

DRAFT  
ENVIRONMENTAL IMPACT REPORT

FOR THE  
LODI WEST 60 kV POWER LINE PROJECT  
City of Lodi, California

July 20, 2010

*Prepared for:*  
CITY OF LODI  
Community Development Department  
221 West Pine Street  
Lodi, CA 95241

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Community Development Department  
221 West Pine Street  
Lodi, CA 95241  
(209) 333-6800

Prepared by:

INSITE ENVIRONMENTAL, INC.  
6653 Embarcadero Drive, Suite Q  
Stockton, CA 95219

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# 1.0 INTRODUCTION

## 1.1 PROJECT AND EIR OVERVIEW

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The Lodi West 60 kV Power Line Project proposes the construction of a new 60-kilovolt (kV) electrical power line that would increase the reliability of the existing electrical supply to Lodi Electric Utility (LEU) customers. Currently, Lodi has only one connection point to the regional electrical grid. The electrical supply is picked up at a Pacific Gas and Electric (PG&E) substation several miles east of the City of Lodi, within San Joaquin County. The existing power line runs west for several miles through rural farmland before reaching LEU customers. This existing line has experienced several failures in the past years, resulting in loss of power to the entire city. To ensure a more reliable supply of electricity to the City of Lodi, the City proposes to construct an additional power line that will connect Lodi to the regional power grid at a second location on the west side of the City of Lodi. This Environmental Impact Report (EIR) describes the potential environmental effects that would result from the City of Lodi (City) approval of the project and its subsequent development.

The project area is located in a rural area west-southwest of the City of Lodi (Figures 1-1 and 1-2). The project's eastern terminus is located near a proposed future substation at the intersection of State Route 12 and the future Westgate Drive. The project's western terminus is located west of the City of Lodi Water Pollution Control Facility (WPCF) site, which is located adjacent to and west of Interstate 5. The City has proposed a primary proposed route for the project, known as the Primary Route. The Primary Route would place a set of six 60-kV conductors overhead on power poles (both wood and steel) along, from east to west, a private farm road, Harney Lane, DeVries Road, Tredway Road, Neeley Road, Kingdon Road, Thornton Road and City of Lodi property. Steel poles will be used in locations that the line changes direction or where increased height is needed. Once the new line reaches the WPCF site, it would connect to the existing 230 kV switchyard operated by the Northern California Power Agency (NCPA).

The purpose of this EIR is to analyze and describe the potentially significant environmental impacts of the Lodi West 60 kV Power Line Project; to identify, analyze and recommend feasible mitigation measures that would avoid or substantially reduce the project's environmental effects; to analyze reasonable alternatives to the proposed project; and to meet other applicable requirements of the California Environmental Quality Act (CEQA). The EIR is an informational document that does not in itself determine whether the proposed project will be approved; instead, the function of the EIR is to inform the public of the land use planning and decision-making process associated with the project. The authority for EIR preparation and the relationship of the project and this document to applicable legal requirements under CEQA are addressed in Section 1.2 below.

## 1.2 EIR REQUIREMENTS AND PROCESSING UNDER THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

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This EIR has been prepared in accordance with the requirements of CEQA and the State CEQA Guidelines. CEQA was passed in 1970 to ensure that state and local agencies consider the environmental effects of actions undertaken, funded or regulated by those agencies. The State CEQA Guidelines contain advisory and mandatory requirements for the application of CEQA to development projects. The City of Lodi is the “lead agency” for the proposed project. As defined in the CEQA Guidelines, the lead agency is the public agency that carries out a project or that has the greatest responsibility for supervising or approving a project.

An EIR is intended to inform decision-makers and the public about the potentially significant adverse environmental effects of the proposed project, and to recommend any feasible mitigation measures that would reduce or avoid these effects. The EIR includes consideration of cumulative impacts, growth-inducing impacts, irreversible effects and alternatives to the proposed project. Regulatory agencies and members of the public have the opportunity to comment on the adequacy of the environmental review during a 45-day review period following the publication of the Public Review Draft EIR. After the close of the public review period, the City is obligated to provide written responses to the comments received, and those responses will be published in a Final EIR. The Final EIR must be considered by City decision-makers, and any other agencies that have approval jurisdiction over the project, prior to project approval. The approving agencies are also required to make certain findings related to the mitigation of significant environmental effects prior to project approval.

This document is the Public Review Draft EIR (Draft EIR) for the Lodi West 60 kV Power Line Project. This EIR is now being made available for review by agencies and the public. The EIR is accompanied by a Notice of Availability and/or a Notice of Completion, which specify the beginning and ending dates of the public review period. Any comments or questions regarding this EIR should be submitted to the lead agency at the following address by the date specified in the Notice of Availability and/or Notice of Completion for this Draft EIR.

City of Lodi  
Community Development Department  
City Hall, 221 West Pine Street  
P.O. Box 3006  
Lodi, CA 95241-1910  
Attention: Konradt Bartlam, Interim Community Development Director

## 1.3 RELATED PROJECTS

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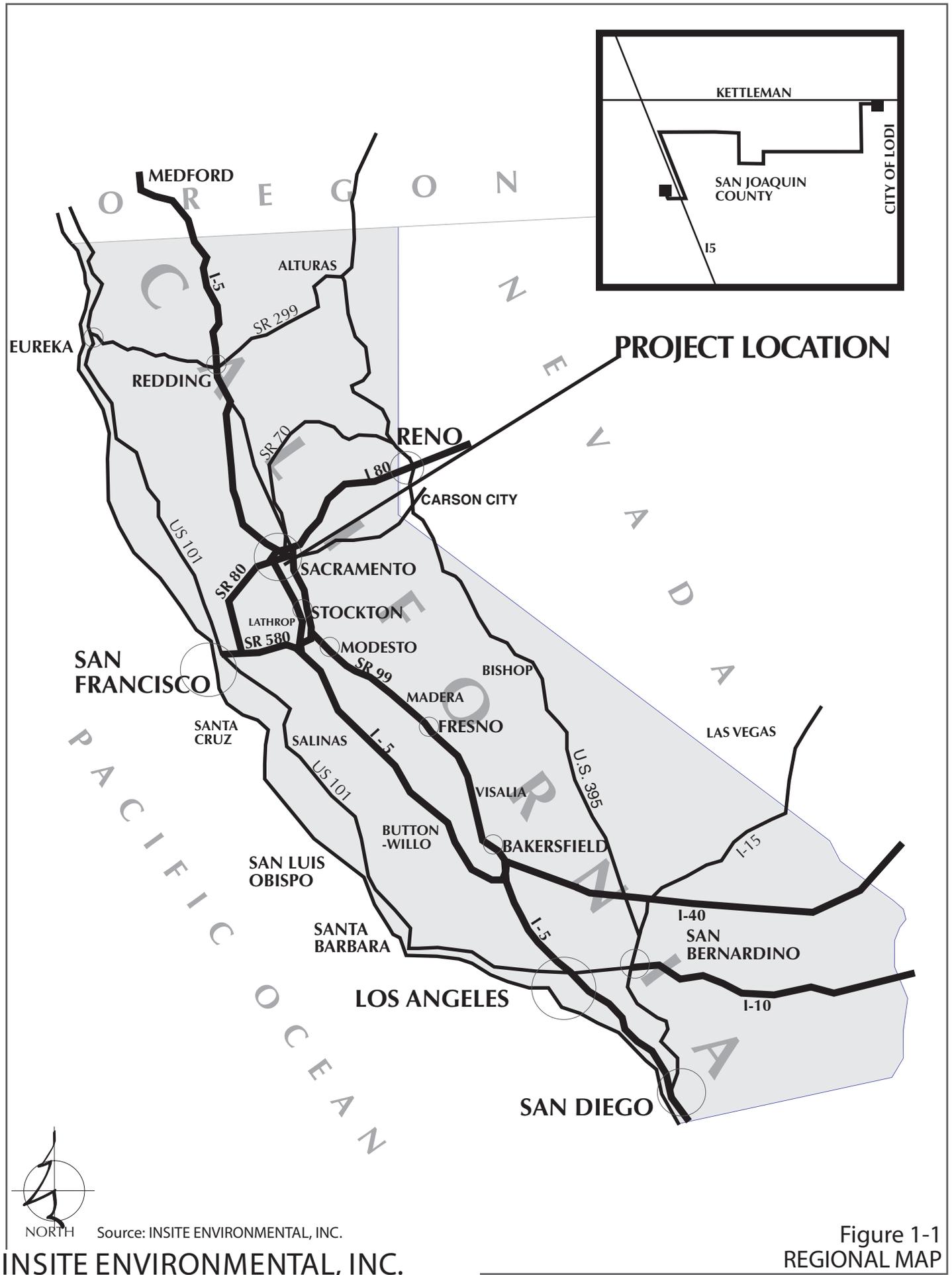
The majority of the proposed Primary Route is located in a rural area located southwest of the City of Lodi; portions of the Primary Route are located within the jurisdiction of San Joaquin County. Agriculture is the predominant land use in this portion of the project area, and development has been limited mainly to scattered residences and agricultural buildings. Public facilities, such as a power plant and wastewater treatment plant are located adjacent to the Primary Route, west of Interstate 5.

The western terminus of the proposed Primary Route is located within the 49-megawatt (MW) power plant operated by the Northern California Power Agency. A substation will be constructed within this facility. NCPA's Combustion Turbine Project No. 2 began commercial operation in April 1995. The facility consists of a 49.9 MW steam-injected gas turbine (STIG) electrical generation power plant.

NCPA has processed and received approval from the California Energy Commission in April 2010 to construct a second power plant, the Lodi Energy Center (LEC). LEC is to be located immediately adjacent to the STIG plant. The two power plants (existing and proposed) are located in a complex that also includes the City of Lodi's White Slough Water Pollution Control Facility (WPCF).

The proposed LEC would generate 225 MW of electricity using steam turbine generators operating on natural gas. The gas would be supplied by a new 2.5-mile pipeline that would be installed next to an existing gas pipeline that supplies the 49-MW plant at the WPCF site.

At the eastern terminus of the proposed Primary Route, Lodi Electrical Utility proposes to construct the future Westside Substation. The substation project would be located on City property next to the proposed extension of Westgate Drive south of State Route 12 (Figures 1-2, 3-1 and 3-2A). Although the Westside Substation would be one of the endpoints of the Lodi West 60 kV Power Line Project, it would be constructed prior to and independently of the 60 kV Power Line Project. For the purposes of this EIR, the Westside Substation is assumed to be in place.



