for the portion of SCWA that lies within the American River POU is the City of Sacramento. Delivery of this water to customers within the POU has been included in the City of Sacramento's long-range plan for perfecting their American River water rights. The diversion location, timing, and volume of delivery are currently under negotiation.

Surface water transfers would require SCWA to enter into purchase and transfer agreements with other entities that currently hold surface water rights upstream of SCWA's points of diversion. According to the WSMP, the amount of water needed is estimated to be 5,200 acre-feet per year (AFY). The timing for the acquisition of this water supply is yet to be determined.

The SCWA conjunctive use program includes the delivery of surface water within the Zone 40 boundaries as part of a comprehensive program to maintain the long-term, regional balance of the groundwater basin. The amount of appropriated water available for use could range up to 71,000 AFY in wet years, primarily during the winter months:

- **Appropriative Water:**

In February 2008, the SWRCB approved SCWA's appropriative right permit application to divert water from the American and Sacramento Rivers (Permit 21209). Water under this permit is considered "intermittent water" that is typically available during the winter months of normal or wet years. These flows could range up to 71,000 AFY. This water would be diverted at the Freeport diversion on the Sacramento River. Since SCWA's

¹ "Term 91" refers to a provision which has been included in many water permits. Term 91 restricts specified post-1965 diverters from diverting the stored water released by the projects. Upstream Delta diverters who possess pre-1914 appropriations, riparian status, or pre-1965 issued water rights are not subject to Term 91.

demands are low in the winter months, it is possible that not all of this supply could be utilized without the ability to store the water.

- CVP Water:

The CVP water supply consists of the CVP contract held by SCWA and the two SMUD assignments that total 45,000 AFY. Most of the CVP water is diverted at the Freeport diversion on the Sacramento River and treated at the Vineyard Surface Water Treatment Plant (SWTP). Some of the CVP supplies are diverted from the Sacramento River and treated at the City's Sacramento River SWTP and delivered to SCWA at the Franklin Intertie. CVP water is described under three different contracts, as follows:

- Sacramento Municipal Utility District (SMUD) 1 Assignment - 15,000 AFY of SMUD's CVP contract water has been assigned to SCWA under the terms of an agreement with SMUD.
- SMUD 2 Assignment - 15,000 AFY of SMUD's CVP contract water has been assigned to SCWA under the terms of an agreement with SMUD.
- CVP Water Public Law 101-514 – In 1999, SCWA entered into a contract with the U.S. Bureau of Reclamation (USBR) for 22,000 AFY of CVP supplies from the American River pursuant to Public Law (PL) 101-514 (often referred to as "Fazio Water"). Of this 22,000 AFY, 7,000 AFY has been subcontracted to the City of Folsom for diversion from Folsom Lake, with 15,000 AFY available for SCWA through the Freeport diversion or Franklin Intertie.

There are two future surface water supplies, POU water and water transfers, planned for in the WSMP to meet build-out water demand. The timing for acquiring these two surface water supplies will be determined by demand growth in Zone 40. "POU water" refers to surface water obtained through a water wholesale agreement with the City of Sacramento (City) whereby the City will sell surface water to SCWA for use in the portion of Zone 40 that lies within the City's American River POU. The amount of water required to serve the POU area is estimated to be 9,300 AFY; this estimate is based on assumed demands located within the POU. "Water transfers" refers to surface water obtained through a water purchase and transfer agreement that SCWA would enter into with other entities that currently hold surface water rights upstream of SCWA's points of diversion. According to the WSMP, the amount of water needed is estimated to be 5,200 AFY.

GROUNDWATER

SCWA's groundwater source for the Project area is the South American Sub-basin as defined by the California Department of Water Resources (DWR) Bulletin 118. According to Bulletin 118, the South American Sub-basin is defined as the area bounded on the west by Interstate 5 and the Sacramento River, on the north by the American River, on the south by the Cosumnes and Mokelumne rivers and on the east by the Sierra Nevada. The Central Basin covers a major portion of this basin.

The estimated long term annual sustainable yield of groundwater from the Central Basin is 273,000 AFY. Currently, groundwater extractions are estimated to be 250,000 AFY (excluding remediation).

The determination of the sustainable yield of the Central Basin (273,000 AFY) was negotiated by the Water Forum Groundwater Negotiating Team (GWNT) and involved a complex process that developed the long-term average annual pumping limit of the basin. The long-term average annual pumping limit is described as the hydro-geologic process under which groundwater can be pumped and not exceed average natural recharge over a long-term period of time. Under sustainable conditions, natural recharge is said to be able to make up for variations in the amount of pumping that occurs over the long-term, given wet and dry periods in the hydrologic record.

Table 3.14-1 identifies past volumes of groundwater extracted by SCWA between 2011 and 2015.

TABLE 3.14-1: HISTORICAL GROUNDWATER PUMPING 2011 - 2015

<i>GROUNDWATER TYPE</i>	<i>LOCATION OR BASIN NAME</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>
Alluvial Basin	Sacramento Valley Groundwater Basin, North American Subbasin	4,654	5,076	5,316	4,602	3,877
Alluvial Basin	Sacramento Valley Groundwater Basin, South American Subbasin	29,972	25,553	23,512	23,179	20,775
<i>Total</i>		<i>34,626</i>	<i>30,629</i>	<i>28,828</i>	<i>27,781</i>	<i>24,652</i>

SOURCE: SCWA 2015 UWMP, TABLE 6-2.

RECYCLED WATER SUPPLIES

SCWA purchases tertiary treated wastewater from Regional San as source of non-potable water for irrigation of parks, schools, and rights-of-way. SCWA provides recycled water to areas within its South Service Area; recycled water is not being used in the NSA or Central Service Area.

Demand and Supply Conclusions in the 2015 UWMP

The UWMP has identified water demand in normal, single dry, and multiple dry years in 5-year increments for the 20-year projection (2020 to 2040). A summary of the pertinent data from these tables is presented in Table 3.14-2.

Constraints on SCWA's surface water supplies includes the significant variation of supplies that are available depending on the climate year type. Even though the surface water supplies are not available at a consistent level of use, SCWA has available groundwater supplies through its conjunctive use program to be able to replace the reduction in surface water supplies in dry years. While groundwater is more consistently available over different climate year types, it has been constrained by groundwater contamination plumes, some naturally occurring contaminants, and the long term need to not exceed the safe yield, which may be affected by future plans for the basin developed to comply with the Sustainable Groundwater Management Act (SGMA). The capacity of supply and conveyance facilities is also a constraint on both surface water and groundwater supplies. SCWA has plans to construct additional water supply facilities. In general, water quality does not have a significant impact on SCWA's current and projected water supplies. The SWTP and groundwater treatment plants provide treatment to meet drinking water standards.

3.14 UTILITIES

TABLE 3.14-2: MULTIPLE DRY YEARS SUPPLY AND DEMAND COMPARISON IN FIVE-YEAR INCREMENTS (AFY)

		2020	2025	2030	2035	2040
<i>RETAIL</i>						
1 st Year	Supply Totals	77,900	77,900	81,900	90,900	90,900
	Demand Totals	48,121	55,490	63,288	71,143	79,278
	<i>Difference</i>	<i>29,779</i>	<i>22,410</i>	<i>18,612</i>	<i>19,757</i>	<i>11,622</i>
2 nd Year	Supply Totals	77,900	77,900	81,900	90,900	90,900
	Demand Totals	48,121	55,490	63,288	71,143	79,278
	<i>Difference</i>	<i>29,779</i>	<i>22,410</i>	<i>18,612</i>	<i>19,757</i>	<i>11,622</i>
3 rd Year	Supply Totals	70,200	70,500	74,600	83,600	83,800
	Demand Totals	48,121	55,490	63,288	71,143	79,279
	<i>Difference</i>	<i>22,079</i>	<i>15,010</i>	<i>11,312</i>	<i>12,457</i>	<i>4,522</i>
<i>WHOLESALE</i>						
1 st Year	Supply Totals	5,000	5,000	6,000	7,000	7,000
	Demand Totals	4,120	4,826	5,733	6,233	6,769
	<i>Difference</i>	<i>880</i>	<i>174</i>	<i>267</i>	<i>767</i>	<i>231</i>
2 nd Year	Supply Totals	5,000	5,000	6,000	7,000	7,000
	Demand Totals	4,120	4,826	5,733	6,233	6,769
	<i>Difference</i>	<i>880</i>	<i>174</i>	<i>267</i>	<i>767</i>	<i>231</i>
3 rd Year	Supply Totals	5,000	5,000	6,000	7,000	7,000
	Demand Totals	4,120	4,826	5,733	6,233	6,769
	<i>Difference</i>	<i>880</i>	<i>174</i>	<i>267</i>	<i>767</i>	<i>231</i>

SOURCE: SCWA 2015 UWMP, MAY 2016 (TABLES 7-8 AND 7-9).

The water supply allocation from the CVP supply in 2015 was a historical low. The CVP allocation for the three-year 2013 to 2015 period was also the lowest historical three-year sequence. The CVP allocation for 2013 to 2015, was 100 percent, 75 percent, and 25 percent of the prior three-year average constrained use for each of the years, respectively. The CVP supply represents SCWA's most significant surface water supply source. Even with the low CVP allocation in 2015, the overall water supply was still 90 percent of normal because of the availability of other water supply sources. It is assumed that wholesale water supplies would be fully available as required to meet wholesale water demands.

It is noted that the SCWA's 2015 UWMP accounts for the demand from the Project.

REGULATORY SETTING - WATER SUPPLY

Senate Bill 610

Senate Bill (SB) 610 requires that public agencies in a position of approving certain projects check with the water agency proposed to serve the project to determine if there are sufficient water supplies available to accommodate the project. SB 610 applies to projects that meet the following criteria:

- A proposed residential development of more than 500 dwelling units.
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
- A proposed hotel or motel, or both, having more than 500 rooms.

- A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
- A mixed-use project that includes one or more of the projects specified above.
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

SB 610 amended Public Resources Code Section 21151.9 to provide that whenever a city or county decides that a project meets any of the above criteria, it must comply with Section 10910 *et seq.* of the Water Code. Section 10910 *et seq.* of the Water Code was also amended by SB 610 to require a city or county to coordinate the CEQA analysis with the water agency proposed to serve the project. Section 10910 *et seq.* requires a city or county to identify any public water system that may supply water to a proposed project. The city or county must ask each of these water providers to indicate whether its “total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the Project, in addition to the public water system’s existing and planned future uses, including agricultural and manufacturing uses.” If the city or county cannot receive this information from the water provider, it must provide the water supply assessment itself. It should be noted that the Project meets the above listed criteria (i.e. the Project has more than 500 dwelling units); therefore, SB 610 is applicable to the Project, and a Water Supply Assessment has been prepared.

Sustainable Groundwater Management Act

The SGMA requires governments and water agencies of basins designated as high and medium priority basins to halt overdraft and develop sustainability plans to bring the basins into balanced levels of pumping and recharge within 20 years. The SGMA empowers local agencies to form Groundwater Sustainability Agencies (GSAs) to manage basins sustainably and requires those GSAs to adopt Groundwater Sustainability Plans (GSPs).

California Model Water Efficient Landscape Ordinance

The Water Conservation in Landscaping Act was enacted in 2006, requiring the DWR to update the Model Water Efficient Landscape Ordinance (MWELo). In 2009, the Office of Administrative Law (OAL) approved the updated MWELo, which required a retail water supplier or a county to adopt the provisions of the MWELo by January 1, 2010, or enact its own provisions equal to or more restrictive than the MWELo provisions.² Because the City of Rancho Cordova is a “local agency”

² California Code of Regulations (CCR), Tit. 23, Div. 2, Ch. 27, Sec. 492.4. The MWELo provides the local agency discretion to calculate the landscape water budget assuming a portion of landscape demand is met by precipitation, which would further reduce the outdoor water budget. For purposes of the Water Supply Assessment, precipitation is not assumed to satisfy a portion of the outdoor landscape requirement because the determination of an appropriate effective precipitation factor is highly uncertain given the various landscape slopes, terrain composition, concurrent watering schedules, etc.

under the MWELo, it must require “project applicants” to prepare plans consistent with the requirements of MWELo for review and approval by the City.

The MWELo applies to new construction with a landscape area greater than 2,500 square feet. The MWELo “highly recommends” use of a dedicated landscape meter on landscape areas smaller than 5,000 square feet, and requires weather-based irrigation controllers or soil-moisture based controllers or other self-adjusting irrigation controllers for irrigation scheduling in all irrigation systems. The MWELo provides a methodology to calculate total water use based upon a given plant factor and irrigation efficiency.³ Finally, the MWELo requires the landscape design plan to delineate hydrozones (based upon plant factors) and then to assign a unique valve for each hydrozone (low, medium, high water use).

City of Rancho Cordova General Plan

The City of Rancho Cordova General Plan contains the following goals and policies that are relevant to water supply:

NATURAL RESOURCES ELEMENT

Goal NR.5: Protect the quantity and quality of the City’s water resources.

Policy NR.5.1: Promote water conservation within existing and future urban uses.

Policy NR.5.2: Encourage the use of treated wastewater to irrigate parks, golf courses, and landscaping.

INFRASTRUCTURE, SERVICES, AND FINANCE ELEMENT

Goal ISF.2: Ensure the development of quality infrastructure to meet community needs at the time they are needed.

Policy ISF.2.1: Ensure the development of public infrastructure that meets the long-term needs of residents and ensure infrastructure is available at the time such facilities are needed.

Policy ISF.2.2: Coordinate with independent public service providers, including schools, parks and recreation, utility, transit, and other service districts, in developing service and financial planning strategies.

Policy ISF.2.3: Ensure that adequate funding is available for all infrastructure and public facilities, and make certain that the cost of improvements is equitably distributed.

³ In calculating Estimated Total Water Use, the MWELo requires use of at least a 71% irrigation efficiency factor. Assuming 71% irrigation efficiency, the average plant factor must be 0.50. It would be possible to stay within the water budget if the average plant factor were higher than 0.50 by designing a system with an irrigation efficiency higher than 71%. The relationship between a Plant Factor (PF) and Irrigation Efficiency (IE) in the Applied Water formula is: $AW=(ETo*PF)/IE$.

Policy ISF.2.4: Ensure the development of public infrastructure that meets the long-term needs of residents and ensure infrastructure is available at the time such facilities are needed.

SCWA 2015 Urban Water Management Plan

The SCWA prepared an Urban Water Management Plan (UWMP) in 2016, as required by the Urban Water Management Planning Act of 1983. The focus of the Plan is the conservation and efficient use of water in the SCWA service area, and the development and implementation of plans to assure reliable water service in the future. The Plan contains projections for future water use, discusses the reliability of the SCWA's water supply, describes the SCWA's water treatment system, and contains a water shortage contingency plan. In addition, the Plan contains best management practices for efficient water use.

SCWA Zone 40 Water Supply Master Plan

The Zone 40 WSMP was been prepared by the SCWA to provide a flexible program of water management alternatives that can be implemented and revised, if necessary, as the availability and feasibility of water supply sources change in the future. The WSMP also reflects changes from the 1987 Zone 40 Water WSMP (James Montgomery, February 1987) (1987 Plan) in the pattern of growth in water demands, water quality treatment requirements, expansion of the original service area, and in the availability of potential sources of surface water supplies. The WSMP describes the studies performed and presents findings, conclusions, and recommendations to meet future water demands in Zone 40 through the year 2030. The Zone 40 WSMP was last amended in December 2011 to address changes in policy, water demand, and water supply sustainability and to address water supply for the Cordova Hills area.

Sunrise Douglas Community Plan/Sun Ridge Specific Plan Long Term Water Supply Plan and EIR

The Sunrise Douglas Community Plan/Sun Ridge Specific Plan Long Term Water Supply Plan EIR addresses the future water demand for buildout of the Sunrise Douglas Community Plan and the Sun Ridge Specific Plan. The SCWA unit water demand factors (from the Zone 40 WSMP) (Table 2-3) were applied to the acreage for each land use designation that generates water use within the Sunrise Douglas Community Plan/Sun Ridge Specific Plan (Table 2-4). The Sunrise Douglas Community Plan/Sun Ridge Specific Plan water supply plan would solely rely on groundwater to serve near-term development within the Sun Ridge Specific Plan, and would rely on a conjunctive use supply over the long term through SCWA's Zone 40 system.

THRESHOLDS OF SIGNIFICANCE - WATER SUPPLY

Consistent with Appendix G of the CEQA Guidelines, the Project will have a significant impact on the environment associated with Utilities if it will:

1. Require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects; and/or

2. Have insufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-2: The Project would not require or result in the relocation of new or expanded water facilities, and would have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years (Less than Significant)

The Project would connect to SCWA existing water supply infrastructure located at the intersection of Rancho Cordova Parkway and Chrysanthy Boulevard. New water distribution pipelines and valves would be provided within the Project site, primarily within the roadway right-of-ways, to serve the proposed development. The water distribution pipelines and other infrastructure have been sized to accommodate planned development included in the WSMP, which includes the Project. The impacts of development of the proposed water system are discussed throughout this EIR.

The Project is located within the 2030 Study Area as defined in the WSMP, and is in the SCWA's Service Area as defined in the UWMP.

The projected water demands associated with the Project are addressed by the WSMP. During the development of the WSMP, there was no detailed land use information available for the Project except that it was projected to be "mixed land uses". The WSMP uses a unit demand factor of 2.51 AFY/acre for "mixed land uses" to estimate the water demands for the Project area and other areas with the same land use classification for overall planning purpose.⁴ Based on this unit demand factor, the WSMP projected a total water demand for the Project of 1,330.8 AFY. The projected demand considered by the WSMP is greater than the water demand calculated for the current Project shown in Table 3.14-3 (1,330.8 AFY as compared to 785.17 AFY). Accordingly, the water demands associated with the Project are addressed by the WSMP.

The projected water demand associated with the Project is also accounted for in the UWMP. The water demands shown in the UWMP through 2035 are an estimated gallons per capita per day (GPCD) target chosen by SCWA and are based on the projected population. Establishing a GPCD target is a new requirement for the UWMP in accordance with Senate Bill (SB) x7-7, adopted in November 2009. Because the population projection for the Project area is included in the total population projection for SCWA, the water demand associated with the Project is considered accounted for in the UWMP. Further, the demand for the Project is less than anticipated in the UWMP and the adopted Water Supply Assessment (WSA) for the Project. Therefore, it is

⁴ This unit water demand factor represents a weighted average demand for a typical mixed land uses area that includes residential, commercial, recreation, and open space. Without detailed land use information, it is a relatively reliable method for water demand estimation for general water supply planning purposes.

reasonable to conclude that the data from the UWMP can be relied upon to meet current and projected demands (see Water Code Section 10910 (c)(2)).

The total area for the Project is estimated to be 530 acres. As shown in Table 3.14-3, the projected annual water demand for the Project is 785.17 AFY, including system losses. The WSA that was adopted by SCWA for the Project site estimates that the annual water demand for the Project site would be 1,101.2 AFY. The proposed land uses and projected water demand for the Project are provided in Table 3.14-3. As shown in the table, the Project’s estimated water demand (785.17 AFY) and is 317.03 AFY less than what was anticipated in the WSA adopted for the Project site.

TABLE 3.14-3: PROPOSED LAND USE AND WATER DEMANDS ESTIMATE FOR THE PROJECT

LAND USE DESCRIPTION	LAND USE CLASSIFICATION	AREA (NET ACRES)	UNIT WATER DEMAND FACTOR (AF/ACRE/YR)	WATER DEMAND (AFY)
Single Family Low Density	Single Family	77.87	2.89	225.04
Single Family Medium Density	Multi-Family Low Density	90.91	3.70	336.37
Multi Family High Density	Multi-Family High Density	8.43	4.12	34.73
Commercial	Commercial	5.16	2.75	14.19
Parks, Landscape Lots	Private Park, Public Park, Landscape Lots	30.37	3.46	105.08
Major Roads	Right-of-Way	71.33	0.21	14.98
Wetland Preserve, Protected Areas, Open Space	Vacant	240.05	0.0	0.00
Water Quality/Detention Basin	Vacant	5.98	0.0	0.00
<i>Subtotal</i>	-	<i>530.1</i>	-	<i>730.39</i>
<i>System Losses (7.5%)</i>	-	-	-	<i>54.87</i>
TOTAL DEMAND	-	-	-	785.17

NOTE: LAND USE CLASSIFICATION AND ACREAGE INFORMATION WERE PROVIDED BY THE PROJECT PROPONENT IN JUNE 2019, AND THE UNIT WATER DEMANDS PROVIDED IN THIS TABLE ARE CONSISTENT WITH THE WSMP.

SOURCE: WATER DEMAND FACTOR: SCWA WATER SUPPLY ASSESSMENT FOR THE RANCH AT SUNRIDGE, TABLE 1, SEPTEMBER 2011; UPDATED CALCULATIONS BASED ON PROPOSED TENTATIVE SUBDIVISION MAP, DE NOVO PLANNING GROUP, 2019.

The Project water demands will ultimately be met by a combination of groundwater and surface water. SCWA has completed the NSA Phase A Project, which is the transmission pipeline that conveys treated surface water from SCWA’s Vineyard Surface Water Treatment Plant (VSWTP) to the NSA. Currently the NSA is receiving treated surface water through the same transmission line that delivered water to the Anatolia Water Treatment Plant (WTP). In the event additional water is needed in the area, the WTP is still active. Initial demands for the Project will likely be met by surface water through the SCWA Phase A Project. In the event additional water is needed, groundwater extracted from the North Vineyard [a.k.a. Excelsior] Well Field (NVWF) south of Mather Field and possibly the Mather Housing wells located at Mather Field. Groundwater from NVWF will be conveyed to and treated at the WTP located to the northwest of the Project area. After treatment, the groundwater will be distributed to the Project area through the existing and future water distribution system.

SCWA currently exercises, and will continue to exercise, its rights as a groundwater appropriator to extract groundwater from the groundwater basin (Central Basin) underlying Zone 40 for delivery to its customers.⁵ The UWMP has identified current and projected groundwater pumping in normal, single dry, and multiple dry years in 5-year increments for the 20-year projection (2020 to 2040), as shown in Table 6-12 of the UWMP.).

As a signatory to the WFA and a member of the Sacramento Central Groundwater Authority (Groundwater Authority), SCWA recognizes the Water Forum-defined long-term sustainable average annual yield of the underlying groundwater basin of 273,000 AFY.

SCWA has previously exercised its rights as a groundwater appropriator to meet the water demands of its customers and will continue to exercise those rights to provide treated groundwater supplies to the project.

The UWMP quantifies SCWA's total projected water supplies during normal, single dry, and multiple dry water years over a 20-year projection in five-year intervals. The UWMP demonstrates that the total projected water supplies for Zone 40 under normal, single dry, and multiple dry years meet the proposed water demands (including existing and other projected future demands) over the next 20 years. See Table 3.14-2 in the Existing Setting.

CONCLUSION

SCWA has determined that it has identified sufficient water supplies to meet the water demands of the project. SCWA makes this determination based on the information provided in this WSA and on the following specific facts:

- SCWA's conjunctive use program is a sustainable water supply program that provides a 100-percent reliable water supply while protecting environmental values and stabilizing the groundwater basin underlying Zone 40.
- SCWA's conjunctive use program has been extensively analyzed and documented in the WSMP, the FEIR for 2002 WSMP, certified in February 2006, the FEIR – WFA, certified in 1999, and the WFA. All referenced documents have been subjected to thorough technical peer review and public scrutiny.
- The Project will be served by water supplies made available through SCWA's conjunctive use program.
- A financing plan for SCWA's conjunctive use program for constructing facilities required for delivering groundwater and surface water to the Project has been approved by the Board through its adoption of the WSMP, Bond Feasibility Reports, and the Sacramento County Water Agency Code.

⁵ The groundwater basin underlying Zone 40 has not been adjudicated.

Based on the analysis described above, the SCWA's existing water supplies are sufficient to meet the SCWA's existing and projected future potable water demands, including those future potable water demands associated with the Project, to the year 2040 under all hydrologic conditions (normal years and dry years). The water demand resulting from development and operation of the Project would be significantly lower than what was assumed for the Project site in the SCWA 2015 UWMP and the Zone 40 WSMP.

Further, the Project's internal water delivery system would connect to an existing main in Rancho Cordova Parkway and would not require nor result in the relocation of new or expanded water facilities. The Project would develop all of the necessary water infrastructure within the Project site. Therefore, the Project would result in a *less than significant* impact to water supplies, and no new water production, treatment, or extraction facilities would be required to serve the Project beyond those previously identified in the Revised Sunrise Douglas Community Plan/Sunridge Specific Plan Long-Term Water Supply Plan Draft EIR and SCWA's UWMP and WSMP.

3.14.3 SOLID WASTE

EXISTING SETTING

According to the California Department of Resources Recycling and Recovery (CalRecycle), in 2017, Rancho Cordova disposed of approximately 64,235 tons of solid waste. Allied Waste Services provides solid waste and recycling collection services to the City. Solid waste is transported to the Kiefer Landfill, near the intersection of Grant Line Road and Kiefer Boulevard.

Sacramento County owns and operates the Kiefer Landfill, and the landfill is the primary solid waste disposal facility in the County. Kiefer Landfill is a total of 1,084 acres in size, with a permitted disposal area of 660 acres. Kiefer Landfill is classified as a Class III municipal solid waste landfill facility and is permitted to accept general residential, commercial, and industrial refuse for disposal, including municipal solid waste, construction and demolition debris, green materials, agricultural debris, and other nonhazardous designated debris.

The landfill is permitted to accept a maximum of 10,800 tons per day of solid waste; however, the average intake is only approximately 6,000 tons per day. The Kiefer Landfill receives over 700,000 tons of waste per year. The site currently has a permitted capacity of approximately 117 million cubic yards and a remaining capacity of 113 million cubic yards. Currently, the landfill is operating below permitted capacity, and the closure date of the Kiefer Landfill is anticipated to be approximately 2064.

CalRecycle provides an average per-capita solid waste disposal rate for residents and business. In Rancho Cordova, CalRecycle identified solid waste disposal rates of 4.8 tons per resident per year and 6.8 tons per employee per year in 2017 (CalRecycle Jurisdiction Diversion/Disposal Rate Summary, 2019).

The California Integrated Waste Management Act (CIWMA) of 1989, also commonly known as Assembly Bill (AB) 939, requires local agencies to implement source reduction, recycling, and composting (see discussion under “Regulatory Setting” below). The Sacramento County Integrated Waste Management Plan, adopted in March 1996, consists of a siting element, summary plan, source reduction and recycling, household hazardous wastes, and non-disposal facility elements. The Countywide Integrated Waste Management Plan requires recycling programs that are expected to result in a 50% diversion away from landfills, thereby extending the life of landfills. According to the 2006 Regional Waste Management Authority Annual Report, Rancho Cordova showed 48% of the solid waste generated in the City was diverted from landfills through recycling, composting, and other waste diversion methods.

To comply with the CIWMA, the City adopted the Business and Multi-Family Recycling Ordinance (Title 6, Chapter 6.21) in October 2008. The ordinance requires businesses and multifamily residential properties with 5 or more units that generate four or more cubic yards per week of solid waste to implement an on-site recycling program. The program requires businesses and multifamily residential properties to keep recyclable materials separate from all other solid waste, to provide signs and labeled containers for the storage and collection of recyclable materials, and to either self-

haul or enter into a written service agreement with a franchise hauler (i.e., Allied Waste Services, Atlas Disposal Industries, or Waste Management of Sacramento) for the collection and subsequent delivery of recyclable materials to an authorized recycling facility. Businesses and multifamily residential property owners and operators must prepare a recycling plan that provides information on the types of on-site recyclable materials and verifies that labeled containers, signs, and a disposal service are available to ensure compliance with the ordinance.

REGULATORY SETTING - SOLID WASTE

California's Integrated Waste Management Act of 1989 (AB 939)

California's Integrated Waste Management Act of 1989 (AB 939) set a requirement for cities and counties to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling and composting. In order to achieve this goal, AB 939 requires that each City and County prepare and submit a Source Reduction and Recycling Element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

AB 939 also established requirements for cities and counties to develop and implement plans for the safe management of household hazardous wastes. In order to achieve this goal, AB 939 requires that each city and county prepare and submit a Household Hazardous Waste Element.

75 Percent Solid Waste Diversion

AB 341 requires CalRecycle to issue a report to the Legislature that includes strategies and recommendations that would enable the state to recycle 75 percent of the solid waste generated in the state by January 1, 2020, requires businesses that meet specified thresholds in the bill to arrange for recycling services by July 1, 2012, and also streamlines various regulatory processes.

Construction and Demolition Waste Materials Diversion

Senate Bill 1374 (SB 1374), Construction and Demolition Waste Materials Diversion Requirements, requires that jurisdictions summarize their progress realized in diverting construction and demolition waste from the waste stream in their annual AB 939 reports. SB 1374 required the California Integrated Waste Management Board (CIWMB, which is now CalRecycle) to adopt a model construction and demolition ordinance for voluntary implementation by local jurisdictions.

California Green Building Standards Code (CALGreen)

CALGreen requires the diversion of at least 50 percent of the construction waste generated during most new construction projects (CALGreen Sections 4.408 and 5.408) and some additions and alterations to nonresidential building projects (CALGreen Section 5.713).

City of Rancho Cordova Municipal Code

Chapter 6.20 of the City's Municipal Code regulates the management of garbage, recyclables, and other wastes. Section 6.20.230 outlines the rules and regulations for collection, transportation, and disposal of commercial solid waste and recyclables in the City.

Chapter 6.21 of the City’s Municipal Code promotes recycled and organics recycling for businesses and multifamily uses by:

1. Requiring covered generators in the city of Rancho Cordova to keep recyclable materials separate from all other solid waste for recycling;
2. Requiring covered generators in the city of Rancho Cordova to keep organic recyclable materials separate from all other solid waste for organics recycling;
3. Requiring covered generators to provide signs and labeled containers for the storage and collection of recyclable materials and organic recyclable materials; and
4. Requiring covered generators to either self-haul or enter into a written service agreement for the collection and subsequent delivery of recyclable materials and organic recyclable materials to a recycling facility.

Chapter 16.92 outlines the City’s Construction and Demolition Debris ordinance. “Covered project” means a project that meets one or more of the following criteria: (1) is new construction; (2) is a demolition project; or (3) is a tenant improvement with a permit valuation greater than or equal to \$250,000. “Covered project” shall not include: (1) activities performed in response to an emergency, such as a natural disaster; or (2) activities that contain significant amounts of materials that cannot be disposed of in Class II sanitary landfills described in Title 27, Section 20250 of the California Code of Regulations, and as may be amended from time to time. The general requirements of the Construction and Demolition Debris ordinance are outlined in Section 16.92.030.

Rancho Cordova General Plan

The Rancho Cordova General Plan contains the following goals and policies that are relevant to solid waste disposal and recycling:

NATURAL RESOURCES ELEMENT

Goal NR.8: Promote waste reduction, reuse, recycling, and composting efforts.

Policy NR.8.1: Support recycling efforts by developing a set of programs to educate residents on recycling and provide recycling services.

Policy NR.8.2: Encourage all companies that do business in Rancho Cordova to recycle and reuse construction scraps, demolition materials, concrete, industrial waste, and green waste.

Policy NR.8.3: Promote the use of rubberized asphalt on all public roadways in an effort to recycle old tires and reduce noise impacts. Implementation of this policy will help to preserve aggregate resources.

Policy NR.8.4: Encourage the use of recycled materials and source reduction (also known as waste prevention) by governmental agencies and local businesses.

Policy NR.8.5: Meet state mandates for solid waste reduction and recycling. Increase recycling efforts beyond those required by state law through supporting businesses that buy and sell re-used materials, such as materials exchange centers.

Policy NR.8.6: Encourage the use of recycled-content products and construction materials.

Policy NR.8.7: Maintain contact with Sacramento County and Allied Waste (or its successor) regarding the capacity projections of Kiefer Landfill and Lockwood Landfill to ensure an adequate capacity in their disposal facilities for the long-term disposal needs of Rancho Cordova.

THRESHOLDS OF SIGNIFICANCE - SOLID WASTE

Consistent with Appendix G of the CEQA Guidelines, the Project will have a less than significant impact on the environment associated with Utilities if it will:

1. 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; and/or
2. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-3: The Project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste, and would not 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 (Less than Significant)

The Project would be a residential and commercial mixed use development, resulting in the addition of up to 1,725 residential units and 53,000 s.f. of commercial and non-residential uses, which is projected to increase the population by an estimated 4,319 residents and 106 employees, as described in Section 2.0, Project Description. Development of the Project site for residential and commercial uses was accounted for in the City's General Plan.

CalRecycle provides an average per-capita solid waste disposal rate for residents and business. In Rancho Cordova, CalRecycle estimates a solid waste disposal rate of 4.8 tons per resident per year. Using this rate, the residential portion of the Project would generate approximately 20,731.2 tons per year of solid waste. Additionally, as described in Section 2.0, the Project would include up to 53,000 square feet of non-residential uses, which includes 21,000 square feet for a recreation center and 32,000 square feet for commercial uses. In order to determine solid waste generation from the proposed non-residential uses, the rate of 6.8 tons per year per employee was used. Therefore, the non-residential components of the Project would generate up to 720.8 tons per year of solid waste. Total solid waste generated by all aspects of the Project would be 21,452 tons per year.

The Project would be required to comply with applicable state and local requirements including those pertaining to solid waste, construction waste diversion, and recycling. Specifically, Chapter 6.20 of the City's Municipal Code regulates the management of garbage, recyclables, and other wastes, Chapter 6.21 of the City's Municipal Code promotes recycled and organics recycling for businesses and multifamily uses, and Chapter 16.92 outlines the City's Construction and Demolition Debris ordinance.

As previously described, the Kiefer Landfill is permitted to accept a maximum of 10,800 tons per day of solid waste; however, the average intake is only approximately 6,000 tons per day. The landfill currently has a permitted capacity of approximately 117 million cubic yards and a remaining capacity of 113 million cubic yards. Currently, the landfill is operating below permitted capacity, and the closure date of the Kiefer Landfill is anticipated to be approximately 2064. The addition of the volume of 21,452 tons per year (or 58.8 tons per day) of solid waste generated by the Project to the Kiefer Landfill would not exceed the landfill's remaining capacity.

The Project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste, and would not 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. This is a *less than significant* impact.

The California Environmental Quality Act (CEQA) requires an Environmental Impact Report (EIR) to evaluate a project's effects in relationship to broader changes occurring, or that are foreseeable to occur, in the surrounding environment. Accordingly, this chapter presents discussion of CEQA-mandated analysis for cumulative impacts and irreversible impacts associated with Project. As described below, this section also includes an analysis of the Project's growth inducing impacts.