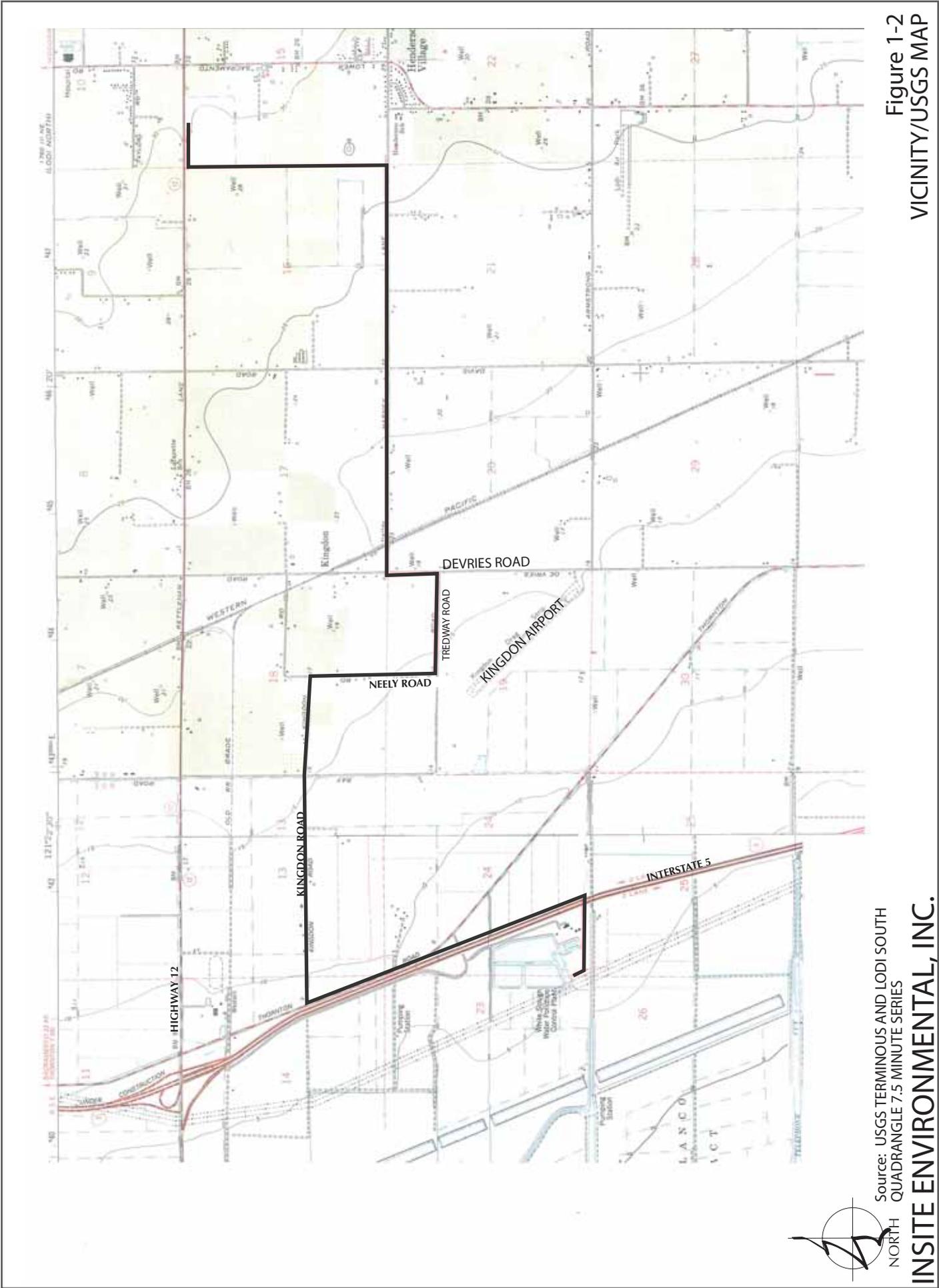
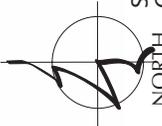


Figure 1-2  
VICINITY/USGS MAP



Source: USGS TERMINOUS AND LODI SOUTH  
NORTH QUADRANGLE 7.5 MINUTE SERIES  
**INSITE ENVIRONMENTAL, INC.**

## 2.0 SUMMARY

### 2.1 SUMMARY OF PROJECT DESCRIPTION

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The Lodi West 60 kV Power Line Project proposes the construction of a new 60-kilovolt (kV) electrical power line that would increase the reliability of the existing electrical supply to Lodi Electric Utility (LEU) customers. Currently, Lodi has only one connection point to the regional electrical grid. The electrical supply is picked up at a Pacific Gas and Electric (PG&E) substation several miles east of the City of Lodi, within San Joaquin County. The existing power line runs west for several miles through rural farmland before reaching LEU customers. This existing line has experienced several failures in the past years, resulting in loss of power to the entire city. To ensure a more reliable supply of electricity to the City of Lodi, the City proposes to construct an additional power line that will connect Lodi to the regional power grid at a second location on the west side of the City of Lodi.

The project area is located in a rural area west-southwest of the City of Lodi. The project's eastern terminus is located near a proposed future substation at the intersection of State Route 12 and the future Westgate Drive. The project's western terminus is located west of the City of Lodi Water Pollution Control Facility (WPCF) site, which is located adjacent to and west of Interstate 5, within the Northern California Power Agency (NCPA) 230 kV switchyard.

The City has proposed a primary proposed route for the project, known as the Primary Route. The Primary Route would place a set of six 60-kV conductors overhead on power poles (both wood and steel) along, from east to west, a private farm road, Harney Lane, DeVries Road, Tredway Road, Neeley Road, Kingdon Road, Thornton Road and City of Lodi property. Steel poles will be used in locations that the line changes direction or where increased height is needed. Once the new line reaches the WPCF area, it would connect to the existing 230 kV switchyard operated by the Northern California Power Agency (NCPA).

### 2.2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

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The potentially significant impacts of the proposed project and mitigation measures proposed to minimize these effects are listed in Table 2-1 at the end of this chapter. The table also identifies the level to which the proposed mitigation measures would reduce impacts. Significant unavoidable impacts are those for which the significance remains "significant" or "less than significant" after mitigation measures are applied.

### 2.3 SUMMARY OF ALTERNATIVES

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Chapter 20.0 identifies and discusses a range of reasonable alternatives to the proposed project. The alternatives considered in that chapter include:

- No Project Alternative
- Alternate Route #1
- Alternate Route #2
- Combinations of Primary Route and Alternative Routes
- Alternative Eastern Terminus Tie-in

The No Project Alternative is defined as the continuation of existing conditions in the project area. Under the No Project Alternative, no 60 kV Power Line would be installed between the NCPA power plant site and the future Westside Substation site. No new power poles would be installed, and existing power lines would remain in place, subject to occasional repair or replacement as conditions warrant. The City of Lodi would continue to rely on its existing connection to the regional power grid at the substation east of Lodi. The No Project Alternative would not fulfill the objective of the proposed project, which is to increase the reliability of the City's electric system. The electric system would remain vulnerable to potential failures, which may continue to cause citywide blackouts.

The Alternative Route #1 Alternative would be similar to the proposed project, in that it would begin at the proposed Westside Substation and end at the NCPA power plant site. However, the route alignment would be different than the Primary Route by utilizing State Route 12, Davis Road, and remain on Tredway Road to Ray Road and then enter agricultural property between Ray Road and Interstate 5. The Alternative Route #2 Alternative would be similar to Alternative Route 1, but the alignment through the agricultural property, between Ray Road and Interstate 5, would slightly differ.

Many of the impacts of Alternate Routes #1 and #2 would be similar to those of the proposed project. These routes would avoid some of the rural residences along Harney Lane, Neeley Road, Kingdon Road and Thornton Road that would be affected by the proposed project, thereby avoiding the potentially adverse air quality and noise impacts on these residences from construction activities. However, these impacts would only be transferred to residences and businesses along SR 12 and Davis Road. Construction on the segments south, southwest of Ray Road may lead to greater dust emissions, as construction would occur on mostly undeveloped land and increase potential impacts to agricultural production due to construction activities.

These alternative routes along Tredway Road would cross over safety zones designated for Kingdon Airpark by the County's Airport Land Use Compatibility Plan (see Chapter 11.0, Health and Safety). In particular, the alignment passes through the Runway Protection Zone (Zone 1), the Inner Approach/Departure Zone (Zone 2), and the Inner Turning Zone (Zone 3). Any poles set in Zone 1 would require Airport Land Use Commission (ALUC) review, while poles in Zone 2 would likely require review, as most poles would be taller than 35 feet. Depending on the results of the ALUC review, pole sizes may need to be shortened, or poles may not be allowed in the zones. This may affect the feasibility of these Alternative Routes.

The Combinations of Primary Route and Alternative Routes Alternative would be similar to the proposed project, in that it would begin at the proposed eastern terminus and end at the NCPA power plant site. However, the alignment would be a combination of the Primary Route and the Alternate Routes. Essentially, this alternative would utilize Alternate Routes #1 and #2 segments along SR 12 and Davis Road and then follow the remaining segments of the Primary Route to the

western terminus at the NCPA power plant. This alternative would fulfill the proposed project objective while avoiding potential conflicts with the Kingdon Airport compatibility zones along Tredway Road and Ray Road that the Alternate Routes encounter. However, it would have aesthetic impacts along SR 12, as well as potential agricultural conflicts due to the placement of the poles. Long range planning improvements along SR 12, including widening of the roadway, could lead to a need to acquire easements from adjacent property owners to implement this alternative, which would add more expense to the project and possibly result in the loss of agricultural land.

The Alternate Eastern Terminus Tie-in Alternative would entail by-passing the future Westside Substation site and connecting the 60 kV Power Line into existing 60 kV power lines closer to Lower Sacramento Road. Approximately six poles would be required to extend this alternative from Westgate Drive to Lower Sacramento Road. This alternative would have many of the same potential impacts identified under the proposed project, however, it would have additional aesthetic impacts along SR 12 due to the placement of the additional poles.

## 2.4 SIGNIFICANT UNAVOIDABLE IMPACTS

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This EIR identifies the significant environmental effects of the proposed project and the mitigation measures that are proposed to minimize these effects. Proposed mitigation would be effective in reducing project-level potentially significant environmental effects to a less than significant level in all cases. However, the project's potential impacts on cumulative aesthetic impacts would not be reduced to less than considerable thus these cumulative aesthetic impacts are considered significant and unavoidable.