4.1 CUMULATIVE SETTING AND IMPACT ANALYSIS

INTRODUCTION

CEQA requires that an EIR contain an assessment of the cumulative impacts that could be associated with the Project. According to CEQA Guidelines Section 15130(a), "an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable." "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects other current projects, and probable future projects (as defined by Section 15130). As defined in CEQA Guidelines Section 15355, a cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related 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 future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

In addition, Section 15130(b) identifies that the following three elements are necessary for an adequate cumulative analysis:

- 1) Either:
 - (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or,
 - (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.
- 2) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available; and

- 3) A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

CUMULATIVE SETTING

The cumulative analysis for this EIR is based primarily on the Rancho Cordova General Plan (June 2006) and the Rancho Cordova General Plan EIR (March 2006), consistent with CEQA Guidelines Section 15130(b)(1)(B). The Rancho Cordova General Plan anticipated regional growth based on land use plans and development projects throughout the region, as described in Table 4.0-1 of the General Plan EIR. Growth anticipated by the General Plan EIR in the City's Planning Area included projects totaling approximately 25,538 acres, including approximately 15,039 acres of residential uses, 2,760 acres of commercial uses, and a range of town center, employment-generating, park, recreation, and public/quasi-public uses. Residential growth under the General Plan was anticipated to accommodate 68,413 single family and multifamily dwelling units.

The General Plan EIR further anticipated growth associated with the Sacramento Region Blueprint, which included growth of the population from 2.0 million to 3.8 million people, job increases from 921,000 to 1.9 million jobs, and housing increases from 713,000 to 1.5 million housing units through 2050 in the Sacramento region. Additional growth associated with Sacramento County, El Dorado County, Placer County, and the cities of Sacramento, Folsom, Rancho Cordova, Citrus Heights, Roseville, and Rocklin was anticipated as reflected in land use plans, as well as a 3,584-acre annexation of the Folsom Sphere of Influence. The Rancho Cordova General Plan considered two planning horizons: a 25-year (2030) and a full buildout (estimated at 2050) horizon. Since adoption of the General Plan, the City has grown in accordance with the vision of the General Plan. While the General Plan has been amended from time to time, the amendments have not required any amendments to the General Plan EIR, nor have any supplemental or subsequent EIRs been required to address changes to the General Plan. The General Plan EIR is an appropriate document to address the Project's contribution to cumulative impacts in the context of the General Plan's contribution to cumulative impacts, as provided by CEQA Guidelines Section 15130(b)(1)(B).

The 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy (2016 MTP/SCS) was adopted by the Sacramento Area Council of Governments (SACOG) in 2016. The 2016 MTP/SCS is the most recently adopted SACOG document, which addresses regional planning for transportation, sustainability, and growth, and the General Plan is the City's most recently adopted citywide land use document. The 2016 MTP/SCS EIR anticipated development of an additional 47,563 acres of land and an increase of approximately 811,000 people, 285,000 new housing units, and 439,000 new employees in the region, which includes El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba Counties, exclusive of the Tahoe Basin.

CUMULATIVE EFFECTS OF THE PROJECT

Cumulative Impacts Addressed by a General Plan for Which an EIR Was Certified

The CEQA Guidelines provide multiple provisions for streamlining the environmental review of subsequent projects that are 1) consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was certified, as described by CEQA Guidelines Section 15183, or 2) later projects consistent with the program, plan, policy, or ordinance for which an EIR was prepared, as described by CEQA Guidelines Section 15152. The Project is consistent with the City's General Plan and is allowed to limit this Draft EIR's analysis of cumulative impacts as provided by both CEQA Guidelines Section 15183 and CEQA Guidelines Section 15152.

CEQA GUIDELINES SECTION 15152: TIERING

As described under CEQA Guidelines Section 15152(a), "Tiering" refers to using the analysis of general matters contained in a broader EIR (such as one prepared for a general plan) with later EIRs and negative declarations on narrower projects; incorporating by reference the general discussions from the broader EIR; and concentrating the later EIR or negative declaration solely on the issues specific to the later project." CEQA Guidelines Section 15152(d) provides the following direction regarding limiting analysis of a later project, where an EIR has already been prepared and certified for a program, plan, policy, or ordinance consistent with the requirements of Section 15152:

Where an EIR has been prepared and certified for a program, plan, policy, or ordinance consistent with the requirements of this section, any lead agency for a later project pursuant to or consistent with the program, plan, policy, or ordinance should limit the EIR or negative declaration on the later project to effects which:

- (1) Were not examined as significant effects on the environment in the prior EIR; or*
- (2) Are susceptible to substantial reduction or avoidance by the choice of specific revisions in the project, by the imposition of conditions, or other means.*

CEQA GUIDELINES SECTION 15183: PROJECTS CONSISTENT WITH A COMMUNITY PLAN OR ZONING

Pursuant to CEQA Guidelines Section 15183, projects which are consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was certified shall not require additional environmental review, except as might be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site. This streamlines the review of such projects and reduces the need to prepare repetitive environmental studies.

This Draft EIR is required to analyze the Project's contribution to cumulative impacts under a limited set of circumstances as identified in CEQA Guidelines Section 15183(b), which states:

4.0 OTHER CEQA-REQUIRED TOPICS

In approving a project meeting the requirements of this section, a public agency shall limit its examination of environmental effects to those which the agency determines, in an initial study or other analysis:

- 1) Are peculiar to the project or the parcel on which the project would be located,*
- 2) Were not analyzed as significant effects in a prior EIR on the zoning action, general plan or community plan with which the project is consistent,*
- 3) Are potentially significant off-site impacts and cumulative impacts which were not discussed in the prior EIR prepared for the general plan, community plan or zoning action, or*
- 4) Are previously identified significant effects which, as a result of substantial new information which was not known at the time the EIR was certified, are determined to have a more severe adverse impact than discussed in the prior EIR.*

CUMULATIVE IMPACTS ADDRESSED BY THE GENERAL PLAN EIR

The Project was considered in the Rancho Cordova General Plan and General Plan EIR (referred to as The Preserve at Sunridge in Table 4.0 of the General Plan EIR), as discussed in Section 3.9, Land Use. The Rancho Cordova General Plan EIR addressed a full range of cumulative impacts, as discussed below, but did not address cumulative impacts associated with greenhouse gases and climate change or tribal cultural resources. At the time the General Plan EIR was written, the Tribal Cultural Resources section of Appendix G of the CEQA Guidelines did not exist as a standalone section. Additionally, recent case law and state legislation has resulted in a need to revisit the greenhouse gases and climate change cumulative analysis. As such, this chapter includes a cumulative analysis for tribal cultural resources and greenhouse gases and climate change that would result from development of the Project. Further, in order to refine the cumulative analyses associated with noise and transportation that is included in the General Plan EIR, Sections 3.10, Noise, and 3.13, Transportation and Circulation, include detailed cumulative analyses for the Project.

The Project does not have any peculiar or unique components that would result in a contribution to cumulative impacts that would be greater than those analyzed for the Project site as part of the General Plan EIR; the Project proposes fewer residential units and comparable developed acreage when compared to the assumptions for the Project site evaluated in the General Plan EIR. The Rancho Cordova General Plan EIR determined that implementation of the General Plan, including buildout of the General Plan Planning Area, would result in the following cumulatively considerable and less than cumulatively considerable cumulative impacts:

- **Cumulative Land Use Effects.** Impact 4.1.5: When considered with existing, proposed, planned and approved development in the region, implementation of the Rancho Cordova General Plan has the potential to contribute to cumulative land use conditions in the region that result in significant impacts to the physical environment. This is considered a cumulatively considerable impact.

- **Cumulative Impacts to Agricultural Resources.** Impact 4.2.4: Implementation of the General Plan Land Use Map Book, along with other proposed development in Sacramento County, would contribute to the additional conversion of important farmland to other uses and may increase agriculture/urban interface conflicts. This is a cumulatively considerable impact.
- **Cumulative Population and Housing Increases.** Impact 4.3.3: Buildout in the planning area, under the General Plan Land Use Map, would include substantial population, housing unit and employment increases. This is considered a cumulatively considerable impact.
- **Cumulative Hazards and Health Risks.** Impact 4.4.5: Persons could be exposed to contaminated soil or groundwater during development of previously contaminated sites or sites undergoing remediation. Implementation of the General Plan policies and action items as well as existing regulatory requirements and standards would reduce impacts so that they are considered less than cumulatively considerable.
- **Cumulative Traffic Impacts on Local Roadways and State Highways.** Impact 4.5.6: When considered with existing, proposed, planned and approved development in the region, implementation of the Rancho Cordova General Plan would contribute to cumulative traffic volumes in the region that result in significant impacts to level of service and operations. This is considered a cumulatively considerable impact.
- **Cumulative Transit System.** Impact 4.5.7: Implementation of the General Plan would contribute to the cumulative demand for public transit service (e.g., bus and light rail service). The General Plan's contribution is considered less than cumulatively considerable.
- **Cumulative Bicycle and Pedestrian System.** Impact 4.5.8: Implementation of the proposed General Plan would contribute to cumulative demands for pedestrian and bicycle infrastructure. The General Plan's contribution is considered less than cumulatively considerable.
- **Cumulative Regional Air Quality Impacts.** Impact 4.6.6: Implementation of the proposed General Plan along with potential development of the Planning Area would exacerbate existing regional problems with ozone and particulate matter. The General Plan's contribution to these conditions is considered cumulatively considerable.
- **Cumulative Traffic Noise.** Impact 4.7.6: Implementation of the General Plan, in combination with regional growth and traffic conditions (pass-through traffic), would increase transportation noise along area roadways. This would be a cumulatively considerable impact.
- **Cumulative Stationary Noise.** Impact 4.7.7: Implementation of the General Plan, in combination with regional growth in surrounding communities outside of the Planning Area, would increase stationary noise. This is considered a cumulatively considerable impact.
- **Cumulative Airport Noise.** Impact 4.7.8: Implementation of the General Plan, in combination with regional growth in the Planning Area and surrounding communities, would subject more noise-sensitive land uses to airport noise. This is considered a less than cumulatively considerable impact.

- **Cumulative Geologic and Soils.** Impact 4.8.6: Implementation of the General Plan, in combination with existing, planned, proposed and reasonably foreseeable development, would not contribute to cumulative geologic and soil impacts, as the impacts would be site-specific and not additive in character. Thus, the General Plan's contribution would be less than cumulatively considerable.
- **Cumulative Mineral Resources.** Impact 4.8.7: Implementation of the General Plan, together with past, present and probable future projects in the area, would result in a cumulatively significant loss of mineral resources in the region. The General Plan's incremental contribution to the loss of mineral resources is cumulatively considerable.
- **Cumulative Water Quality.** Impact 4.9.5: Implementation of the General Plan and potential development of the Planning Area would include substantial grading, site preparation, and an increase in urbanized development. Increased development would contribute to cumulative water quality impacts and is considered cumulatively considerable.
- **Cumulative Flood Hazards.** Impact 4.9.6: Implementation of the General Plan would increase impervious surfaces and alter drainage conditions and rates in the Planning Area, which could contribute to cumulative flood conditions along the American River, Sacramento River, Cosumnes River, and local waterways. However, the General Plan contains adequate General Plan policies and action items that address drainage and flooding issues. This is considered a less than cumulatively considerable impact.
- **Cumulative Water Supply.** Impact 4.9.7: Implementation of the General Plan would contribute to an increased demand for water supply requiring increased groundwater production and the use of surface water supplies that could result in significant environmental impacts. This is considered a cumulatively considerable impact.
- **Cumulative Biological Resources.** Impact 4.10.8: Implementation of the General Plan, together with past, present, and probable future projects in the Planning Area and larger regional context would result in a cumulatively significant loss of biological resources in the region. The General Plan's incremental contribution to this significant cumulative impact is cumulatively considerable.
- **Prehistoric Resources, Historic Resources, and Human Remains.** Impact 4.11.3: Adoption of the Rancho Cordova General Plan along with foreseeable development in the region could result in the disturbance of cultural resources (i.e., prehistoric sites, historic sites, and isolated artifacts and features) and human remains. This contribution is considered cumulatively considerable.
- **Cumulative Paleontological Resources.** Impact 4.11.4: Adoption of the Rancho Cordova General Plan along with any foreseeable development in the region could result in the potential disturbance of paleontological resources (i.e., fossils and fossil formations). This is considered a less than cumulatively considerable impact.
- **Cumulative Fire Protection and Emergency Medical Services.** Impact 4.12.1.2: Implementation of the General Plan in combination with other reasonably foreseeable development (based on Sacramento County, and the cities of Folsom, Elk Grove, Citrus Heights, Galt, Lodi, and Sacramento General Plans land use projections), would increase

the population within the Sacramento Metropolitan Fire District service area, requiring additional fire and emergency medical services and related facilities. The City's contribution to the need for expanded fire protection services is considered less than cumulatively considerable.

- **Cumulative Design-Related Safety Concerns.** Impact 4.12.2.3: Implementation of the General Plan and other reasonably foreseeable development in southeastern Sacramento County (based on Sacramento County land use projections) would increase the population within the Planning Area and surrounding area and would require additional law enforcement services and related facilities under cumulative conditions. This is a less than cumulatively considerable impact.
- **Cumulative Water Service.** Impact 4.12.3.2 Implementation of the General Plan would contribute to the need for additional treatment capacity, storage capacity, and other conveyance facilities to meet cumulative water demands with SCWA, GSWC and Cal-Am. The General Plan's contribution would be cumulatively considerable.
- **Cumulative Wastewater Conveyance and Treatment.** Impact 4.12.4.2: Implementation of the General Plan, in addition to other reasonably foreseeable development in eastern Sacramento County (based on the land use projections established in the Sacramento County General Plan), would substantially increase in wastewater flows and require additional infrastructure and treatment capacity that would result in a physical effect on the environment. This is considered cumulatively considerable.
- **Cumulative Solid Waste Service.** Impact 4.12.5.2: The General Plan, in addition to proposed and approved projects in the region area, would generate solid waste that would require expanded collection and disposal services. The General Plan's contribution would be less than cumulatively considerable.
- **Cumulative Public Schools.** Impact 4.12.6.2: Implementation of the General Plan in combination with other reasonably foreseeable development (based on General Plan land use projections for Sacramento County, Folsom, and Elk Grove) proposed in eastern Sacramento County would result in a cumulative increase in student enrollment and require additional schools and related facilities to accommodate the growth. This is a less than cumulatively considerable impact.
- **Cumulative Park and Recreation Demands.** Impact 4.12.7.3: Implementation of the General Plan in combination with other reasonably foreseeable development would require additional park and recreation facilities within the Planning Area boundaries and CRPD's service area boundaries. This would be a less than cumulatively considerable impact.
- **Cumulative Electrical, Telephone, and Cable Services.** Impact 4.12.8.2: Implementation of the General Plan as well as potential development in the surrounding areas (based on Sacramento County General Plan land use projections) would result in cumulative utility service impacts. The General Plan 's contribution would be less than cumulatively considerable.
- **Alteration of Visual Character.** Impact 4.13.3: Implementation of the General Plan will encourage new development and redevelopment activities that could degrade the existing

visual character or quality of the Planning Area. This is considered a potentially significant impact.

- **Cumulative Visual Resources.** Impact 4.13.5: Implementation of the General Plan will encourage new development and redevelopment activities that would contribute to the cumulative alteration of existing landscape characteristics of the region. This impact is cumulatively considerable.

Because the Project does not have any peculiar or unique components that would result in a contribution to cumulative impacts that would be greater than those analyzed for the Project site as part of the General Plan EIR, and because the Project proposes fewer residential units and comparable developed acreage when compared to the assumptions for the Project site evaluated in the General Plan EIR, the Project would not result in increased impacts to the above-listed cumulative topics.

Cumulative Impacts not Addressed by the General Plan EIR

As discussed throughout this EIR, the Project is consistent with the City's General Plan vision for the Project site. The impacts of development of the City's Planning Area, which includes the Project site, are analyzed in the City's General Plan EIR. There is no substantial new information that would indicate that the Project's impacts would be more severe or more adverse. As such, this chapter focuses on cumulative impacts related to the topics that were not analyzed in the Rancho Cordova General Plan EIR, including: greenhouse gases, climate change, and energy; and tribal cultural resources.

METHOD OF ANALYSIS

Although the environmental effects of an individual project may not be significant when that project is considered separately, the combined effects of several projects may be significant when considered collectively. State CEQA Guidelines Section 15130 requires a reasonable analysis of a project's cumulative impacts, which are defined as "two or more individual effects which, when considered together are considerable or which compound or increase other environmental impacts." The cumulative impact that results from several closely related projects is: 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 (State CEQA Guidelines Section 15355[b]). Consistent with State CEQA Guidelines Section 15130(a), the discussion of cumulative impacts in this Draft EIR focuses on significant and potentially significant cumulative impacts. According to Section 15130(b) of the State CEQA Guidelines, in part, "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."

The goal of analysis of cumulative impacts is twofold: first, to determine whether the overall long-term impacts of all such projects would be cumulatively significant; and second, to determine whether the Project itself would cause a “cumulatively considerable” (and thus significant) incremental contribution to any such cumulatively significant impacts. (See State CEQA Guidelines Sections 15130[a]-[b], 15355[b], 15064[h], and 15065[c]; *Communities for a Better Environment v. California Resources Agency* [2002] 103 Cal.App.4th 98, 120.) In other words, the required analysis first creates a broad context in which to assess the project’s incremental contribution to anticipated cumulative impacts, viewed on a geographic scale well beyond the project site itself, and then determines whether the Project’s incremental contribution to any significant cumulative impacts from all projects is itself significant (i.e., “cumulatively considerable”).

There are two approaches to identifying cumulative projects and the associated impacts. The list approach identifies individual projects known to be occurring or proposed in the surrounding area in order to potential cumulative impacts. The projection approach uses a summary of projections in adopted General Plans or related planning documents to identify potential cumulative impacts. This EIR uses the projection approach for the cumulative analysis and considers the development anticipated to occur in the region, including growth associated with the buildout of the Rancho Cordova General Plan, as discussed above under the cumulative setting.

PROJECT ASSUMPTIONS

The Project’s contribution to environmental impacts under cumulative conditions is based on full buildout of the Project. See Chapter 2.0, Project Description, for a complete description of the Project.

CUMULATIVE IMPACTS

Cumulative impacts for tribal cultural resources are not quantifiable and are therefore discussed in qualitative terms as they pertain to development patterns in the surrounding region. As discussed below, the analysis of GHGs and climate change provided in Section 3.9 is within the cumulative context. In consideration of the cumulative scenario described above, the Project may result in the following cumulative impacts.

CULTURAL AND TRIBAL RESOURCES

Impact 4.1: The Project may contribute to cumulative impacts on known and undiscovered tribal cultural resources (Less than Cumulatively Considerable)

The cumulative setting for cultural resources includes the City of Rancho Cordova Planning Area and the surrounding areas of Sacramento County. Cumulative development anticipated in Rancho Cordova and the greater Sacramento County area, including growth projected by adopted general plans, may result in the discovery and removal of cultural resources, including archaeological, historical, and Native American resources and human remains. As discussed in Section 3.4, Cultural and Tribal Resources, the Project site is located in an area known to have historical, archaeological, and tribal cultural resources. However, field surveys of the site have not identified any tribal cultural resources, as described in Section 3.4. As discussed in Section 3.4, tribal representatives were contacted regarding the Project and no resources were identified on the Project site.

However, the potential remains for the discovery of tribal cultural resources as discussed in Section 3.4. Mitigation measures provided in Section 3.4 would require the Project to evaluate any resources discovered during construction activities and ensure that in the event of an unanticipated discovery of tribal cultural resources, the discovered resources would be evaluated, affected tribes would be provided the opportunity to consult on the significance and recommended methods for conservation and preservation, and that adequate measures would be taken to document and address the find. Any significant finds would be required to be preserved, either through relocation or documentation, and the Project is not anticipated to considerably contribute to a significant reduction in tribal cultural resources. Therefore, the Project would have a ***less than cumulatively considerable*** contribution to impacts to cultural resources and no further mitigation is required.

GREENHOUSE GASES, CLIMATE CHANGE, AND ENERGY

Impact 4.2: The Project may contribute to cumulative impacts on greenhouse gases and climate change (Less than Cumulatively Considerable)

The cumulative setting for this issue comprises anthropogenic (i.e., human-made) GHG emissions sources across the globe and no project alone would reasonably be expected to contribute to a noticeable incremental change to the global climate. However, legislation and executive orders on the subject of climate change in California have established a statewide context and process for developing an enforceable statewide cap on GHG emissions. Given the nature of environmental consequences from GHGs and global climate change, CEQA requires that lead agencies consider evaluating the cumulative impacts of GHGs. Small contributions to this cumulative impact (from which significant effects are occurring and are expected to worsen over time) may be potentially considerable and, therefore, significant.

Emissions of GHGs have the potential to adversely affect the environment in a cumulative context. The emissions from a single project will not cause global climate change, however, GHG emissions from multiple projects throughout the world could result in a cumulative impact with respect to global climate change. Therefore, the analysis of GHGs and climate change presented in Section 3.6 is presented in terms of the Project's contribution to cumulative impacts and potential to result in cumulatively considerable impacts related to GHGs and climate change.

The analysis of GHGs and climate change included in Section 3.6 was conducted at the cumulative level, as described in greater detail in that EIR section. As described in Section 3.6, the Project is consistent with statewide, regional, and local planning efforts to reduce GHG emissions. The Project is consistent with the State of California GHG reduction targets (as identified by Assembly Bill 32, Senate Bill 32, and the Scoping Plan), Sacramento Area Council of Governments Metropolitan Transportation Plan/Sustainable Communities Strategy, Executive Order B-30-15 and the Sacramento Metropolitan Air Quality Management District CEQA Guide. Additionally, the Project would ensure that all residential uses either have on-site renewable energy systems or are served through purchased renewable energy, provide energy efficient appliances and lighting, and include comprehensive measures to promote use of electric vehicles. As discussed in Section 3.6, the Project would have a less than significant impact related to the use of inefficient, wasteful, or

unnecessary use of energy, and would not cause a considerable contribution to cumulative impacts associated with the use of energy. Due to the Project's consistency with State and regional plans to address greenhouse gas emissions with implementation of Mitigation Measures 3.2-1 and 3.6-1 as discussed in Section 3.6 of this Draft EIR, the Project would have a ***less than cumulatively considerable*** impact, and no further mitigation is required.

4.2 GROWTH-INDUCING EFFECTS

INTRODUCTION

Section 15126.2(d) of the CEQA Guidelines requires that an EIR evaluate the growth-inducing impacts of a proposed action. A growth-inducing impact is defined by the CEQA Guidelines as:

The way in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth...It is not assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment.

Section 15126 of the CEQA Guidelines identifies criteria for evaluating the extent to which growth could be induced, accelerated, intensified, or shifted as a result of the Project. Subsection (d) provides the framework for a discussion of these potential growth-inducing impacts, as follows:

- Would the project foster economic or population growth or the construction of additional housing?
- Would the project remove obstacles to population growth?
- Would the project tax existing community facilities?
- Would the project encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively?

The Project would result in the construction of additional housing within the City of Rancho Cordova. As discussed in Section 3.11, Population and Housing, the Project would not result in direct or indirect population growth beyond the City's planned capacity. The Project would not remove any barriers to growth. Growth within the Project area has been anticipated by the City since its incorporation in 2003 and adoption of the General Plan in 2006. The Project site is bound by the Sunridge Specific Plan to the north, east, and west, and by the SunCreek Specific Plan to the south and east. Much of the utilities infrastructure that would be extended to serve the Project site is currently developed and stubbed adjacent to the Project site. Additionally, public service providers have anticipated development of the site and adjacent areas. Existing school facilities are located in the vicinity of the site, and a fire station was also constructed west of the site in order to serve the existing and future uses within the Project vicinity. As discussed in Section 3.14, the Project would include sewer improvements that accommodate other approved development projects. This increase in sewer capacity is consistent with the Sacramento Area Sewer District's

service plans and would implement master infrastructure improvements to accommodate planned and approved development.

By providing additional age-restricted housing, non-age restricted housing, commercial uses, and parks uses within the City of Rancho Cordova, the Project would provide areas for seniors and other members of the community to live, shop, and recreate and would accommodate population and employment growth consistent with the vision of the General Plan.

Additionally, as discussed in Section 3.12, Public Services and Recreation, the Project would increase demand for other public facilities within the City of Rancho Cordova, such as libraries and community buildings. However, given that the additional population increase associated with the Project is a small percentage of the population of the City as a whole, significant impacts due to increased demand on libraries and community facilities are not expected and the demand on such services and facilities associated with the Project is consistent with planned growth for the Project area. In addition to the 19.24 acres of park and recreation facilities, the Project includes a 27,000 square-foot community clubhouse in the age-restricted portion of the Project.

As demonstrated throughout this Draft EIR, the Project would not encourage or facilitate other growth-inducing activities, beyond the activities and growth addressed in this Draft EIR, that could significantly affect the environment, either individually or cumulatively.

4.3 SIGNIFICANT IRREVERSIBLE EFFECTS

Legal Considerations

CEQA Guidelines Section 15126.2() and Public Resources Code Sections 21100(b)(2) and 21100.1(a), require that the EIR include a discussion of significant irreversible environmental changes which would be involved in the proposed action should it be implemented. Irreversible environmental effects are described as:

- The project would involve a large commitment of nonrenewable resources;
- The primary and secondary impacts of a project would generally commit future generations to similar uses (e.g., a highway provides access to previously remote area);
- The project involves uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The phasing of the proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

Determining whether the Project would result in significant irreversible effects requires a determination of whether key resources would be degraded or destroyed such that there would be little possibility of restoring them. Irrecoverable commitments of resources should be evaluated to assure that such current consumption is justified.

Analysis

Implementation of the Project would result in the development of a residential mixed use Project on 530 acres of unoccupied land that is currently designated Urban Development Area (UDA) by the Rancho Cordova General Plan. This property was previously used for agricultural purposes (cattle grazing). Development of the Project would constitute a long-term commitment to residential uses. It is unlikely that circumstances would arise that would justify the return of the land to its prior condition.

A variety of resources, including land, energy, water, construction materials, and human resources would be irretrievably committed for the Project's initial construction, infrastructure installation, and its continued maintenance. Construction of the Project would require the commitment of a variety of other non-renewable or slowly renewable natural resources such as lumber and other forest products, sand and gravel, asphalt, petrochemicals, and metals.

Additionally, a variety of resources would be committed to the ongoing operation and life of the Project. The introduction of new residential uses to the site will result in an increase in area traffic over existing conditions. Fossil fuels are the principal source of energy and the Project will increase consumption of available supplies, including gasoline and diesel fuel, and natural gas. These energy resource demands relate to initial Project construction, Project operation and site maintenance and the transport of people and goods to and from the Project site. Additional information the estimated energy usage of the Project can be found under Impact 3.6-4 of Section 3.6, Greenhouse Gases, Climate Change, and Energy, of this EIR. This impact concluded that Project implementation would not result in the inefficient, wasteful, or unnecessary use of energy resources as outlined in Section 15126.2 of the CEQA Guidelines.

4.4 SIGNIFICANT AND UNAVOIDABLE IMPACTS

CEQA Guidelines Section 15126.2(c) requires an EIR to discuss unavoidable significant environmental effects, including those that can be mitigated but not reduced to a level of insignificance. The following significant and unavoidable impacts of the Project are discussed in Chapters 3.1 through 3.14 (Project-level) and Chapter 4.0.

- Impact 3.1-1: Project implementation would result in substantial adverse effects on scenic vistas and resources or substantial degradation of visual character
- Impact 3.13-1: Under Existing (2017) Plus Project conditions, Project may conflict with an applicable program, plan, ordinance or policy addressing the circulation system – Roadway Segments and Intersections
- Impact 3.13-2: Under Cumulative (2040) Plus Project conditions, Project may conflict with an applicable program, plan, ordinance or policy addressing the circulation system – Roadway Segments and Intersections

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5.1 CEQA REQUIREMENTS

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) analyze a reasonable range of feasible alternatives that meet most or all Project objectives while reducing or avoiding one or more significant environmental effects of the Project. The range of alternatives required in an EIR is governed by a “rule of reason” that requires an EIR to set forth only those alternatives necessary to permit a reasoned choice (CEQA Guidelines Section 15126.6[f]). Where a potential alternative was examined but not chosen as one of the alternatives, the CEQA Guidelines require that the EIR briefly discuss the reasons the alternative was dismissed.

Alternatives that are evaluated in the EIR must be potentially feasible alternatives. However, not all possible alternatives need to be analyzed. An EIR must “set forth only those alternatives necessary to permit a reasoned choice.” (CEQA Guidelines, Section 15126.6(f).) The CEQA Guidelines provide a definition for a “range of reasonable alternatives” and, thus limit the number and type of alternatives that need to be evaluated in an EIR.

First and foremost, alternatives in an EIR must be potentially feasible. In the context of CEQA, “feasible” is defined as:

... capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors. (CEQA Guidelines 15364)

The inclusion of an alternative in an EIR is not evidence that it is feasible as a matter of law, but rather reflects the judgment of lead agency staff that the alternative is potentially feasible. The final determination of feasibility will be made by the lead agency decision-making body through the adoption of CEQA Findings at the time of action on the Project. (Mira Mar Mobile Community v. City of Oceanside (2004) 119 Cal.App.4th 477, 489 see also CEQA Guidelines Section 15091(a)(3) findings requirement, where alternatives can be rejected as infeasible); Section 15126.6 ([an EIR] must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation”). The following factors may be taken into consideration in the assessment of the feasibility of alternatives: site suitability, economic viability, availability of infrastructure, general plan consistency, other plan or regulatory limitations, jurisdictional boundaries, and the ability of the proponent to attain site control (Section 15126.6 (f) (1)).

Equally important to attaining the Project objectives is the reduction of some or all significant impacts, particularly those that could not be mitigated to a less than significant level. The following significant and unavoidable impacts of the Project are discussed in Chapters 3.1 through 3.14:

5.0 ALTERNATIVES TO THE PROJECT

- Impact 3.1-1: Project implementation would result in substantial adverse effects on scenic vistas and resources or substantial degradation of visual character;
- Impact 3.13-1: Under Existing (2017) Plus Project conditions, the Project may conflict with an applicable program, plan, ordinance or policy addressing the circulation system – Roadway Segments and Intersections; and
- Impact 3.13-2: Under Cumulative (2040) Plus Project conditions, the Project may conflict with an applicable program, plan, ordinance or policy addressing the circulation system – Roadway Segments and Intersections.

The following analysis of alternatives focuses on significant impacts, including both those that can be mitigated to a less than significant level and those that would remain significant even if mitigation is applied or for which no feasible mitigation is available.

A Notice of Preparation was circulated to the public to solicit recommendations for a reasonable range of alternatives to the Project. Additionally, a public scoping meeting was held during the public review period to solicit recommendations for a reasonable range of alternatives to the Project. No comments related to potential alternatives to the Project were received.

PROJECT OBJECTIVES

The alternatives to the Project selected for analysis in the EIR were developed to minimize significant environmental impacts while fulfilling the basic objectives of the Project. As described in Chapter 2.0, Project Description, the following objectives have been identified for The Ranch Project:

- Create a high-quality development that implements the vision of the General Plan, which designates the Project site for development with a local town center, a mix of residential densities, and a natural resources preserve;
- Respect the Project site's existing natural features through preservation of 199.5 acres of wetlands, vernal pools, and open space;
- Provide a residential development that would assist the City in meeting its housing needs, including a range of housing types to serve the senior population;
- Provide a residential development that would assist the City in meeting its affordability goals providing housing at many price points and attract residents from different areas;
- Create a unique age-restricted community that provides a mix of housing types and amenities, including a club house and recreation facility;
- Accommodate neighborhood-serving commercial uses as part of the town center;
- Implement the City's Bicycle and Pedestrian Master Plans through providing an on-site bicycle and pedestrian network that is accessible by the general public and provides opportunities for connectivity with bicycle and pedestrian facilities on adjacent properties; and
- Implement the City's Transit Master Plan through providing a Signature Transit Station and accommodating the Signature Transit Route along Rancho Cordova Parkway.

ALTERNATIVES NOT SELECTED FOR FURTHER ANALYSIS

Alternatives to the Project were considered, but rejected from further analysis. These alternatives included an alternative site location and a Project redesign alternative. The alternatives that were rejected from further analysis are discussed below.

Alternative Site Location

The City of Rancho Cordova considered alternative locations early in the public scoping process. The City's key considerations in identifying an alternative location were as follows:

- Is there an alternative location where significant effects of the project would be avoided or substantially lessened?
- Is there a site available within the City's Sphere of Influence with the appropriate size and characteristics such that it would meet the basic project objectives?

A hypothetical off-site alternative was considered but dismissed from further analysis. The Project applicant has not been able to identify a potential site for acquisition that meets the Project objectives. There are no alternative sites in the City suited for development that the Project applicant could reasonably acquire which would replace the proposed site (in size and physical characteristics) and also avoid significant impacts that would result from Project implementation. It is anticipated that a project of comparable size would result in similar transportation/circulation and aesthetic impacts in an alternative location. An off-site location could result in additional environmental impacts compared to the Project because of increased construction impacts (noise, air quality, water runoff, etc.) stemming from the extension of the basic infrastructure if the site is not proximate to existing infrastructure. Additionally, development of the Project site for residential mixed uses is identified by the City's General Plan and the Sacramento Area Council of Governments (SACOG) Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS). Further, development of an off-site location would not result in preservation of the Project site in the long-term as it would likely develop with residential, commercial, and other uses as envisioned by the General Plan and the MTP/SCS. Therefore, the Off-Site Location Alternative is dismissed from further analysis.

In addition, as discussed in *Citizens of Goleta Valley v. Board of Supervisors (1990) 52 Cal.3d 553 (Goleta II)*, where a project is consistent with an approved general plan, no off-site alternative need be analyzed in the EIR. The EIR "is not ordinarily an occasion for the reconsideration or overhaul of fundamental land-use policy." (*Goleta II*, supra, 52 Cal.3d at p. 573.) In approving a general plan, the local agency has already identified and analyzed suitable alternative sites for particular types of development and has selected a feasible land use plan. "Informed and enlightened regional planning does not demand a project EIR dedicated to defining alternative sites without regard to feasibility. Such ad hoc reconsideration of basic planning policy is not only unnecessary, but would be in contravention of the legislative goal of long-term, comprehensive planning." (*Goleta II*, supra, 52 Cal.3d at pp. 572-573.) Here, the Project is generally consistent with the types of uses considered in the General Plan and associated EIR. As discussed in Section 3.9, Land Use, of this EIR, the Rancho Cordova General Plan currently designates the Project site as the SunCreek/Preserve Planning Area. The Project is consistent

with the City's General Plan. Thus, in addition to the reasons discussed above, an off-site alternative need not be further discussed in this EIR.