**TABLE 2-1  
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation
<b>4.0 AESTHETICS</b>			
Project Effects on Visual Resources	LS	None required.	
Aesthetic Effects on Scenic Routes and Scenic Vistas	LS	None required.	
Aesthetic Effects of Construction	LS	None required.	
Light and Glare	LS	None required.	
<b>5.0 AGRICULTURE</b>			
Loss of Farmland	LS	None required.	
Williamson Act Lands Impacted	LS	None required.	
Conversion of Farmlands	LS	None required.	
<b>6.0 AIR:</b>			
Impacts of Project Construction on Air Quality	PS	6-1. All project construction activities shall comply with relevant provisions of the San Joaquin Valley Air Pollution Control District Regulation VIII - Control Measures for Construction Emissions of PM-10, as described in Table 6-2 of the District's Guide for Assessing Air Quality Impacts, or the applicable regulation of the APCD with jurisdiction. These requirements would typically include: <ul style="list-style-type: none"> <li>a. All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, or vegetative ground cover.</li> <li>b. All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.</li> <li>c. All land clearing, grubbing, scraping, excavation, land leveling, grading, cut &amp; fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.</li> <li>d. When materials are transported off-site, all material shall be covered, effectively wetted to limit visible dust emissions, or at least six inches of freeboard space from the top of the container shall be maintained.</li> <li>e. All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust</li> </ul>	LS

TABLE 2-1  
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation
		emissions. Use of blower devices is expressly forbidden.	
		f. Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.	
		g. Limit traffic speeds on unpaved roads to 15 mph.	
Impacts of Project Operations on Air Quality	LS	None required.	
Exposure to Toxic Air Contaminants	LS	None required	
Exposures to Odors	LS	None required.	
<b>7.0 BIOLOGICAL RESOURCES</b>			
Impacts on Special Status Plants	LS	None required.	
Impacts to Special Status Wildlife Species	PS	7-1. Pre-construction surveys for nesting Swainson's hawks along the Primary Route shall be conducted if construction commences between March 1 and September 15. The surveys shall include all large trees visible from the Primary Route. If active nests are found, a qualified biologist shall recommend any necessary temporal restrictions on construction to avoid or minimize disturbance of the nests. Such restrictions may include, but are not limited to, a buffer area around nests within which no construction activities would occur until the young have fledged.	LS
		7-2. Pre-construction surveys for burrowing owls along the Primary Route shall be conducted if construction commences between February 1 and August 31. The surveys shall include the rural areas along the roads that the Primary Route follows, and all areas of open grassland visible from the Primary Route. If occupied burrows are found, a qualified biologist shall recommend any necessary temporal restrictions on construction to avoid or minimize disturbance of the nests. Such restrictions may include, but are not limited to, a buffer area around nests within which no construction activities would occur until the young have fledged.	
		7-3. Pre-construction surveys for tricolored blackbird shall be conducted if construction commences between March 15 and August 1. The survey shall include the blackberry brambles and marsh vegetation associated with wetlands in the vicinity of the west end of the Primary Route. If active nests are found, a qualified biologist shall recommend any necessary temporal restrictions on construction to avoid or minimize disturbance of	

**TABLE 2-1  
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation
		<p>the nests. Such restrictions may include, but are not limited to, a buffer area around nests within which no construction activities would occur until the young have fledged.</p> <p>7-4 Any trees that need to be removed or trimmed as part of the project shall be felled or trimmed outside of the general bird nesting season (February 1 through August 31), or a nesting bird survey shall be conducted immediately prior to the proposed tree removal or trimming. If active nests are found, tree felling or trimming shall be delayed until the young have fledged.</p> <p>7-5 As an alternative to the above mitigation measures, the proponent may seek coverage under the SJMSCP. In this event, the proponent shall request coverage under the SJMSCP, pay required fees and observe any Incidental Take Minimization Measures specified for the project by the San Joaquin County COG.</p> <p>7-6 Potentially jurisdictional waters of the U.S. and wetlands shall be avoided to the maximum extent practicable through placing the power poles outside the potentially jurisdictional areas. If power poles must be placed within potentially jurisdictional waters of the U.S. or wetlands and/or modifications to the jurisdiction areas are needed to support the pole installation, a wetland delineation shall be conducted and submitted to ACOE to determine the jurisdictional or non-jurisdictional status of mapped features. If the project will involve encroachment into potentially jurisdictional waters of the U.S. and wetlands, all necessary permits and/or certification shall be obtained from ACOE, CDFG, and the Regional Water Quality Control Board, and the project shall comply with all conditions of these permits and/or certifications.</p>	LS
Impacts on Wetlands and Waters of the US	PS		
Other Biological Resource Impacts	LS	None required.	
<b>8.0 CULTURAL RESOURCES</b>			
Potential Impacts on Prehistoric Cultural Resources	PS	<p>8-1 If any subsurface cultural resources, including either prehistoric or historic resources, are encountered during construction, all construction activities in the vicinity of the encounter shall be halted until a qualified archaeologist can examine these materials and make a determination of their significance.</p> <p>8-2 If human remains are encountered at any time during the development of the project, all work in the vicinity of the find shall halt and the County Coroner shall be notified immediately. If it is determined that the remains are those of a Native American, the Coroner must contact the Native American Heritage Commission. At the same time, a qualified archaeologist must be contacted to evaluate the archaeological implications of the finds. The CEQA Guidelines detail steps to be taken when human remains are found to be of Native American origin.</p>	LS

TABLE 2-1  
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation
Potential Project Effects on Historic Resources	PS	8-3 The EUD shall be responsible for compliance with Mitigation Measure 8-1, if necessary, regarding unidentified subsurface cultural resources exposed during excavation activities, including unidentified historic resource.	LS
<b>9.0 GEOLOGY AND SOILS</b>			
Project Exposure to Faulting and Seismic Shaking Hazards	LS	None required.	
Project Exposure to Liquefaction	LS	None required.	
Exposure of Project to Soil Hazards	LS	None required.	
Effects on Mineral Resources	LS	None required.	
<b>10.0 GLOBAL CLIMATE CHANGE</b>			
Impacts of Project-Related Greenhouse Gas Emissions	LS	None required.	
Project Consistency with Applicable Plans	LS	None required.	
Impacts of Climate Change on Project	LS	None required.	
<b>11.0 HEALTH AND SAFETY</b>			
Impacts from Hazardous Materials during Construction	LS	None required.	
Hazardous Material Impacts During Project Operation and Maintenance	LS	None required.	
Transport of Hazardous Materials	LS	None required.	
Impact of High-Voltage Power Lines	LS	None required.	
Hazards Related to Airport Operations	PS	11-1 If design modifications require power pole heights to exceed 100 feet above ground level along the Primary Route, the Airport Land Use Commission and Federal Aviation Administration shall be notified and a request made to review the land use action (e.g., installation of power poles that exceed 100 feet in height within Compatibility Zones 7 and 8).	LS

TABLE 2-1  
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation
Electrocution Hazards	LS	None required.	
<b>12.0 HYDROLOGY AND WATER QUALITY</b>			
Impacts on Surface Water Supply and Quality	LS	None required.	
Impacts on Groundwater Supply and Quality	LS	None required.	
Project Effects on Stormwater Runoff	LS	None required.	
Exposure of Primary Route to Flooding Hazards	LS	None required.	
<b>13.0 LAND USE AND PLANNING</b>			
Issues Associated with Existing Land Uses	LS	None required.	
Consistency with General Plan Policies	LS	None required.	
Consistency with Zoning	LS	None required.	
Consistency with San Joaquin County Habitat Conservation Plan	LS	None required.	
Consistency with the Airport Land Use Compatibility Plan	LS	None required.	
<b>14.0 NOISE</b>			
Construction Noise	PS	14-1. Temporary noise impacts resulting from project construction shall be minimized by restricting hours of operation by noise-generating equipment to 7:00 AM to 7:00 PM Monday through Saturday when such equipment is to be used near noise-sensitive land uses. No construction activities shall occur Sundays or national holidays.  14-2 All construction equipment shall be fitted with factory equipped mufflers, and shall be maintained in good working order, at all times.	LS
Impacts of Project Operations	LS	None required.	
Airport Noise	LS	None required.	

TABLE 2-1  
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation
<b>15.0 POPULATION AND HOUSING</b>			
Project Effects on Population Growth	LS	None required.	
Project Effects on Housing	LS	None required.	
<b>16.0 PUBLIC SERVICES/FACILITIES</b>			
Project Impacts on Public Services	LS	None required.	
<b>17.0 TRANSPORTATION</b>			
Impacts on Roadway and Intersection Operations	LS	None required.	
Impacts on Railroad and Public Transit Operations	LS	None required.	
Impacts on Pedestrian and Bicycle Facilities	LS	None required.	
Impacts on Air Traffic	LS	None required.	
<b>18.0 UTILITIES/SERVICES SYSTEMS</b>			
Water and Wastewater Systems	LS	None required.	
Storm Drainage Systems	LS	None required.	
Solid Waste Generation	LS	None required.	
Project Impacts on Non-Electrical Utilities	LS	None required.	
Project Impacts on Electrical System	LS	None required.	
Project Effects on Energy Consumption	LS	None required.	
<b>19.0 CUMULATIVE</b>			
Aesthetics	CS	None available.	CS
Agricultural Resources	LC	None required.	
Air Quality	LC	None required.	

TABLE 2-1  
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation
Biological Resources	LC	None required.	
Cultural Resources	LC	None required.	
Geology and Soils	LC	None required.	
Global Climate Change	LC	None required.	
Health and Safety	LC	None required.	
Hydrology and Water Quality	LC	None required.	
Land Use and Planning	LC	None required.	
Noise	LC	None required.	
Public Services	LC	None required.	
Transportation/Circulation	LC	None required.	
Utilities and Energy Systems	LC	None required.	
<i>Mitigation Measure Key Code:</i>			
<i>ODS=Owners, developers and/or successors-in-interest; S=Significant; CS=Cumulatively Considerable and Significant; PS=Potentially Significant; LS=Less than Significant; LC=Less than Considerable</i>			

## 3.0 PROJECT DESCRIPTION

### 3.1 PROJECT OVERVIEW

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The Lodi West 60 kV Power Line Project proposes the construction of a new 60 kilovolt (kV) electrical power line. The purpose of the project is to increase the reliability of the existing electrical supply to Lodi Electric Utility (LEU) customers. Currently, Lodi has only one connection point to the regional electrical grid. The electrical supply is picked up at a Pacific Gas and Electric (PG&E) substation several miles east of the City of Lodi, within San Joaquin County. The power line runs west for several miles through rural farmland before reaching LEU customers. This existing line has experienced several failures in the past years, resulting in loss of power to the entire city. To ensure a more reliable supply of electricity to the City of Lodi, the City proposes to construct an additional 7.8-mile long power line that will connect Lodi to the regional power grid at a second location west of the City of Lodi.

The proposed Primary Route, which is linear in nature, involves construction and operation of a planned 7.8-mile long 60 kV power line by the City of Lodi Electrical Utility Department (EUD). The line would connect the City's future Westside Substation, located near the intersection of State Route 12 and the future Westgate Drive, with available electric supply from major statewide distribution lines that parallel the west side of I-5, south of State Route 12. This tie-in will occur at the existing Northern California Power Agency's 230 kV switchyard facility near the City of Lodi's White Slough Water Pollution Control Plant west of I-5.