Project Redesign

Under the Project Redesign Alternative, the number of residential and non-residential uses would remain the same and would be constructed at the Project site, but with a revised design and layout. For example, the preserve area could be relocated or redesigned. The Project has been designed to avoid impacts to natural resources present on the Project site and has been proposed with less development than was anticipated under the Rancho Cordova General Plan and General Plan EIR in order to preserve natural features on the Project site. Due to the extensive wetland and vernal pool features present on the Project site, a significant redesign may avoid some of the existing impacts to wetlands and other waters of the U.S. and State, but would create new impacts to wetlands and other waters of the U.S. in other locations on the Project site, resulting in potential impacts associated with biological resources and water quality. This alternative would not result in a significant reduction in impacts associated with re-arranging uses on the Project site. Therefore, the Project Redesign Alternative is dismissed from further analysis.

5.2 ALTERNATIVES CONSIDERED IN THIS EIR

Three alternatives to the Project were developed based on City of Rancho Cordova staff input and the technical analysis performed to identify the environmental effects of the Project. The alternatives analyzed in this EIR include the following three alternatives in addition to the Project:

- No Project Alternative
- Reduced Project Alternative #1
- Reduced Project Alternative #2

NO PROJECT ALTERNATIVE

The CEQA Guidelines (Section 15126.6[e]) require consideration of a No Project Alternative that represents the existing conditions, as well as what would reasonably be expected to occur in the foreseeable future if the Project were not approved. For purposes of this analysis, the No Project Alternative assumes that the Project site remains in its existing state and no additional development would occur in the short-term. However, it is anticipated that a new development Project would be submitted and that the Project site would be developed with uses consistent with the General Plan, as described for the SunCreek/Preserve Planning Area. The current condition of the site is largely undeveloped and has accommodated agricultural uses (cattle grazing) in the past.

As noted above, the Rancho Cordova General Plan currently designates the Project site as the SunCreek/Preserve Planning Area. While the No Project Alternative may delay the development of the Project site, in the mid- to long-term, the Project site is anticipated to be developed as envisioned by the General Plan. The No Project Alternative would allow the Project site to be

converted from agricultural to a development with a mix of residential densities, town center uses, and parks/recreation uses as envisioned by the General Plan. The assumed maximum buildout of the project site as envisioned in the General Plan EIR includes 2,624 residential units on 303.5 acres, as well as a village center with commercial uses, park areas and wetland preserve. This maximum buildout for the Project site is identified in Table 4.0-1 of the General Plan Draft EIR in “The Preserve at Sunridge” row on page 4.0-6. The development scenario envisioned under the General Plan would be more intense than anticipated for the Project under the No Project Alternative. The preserve would be smaller than the area preserved by the Project and additional impacts to wetlands and other waters of the U.S. and state are anticipated under this alternative.

REDUCED PROJECT ALTERNATIVE #1

Under Reduced Project Alternative #1, the Project site would be developed with the same amount of non-residential uses as the Project, but with a reduction in the amount of residential development (age-restricted and non-age-restricted). This alternative would result in:

- 59,000 sf of non-residential uses (32,000 sf of commercial and a 27,000-sf clubhouse),
- 637 single-family non-age-restricted units,
- 643 single-family active adult age-restricted units,
- 50 active adult multifamily units, and
- 268 multifamily non-age-restricted units (or the same amount as the Project).

Under the Reduced Project Alternative #1, 100 single family non-age-restricted units and 50 active adult single family units would be eliminated. This alternative would avoid impacts to an additional 0.025 acres of seasonal wetlands and 0.668 acres of vernal pools. This alternative would also include increased setbacks from Rancho Cordova Parkway aimed to reduce impacts related to aesthetics. The proposed amenities, bicycle and pedestrian improvements, and landscaping would be the same as the Project. The development footprint would be decreased compared to the Project.

REDUCED PROJECT ALTERNATIVE #2

Under Reduced Project Alternative #2, the Project site would be developed with the same amount of non-residential uses as the Project, but with a reduction in the amount of residential development (non-age-restricted only). This alternative would result in:

- 59,000 sf of non-residential uses (32,000 sf of commercial and a 27,000-sf clubhouse),
- 477 single-family non-age-restricted units,
- 693 single-family age-restricted units,
- 50 multifamily age-restricted units, and
- 268 multifamily non-age-restricted units.

This alternative would result in a reduction in 260 single family non-age-restricted units. This alternative would also include increased setbacks, landscaped areas, and parks aimed to reduce impacts related to aesthetics. This alternative would avoid impacts to an additional 0.025 acres

5.0 ALTERNATIVES TO THE PROJECT

of seasonal wetlands and 0.668 acres of vernal pools. The proposed amenities, bicycle and pedestrian improvements, and landscaping would be the same as the Project. The development footprint would be decreased compared to the Project.

Table 5.0-1 compares the characteristics of the Project to each of the three alternatives analyzed below. Table 5.0-2 compares trips generated by the Project to each of the three alternatives analyzed below.

TABLE 5.0-1: COMPARISON OF PROJECT CHARACTERISTICS TO THE ALTERNATIVES

COMPONENT	PROJECT	NO PROJECT ALTERNATIVE	REDUCED PROJECT ALTERNATIVE #1	REDUCED PROJECT ALTERNATIVE #2
Single Family, Non-Age-Restricted (Units)	735	1,124	637	477
Single Family Units, Senior Age-Restricted (Units)	737	1,000	643	693
Multifamily, Non-Age-Restricted (Units)	215	400	268	268
Multifamily Units, Senior Age-Restricted (Units)	38	100	50	50
<i>Subtotal Dwelling Units</i>	<i>1,725</i>	<i>2,624</i>	<i>1,598</i>	<i>1,488</i>
Senior Community Clubhouse (square feet)	27,000	27,000	27,000	27,000
Commercial Parcel (acres)	5.16	5.08	5.08	5.08
Parks and Recreation (acres)	19.24	19.24	19.24	19.24
Nature Preserve (acres)	199.5	136.8	212.0	221.1

TABLE 5.0-2: COMPARISON OF PROJECT TRIPS TO THE ALTERNATIVES

LAND USE	THE RANCH PROJECT			ALTERNATIVE 1		ALTERNATIVE 2		ALTERNATIVE 3	
	UNITS	TOTAL TRIPS	TRIP RATE ¹	UNITS	TRIPS	UNITS	TOTAL TRIPS	UNITS	TOTAL TRIPS
Single Family, Non-restricted (units)	735	6,796	9.246	1,124	10,393	637	5,890	477	4,410
Multifamily, Non-restricted (units)	215	1,225	5.698	1,000	5,698	268	1,527	268	1,527
Senior Single Family (units)	737	2,519	3.418	400	1,367	643	2,198	693	2,369
Senior Multifamily (units)	38	112	2.947	100	295	50	147	40	118
Shopping Center (thousand square feet)	32	954	29.813	32	954	32	954	32	954
TOTAL	-	11,606		-	18,707	-	10,716	-	9,378

¹TRIP RATES CALCULATED BASED ON KIMLEY HORN JAEGER RANCH SUPPLEMENTAL TRAFFIC ANALYSIS, TRIP GENERATION MEMORANDUM, JUNE 12, 2019

5.3 ENVIRONMENTAL ANALYSIS

The alternatives analysis provides a summary of the relative impact level of significance associated with each alternative for each of the environmental issue areas analyzed in this EIR. Following the analysis of each alternative, Table 5.0-3 summarizes the comparative effects of each alternative.

NO PROJECT ALTERNATIVE

Aesthetics and Visual Resources

The No Project Alternative would result in the long-term development of the Project site with up to 2,624 residential units, a village center, and park uses. Similar to the Project, this alternative would result in increases in daytime glare and nighttime lighting. The visual character of the Project site would change under this alternative compared to existing conditions.

As described in Chapter 3.1, the visual character of the Project site would be significantly altered as a result of Project implementation. Compliance with the City's design guidelines and the proposed Architectural + Site Design Guidelines for multi-family parcels and commercial parcels would ensure that impacts are reduced to the greatest extent possible. Nevertheless, impacts related to degradation of the visual character of the site would be significant and unavoidable.

Implementation of Mitigation Measure 3.1-1 would ensure that lighting features do not result in light spillage onto adjacent properties and do not significantly impact views of the night sky. Adherence to the requirements in this mitigation would ensure that excessively reflective building materials are not used, and that the Project would not result in significant impacts related to daytime glare. As such, impacts related to nighttime lighting and daytime glare would be less than significant.

In summary, the Project would result in new sources of light and glare and would also result in impacts to the existing visual character or quality of the Project site and its surroundings. The No Project Alternative would result in construction of 2,624 units on 303.5 acres, a village center, and park uses throughout the Project site. In order to avoid the on-site aquatic habitats, the No Project Alternative would also cluster development to maintain large open space characteristic of the Project. However, because this alternative would result in up to 876 more units than the Project, the development footprint would be required to increase, densities may increase, there would be additional potential sources of light and glare, and less preservation of open space and natural resources would occur. Therefore, aesthetic impacts would not be reduced by this alternative and would be worse than the Project.

Air Quality

As described in Section 3.2, implementation of the Project would generate emissions during both the construction phase and the operational phase. The projected emissions would be reduced to a level that does not exceed the project-level operational thresholds of significance with implementation of the mitigation measures in Section 3.2.

Construction related impacts would be greater under this alternative when compared to the Project, as the extent of development would be increased and duration of construction would be increased. Under this alternative, mobile source emissions and emissions associated with residential operations would increase. Mobile source (vehicle emissions) are directly related to the number of vehicle trips generated by a project. Under this alternative, a greater number of people and residential units would be located on the Project site due to the substantial increase in units, which would generate approximately 7,101 more daily vehicle trips when compared to the Project, as shown in Table 5.0-2. As a result, this alternative would generate higher levels of pollutants from mobile sources. Therefore, this alternative would have increased impacts related to air quality when compared to the Project.

Biological Resources

As described in Section 3.3, while Project implementation is not anticipated to result in significant impacts to biological resources, construction activities associated with the Project would result in impacts to wetlands and ground disturbing activities associated with the potential to impact or harm biological resources, including special-status species. Under the No Project Alternative, the Project site would be developed with up to 2,624 units, a village center, and park areas. Due to the increased development intensities, this alternative would dedicate a lesser amount of the Project site for open space and wetland preserve uses compared to the Project. Due to the on-site aquatic resources, any future project on the Project site that is consistent with the General Plan would likely be designed to minimize and avoid impacts to wetlands and other waters of the U.S. Because this alternative would result in a decrease in the amount of open space preserved, including a decrease in the preservation of sensitive aquatic resources, impacts to biological resources would be worse than the Project, although such impacts would be reduced to less than significant with implementation of mitigation. Overall, this impact would have greater impacts on biological resources when compared to the Project.

Cultural and Tribal Resources

The No Project Alternative would result in ground disturbing activities throughout much of the Project site. The Project is not anticipated to result in significant impacts to cultural or historical resources, and the No Project Alternative would result in similar risks related to the unintentionally discovery of such resources by developing much of the Project site with residential and commercial uses. As such, this impact would be equal when compared to the Project.

Geology and Soils

The No Project Alternative would result in development of 876 more units than the Project. The future development allowed under this alternative would be exposed to the same level of risk from geologic hazards as the Project. This alternative is not anticipated to result in a significant change in any risks associated with geology and soils. Therefore, the impact under this alternative would be comparable to the Project.

Greenhouse Gases, Climate Change, and Energy

Under the No Project Alternative, more housing units would be constructed on the Project site. Implementation of the Project would generate GHG emissions during construction and operation. Short-term construction GHG emissions are a one-time release of GHGs and are not expected to significantly contribute to global climate change over the lifetime of a project. As noted previously, construction related impacts would be similar under this alternative when compared to the Project, as the duration of construction would be comparable.

Under the No Project Alternative, because more people would likely reside within the Project site under this alternative, amount of emissions associated with residential activities would increase and the number of vehicle trips generated would also increase by approximately 7,101 daily trips, as shown in Table 5.0-2. As such, the operational, including mobile, greenhouse gas emissions would also increase when compared to the Project. While there would be additional development under this alternative, it is anticipated that energy-saving measures would be similar to the Project and there would not be a significant change in the potential for wasteful, inefficient, or excessive consumption of energy under this alternative.

Hazards and Hazardous Materials

The No Project Alternative is similar to the Project in that both the Project and this alternative would result in development of the Project site with residential, commercial, and park uses. However, this alternative would increase the number of people residing within the Project site. As described in Chapter 3.7, construction activities may result in the use and transport of common hazardous materials, including oils, fuels, paints and solvents. This potential impact would still occur under the No Project Alternative. Additionally, the operational phases of both the Project and the No Project Alternative would not pose a significant hazard to the public or the environment. Future development under the No Project Alternative would be subject to the City's General Plan policies, and other local, state, and federal regulations pertaining to hazardous materials and no significant increase in the potential for release of or exposure to hazardous materials is anticipated under this alternative. This impact would be similar under this alternative when compared to the Project.

Hydrology and Water Quality

The No Project Alternative would result in development of the Project site with up to 2,624 units, a village center, and park uses. This alternative would result in a similar amount of land covered with impervious surfaces compared to the Project. Similar to the Project, stormwater would be directed to on-site detention basin(s) and landscaped areas, and the storm drainage system would be designed to ensure that post-construction runoff volumes do not exceed pre-development conditions. Because the alternative would be required to implement improvements in order to manage and treat stormwater flows from the site, impacts related to water quality would be similar.

As described in Chapter 3.8, when the Project is developed, the on-site impervious area would increase, leading to faster runoff rates. The No Project Alternative would provide a greater amount of impervious surface on-site as compared to the Project, which would also result in

greater impacts related to rainfall infiltration and runoff during storm events as compared to the Project. This is largely due to the fact that this alternative would result in 876 more units than the Project.

The No Project Alternative would provide a similar amount of impervious surface on-site as compared to the Project, which would also result in similar impacts related to rainfall infiltration and runoff during storm events as compared to the Project.

As described in Chapter 3.8, Project implementation has the potential to result in the discharge of pollutants into detention basins, and would change the existing drainage pattern on the site, although these impacts are less than significant as a result of compliance with local, state, and federal regulations. Under the No Project Alternative, these impacts would be similar to the Project. Overall, potential impacts related to hydrology and water quality would not be improved under the No Project Alternative when compared to the Project.

Land Use

The No Project Alternative would also require a change of the Project site's General Plan Land Use designation from Planning Area to Low Density Residential (LDR), Medium Density Residential (MDR), High Density Residential (HDR), Commercial (C), Parks and Open Space (P/OS), and Natural Resources (NR). Under this alternative, the Project site would be developed with uses consistent with the General Plan land use designation and the identified net density associated with the SACOG MTP/SCS for the site. The analysis in Section 3.9 concluded that the Project would not result in any significant land use impacts; the No Project Alternative would also not result in significant land use impacts. Therefore, this alternative would have similar impacts compared to the Project.

Noise and Vibration

As described in Section 3.10, the primary sources of noise associated with implementation of the Project are from increased vehicle trips on study area roadways in the Project vicinity from on-site uses, and increased noise from future operation within the Project site. Under this alternative, noise associated with vehicle trips is expected to increase due to the increase in vehicle trips, while other on-site noise sources would likely be comparable to those generated by the Project. The Project is estimated to generate approximately 11,606 new external vehicle trips on a daily basis. When compared to the Project, this alternative would result in an increase in the number of daily vehicle trips by 7,101. This alternative would generate more daily vehicle trips and peak hour trips associated with the increase in residential units, which would generate increased noise levels on area roadways. Similar to the Project, this alternative would expose future residential uses to noise sources. Overall, due to the increase in anticipated vehicle trips, this impact would be increased under this alternative when compared to the Project.

Population and Housing

This alternative would result in the construction of more housing units over a comparable area as the Project. As discussed in Section 3.11, the Project would be a residential and commercial mixed use development, resulting in the addition of up to 1,748 residential units (up to 1,430

single family units and up to 328 multifamily units) in total. This would allow for a maximum population of approximately 4,410 residents, based on the number of units planned for development.

Under the No Project Alternative, the Project site would be developed with up to 2,642 units, a village center, and park uses. Because this alternative would substantially increase the amount of units, the associated population would also increase. However, this increase is consistent with the General Plan and does not conflict with regional plans for growth. Therefore, impacts related to population and housing would be comparable to the Project.

Public Services and Recreation

This alternative would result in an increase in the number of housing units by 876 units. As described in Section 3.12, implementation of the Project would result in an increase in demand for police and fire protection services, as well as increased demand for schools, parks, and other public facilities. As discussed previously, there would be a larger change in the population generated under this alternative when compared to the Project. However, while this alternative would have an increased demand for public services compared to the Project, this increase is not anticipated to require construction, expansion, or relocation of public service facilities. The 876 additional units under this alternative could, however, require the construction of additional park and/or recreation facilities on- or off-site. Overall, impacts associated with environmental effects associated with the construction, expansion, or relocation of physical facilities associated with the provision of public services and recreation would be slightly greater than the Project.