The Primary Route between the two end points will traverse rural agricultural areas within San Joaquin County. A major portion of the Primary Route will be located within existing Public Utility Easements on San Joaquin County roads. One segment near the eastern terminus will be placed along a private farm road within an existing utility easement. A segment along I-5 within City of Lodi property will have to have a utility easement established. A combination of wood and steel poles will be used to carry the proposed power line which consists of 6 wires. Where existing poles with communication lines or PG&E distribution lines are present along the Primary Route; they will be replaced with the new 60 kV poles and the existing lines will be moved onto the new poles.

### 3.2 PROJECT LOCATION

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The proposed 7.8-mile long Primary Route will connect to the future Westside Substation site, located on the southwest corner of Kettleman Lane (also known as State Route 12) and future Westgate Drive, in the City of Lodi. The Primary Route traverses west across unincorporated territory to the site of a proposed substation within the Northern California

Power Agency's power plant facility near the City of Lodi's White Slough Water Pollution Control Plant. Except for privately held land near the Primary Route's eastern terminus and paralleling the east side of I-5, the project would be located within the following road rights-of-ways: Harney Lane, DeVries Road, Tredway Road, Neeley Road, Kingdon Road, and Thornton Road. Refer to Figures 1-1 and 1-2.

### 3.3 PROJECT OBJECTIVE

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The objective of the project is to increase the reliability of the City's electrical system by providing a second point of supply from the regional power grid. The City's system is presently served with power supply from a single PG&E substation located in an unincorporated area to the east of the city. This line has experienced several interruptions in the past years, which have resulted in the loss of power to the entire city. An additional power line as proposed will connect the City of Lodi to the regional power grid at a second location, providing an alternate electric supply in case of an accidental interruption of supply from the eastern power line.

### 3.4 PROJECT DETAILS

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The proposed Primary Route involves construction and operation of a planned 7.8-mile long 60 kilovolt power line by the City of Lodi Electrical Utility Department. The line would connect the City's future Westside Substation with electric supply from regional distribution lines that parallel the west side of I-5, south of State Route 12. This tie-in will occur within the existing Northern California Power Agency's 230 kV switchyard.

The majority of the proposed power line will be constructed with wooden poles (approximately 127). Approximately 13 steel poles will be used at main angle points (approximately 90 degrees) and at critical crossing locations such as roadways and/or drainage ways. Some sections of line will be constructed jointly with existing PG&E distribution lines. All PG&E poles will be replaced and existing facilities transferred to the new poles. The City's preliminary estimate indicates that along the primary route 104 of the proposed poles will be joint (include attaching existing PG&E lines) along the Primary Route, and 36 poles will only have an EUD solo attachment (the 60 kV power line only).

The determination of the height of the poles is based on California Public Utilities Commission General Order 95 (GO-95) construction standards for a 60 kV power line. The steel poles and wooden poles will be a minimum of 57 feet above ground level. Heights up to approximately 90 feet will be required for crossing of existing PG&E power lines, the Union Pacific Railroad tracks, and I-5.

## **Primary Route Description by Segment**

The following is a detailed description of each segment of the Primary Route. Each straight, linear run of line corresponds to a segment. A descriptive title has also been given each segment. Unless steel pole locations are specifically identified in the detailed description or shown on the figures, all other poles should be assumed to be wooden. Figures 3-1 through 3-3 illustrate the Primary Route details, including pole profiles.

### Segment A (Future Westside Substation)

- The power line begins at the easternmost interconnection point, the future Westside Substation, located on the southwest corner of Kettleman Lane (State Route 12) and the future Westgate Drive. The 60 kV power line exits the proposed Westside Substation at the southwest corner of the substation and proceeds west approximately 900 feet on the north side of a planned future street right-of-way to a private farm road.
- The first pole next to the future Westside Substation will be steel.

### Segment B (Farm Road)

- The power line turns south, with the use of a steel pole, on the private farm road and continues approximately 4,800 feet to Harney Lane. The first approximately 900 feet of the line will be constructed jointly with PG&E distribution lines. After approximately 900 feet, the power line will consist of a solo attachment (the 60 kV power line only). A steel pole is used at this transition from joint to solo attachment.
- The last 1,200 feet of this segment, north of Harney Lane will be constructed jointly with PG&E distribution lines.
- This north-south trending segment ends with a steel pole within the Harney Lane right-of-way.

### Segment C (Harney)

- The power line turns west along the north side of Harney Lane and continues approximately 12,000 feet to DeVries Road. This segment of power line will be constructed jointly with PG&E distribution lines and existing communication lines (i.e., telephone). The last 1,000 feet of power poles before DeVries Road will be joint use with PG&E distribution lines only (no communication).
- This east-west trending segment ends with a steel pole at the northeast corner of DeVries Road and Harney Lane.

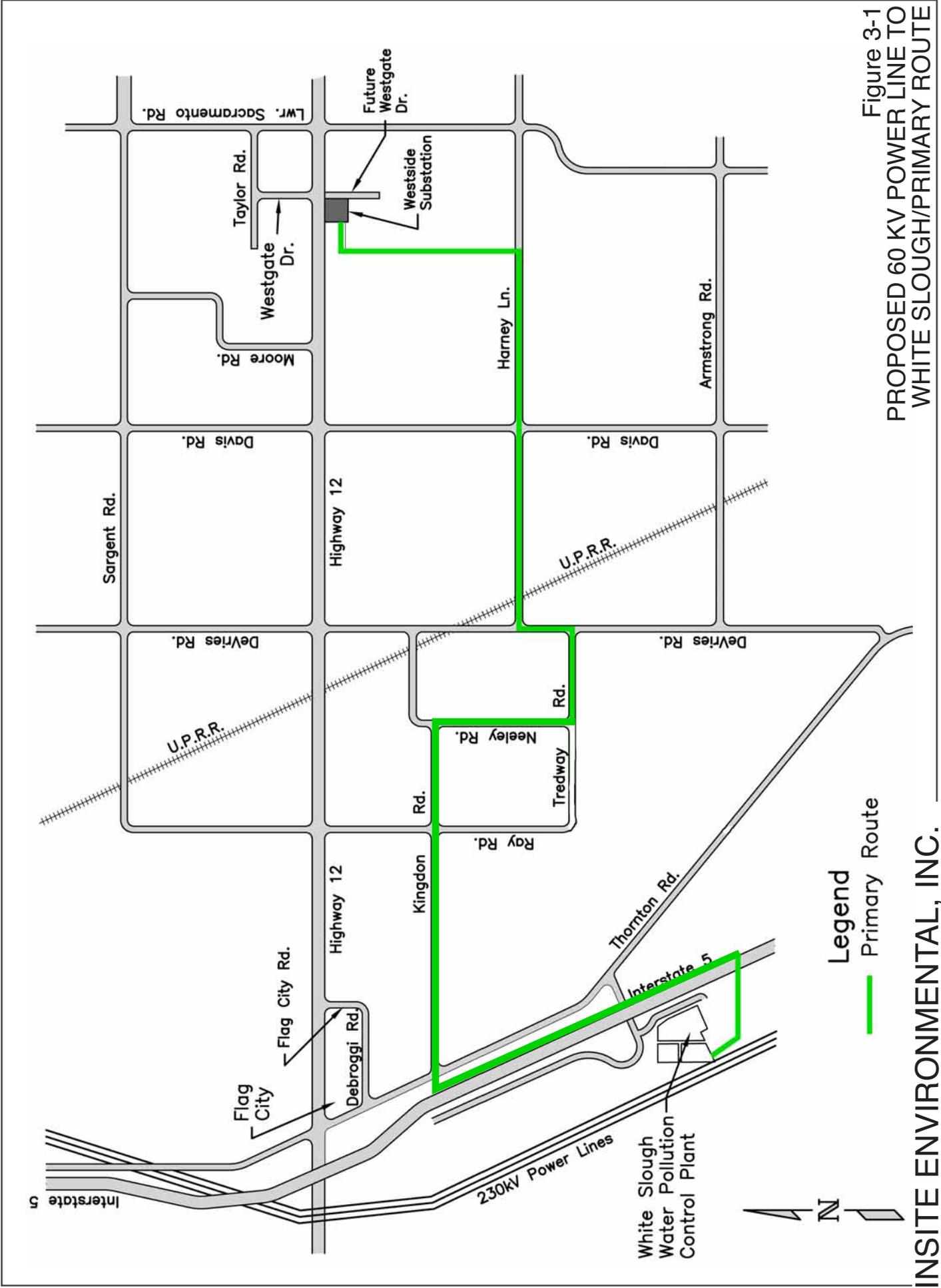
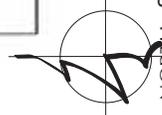
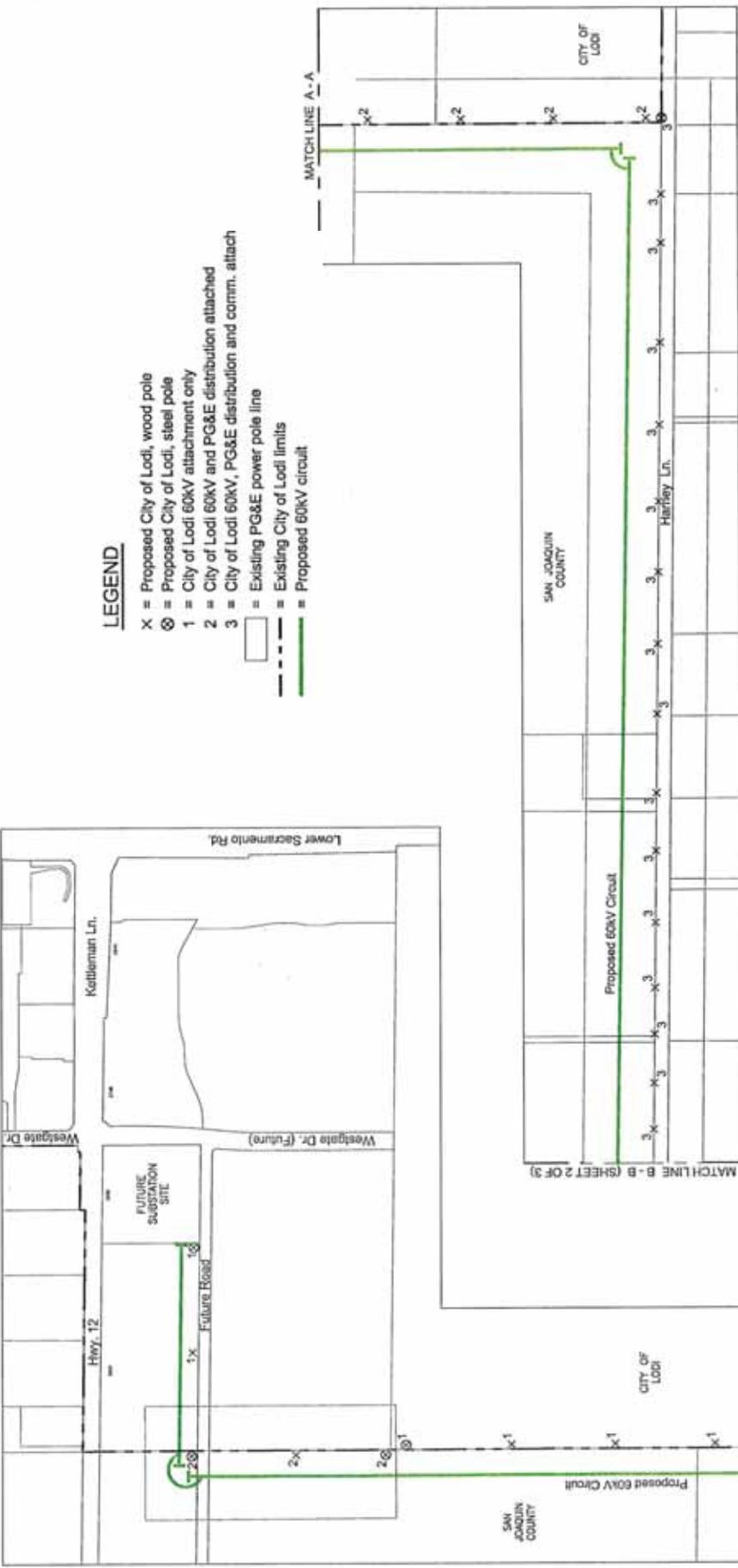