Transportation and Circulation

As described above, this alternative would result in an increase in total daily vehicle trips when compared to the Project, which would in turn increase the peak hour AM and PM vehicle trips. The Project is estimated to generate up to 11,606 new daily trips, with 841 and 1,102 trips occurring during the AM and PM peak hours, respectively. Under this alternative, the increased development would generate an increase of approximately 7,101 daily trips compared to the Project, as shown in Table 5.0-2. The increase in traffic would result in increased AM and PM peak hour trips under this alternative when compared to the Project. This has the potential to increase impacts to area roadways and intersections. Impacts related to traffic and circulation would be increased under this alternative when compared to the Project.

Utilities

Both the Project and this alternative would be served by the Sacramento Area Sewer District (SASD) and the Sacramento Regional County Sanitation District (Regional San). The Project would have a less-than-significant impact on public wastewater service, including disposal or treatment systems. Development under the No Project Alternative would also result in an increase in solid waste generation within the Project site due to the increase in residential units. Because the No Project Alternative would result in an increased population compared to the Project, water demand would also increase. There is the potential for development under this alternative to exceed the growth anticipated in the infrastructure planning to serve the Project

area and to require additional water and wastewater facilities to serve the Project. Overall, this alternative would have worse impacts to utilities when compared to the Project.

REDUCED PROJECT ALTERNATIVE #1

Aesthetics and Visual Resources

Under Reduced Project Alternative #1, the Project site would be developed with the same amount of non-residential uses as the Project, but with a reduction in the amount of residential development (50 fewer single-family age-restricted units and 100 fewer single-family non-age-restricted units). When compared to the Project, the area of the Project site developed with residential uses would be decreased and there would be an increase in the area preserved as a nature preserve. Developing the entire Project site with 127 fewer residential units would likely result in buildings with equal stories as the Project. The building setbacks and landscaped areas adjacent to existing and future roadways under this alternative would likely be greater than the Project, which may increase the visual and aesthetic appeal of the site compared to the Project. Overall, this alternative would have reduced impacts to aesthetics when compared to the Project, but the conversion of the Project site to a residential community with a commercial center and parks and recreation uses would still result in a significant and unavoidable impact associated with changes in visual character.

Air Quality

As described in Section 3.2, implementation of the Project would generate emissions during both the construction phase and the operational phase. Construction related impacts would be reduced under this alternative when compared to the Project, as the area of ground disturbance would be less, and the duration of construction may be slightly reduced. Under this alternative, mobile source emissions would also slightly decrease. Mobile source (vehicle emissions) are directly related to the number of vehicle trips generated by a project. Under this alternative, the residential uses developed on the Project site would generate approximately 890 fewer daily vehicle trips when compared to the Project, as shown in Table 5.0-2, which would generate lower levels of pollutants from mobile sources. Therefore, this alternative would have reduced impacts related to air quality when compared to the Project.

Biological Resources

As described in Section 3.3, while Project implementation is not anticipated to result in significant impacts to biological resources, construction activities associated with the Project would result in impacts to wetlands and ground disturbing activities that may impact or harm biological resources, including special-status species. Under Reduced Project Alternative #1, the Project site would be developed with the same amount of non-residential uses as the Project, but with a reduction in the amount of residential development of 127 units. This alternative would increase the area of the site for permanent open space uses compared to the Project. Due to the on-site aquatic resources, this alternative would also be designed to minimize and avoid impacts to wetlands and other waters of the U.S. Because this alternative would require fill of wetlands and waters of the U.S. and conversion of much of the Project site to urban uses,

impacts to biological resources would require mitigation similar to the Project to be reduced to less than significant. However, overall, this alternative would have a reduction in impacts to biological resources compared to the Project.

Cultural and Tribal Resources

Reduced Project Alternative #1 would result in ground disturbing activities throughout much of the Project site. The Project is not anticipated to result in significant impacts to cultural or historical resources, and Reduced Project Alternative #1 would result in similar risks related to the unintentional discovery of such resources by developing much of the Project site with residential and commercial uses. As such, this impact would be comparable to the Project.

Geology and Soils

Reduced Project Alternative #1 would result in development of 127 fewer residential units than the Project. The future development allowed under this alternative would be exposed to the same level of risk from geologic hazards as the Project. Therefore, this impact under this alternative would be comparable to the Project.

Greenhouse Gases, Climate Change, and Energy

Under Reduced Project Alternative #1, fewer housing units would be constructed on the Project site. Implementation of the Project would generate GHG emissions during construction and operation. Short-term construction GHG emissions are a one-time release of GHGs and are not expected to significantly contribute to global climate change over the lifetime of a Project. As noted previously, construction related impacts would be reduced under this alternative when compared to the Project, as the extent of the development footprint and duration of construction activities would be reduced slightly.

Under Reduced Project Alternative #1, because fewer people would likely reside within the Project site under this alternative due to the reduction of 127 units, the number of vehicle trips generated would also decrease by approximately 890 daily vehicle trips. Emissions associated with area sources and the mobile greenhouse gas emissions associated with vehicle trips would decrease when compared to the Project. As such, the greenhouse gas emissions impact would be decreased when compared to the Project.

While there would be reduced development under this alternative, it is anticipated that energy-saving measures would be similar to the Project and there would not be a significant change in the potential for wasteful, inefficient, or excessive consumption of energy under this alternative.

Hazards and Hazardous Materials

Reduced Project Alternative #1 is similar to the Project in that both the Project and this alternative would result in development of the Project site with residential, commercial, and park uses. As described in Chapter 3.7, construction activities may result in the use and transport of common hazardous materials, including oils, fuels, paints and solvents. This potential impact would still occur under Reduced Project Alternative #1. Additionally, the operational phases of both the Project and Reduced Project Alternative #1 would not pose a

significant hazard to the public or the environment. Future development under Reduced Project Alternative #1 would be subject to the City's General Plan policies, and other local, state, and federal regulations pertaining to hazardous materials. This impact would be similar under this alternative when compared to the Project.

Hydrology and Water Quality

Reduced Project Alternative #1 would reduce development by 127 single family units compared to the Project and result in an increase in permanent open space. While this alternative would result in a reduced amount of land covered with impervious surfaces compared to the Project, stormwater would be directed to on-site detention basin(s) and landscaped areas, and the storm drainage system would be designed to ensure that post-construction runoff volumes do not exceed pre-development conditions similar to the Project. Because the alternative would be required to implement improvements in order to manage and treat stormwater flows from the site, impacts related to water quality would be similar.

As described in Chapter 3.8, Project implementation has the potential to result in the discharge of pollutants into detention basins, and would change the existing drainage pattern on the site, although these impacts are less than significant as a result of compliance with local, state, and federal regulations. Under Reduced Project Alternative #1, these impacts would be similar to the Project. Overall, potential impacts related to hydrology and water quality would not be significantly improved under Reduced Project Alternative #1 when compared to the Project.

Land Use

Reduced Project Alternative #1 would also require a change of the Project site's General Plan Land Use designation from Planning Area to LDR, MDR, HDR, C, P/OS, and NR designations. Under this alternative, the Project site would be developed with similar uses as the Project. The analysis in Section 3.9 concluded that the Project would not result in any significant land use impacts. Similarly, this alternative could be designed to be consistent with the General Plan. The decrease in units and decreased development footprint associated with this alternative would not conflict with the adopted MTP/SCS as this alternative would result in comparable residential net densities on the Project site when compared to the Developing Community assumptions for the Project site. Therefore, this alternative would have similar impacts compared to the Project.

Noise and Vibration

As described in Section 3.10, the primary sources of noise associated with implementation of the Project are from increased vehicle trips on study area roadways in the Project vicinity from on-site uses, and increased noise from future operation within the Project site. The Project is estimated to generate approximately 11,606 new external vehicle trips on a daily basis. Under this alternative, noise associated with vehicle trips is expected to decrease by approximately 890 daily trips due to the decrease in residential units, while other on-site noise sources would likely be comparable to those generated by the Project. This alternative would generate fewer daily vehicle trips and peak hour trips, which would generate decreased noise levels on area roadways. Similar to the Project, this alternative would expose future residential uses to noise

sources. Overall, due to the decrease in anticipated vehicle trips, this impact would be decreased under this alternative when compared to the Project.

Population and Housing

This alternative would result in the construction of fewer housing units over a smaller area than the Project. As discussed in Section 3.11, the Project would be a residential and commercial mixed use development, resulting in the addition of up to 1,725 residential units (up to 1,472 single family units and up to 253 multifamily units) in total. This would allow for a maximum population of approximately 4,319 residents, based on the number of units planned for development.

Under Reduced Project Alternative #1, the Project site would be developed with up to 1,598 units. While this alternative would add fewer residents as compared with the Project, impacts related to population and housing would be comparable to the Project as neither this alternative nor the Project would conflict with applicable population forecasts.

Public Services and Recreation

This alternative would result in a decrease in the number of housing units by 127 units. As described in Section 3.12, implementation of the Project would result in an increase in demand for police and fire protection services, as well as increased demand for schools, parks, and other public facilities. As discussed previously, there would be a reduction in the population generated under this alternative when compared to the Project. As such, this alternative would have a decreased demand for public services compared to the Project and a decrease in the amount of park area required to serve the Project. Similar to the Project, this alternative would not result in need for construction, relocation, or expansion of facilities for public services and recreation, other than the park and recreation uses proposed as part of the alternative. Because this alternative would decrease demand for public services and would require less parkland than the Project, physical environmental impacts related to public services and recreation would be slightly less than the Project.

Transportation and Circulation

As described above, this alternative would result in a decrease in total daily vehicle trips when compared to the Project, which would in turn decrease the peak hour AM and PM vehicle trips. The Project is estimated to generate up to 11,606 new daily trips, with 841 and 1,102 trips occurring during the AM and PM peak hours, respectively. Under this alternative, the decrease in residential units would result in a reduction of 890 daily trips. The trip generation for this alternative was calculated using the same trip generation rates as the Project that were provided by Kimley-Horn (June 12, 2019, as shown in Table 5.0-2). The related decrease in AM and PM peak hour trips under this alternative would generate decreased traffic levels on area roadways when compared to the Project. This has the potential to decrease impacts to area roadways and intersections, in particular, the impact at Intersection #21, Sunrise Boulevard/White Rock Road is anticipated to be reduced to less than significant resulting from a decrease in delay compared to the Project. The remaining potentially significant impacts would not be avoided under this alternative, but the level of delay would be reduced compared to the

Project. Overall, impacts related to traffic and circulation associated with roadway operations would be decreased under this alternative when compared to the Project.

Utilities

Both the Project and this alternative would be served by the SASD and Regional San. The Project would have a less-than-significant impact on public wastewater service, including disposal or treatment systems. It is noted, however, that the decrease in residential units under this alternative would decrease the wastewater treatment demand compared to the Project. Development under Reduced Project Alternative #1 would also result in a decrease in solid waste generation within the Project site due to the decrease in residential units. Because Reduced Project Alternative #1 would result in a decreased amount of development compared to the Project, water demand would also decrease. Overall, this alternative would have less impacts to utilities when compared to the Project.

REDUCED PROJECT ALTERNATIVE #2

Aesthetics and Visual Resources

Under Reduced Project Alternative #2, the Project site would be developed with the same amount of non-residential uses as the Project, but with a reduction in the amount of residential development (non-age-restricted only). When compared to the Project, the area of the Project developed with residential uses would be decreased and there would be an increase in the area preserved as a nature preserve. Developing the entire Project site with 247 fewer residential units would likely result in buildings with a comparable number of stories as the Project. The building setbacks and landscaped areas adjacent to existing and future roadways under this alternative would likely be greater to the Project, which may increase the visual and aesthetic appeal of the site compared to the Project. Overall, this alternative would have reduced impacts to aesthetics when compared to the Project, but the conversion of the Project site to a residential community with a commercial center and parks and recreation uses would still result in a significant and unavoidable impact associated with changes in visual character.

Air Quality

As described in Section 3.2, implementation of the Project would generate emissions during both the construction phase and the operational phase. Construction related impacts would be reduced under this alternative when compared to the Project, as the area of ground disturbance would be less, and the duration of construction may be slightly reduced. Under this alternative, mobile source emissions would also slightly decrease. Mobile source (vehicle emissions) are directly related to the number of vehicle trips generated by a project. Under this alternative, the residential uses developed on the Project site would generate approximately 2,228 fewer daily vehicle trips when compared to the Project, as shown in Table 5.0-2, which would generate lower levels of pollutants from mobile sources. Therefore, this alternative would have reduced impacts related to air quality when compared to the Project.

Biological Resources

As described in Section 3.3, while Project implementation is not anticipated to result in significant impacts to biological resources, construction activities associated with the Project would result in impacts to wetlands and ground disturbing activities that may impact or harm biological resources, including special-status species. Under Reduced Project Alternative #2, the Project site would be developed with the same amount of non-residential uses as the Project, but with a reduction in the amount of residential development (247 fewer units). This alternative would increase the area of the site for permanent open space uses compared to the Project. Due to the on-site aquatic resources, this alternative would also be designed to minimize and avoid impacts to wetlands and other waters of the U.S. Because this alternative would require fill of wetlands and waters of the U.S. and conversion of much of the Project site to urban uses, impacts to biological resources would require mitigation similar to the Project to be reduced to less than significant. However, overall, this alternative would have a reduction in impacts to biological resources compared to the Project.

Cultural and Tribal Resources

Reduced Project Alternative #2 would result in ground disturbing activities throughout much of the Project site. The Project is not anticipated to result in significant impacts to cultural or historical resources, and Reduced Project Alternative #2 would result in similar risks related to the unintentional discovery of such resources by developing much of the Project site with residential and commercial uses. As such, this impact would be comparable to the Project.

Geology and Soils

Reduced Project Alternative #2 would result in development of 247 fewer residential units than the Project. The future development allowed under this alternative would be exposed to the same level of risk from geologic hazards as the Project. Therefore, this impact under this alternative would be comparable to the Project.

Greenhouse Gases, Climate Change, and Energy

Under Reduced Project Alternative #2, fewer housing units would be constructed on the Project site. Implementation of the Project would generate GHG emissions during construction and operation. Short-term construction GHG emissions are a one-time release of GHGs and are not expected to significantly contribute to global climate change over the lifetime of a project. As noted previously, construction related impacts would be reduced under this alternative when compared to the Project, as the extent of the development footprint and duration of construction activities would be reduced slightly.

Under Reduced Project Alternative #2, there would be less residential development, resulting in a reduced population and a reduction in the number of vehicle trips generated. As such, the mobile greenhouse gas emissions would decrease when compared to the Project and the greenhouse gas emissions impact would be decreased when compared to the Project.

While there would be reduced development under this alternative, it is anticipated that energy-saving measures would be similar to the Project and there would not be a significant change in the potential for wasteful, inefficient, or excessive consumption of energy under this alternative.

Hazards and Hazardous Materials

Reduced Project Alternative #2 is similar to the Project in that both the Project and this alternative would result in development of the Project site with residential, commercial, and park uses. As described in Chapter 3.7, construction activities may result in the use and transport of common hazardous materials, including oils, fuels, paints and solvents. This potential impact would still occur under Reduced Project Alternative #2. Additionally, the operational phases of both the Project and Reduced Project Alternative #2 would not pose a significant hazard to the public or the environment. Future development under Reduced Project Alternative #2 would be subject to the City's General Plan policies, and other local, state, and federal regulations pertaining to hazardous materials. This impact would be similar under this alternative when compared to the Project.

Hydrology and Water Quality

Reduced Project Alternative #2 would reduce development by 260 single family units compared to the Project and result in an increase in permanent open space. While this alternative would result in a reduced amount of land covered with impervious surfaces compared to the Project, stormwater would be directed to on-site detention basin(s) and landscaped areas, and the storm drainage system would be designed to ensure that post-construction runoff volumes do not exceed pre-development conditions similar to the Project. Because the alternative would be required to implement improvements in order to manage and treat stormwater flows from the site, impacts related to water quality would be similar.

As described in Chapter 3.8, Project implementation has the potential to result in the discharge of pollutants into detention basins, and would change the existing drainage pattern on the site, although these impacts are less than significant as a result of compliance with local, state, and federal regulations. Under Reduced Project Alternative #2, these impacts would be similar to the Project. Overall, potential impacts related to hydrology and water quality would not be significantly improved under Reduced Project Alternative #2 when compared to the Project.

Land Use

Reduced Project Alternative #2 would also require a change of the Project site's General Plan Land Use designation from Planning Area to LDR, MDR, HDR, C, P/OS, and NR designations. Under this alternative, the Project site would be developed with similar uses as the Project. The analysis in Section 3.9 concluded that the Project would not result in any significant land use impacts. The decrease in units and decreased development footprint associated with this alternative would not conflict with the adopted MTP/SCS and would result in comparable residential net densities on the Project site when compared to the Developing Community assumptions for the Project site. Reduced Project Alternative #2 would also not result in

significant land use impacts. Therefore, this alternative would have similar impacts to the Project.

Noise and Vibration

As described in Section 3.10, the primary sources of noise associated with implementation of the Project are from increased vehicle trips on study area roadways in the Project vicinity from on-site uses, and increased noise from future operation within the Project site. The Project is estimated to generate approximately 11,606 new external vehicle trips on a daily basis. Under this alternative, noise associated with vehicle trips is expected to decrease due to approximately 2,228 fewer daily vehicle trips due to the decrease in residential units, while other on-site noise sources would likely be comparable to those generated by the Project. This alternative would generate fewer daily vehicle trips and peak hour trips, which would generate decreased noise levels on area roadways. Similar to the Project, this alternative would expose future residential uses to noise sources. Overall, due to the decrease in anticipated vehicle trips, this impact would be decreased under this alternative when compared to the Project.