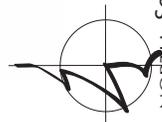
Figure 3-1  
 PROPOSED 60 KV POWER LINE TO  
 WHITE SLOUGH/PRIMARY ROUTE



NORTH Source: CITY OF LODI

**INSITE ENVIRONMENTAL, INC.**

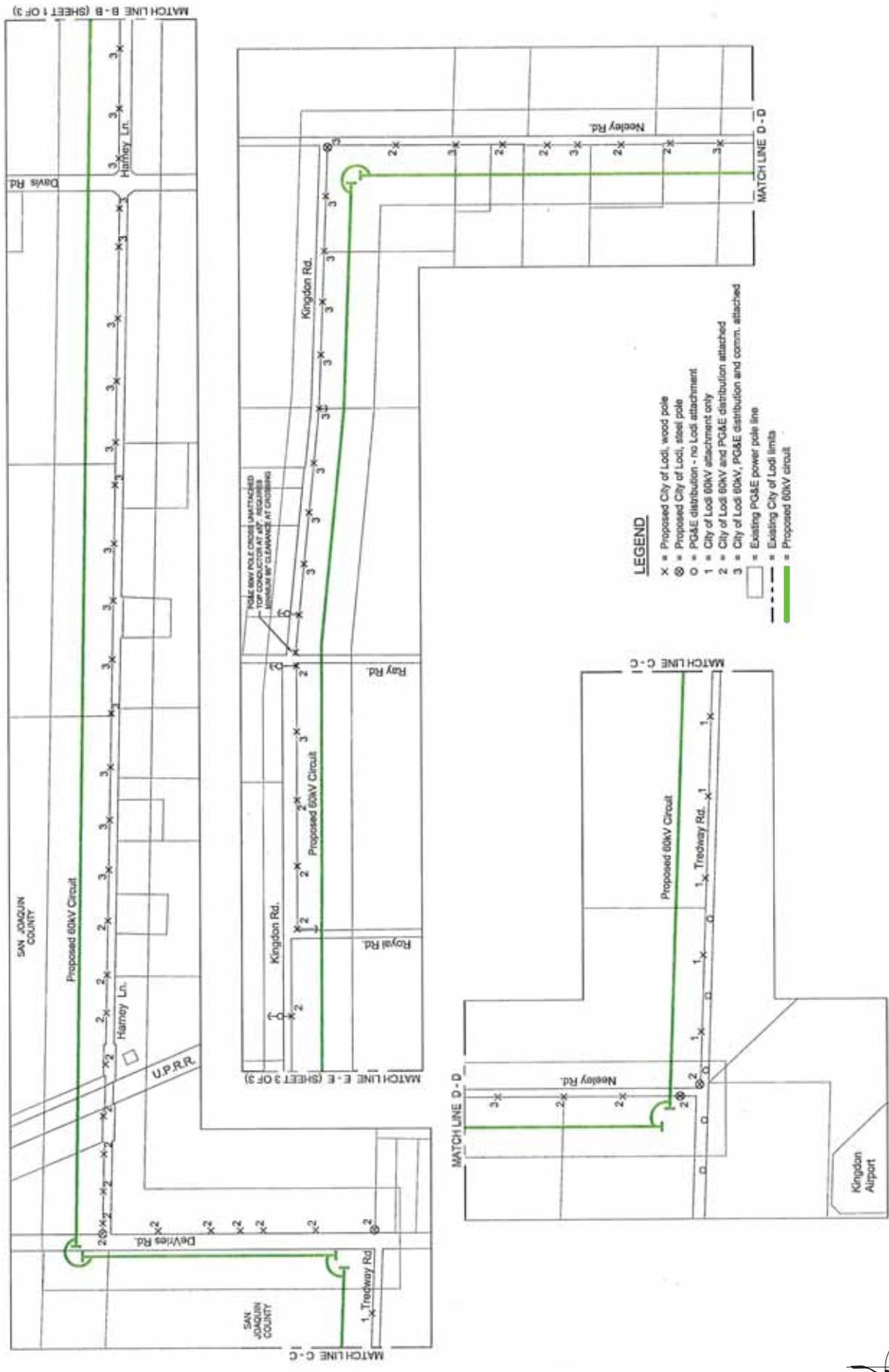
Figure 3-2A  
**PROPOSED 60 kV POWER LINE TO WHITE SLOUGH  
 SEGMENTS A TO C OF PRIMARY ROUTE**



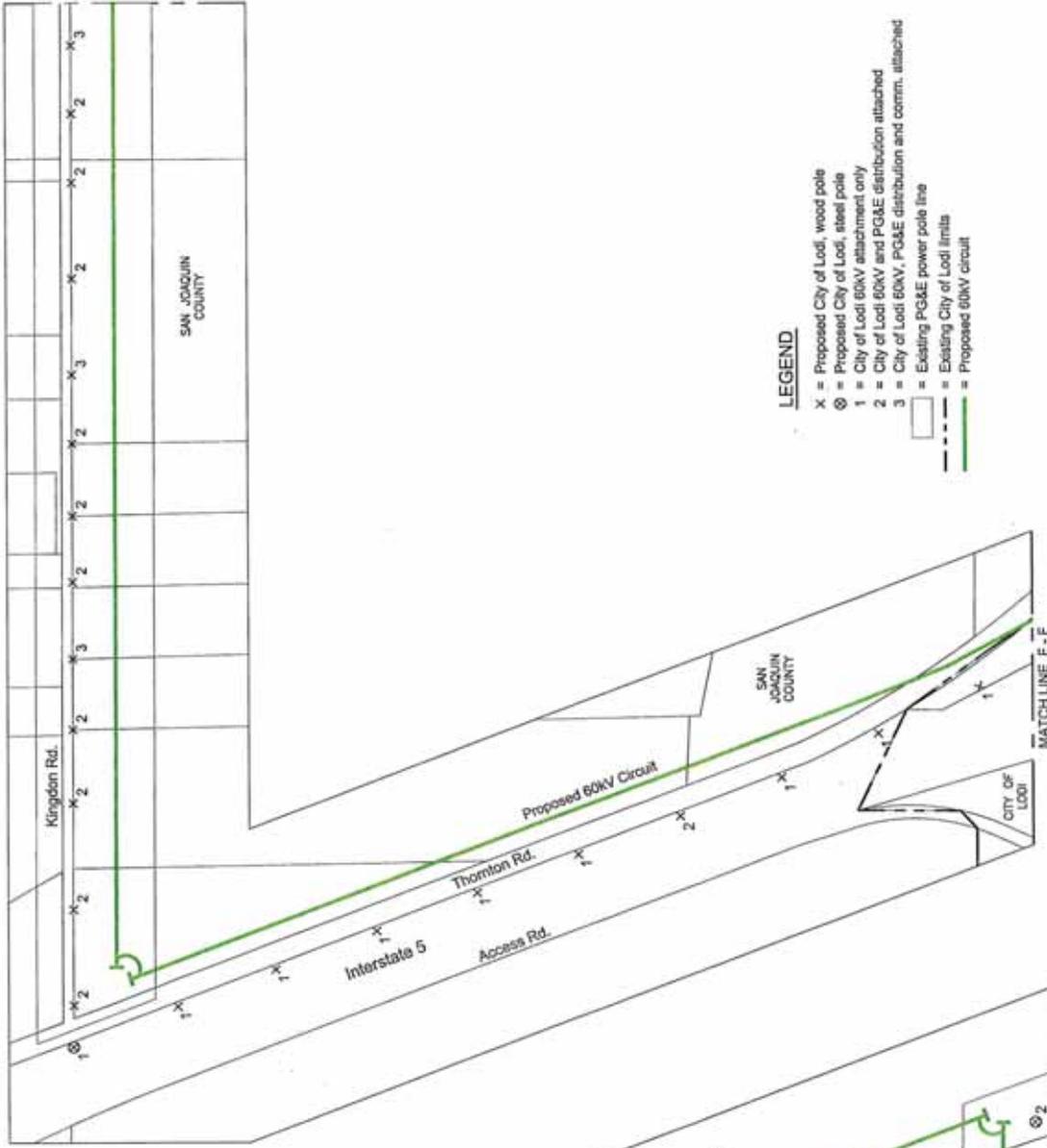
NORTH Source: CITY OF LODI

**INSITE ENVIRONMENTAL, INC.**

**Figure 3-2B**  
**PROPOSED 60 kV POWER LINE TO WHITE SLOUGH**  
**SEGMENTS C TO G OF PRIMARY ROUTE**

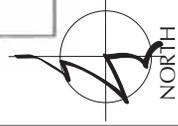


MATCHLINE E-E (SHEET 2 OF 3)



**LEGEND**

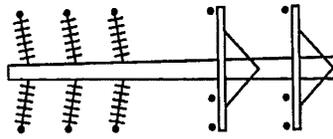
- X = Proposed City of Lodi, wood pole
- ⊗ = Proposed City of Lodi, steel pole
- 1 = City of Lodi 60kV attachment only
- 2 = City of Lodi 60kV and PG&E distribution attached
- 3 = City of Lodi 60kV, PG&E distribution and comm. attached
- = Existing PG&E power pole line
- - - = Existing City of Lodi limits
- = Proposed 60kV circuit



Source: CITY OF LODI

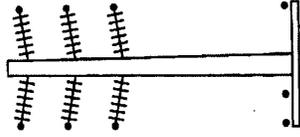
**INSITE ENVIRONMENTAL, INC.**

Figure 3-2C  
PROPOSED 60 kV POWER LINE TO WHITE SLOUGH  
SEGMENTS G TO I OF PRIMARY ROUTE



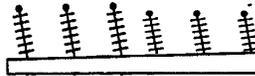
**POLE PROFILE**

Joint use with dual distribution and communication lines



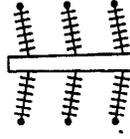
**POLE PROFILE**

Joint use with distribution and communication lines



**POLE PROFILE**

Solo Attachment (EUD Only)



**POLE PROFILE**

Solo Attachment (EUD Only)

#### Segment D (DeVries)

- The power line turns south on the east side of DeVries Road for approximately 1,300 feet to Tredway Road. This segment of power line will be constructed jointly with PG&E distribution lines.
- This north-south trending segment ends with a steel pole at the northeast corner of DeVries Road and Tredway Road.

#### Segment E (Tredway)

- The power line heads west on the north side of Tredway Road for approximately 2,800 feet to Neeley Rd. The power line will leave the joint poles at DeVries Road and consist of a solo attachment (the 60 kV line only) along this segment.
- This east-west trending segment ends with a joint steel pole at the northeast corner of Neeley Road and Tredway Road.

#### Segment F (Neeley)

- The power line crosses Neeley, travels along the west side of Neeley Road for approximately 3,100 feet. A steel pole is located at the northwest corner of Neeley Road and Tredway Road.
- This segment of power line will be constructed jointly with PG&E distribution and communication lines.
- This segment ends with a joint steel pole at the southwest corner of Kingdon Road and Neeley Road.

#### Segment G (Kingdon)

- The power line turns west along the south side of Kingdon Road for approximately 8,200 feet to the west side of Thornton Road.
- This segment of power line will be constructed jointly with PG&E distribution and communication lines.
- This segment ends with a steel pole at the southwest corner of Kingdon Road and Thornton Road.

#### Segment H (Thornton and I-5)

- The power line turns south along the west side of Thornton Road for approximately 4,000 feet, at which point Thornton Road turns to the east. The proposed 60 kV power line continues south, paralleling I-5 for another 4,000 feet along private property adjacent to the I-5 right-of-way.

- This segment of power line consists of a solo attachment (the 60 kV power line only).

#### Segment I (White Slough)

- The power line crosses I-5 in the same location as an existing PG&E 12kV distribution line crossing. This segment of power line will be constructed jointly with PG&E distribution lines.
- The power line continues west on City of Lodi property for approximately 1,300 feet to a proposed tie-in at the Northern California Power Agency's (NCPA) facility near White Slough Water Pollution Control Plant. The power line will leave the westernmost steel pole along the Primary Route, attach to a takeoff steel structure positioned in the southwest corner of the NCPA facility, and then tie into the existing system.
- Steel poles will be used at both ends of this segment.

#### **White Slough Substation**

The western terminus of the Primary Route would be at the existing NCPA power plant, adjacent to the White Slough Water Pollution Control Plant. A modification to the existing power plant substation would be required for an interconnection with the proposed power line. A new substation bay and buss extension would be required to accommodate the installation of the 230/60 kV transformer bank and breakers necessary for the interconnection. A takeoff steel structure will be positioned in the southwest corner of the NCPA facility to receive the power line from the most western steel pole along the Primary Route.

#### **Construction Methods**

Most of the proposed power line will be constructed with approximately 127 wooden poles. Approximately 13 steel poles will be used at main angles (approximately 90 degrees) and at critical crossing locations such as roadways and/or drainage ways. Figure 3-3 contains representative schematic drawings of the types of pole design to be utilized. The determination of the height of the poles is based on CPUC GO-95 construction standards for a 60 kV power line.

Some segments of the power line will be constructed jointly with PG&E distribution lines. All PG&E poles will be replaced and facilities transferred to new poles.

Construction of the power line would consist of drilling the holes for the poles, setting the poles, installing associated cross-arms and other hardware, and pulling the conductors into place. Typically, the holes would be drilled and the poles placed with a line truck. A three-man crew can place approximately five poles per day. Typically, once the poles are in place, a rope is strung along the alignment and over the pole fixtures. The rope is tightened and connected to the spooled conductor, and then is used to pull the conductor

into place. Usually a 4,400-foot reel of conductor is pulled at once, although more or less may be pulled depending on the constraints of the site.

Construction of steel corner poles for power lines would involve either the excavation and pouring of a concrete foundation and placement of anchor bolts to which the flanged corner poles would be fastened, or the steel poles would be installed similar to wood poles; holes would be drilled and a portion of the steel pole lowered into the hole.

Construction of the power line would involve temporary work and minor disturbances along existing roads and streets. Conflicts with travel lanes will be minimized at all times, and if any lanes are closed, closure of more than one lane at a time would be unlikely. Traffic safety cones or construction signage would be used to alert drivers to the presence of workers and equipment.

### **Public Utility Easements/Pole Placement**

The Lodi EUD has standards for public utility easements for 60 kV power lines mounted on power poles. For one or both sides of the roadway, the easement would be 10 feet wide from the roadway right-of-way or the property line. This easement is vertical as well as horizontal. At 23 feet above the ground surface, the easement widens to 16.5 feet from the roadway right-of-way or property line. These standards would apply to all segments of the Primary Route.

The project proposes to use the existing easements in which existing power poles have been placed. The EUD presented the proposed project with the Primary Route to the San Joaquin County Planning Department and Public Works Department for their review and comments. The setback for existing utility poles on the Primary Route is 3 to 8 feet. The County agreed to allow the EUD to apply for placing the poles in the existing setbacks from the edge of the roadway (Auriga Corporation, 2008).

### **Westside Substation (Not A Part)**

At the eastern terminus of the Primary Route, the Lodi EUD, as a separate project, will construct a substation at the intersection of State Route 12 and the future Westside Drive. This proposed Westside Substation would be constructed independently of this project, and is being subject to separate CEQA review. The potential environmental effects of the Westside Substation are, however, considered in the cumulative impact analysis in Chapter 19.0, *Cumulative Impacts*.

## **3.5 PERMITS AND APPROVALS**

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The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) identify the principal discretionary actions under consideration in the EIR as well as any other agency permits and approvals that may require consideration under

CEQA. Anticipated and potential permits and approvals associated with the project are identified in Table 3-1.

TABLE 3-1  
PERMITS AND APPROVALS

Agency	Permit/Approval
Federal Aviation Administration (FAA)	Application for Construction of a Permanent Structure
California Department of Transportation	Encroachment Permit
San Joaquin County	Encroachment Permit
Lodi City Council	Final Environmental Impact Report Certification
Union Pacific Railroad	Encroachment Permit

## 4.0 AESTHETICS/VISUAL RESOURCES

### ENVIRONMENTAL SETTING

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Aesthetics are highly subjective by nature. Webster's dictionary defines aesthetics as "a branch of philosophy dealing with the nature of beauty, art, and taste and with the creation and appreciation of beauty; a pleasing appearance or effect". Thus, the aesthetic value assigned to something varies significantly, depending on a person's ideas and perceptions. Visual resources are the natural and cultural features of a place that can be seen and that contribute to the public's enjoyment of that place. Visual resource or aesthetic impacts are generally defined by a project's physical characteristics and their potential visibility, and how the project would change the visual character and quality of the place in which it would be located.

#### Project Area Setting

The project area is located in the Central Valley, which is primarily composed of a rural agricultural/residential landscape. The rural portions of the Central Valley vary widely in use, but include extensive croplands, orchards, vineyards, and rural residences that range from single homes associated with agricultural uses to small, subdivided areas. Landscape character is common throughout most of the Central Valley, as extensive portions are devoted to orchard or field crops particularly well suited to the soils or climate of a particular locale. The project area contains extensive areas of vineyards, and cornfields and orchards were also observed. There are also rural residences scattered throughout the project area.

Public roads, irrigation canals, railroads and other linear facilities in the Central Valley are generally adjoined by agricultural land, including associated low-density rural residential development, occasional industrial and other non-agricultural uses. The project area contains several two-lane rural roads within relatively narrow rights-of-way. These include Harney Lane, DeVries Road, Tredway Road, Kingdon Road and Thornton Road. Agricultural uses and roadside residences generally dominate views along these roadways. However, an airstrip (Kingdon Airpark) is visible along portions of DeVries Road and Tredway Road. Also, a Union Pacific Railroad track traverses the center of the project area in a northwest-southeast orientation. Agricultural lands adjoin the tracks, except for an agricultural chemicals business at the intersection of Harney Lane and DeVries Road.

Along state highways, interstate freeways and other high-volume roads, rural road aesthetics are frequently dominated by the presence of the transportation facility itself and its wide, cleared right-of-way. The project area includes two high-volume roadways: Interstate 5 (I-5) and State Route 12 (SR 12). I-5 and SR 12 intersect approximately 2 miles north of the Lodi Water Pollution Control Facility (WPCF), which is near the western terminus of the project. A commercial cluster, known as Flag City, is located in the southeastern corner of the intersection. Flag City includes gas stations, a truck stop,

restaurants, motels and other highway services. East of Flag City, SR 12 has views that are of primarily agricultural lands, mainly vineyards. West of I-5 along SR 12, views consist primarily of agricultural lands, mainly field and row crops. The WPCF is visible from I-5. Located adjacent to and west of I-5, the WPCF site includes the plant with treatment and holding ponds, and an existing power plant and substation operated by the NCPA. East of the WPCF, across from I-5 and west of Thornton Road, are vacant lands owned by the City of Lodi.

Existing views from public roads in the Central Valley commonly include overhead utility pole systems, including electrical and phone facilities and occasionally cable television facilities. Some roads have overhead facilities on both sides of the road, while others have none at all. The project area contains power poles that are already installed along the preferred alignment, except along Tredway Road where only a few poles are installed around the intersection with Neeley Road, and along Thornton Road. Most existing lines in the study area have wires mounted on cross arms, with a variety of different hardware and insulator types. Most of the poles are made of wood and have been in use for decades. Due in part to the number of years the existing poles have been exposed to the elements of weather and soil conditions, many existing poles along the proposed alignment are leaning rather than upright. A few poles have some bracing to keep them upright or from leaning any further causing stress to the facility components (i.e., power and communication lines).

### Areas of Visual/Aesthetic Sensitivity

While numbers of sites within the project area are potentially sensitive to visual/aesthetic impact, primary concerns typically are addressed to areas and travel routes with the highest probable viewer expectations. These would include designated scenic routes; potential project areas located in or near recreational sites; and destinations, recreational travel corridors and designated natural areas. The San Joaquin County General Plan has designated Interstate 5 north of Eight Mile Road – a segment of which passes through the project area – as a Scenic Route. In addition, the Lodi General Plan has designated the entry of SR 12 into Lodi as a “gateway” that should be made visually appealing (Urban Design and Cultural Resources Element, Goal B, Policy 1). There are no recreational sites or designated natural areas in the project area.