Population and Housing

This alternative would result in the construction of fewer housing units over a comparable area as the Project. As discussed in Section 3.11, the Project would be a residential and commercial mixed use development, resulting in the addition of up to 1,725 residential units in total. This would allow for a maximum population of approximately 4,4319 residents, based on the number of units planned for development.

Under Reduced Project Alternative #2, the Project site would be developed with 247 fewer single-family units than the Project and would have similar commercial uses, recreation, park uses, and a preserve. While this alternative would add fewer residents as compared with the Project, impacts related to population and housing would be comparable to the Project as neither this alternative nor the Project would conflict with applicable population forecasts.

Public Services and Recreation

This alternative would result in a decrease in the number of housing units by 247 units compared to the Project. As described in Section 3.12, implementation of the Project would result in an increase in demand for police and fire protection services, as well as increased demand for schools, parks, and other public facilities. As discussed previously, there would be a reduction in the population generated under this alternative when compared to the Project. As such, this alternative would have a decreased demand for public services compared to the Project and, similar to the Project, not result in need for construction, relocation, or expansion of facilities for public services and recreation, other than the park and recreation uses proposed as part of the alternative. Therefore, physical environmental impacts related to public services and recreation would be comparable to the Project.

Transportation and Circulation

As described above, this alternative would result in a decrease in total daily vehicle trips when compared to the Project, which would in turn decrease the peak hour AM and PM vehicle trips.

The Project is estimated to generate up to 11,606 new daily trips, with 841 and 1,102 trips occurring during the AM and PM peak hours, respectively. Under this alternative, the decrease in residential units would result in a reduction of 2,228 daily trips, as shown in Table 5.0-2. The trip generation for this alternative was calculated using the same trip generation rates as the Project that were provided by Kimley-Horn (June 12, 2019). The related decrease in AM and PM peak hour trips under this alternative would generate decreased traffic levels on area roadways when compared to the Project. This has the potential to decrease impacts to area roadways and intersections, in particular, the impact at Intersection #21, Sunrise Boulevard/White Rock Road is anticipated to be reduced to less than significant resulting from a decrease in delay compared to the Project. The remaining potentially significant impacts would not be avoided under this alternative, but the level of delay would be reduced compared to the Project. Overall, impacts related to traffic and circulation associated with roadway operations would be decreased under this alternative when compared to the Project.

Utilities

Both the Project and this alternative would be served by the SASD and Regional San. The Project would have a less-than-significant impact on public wastewater service, including disposal or treatment systems. It is noted, however, that the decrease in residential units under this alternative would decrease the wastewater treatment demand compared to the Project. Development under Reduced Project Alternative #2 would also result in a decrease in solid waste generation within the Project site due to the decrease in residential units. Because Reduced Project Alternative #2 would result in a decreased amount of development compared to the Project, water demand would also decrease. Overall, this alternative would have less impacts to utilities when compared to the Project.

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that an environmentally superior alternative be identified among the alternatives that are analyzed in the EIR. If the No Project Alternative is the environmentally superior alternative, an EIR must also identify an environmentally superior alternative among the other alternatives (CEQA Guidelines Section 15126.6(e)(2)). The environmentally superior alternative is that alternative with the least adverse environmental impacts when compared to the Project.

A comparative analysis of the Project and each of the Project alternatives is provided in Table 5.0-3 below. The table includes a numerical scoring system, which assigns a score of “2,” “3,” or “4” to the Project and each of the alternatives with respect to how each alternative compares to the Project in terms of the severity of the environmental topics addressed in this EIR. A score of “2” indicates that the alternative would have a better (or lessened) impact when compared to the Project. A score of “3” indicates that the alternative would have the same (or equal) level of impact when compared to the Project. A score of “4” indicates that the alternative would have a worse (or greater) impact when compared to the Project. The Project alternative with the lowest total score is considered the environmentally superior alternative.

TABLE 5.0-3: COMPARISON OF ALTERNATIVE PROJECT IMPACTS TO THE PROJECT

<i>ENVIRONMENTAL ISSUE</i>	<i>PROJECT</i>	<i>NO PROJECT ALTERNATIVE</i>	<i>REDUCED PROJECT ALTERNATIVE #1</i>	<i>REDUCED PROJECT ALTERNATIVE #2</i>
Aesthetics and Visual Resources	3 – Same	4 - Greater	2 – Less	2 – Less
Air Quality	3 – Same	4 - Greater	2 – Less	2 – Less
Biological Resources	3 – Same	4 - Greater	2 – Less	2 - Less
Cultural and Tribal Resources	3 – Same	3 – Same	3 – Same	3 – Same
Geology and Soils	3 – Same	3 - Same	3 - Same	3 - Same
Greenhouse Gas, Climate Change, and Energy	3 – Same	4 - Greater	4 – Greater	4 - Worse
Hazards and Hazardous Materials	3 – Same	3 – Same	3 – Same	3 – Same
Hydrology and Water Quality	3 – Same	3 – Same	3 – Same	3 – Same
Land Use	3 – Same	3 – Same	3 – Same	3 – Same
Noise and Vibration	3 – Same	4 – Greater	2 – Less	2 – Less
Population and Housing	3 – Same	3 - Same	2 – Less	2 – Less
Public Services and Recreation	3 – Same	4 - Greater	2 – Less	3 - Same
Transportation and Circulation	3 – Same	4 – Greater	2 – Less	2 – Less
Utilities	3 – Same	3 - Same	2 – Less	2 – Less
Summary	42	49	35	36

As shown in Table 5.0-3, the No Project Alternative would result in 49 points, Reduced Project Alternative #1 would result in 35 points, and Reduced Project Alternative #2 would result in 36 points. However, because Reduced Project Alternative #2 would reduce the extent of development, including the acreage and number of residential units and associated population, more than Reduced Project Alternative #1, impacts of Reduced Project Alternative #2 associated with air quality, noise, and traffic would be reduced more than Reduced Project Alternative #1. Therefore, Reduced Project Alternative #2 is the next environmentally superior alternative to the Project. It is noted that the superior alternative would depend on the City's local priorities (i.e., traffic impacts to the regional roadway system, maintenance of public services and utilities services, etc.), as well as the ability to meet the Project's objectives. It is noted, however, that this alternative would not eliminate the significant and unavoidable impact related to aesthetics that would occur under the Project. Each alternative's ability to satisfy the Project objectives is discussed in the following section.

5.4 COMPARATIVE EVALUATION OF THE PROJECT AND ALTERNATIVES TO SATISFY PROJECT OBJECTIVES

This section examines how each of the alternatives selected for more detailed analysis meets the Project objectives.

5.0 ALTERNATIVES TO THE PROJECT

1. *Create a high-quality development that implements the vision of the General Plan, which designates the Project site for development with a local town center, a mix of residential densities, and a natural resources preserve.*

The No Project Alternative would satisfy this Project objective because under this alternative, the project site would be developed consistent with the General Plan land use designation and the SACOG MTP/SCS vision for the site. Under Reduced Project Alternative #1, the Project site would be developed with the same amount of non-residential uses as the Project, but with a reduction in the amount of residential development (age-restricted and non-age-restricted). Under Reduced Project Alternative #2, the Project site would be developed with the same amount of non-residential uses as the Project, but with a reduction in the amount of residential development (non-age-restricted only). Therefore, Reduced Project Alternatives #1 and #2 would achieve this objective.

2. *Respect the Project site's existing natural features through preservation of 199.5 acres of wetlands, vernal pools, and open space.*

The No Project Alternative would satisfy this Project objective because under this alternative, a wetland preserve area would be provided; however, the preserve would be smaller than that associated with the Project. Similarly, Reduced Project Alternatives #1 and #2 would also provide preserve areas comparable to or larger than the Project. Therefore, Reduced Project Alternatives #1 and #2 would achieve this objective.

3. *Provide a residential development that would assist the City in meeting its housing needs, including a range of housing types to serve the senior population.*

The No Project Alternative would satisfy this Project objective because this alternative would include a range of housing types, although the ultimate types (including single family versus multifamily and age-restricted versus non-age-restricted) of units is unknown at this time but has been estimated for the purpose of this analysis. Reduced Project Alternative #1 also meets this objective because the alternative would provide a range of housing types for various age groups. However, because this alternative would reduce the amount of total housing by 127 units, this objective would be met to a lesser extent than the Project. Similarly, Reduced Project Alternative #2 meets this objective because the alternative would provide a range of housing types for various age groups. However, because this alternative would reduce the amount of total housing by 247 units, this objective would be met to a lesser extent than the Project.

4. *Provide a residential development that would assist the City in meeting its affordability goals providing housing at many price points and attract residents from different areas.*

Similar to objective number three above, the No Project Alternative would satisfy this Project objective because this alternative would include ample residential housing at many price points, although the ultimate types (including single family versus multifamily and age-restricted versus non-age-restricted) of units is unknown at this time. Reduced Project Alternative #1 also meets

this objective because the alternative would provide a range of housing types for various income groups. However, because this alternative would reduce the amount of total housing by 127 units, this objective would be met to a lesser extent than the Project. Similarly, Reduced Project Alternative #2 meets this objective because the alternative would provide a range of housing types for various income groups. However, because this alternative would reduce the amount of total housing by 247 units, this objective would be met to a lesser extent than the Project.

5. *Create of a unique age-restricted community that provides a mix of housing types and amenities, including a club house and recreation facility.*

Depending on the ultimate housing types, the No Project Alternative would satisfy this Project objective because under this alternative, a mix of housing types and amenities would be provided. However, uncertainty regarding the level of amenities and number of age-restricted units could prevent the No Project Alternative from fully satisfying this objective. Reduced Project Alternative #1 would meet this objective to a lesser extent than the Project because the alternative would reduce the number of age-restricted units by 82. Reduced Project Alternative #2 would meet this objective by a lesser extent as well because the alternative would provide 42 fewer age-restricted units than the Project.

6. *Accommodate neighborhood-serving commercial uses as part of the town center.*

All three alternatives would achieve this object because all of the alternatives would include a town center area with neighborhood-serving commercial uses.

7. *Implement the City's Bicycle and Pedestrian Master Plans through providing an on-site bicycle and pedestrian network that is accessible by the general public and provides opportunities for connectivity with bicycle and pedestrian facilities on adjacent properties.*

The No Project Alternative would satisfy this Project objective because under this alternative, the site would be developed consistent with the General Plan land use designation for the site, and the General Plan incorporates the provisions of the City's Bicycle and Pedestrian Master Plans. Both Reduced Project Alternative #1 and Reduced Project Alternative #2 would also achieve this objective by providing ample pedestrian and bicycle facilities throughout the Project site, which would connect to adjacent properties.

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REFERENCES

- Bay Area Air Quality Management District. 2017. Spare the Air: Cool the Climate. April. San Francisco, CA. Available: http://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en. Accessed: July 12, 2019.
- C Donald Ahrens. 2006. Meteorology Today: An Introduction to Weather, Climate, & the Environment.
- California Air Pollution Control Officers Association (CAPCOA). 2017. Appendix A, Calculation Details for CalEEMod. October 2017.
- California Air Resources Board. 2005. Air Quality and Land Use Handbook: A Community Health Perspective.
- California Air Resources Board. 2014. 2020 Statewide Greenhouse Gas Emissions and the 2020 Target (base years for forecasting: 2009-2011 emissions). Available at: https://www.arb.ca.gov/cc/inventory/data/misc/2020_forecast_base0911_2015-01-22.pdf
- California Air Resources Board. 2014. Background Material: Almanac of Emissions and Air Quality 2013 Edition - Chapter 4 Regional Trends and Forecasts. Page last reviewed on February 7, 2014. Available: <https://ww3.arb.ca.gov/aqd/almanac/almanac13/chap413.htm>.
- California Air Resources Board. 2015. ARB Databases: Aerometric Data Analysis and Management System (ADAM). Available at: <http://www.arb.ca.gov/adam/trends/trends1.php>.
- California Air Resources Board. 2015. CalEEMod Model v.2013.2.2. Available at: <http://www.caleemod.com/>.
- California Air Resources Board. 2015. EMFAC2014 Web Database. Available at: <https://www.arb.ca.gov/emfac/2014/>.
- California Air Resources Board. 2015. State and National Attainment Status for Criteria Pollutants. Available at: <http://www.arb.ca.gov/desig/adm/adm.htm>.
- California Air Resources Board. 2015a. 2030 Target Scoping Plan Workshop Slides. (October 1, 2015). Available at: http://www.arb.ca.gov/cc/scopingplan/meetings/10_1_15slides/2015slides.pdf.
- California Air Resources Board. 2016. California Climate Strategy. January 29, 2016. Available at: http://docketpublic.energy.ca.gov/PublicDocuments/15-RETI-02/TN210091_20160129T154626_California_Climate_Strategy_CARB_for_RETI_20_Plenary_Meeting_on.pdf.
- California Air Resources Board. 2016a. Ambient Air Quality Standards. Available at: <https://www.arb.ca.gov/research/aaqs/aaqs2.pdf>.

- California Air Resources Board. 2016b. ARB Databases: Aerometric Data Analysis and Management System (ADAM). Available at: <<https://arb.ca.gov/adam>>.
- California Air Resources Board. 2017. California's 2017 Climate Change Scoping Plan. Available at: <https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf>.
- California Air Resources Board. 2018. Area Designations Maps/State and National. This page last reviewed December 28, 2018. Available at: <<https://www.arb.ca.gov/desig/adm/adm.htm>>.
- California Air Resources Board. 2019a. 2016 SIP Emission Projection Data. Statewide. Available at: <https://www.arb.ca.gov/app/emsmv/2017/emssumcat_query.php?F_YR=2012&F_DIV=-4&F_SEASON=A&SP=SIP105ADJ&F_AREA=CA#5>.
- California Air Resources Board. 2019b. AQMIS 2. Air Quality Data (PST) Query Tool. Accessed on July 11, 2019. Available: <<https://www.arb.ca.gov/aqmis2/aqdselect.php>>.
- California Air Resources Board. 2019bc. ARB Databases: Aerometric Data Analysis and Management System (ADAM). Accessed July 11, 2019. Available at: <<https://www.arb.ca.gov/adam/trends/trends1.php>>.
- California Air Resources Board. 2019d. California Ambient Air Quality Standards (CAAQS). Available at: <<http://www.arb.ca.gov/research/aaqs/caaqs/caaqs.htm>>.
- California Air Resources Board. 2019e. Carbon Monoxide and Health. Available: <<https://ww3.arb.ca.gov/research/aaqs/caaqs/co/co.htm>>.
- California Air Resources Board. 2019f. What is Carbon Monoxide? Accessed on: July 11, 2019. Available: <https://ww2.arb.ca.gov/resources/carbon-monoxide-and-health>.
- California Department of Conservation. Fault Activity Map of California. Available at: <<http://maps.conservation.ca.gov/cgs/fam/>>.
- California Department of Education. School Accountability Report Card Reported Using Data from the 2016-2017 School Year For: Elk Grove Charter School. Published During 2017-2018.
- California Department of Education. School Accountability Report Card Reported Using Data from the 2016-2017 School Year For: Katherine L. Albiani Middle School. Published During 2017-2018.
- California Department of Education. School Accountability Report Card Reported Using Data from the 2016-2017 School Year For: Las Flores High School. Published During 2017-2018.
- California Department of Education. School Accountability Report Card Reported Using Data from the 2016-2017 School Year For: Pleasant Grove High School. Published During 2017-2018.
- California Department of Education. School Accountability Report Card Reported Using Data from the 2016-2017 School Year For: T.R. Smedberg Middle School. Published During 2017-2018.

- California Department of Education. School Accountability Report Card Reported Using Data from the 2016-2017 School Year For: Sheldon High School. Published During 2017-2018.
- California Department of Education. School Accountability Report Card Reported Using Data from the 2016-2017 School Year For: Sunrise Elementary. Published During 2017-2018.
- California Department of Finance. 2017. Population and Housing Estimates (E-5 Reports). Available at: <<http://www.dof.ca.gov/research/demographic/reports/>>.
- California Department of Finance, Demographics Research Unit. 2018. E-5 City/County Population and Housing Estimates, 1/1/2018. Published May 2018.
- California Department of Fish and Wildlife. 2016. California Natural Diversity Database (CNDDDB). Accessed in August 2018.
- California Department of Fish and Game. "Special Plants List." Natural Diversity Database.
- California Department of Fish and Game. "Special Animals List." Natural Diversity Database.
- California Department of Fish and Game. "Special Vascular Plants, Bryophytes, and Lichens List." Natural Diversity Database.
- California Department of Forestry & Fire Protection. Very High Fire Hazard Severity Zones in LRA – Sacramento County. July 30, 2008.
- California Department of Forestry & Fire Protection. Fire Hazard Severity Zones in SRA – Sacramento County. Adopted by CAL FIRE on November 7, 2007.
- California Department of Toxic Substances Control. 2016. Envirostar database search (DTSC, 2016). Available online at: [Envirostar.dtsc.ca.gov](http://envirostar.dtsc.ca.gov). Accessed on August 2018.
- California Department of Transportation. 2002. Guide for the Preparation of Traffic Impact Studies. December 2002.
- California Department of Transportation. 2002. Transportation Related Earthborne Vibrations. TAV-02-01-R9601. February 20, 2002.
- California Department of Transportation. 2009. Technical Noise Supplement, Traffic Analysis Protocol. November 2009.
- California Department of Transportation. 2012. California Manual on Uniform Traffic Control Devices for Streets and Highways.
- California Department of Transportation. 2013. Officially Designated State Scenic Highways. Available at: <http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm>.