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

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### Significance Thresholds

According to the CEQA Guidelines, a project will ordinarily have a significant effect on the environment if it would have a substantial, demonstrable negative aesthetic effect. Further, a project may have significant aesthetic effects if it would:

- Have a substantial adverse effect on a scenic vista,

- Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway,
- Substantially degrade the existing visual character or quality of the site and its surroundings, or
- Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

### *Project Effects on Visual Resources*

The project would result in the long-term addition of new overhead power lines to the existing aesthetic environment, predominantly along existing rural roads. Physical changes associated with program implementation would include the addition of new poles, or the replacement of existing poles with taller poles; the use of steel poles at turns in the alignment (i.e., corners); the addition of new insulators, cross-arms and other equipment; and the installation of new conductors to the individual alignment.

Viewer expectations in rural areas are generally associated with agricultural and residential land use of the area, or services to these uses. Potentially affected viewer populations would consist of general-use motorists using existing highways and public roads, and project area residents who would have concerns with aesthetic changes in the vicinity of their residences. On a more general level, rural portions of the project area represent an open space resource for residents of nearby urban areas. Visual/aesthetic sensitivity levels would tend to be relatively low within the extensive common agricultural areas that predominate in the project area. Low-volume/moderate sensitivity corridors, such as numerous local roads in the project area, may affect fewer people, but the scale of change and aesthetic expectations may be somewhat greater.

While electrical facilities are generally an accepted part of the developed landscape, the number and organization of those facilities bears on whether they are a neutral or more noticeable and detrimental element of the landscape. The number of poles and conductors, and the presence or absence of transformers or other equipment, varies widely from location to location and is a reflection both of electrical demands generated by local and regional land uses; design practices of the electrical utility; and numerous changes and upgrades to the electrical system over time. Existing overhead utility systems may vary from a single, pole-mounted telephone cable to several cables, one or more distribution circuits and a transmission circuit. These configurations are generally illustrated in Figures 4-1 and 4-2 that depict existing views along Harney Lane and Kingdon Road.

Electrical facilities are a common element of the aesthetic environment throughout the project area. Overhead distribution and/or transmission facilities, together with telephone and television cables, are suspended from pole systems located along most public highways and streets. Nonetheless, some residents may find replacement electrical facilities represent aesthetic deterioration, especially the addition of steel poles. Also, portions of the proposed alignment have no existing electrical facilities. Any proposed new facilities would involve the addition of new aesthetic elements to the alignment,

rather than repetition of existing elements. Local residents or users may consider these added facilities significant in aesthetic impact.

New electrical lines, insulators and poles would add to this aspect of the rural/agricultural landscape. However, these facilities would not contrast greatly with existing conditions, as similar facilities are a common and accepted part of the landscape. To illustrate the potential aesthetics impacts of the proposed power line, Environmental Vision, a visual resource consultant, visited the area of the proposed alignment and took photographs of two representative segments of the proposed route: one view looking west along Harney Lane and the second view looking east along Kingdon Road, east of Ray Drive. The consultant then performed a visual simulation of the project along those two segments by superimposing images of the project components onto the existing view. The simulations were based on the type, height and alignment of poles proposed in these segments. Figures 4-1 and 4-2 illustrates these segments and the “before” and “after” views of the project.

As shown in Figures 4-1 and 4-2, the views after project construction would not be significantly different from existing conditions. Proposed lines will be built along existing distribution line alignments and would generally increase pole height and add the 60 kV power lines, but would result in no substantial increase in the number of poles. Some of the existing poles due to age and stress have begun to lean and be less uniform with adjacent poles. In situations where existing poles are replaced, the replacement would restore a degree of uniformity to the line through the use of standard designs and materials for both the new pole and replacement of the existing pole. As a result, proposed facilities, in comparison to many existing facilities, would involve less variation from pole to pole, with variations in pole height or conductor configuration restricted to situations where other facilities must be crossed, or where other unusual conditions occur. This same condition would extend to future system maintenance, as damaged poles and equipment will generally be replaced with comparable equipment.

Specific areas where aesthetic/visual impacts potentially may occur include the following:

**State and Federal Highway Crossings.** The project would involve a crossing of Interstate 5. Utility line crossings of highways and roads are common throughout the project area, and a part of the background visual environment in areas served by overhead electrical facilities. Aesthetic effects from this source would be very localized and incidental, and no mitigation would be considered necessary. The crossing of I-5 is discussed in more detail later in this chapter.

**Rural Roads.** The majority of the project would involve the construction of overhead lines along local roads serving rural areas that are predominantly agricultural, with some crossings. Most of these alignments have existing electrical and other utility facilities along at least one side of the road. As with the state and federal highways, facilities along rural roads are common throughout the project area, and a part of the background visual environment.



**Existing View from Harney Lane Looking West**



**Visual Simulation of Proposed Project**



**Existing View from Kingdon Road Looking East**



**Visual Simulation of Proposed Project**

**Canal, Pipeline and Private Road Alignments.** Power lines may be located along irrigation canals, pipeline alignments, private roads or other non-public linear facilities, including other electrical line alignments. Aesthetic concerns associated with these alignments are generally restricted to those of adjoining owners and residents, as opposed to the public using highways and roads. Potential aesthetic effects would be generally minimal and localized. Electrical transmission or distribution would be consistent with continued use of the linear facility as well as with the surrounding use, and these alignments would involve less potential for significant impacts than lines located along public-use corridors.

**Public Lands.** The potential impacts of electrical line construction on public lands would be similar to those described above for various land use conditions. Project alignments located adjacent to or through public corporation yards, sewage treatment plants, unused surplus lands or other lands fulfilling essentially commercial, industrial, or agricultural uses would involve no more environmental impact than private lands in comparable use. Potential aesthetic impacts on lands of this type would generally be less than significant and would not require mitigation. The project would traverse City-owned lands that are currently used for agriculture or are vacant, and the western endpoint of the project would be near the WPCF. It would not affect public lands with park, recreational or scenic uses.

The most significant visual changes in the project area resulting from the project would be the increased height of the poles and the placement of steel poles. Steel poles would be placed only where the line would change direction, which would result in 13 steel poles installed out of approximately 140 total poles. In addition, all poles would be placed in existing rights-of-way along public roads, where existing poles are currently placed. Based on this, along with the low population density, the intensive agricultural nature of the area, and the degree to which views are localized by orchard and ornamental tree plantings, the potential aesthetic/visual effects of the project are not considered significant.

Level of Significance: Less than significant

Mitigation Measures: None required

### *Project Effects on Scenic Routes and Scenic Vistas*

As discussed in the Environmental Setting section, there are no designated scenic vistas, notable scenic resources or designated or recognized scenic roads or highways in the project area, except for Interstate 5 and the SR 12 “gateway” to Lodi. I-5 would be affected by the project, as the power line proposes to cross I-5 near the WPCF site. The crossing would be at the location of an existing power line crossing, which would be replaced by the new crossing. Since the power line would cross I-5 at the existing location, and since the existing line would be replaced, the net effect of the project on I-5’s scenic value would be less than significant.

The proposed alignment of the project would not cross SR 12 nor follow any segment of it. Instead, the power line would exit the proposed Westside Substation from its southwestern corner and go directly west to a proposed line segment that would follow an existing line corridor south to Harney Lane; away from SR 12. The project would have no significant impact on I-5 or the SR 12.

Level of Significance: Less than significant

Mitigation Measures: None required

### *Aesthetic Effects of Construction*

Planned construction activities associated with the project would result in potential aesthetic effects. The hole-drilling, pole-setting, installation of hardware, and conductor stringing required for power line construction would, in any particular area, involve minor and localized effects. The presence of construction equipment and activity would not be required for more than a few days in any location. The presence of utility construction and maintenance equipment would result in no significant permanent aesthetic effect.

Level of Significance: Less than significant

Mitigation Measures: None required

### *Light and Glare*

The project would use mostly wood poles, which do not reflect light. Steel poles are typically coated with anti-rust agents that reduce potential glare, or are painted with non-reflective colors. None of these new distribution lines would require lighting, nor would they use reflective materials. Therefore, the project would not result in the potential for new light or glare.

Level of Significance: Less than significant

Mitigation Measures: None required

## 5.0 AGRICULTURAL RESOURCES

### ENVIRONMENTAL SETTING

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Agriculture has been and continues to be an important part of the economy in San Joaquin County. An estimated 4,000 farms are located within the county and cover an estimated land area of 1,400 square miles. The general trend in agriculture has been toward less acreage harvested, but higher product values.

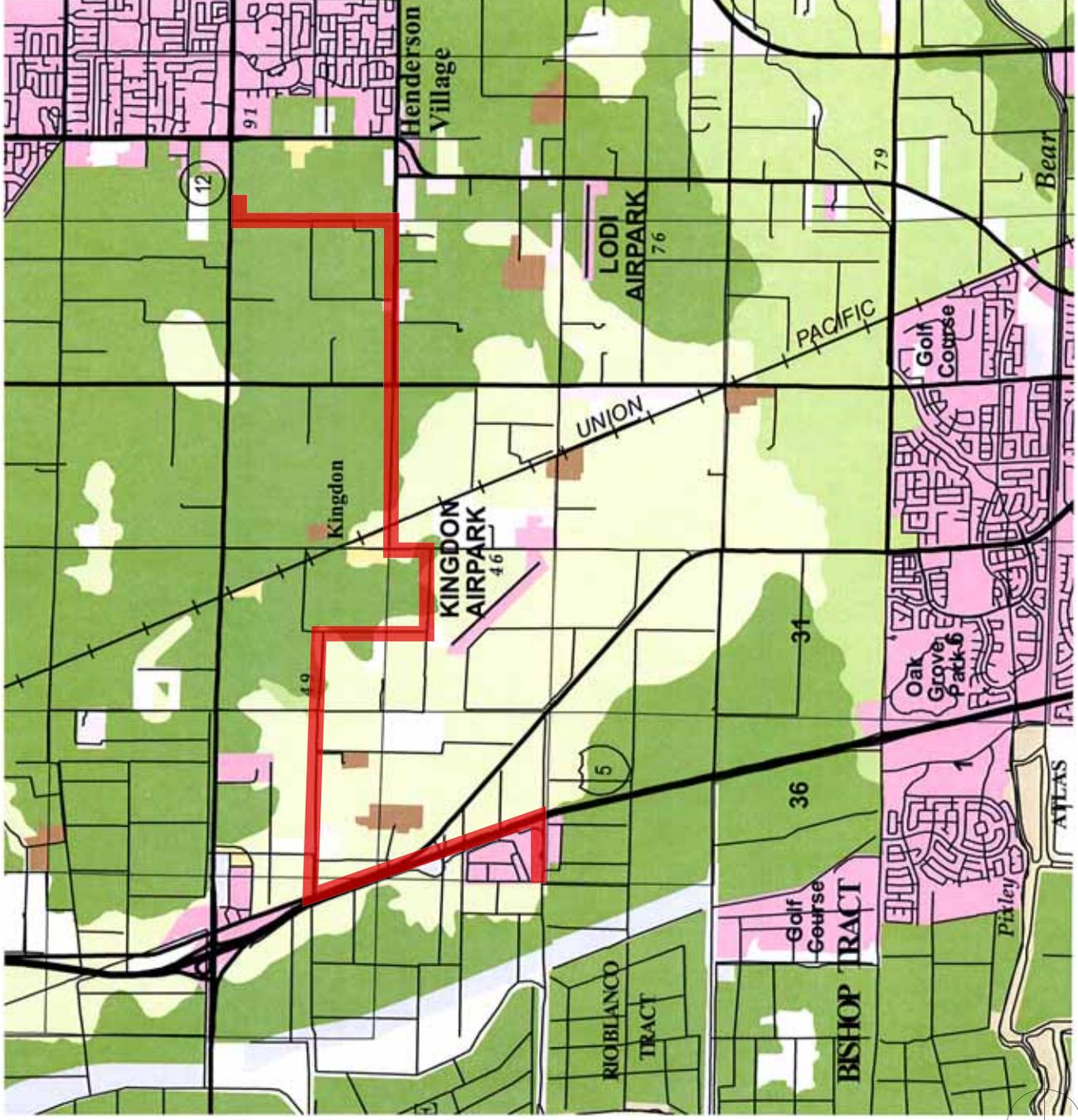
The project area is located in an area southwest of Lodi and north of Stockton. Land uses in this area are predominantly agricultural. Within the project area, vineyards, orchards and row and field crops are raised. There is little development, mostly scattered single-family residences and agricultural buildings. The two most significant developed areas are the Kingdon Airpark and the Lodi Wastewater Pollution Control Facility (WPCF) site.