- California Department of Water Resources. 2003. Bulletin 118, California's Groundwater, 2003 Update.
- California Department of Water Resources. 2012. State of California Watershed Hierarchy Naming Convention.
- California Energy Commission. 2006. Refining Estimates of Water-Related Energy Use in California.
- California Energy Commission. 2012. Energy Almanac. Retrieved August 2018. Available at: <<http://energyalmanac.ca.gov/overview/index.html>>.
- California Energy Commission. 2012a. Building Energy Efficiency Standards Frequently Asked Questions. May 2012.
- California Energy Commission. 2012b. Energy Almanac. Retrieved August 2018. Available at: <<http://energyalmanac.ca.gov/overview/index.html>>.
- California Energy Commission. 2014. California Greenhouse Gas Emission Inventory. Available at: <http://www.arb.ca.gov/cc/inventory/inventory_current.htm>.
- California Energy Commission. 2015. 2016 Building Energy Efficiency Standards. Adoption Hearing. June 10, 2015. Available at: <http://www.energy.ca.gov/title24/2016standards/rulemaking/documents/2015-06-10_hearing/2015-06-10_Adoption_Hearing_Presentation.pdf>.
- California Energy Commission. 2016. California Energy Consumption Database. Available at: <<http://ecdms.energy.ca.gov/>>.
- California Energy Commission. 2016. Electricity Consumption by County. Available at: <<http://ecdms.energy.ca.gov/elecbycounty.aspx>>.
- California Energy Commission. 2016a. 2016 Building Energy Efficiency Standards. Adoption Hearing. June 10, 2015.
- California Energy Commission. 2016b. California Greenhouse Gas Emission Inventory – 2016 Edition. Available at: <<https://www.arb.ca.gov/cc/inventory/data/data.htm>>.
- California Energy Commission. 2018a. California Greenhouse Gas Emission Inventory – 2018 Edition. Available at: <<https://www.arb.ca.gov/cc/inventory/data/data.htm>>.
- California Energy Commission. 2018b. Tracking Overview. Renewable Energy – Overview. Available at: <http://www.energy.ca.gov/renewables/tracking_progress/documents/renewable.pdf>.
- California Energy Commission. 2019. Energy Almanac. Retrieved August 2012, from <<http://energyalmanac.ca.gov/overview/index.html>>.

- California Environmental Protection Agency. 2010. Climate Action Team Report to Governor Schwarzenegger and the Legislature. December 2010. Available at: <http://www.climatechange.ca.gov/climate_action_team/reports/>.
- Central Intelligence Agency. 2009. The World Factbook 2009. Available at: <<https://www.cia.gov/library/publications/download/download-2009/>>.
- California Regional Water Quality Control Board, Central Valley Region. Order R5-2016-0020, NPDES No. CA0077682: Waste Discharge Requirements for the Sacramento Regional County Sanitation District Sacramento Regional Wastewater Treatment Plan, Sacramento County.
- CalRecycle. Estimated Solid Waste Generation Rates. Available at: <<https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates>>.
- CalRecycle. Jurisdiction Diversion/Disposal Rate Summary (2007 - Current). Accessed June August 2018. Available at: <<https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/ReviewReports>>.
- CalRecycle. Solid Waste Information System (SWIS). Available at: <<http://www.calrecycle.ca.gov/SWFacilities/Directory/Search.aspx>> and <<http://www.calrecycle.ca.gov/LGCentral/Reports/DRS/Destination/JurDspFa.aspx>>.
- CAPCOA. 2017. CalEEMod (v.2016.3.2). Modelled in April 2019.
- City of Citrus Heights, City of Elk Grove, City of Folsom, City of Galt, City of Rancho Cordova, City of Sacramento, and County of Sacramento. Sacramento Region Stormwater Quality Design Manual. July 2018.
- City of Rancho Cordova. Draft Environmental Impact Report/Environmental Impact Statement – SunCreek Specific Plan Project. October 2012.
- City of Rancho Cordova. Final Environmental Impact Report – Sunrise Douglas Community Plan/Sun Ridge Specific Plan Long-Term Water Supply Plan. October 2011.
- City of Rancho Cordova. Rancho Cordova General Plan. Adopted June 26, 2006.
- City of Rancho Cordova. Rancho Cordova General Plan Draft Environmental Impact Report Vol. 1. March 2006.
- Cordova Recreation and Park District. 2014. Cordova Recreation and Park District Park Impact Fee Nexus Study. April 8, 2014.
- Cordova Recreation and Park District. 2014. Master Plan for New Development in Incorporated Areas 2014.
- CTA Engineering & Surveying. The Ranch Level 1 Sewer Study. September 2018.
- CTA Engineering & Surveying. The Ranch Level 2 Sewer Study. July 2019.

- Elk Grove Unified School District. Development Fee Justification Study/School Facilities Needs Analysis. March 2018.
- Elk Grove Unified School District. Facilities Master Plan 2015-2025 Master Plan. February 2016.
- Elk Grove Unified School District. Local Control Accountability Plan 2017-2020. Approved by the Board of Education on June 27, 2017.
- ENVIRON. 2013. Appendix A: Calculation Details for CalEEMod. Available at: <<http://www.aqmd.gov/docs/default-source/caleemod/caleemod-appendixa.pdf?sfvrsn=2>>.
- Environmental Protection Agency. 2013. Toxics Release Inventory (TRI) Program. Accessed August 2018. Available at: <<https://www.epa.gov/toxics-release-inventory-tri-program/2013-tri-national-analysis-introduction>>.
- Federal Railroad Administration. Federal Railroad Administration website. Accessed September 2018. Available at: <<http://safetydata.fra.dot.gov/officeofsafety/publicsite/crossing/xingqryloc.aspx>>.
- Federal Transit Administration. 2006. Transit Noise and Vibration Impact Assessment Guidelines. May 2006.
- Foothill Associates. Aquatic Resources Delineation Report, The Ranch 530-Acre Study Area, City of Rancho Cordova, California. October 13, 2017.
- Foothill Associates. Biological Resources Assessment, The Ranch 530-Acre Study Area, City of Rancho Cordova, California. October 13, 2017.
- Foothill Associates. Determination of Eligibility and Effect for the Jaeger 530 Project Area, Sacramento County, California. January 2005.
- Foothill Associates. RE: Special-Status Plant Survey for The Ranch (Jaeger 530) Project located in the City of Rancho Cordova, Sacramento County, California. October 20, 2017.
- Institute of Transportation Engineers. 2012. Trip Generation Manual, 9th Edition.
- Intergovernmental Panel on Climate Change. 2013. Climate Change 2013: The Physical Science Basis. Available at: <http://www.climatechange2013.org/images/report/WG1AR5_SPM_FINAL.pdf>.
- Kimley-Horn. Memorandum RE: Jaeger Ranch Supplemental Traffic Analyses, Draft Traffic Impact Analysis Services. December 3, 2018.
- Kimley-Horn. Memorandum RE: Jaeger Ranch Supplemental Traffic Analyses, Draft Trip Generation Memorandum. June 12, 2019.
- Kimley-Horn. Memorandum RE: Jaeger Ranch Traffic Impact Study, Draft Other Considerations. August 28, 2018.

- Kimley-Horn. Memorandum RE: Jaeger Ranch Traffic Impact Study, Draft VMT Analysis Results. April 16, 2018.
- Kimley-Horn. Traffic Impact Analysis, Jaeger Ranch, City of Rancho Cordova, California. August 28, 2018.
- International Energy Agency. 2018. FAQs: Oil. Available at: <<https://www.iea.org/about/faqs/oil/>>.
- National Aeronautics and Space Administration. Jet Propulsion Laboratory. 2015. NASA: Background Ozone is a Major Issue in U.S. West. Available: <<https://www.jpl.nasa.gov/news/news.php?feature=4723>>.
- National Resources Defense Council. 2014. NRDC Fact Sheet: California Snowpack and the Drought. April 2014. Available at: <<https://www.nrdc.org/sites/default/files/ca-snowpack-and-drought-FS.pdf>>.
- Pacific Gas & Electric. Electric & Gas Service Requirements 2017-2018. 2017-2018 Edition.
- Peak & Associates. Cultural Resources section for The Ranch Project. June 2018.
- Personal Communication with Jeff Schelldorf, Lieutenant, Rancho Cordova Police Department. March 7, 2019.
- Personal communication with Mollie Meyer, Administrative Specialist, Operations Division, Sacramento Metropolitan Fire District. October 10, 2018.
- Sacramento Area Council of Governments (SACOG). 1997. Mather Airport Comprehensive Land Use Plan. May 1997.
- Sacramento Area Council of Governments (SACOG). 2008. SACOG Regional Growth Blueprint 2035 Growth Projections. Available at: <<http://www.sacog.org/growth-projections-2035>>.
- Sacramento Area Council of Governments (SACOG). 2011. SACOG MTP/SCS 2035 Draft EIR.
- Sacramento Area Council of Governments (SACOG). 2012. Metropolitan Transportation Plan/Sustainable Communities Strategy. Adopted April 19, 2012.
- Sacramento Area Council of Governments (SACOG). 2016. 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy. Adopted February 18, 2016.
- Sacramento Area Council of Governments (SACOG). 2016. SACOG MTP/SCS 2035 Final EIR. Available at: <<https://www.sacog.org/general-information/final-2016-mtpscs-environmental-impact-report>>.
- Sacramento Area Council of Governments (SACOG). 2016. Draft Environmental Impact Report for the 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy. September 2015. Available at: <<https://www.sacog.org/general-information/2016-mtpscs-draft-environmental-impact-report>>.

- Sacramento Area Sewer District. Sewer System Capacity Plan – 2010 Update. November 2011.
- Sacramento Area Sewer District. Sewer System Management Plan. March 2019.
- Sacramento County. 2016 Sacramento Countywide Local Hazard Mitigation Plan Update. December 2016.
- Sacramento County Water Agency. 2015 Urban Water Management Plan. June 2016.
- Sacramento County Water Agency. Groundwater Management Plan. October 26, 2004.
- Sacramento County Water Agency. Water Supply Assessment for The Ranch at Sunridge. September 2011.
- Sacramento County Water Agency. Zone 40 Water Supply Master Plan. February 2005.
- Sacramento Metropolitan Air Quality Management District. 2009. Guide to Air Quality Assessment in Sacramento County. December 2009.
- South Coast Air Quality Management District. 2015. Applicable of the South Coast Air Quality Management District for Leave to File Brief of Amicus Curiae in Support of Neither Party. Filed April.
- Sacramento Metropolitan Air Quality Management District. 2015. SMAQMD Thresholds of Significance Table. Available at: <<http://www.airquality.org/LandUseTransportation/Documents/CH2ThresholdsTable5-2015.pdf>>.
- Sacramento Metropolitan Air Quality Management District. 2016. Operational Best Management Practices for Particulate Matter Emissions from Land Use Development Projects. Available at: <<http://www.airquality.org/LandUseTransportation/Documents/ch4OperationalBMPS-PMFINAL8-2016.pdf>>.
- Sacramento Metropolitan Air Quality Management District. 2017. July 13, 2017 Rancho Cordova Community Follow Up Meeting (Presentation). Available at: <<http://www.airquality.org/StationarySources/Documents/SMAQMD%20SRC%20Public%20Meeting%202017%20presentation.pdf>>.
- Sacramento Metropolitan Air Quality Management District. 2018. Guide to Air Quality Assessment in Sacramento County. Last Revised September 2018. Available at: <<http://www.airquality.org/businesses/ceqa-land-use-planning/ceqa-guidance-tools>>.
- Sacramento Metropolitan Air Quality Management District. 2019. Friant Ranch Interim Recommendation. April 25, 2019.
- Sacramento Metropolitan Fire District. Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 2017.

- Sacramento Municipal Utility District. Guide for Transmission Encroachment. January 2013.
- Sacramento Regional County Sanitation District. 20-Year Strategic Plan 2016-2026.
- Sacramento Regional Transit. 2018. Sacramento Regional Transit website. Available at: <http://www.sacrt.com/>.
- Saxelby Acoustics. Environmental Noise Assessment: The Ranch – Environmental Impact Report, City of Rancho Cordova, California. March 6, 2019.
- South Sacramento Habitat Conservation Plan. Final South Sacramento Habitat Conservation Plan, Volume I. February 2018.
- State of California. 2019. California’s Fourth Climate Change Assessment. Published January 16, 2019. Available at: <http://climateassessment.ca.gov/>.
- State Water Resources Control Board. 2010. State Water Resources Control Board 2010 Integrated Report Clean Water Act Sections 303(d) and 305(b) (SWRCB, 2010). April 19, 2010. Available at: http://www.waterboards.ca.gov/water_issues/programs/tmdl/2010state_ir_reports/docs/2010ir0419.pdf.
- State Water Resources Control Board (GeoTracker) Information System and Geographic Environmental Information Management System (GEIMS) 2015. Available at: <http://geotracker.waterboards.ca.gov/>.
- Transportation Research Board. Highway Capacity Manual 2010.
- United States Census Bureau. 2017. American Factfinder.
- United States Census Bureau. 2017. American Factfinder, Table S0102, Population 60 Years and Over in the United States – Rancho Cordova city, California.
- United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 2016. USDA NRCS Web Soil Survey, Sacramento County, California. Accessed August 2018.
- United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 2013b. Web Soil Survey. Accessed August 2018. Available at: <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>.
- United States Energy Information Administration (U.S. EIA). 2017. California State Energy Profile. Last updated October 19, 2017. Available at: <https://www.eia.gov/state/print.cfm?sid=CA>.
- United States Energy Information Administration (U.S. EIA). 2019a. Analysis and Projections. Short-term Energy Outlook. Release date: July 9, 2019. Available at: https://www.eia.gov/outlooks/steo/report/global_oil.php.

- United States Energy Information Administration (U.S. EIA). 2019b. Independent Statistics and Analysis. Frequently Asked Questions. Last updated March 14, 2019. Available at: <<https://www.eia.gov/tools/faqs/faq.php?id=33&t=6>>.
- United States Environmental Protection Agency (U.S. EPA). Water Quality Progress Report – Sacramento County Urban Creeks – Diazinon and Chlorpyrifos. Approved 2004.
- United States Energy Information Administration (U.S. EIA). 2019a. Analysis and Projections. Short-term Energy Outlook. Release date: July 9, 2019. Available at: <https://www.eia.gov/outlooks/steo/report/global_oil.php>.
- United States Energy Information Administration (U.S. EIA). 2019b. Independent Statistics and Analysis. Frequently Asked Questions. Last updated March 14, 2019. Available at: <<https://www.eia.gov/tools/faqs/faq.php?id=33&t=6>>.
- United States Environmental Protection Agency. 2019a. Health Effects of Ozone Pollution. Accessed: July 11, 2019. Available at: <<https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution>>.
- United States Environmental Protection Agency. 2016. Basic Information about Carbon Monoxide (CO) Outdoor Air Pollution. Accessed: July 11, 2019. Available: <<https://www.epa.gov/copollution/basic-information-about-carbon-monoxide-co-outdoor-air-pollution#Effects>>.
- United States Environmental Protection Agency. 2017. Sulfur Dioxide Concentrations – EPA. Accessed: July 11, 2019. Available at: <https://cfpub.epa.gov/roe/indicator_pdf.cfm?i=91>.
- United States Environmental Protection Agency. 2018. National Air Quality: Status and Trends of Key Air Pollutants. Accessed: July 11, 2019. Available: <<https://www.epa.gov/air-trends>>.
- United States Environmental Protection Agency. 2019b. Health Effects of Ozone In the General Population. Accessed: July 11, 2019. Available: <<https://www.epa.gov/ozone-pollution-and-your-patients-health/health-effects-ozone-general-population>>.
- United States Environmental Protection Agency. 2019c. Health and Environmental Effects of Particulate Matter (PM). Available: <https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm>. Accessed: July 12, 2019.
- United States Environmental Protection Agency. 2019d. Basic Information About Lead Pollution. Accessed: July 12, 2019. Available: <<https://www.epa.gov/lead-air-pollution/basic-information-about-lead-air-pollution#how>>.
- United States Geological Survey. 2018. Magnitude/Intensity Comparison. Available at: <https://earthquake.usgs.gov/learn/topics/mag_vs_int.php>.
- University of California, Davis. 1997. Transportation Project-Level Carbon Monoxide Protocol. Revised December, 1997.

United States Energy Information Administration (U.S. EIA). 2017. California State Energy Profile. Last updated October 19, 2017. Available at: <<https://www.eia.gov/state/print.php?sid=CA>>.

Wallace-Kuhl & Associates. Phase I Environmental Site Assessment – Jaeger Ranch Property, Southeast of the Intersection of Douglas Road and Jaeger Road Rancho Cordova, California. September 22, 2016.

Wallace-Kuhl & Associates. Preliminary Geotechnical Engineering Report – Jaeger Ranch Property. September 26, 2016.

Watermark Engineering, Inc. The Ranch Master Drainage Study, Third Submittal. April 30, 2019.

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