According to the Natural Resources Conservation Service, approximately 54% of the soils in the project area are classified as “prime” by the soil survey, provided the soils are irrigated. The remaining soils, mostly Devries sandy loam, are classified as “non-prime.” There are three soils in the project area that are rated as “excellent” for cultivated agriculture potential. These are Acampo sandy loam, Kingdon fine sandy loam, and Tokay fine sandy loam. Another soil, Tujungam loamy sand, is rated as having “good” potential. One soil rated as “poor”, Devries sandy loam, covers almost half of the project area. Table 5-1 provides detailed information on the agricultural suitability of project area soils. Chapter 9.0, Geology and Soils, provides additional soils information.

#### Important Farmland

The California Department of Conservation has a Farmland Mapping and Monitoring Program that tracks trends in farmland acreage and prepares maps of agricultural lands. The maps categorize farmland in decreasing order of importance as "Prime Farmland," "Farmland of Statewide Importance," "Unique Farmland," and "Farmland of Local Importance." Collectively, these categories of farmland constitute "Important Farmland," and the maps illustrating these and other lands are called Important Farmland Maps.

The Important Farmland Map for San Joaquin County designates most of the project area as Prime Farmland and Local Importance (Figure 5-1). “Prime Farmland” includes lands with the best combination of physical and chemical characteristics able to sustain long-term production of agriculture crops. “Unique Farmland” is land used for production of the state’s major crops on soils not qualifying as Prime Farmland. The project area contains small areas of Urban and Built Up Land, which include Kingdon Airpark and the Lodi WPCF site, as well as scatterings of Farmland of Local Importance and Other Lands. “Farmland of Local Importance” is farmable land in San Joaquin County that does not meet the definitions of Prime Farmland, Unique Farmland or other farmland designations.



**Legend:**

- Prime Farmland
- Statewide Importance
- Unique Farmland
- Local Importance
- Grazing
- Urban
- Other
- Water
- County Limit
- City Limit
- Street
- Water
- Primary Route of 60 kV Power Line

NORTH SOURCE: STANTEC CONSULTING INC.

INSITE ENVIRONMENTAL, INC.

Figure 5-1  
IMPORTANT FARMLAND MAP

TABLE 5-1  
 AGRICULTURAL SUITABILITY OF SOILS  
 LODI WEST 60 KV POWER LINE PROJECT AREA

Name <sup>1</sup>	Prime	Capability Class	Storie Index Grade and Rating <sup>2</sup>
101 - Acampo Sandy Loam	Yes	IIs irrigated, IVs non-irrigated	Grade 1, Excellent
149 - Devries Sandy Loam	No	IIIw irrigated, IVw non-irrigated	Grade 4, Poor
168 - Guard Clay Loam	Yes	IIIw irrigated, IVw non-irrigated	Grade 3, Fair
169 - Guard Clay Loam, drained	Yes	IIw irrigated, IVw non-irrigated	Grade 3, Fair
189 - Kingdon Fine Sandy Loam	Yes	I irrigated, IVc non-irrigated	Grade 1, Excellent
256 - Tokay Fine Sandy Loam	Yes	I irrigated, IVc non-irrigated	Grade 1, Excellent
259 - Tujunga Loamy Sand	Farmland of Statewide Importance	IIIe irrigated, IVe non-irrigated	Grade 2, Good

NOTES:

1. Refer to Figure 9-1 in Chapter 9.0 Geology and Soils for location of soil types.
2. Index value is weighted average of the component part ratings.

*Sources: US Dept. of Agriculture, Soil Conservation Service, Soil Survey of San Joaquin County, California, 1992; US Dept. of Agriculture, Natural Resources Conservation Service, Custom Soil Resource Report for San Joaquin County, California, Lodi EUD Power Line, 2009*

The loss of available agricultural land has been identified by the State as an issue of concern. Between 1990 and 2006, 31,015 acres of agricultural land were lost in San Joaquin County. Of these acres lost, 18,074 acres were classified as Important Farmland, defined as being Prime Farmland, Unique Farmland, Farmland of Statewide Importance and Farmland of Local Importance. Most of these lost acres (24,056 acres) were converted to Urban and Built Up Land (Department of Conservation, 2007).

## REGULATORY SETTING

### Williamson Act

The California Land Conservation Act of 1965 – commonly known as the Williamson Act – enables counties and cities to designate agricultural preserves and offer preferential taxation to private agricultural landowners based on the income-producing value of their property in agricultural use, rather than on the property’s assessed market value. In return for the preferential tax rate, the landowner signs a contract with the county or city agreeing

not to develop the land for a minimum 10-year period. Contracts are automatically renewed annually unless a party to the contract files for nonrenewal or petitions for cancellation. Additionally, landowners may enter into longer-term agreements by signing into a Farmland Security Zone contract. Land under a Farmland Security Zone contract is valued for property assessment purposes at 65 percent of its Williamson Act valuation, or 65 percent of its Proposition 13 valuation, whichever is lower. The minimum initial term for a farmland security zone contract is 20 years. Upon expiration of the initial term, the contract self-renews annually for an additional year until a notice of nonrenewal is filed.

Permissible land uses under Williamson Act contracts (e.g. agricultural land uses and limited ancillary uses) are governed by Government Code §51238.1. In accordance with State law, each city and county has the discretion to determine land uses that are or are not compatible with Williamson Act contracts, provided these uses are not prohibited under the Act. Several parcels adjacent to the Primary Route are under existing Williamson Act contracts.

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

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### Significance Thresholds

For the purposes of this EIR, impacts on agricultural resources are considered significant if the proposed project would:

- Result in a conversion of Prime Farmland, Unique Farmland, Farmland of Statewide Importance, and Farmland of Local Importance, as shown on the maps prepared under the Farmland Mapping and Monitoring Program of the California Department of Conservation, to nonagricultural use;
- Cause a conflict with existing zoning for agricultural use or a Williamson Act contract land; or
- Involve other changes in the existing environment that, because of their location or nature, could result in conversion of farmland to nonagricultural use.

### Project Impacts on Agricultural Resources

#### *Loss of Farmland*

The proposed 60 kV Power Line Primary Route would traverse agricultural land, most of which has been designated Prime Farmland or Unique Farmland. However, most of the Primary Route would be placed in existing utility easements along public roads and would not result in the permanent or temporary loss of farmland.

Two of the Primary Route segments would not be located along a public road; the segment from the future Westside Substation to Harney Lane; and the portion of Thornton Road

segment that parallels I-5 along City of Lodi property (APNs 055-150-15 and 055-130-13). The Westside Substation to Harney Lane segment would be located within an existing utility easement and would replace existing poles. These existing poles are located along an existing dirt access road thus the new poles would not result in the permanent or temporary loss of farmland along this particular segment.

The segment of the Primary Route that leaves the right of way of Thornton Road and parallels the eastern edge of I-5 Freeway will be located within City of Lodi property that is currently being farmed. The poles will be located adjacent to a dirt access road near the I-5 boundary. No farming occurs between the dirt road and I-5 right-of-way, thus the new poles would not result in the permanent or temporary loss of farmland along this particular segment.

Level of Significance: Less than significant

Mitigation Measures: None required

### *Williamson Act Lands Impacted*

The proposed 60 kV Power Line Primary Route would be placed next to parcels under Williamson Act contracts. As previously noted above, a major portion of the power line would be placed in existing utility easements, and no additional easement area would be acquired. Therefore, no lands under Williamson Act contracts would be removed from agricultural production.

Level of Significance: Less than significant

Mitigation Measures: None required

### *Conversion of Farmlands*

The extension of electrical lines into rural areas could potentially encourage conversion of farmlands into more urban uses. However, the voltage of the proposed 60 kV power line is too great to serve any proposed development directly. The objective of the project is to provide greater reliability in the delivery of electricity to the entire incorporated area of Lodi. It is not intended to serve as a power source for any particular development in the project area. Therefore, the project would be unlikely to encourage the conversion of existing farmland in the project area to non-agricultural uses.

Level of Significance: Less than significant

Mitigation Measures: None required

## 6.0 AIR QUALITY

This chapter provides an overview of the existing air quality in the project area, and an analysis of potential impacts to air quality that would result from project implementation. Information for this chapter came primarily from the air quality analysis in the Lodi Energy Center EIR and from the San Joaquin Valley Air Pollution Control District (APCD). Analysis of the potential global climate change effects of the project due to greenhouse gas emissions are addressed in Chapter 10.0, Global Climate Change.

### ENVIRONMENTAL SETTING

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#### Air Basin

Air quality is a function of pollutant emissions as well as the topographic and climatologic characteristics of the region. The California Air Resources Board (ARB) has divided California into regional air basins, according to topographic and air drainage features (Figure 6-1). The project area is located in the San Joaquin Valley Air Basin (SJVAB), which encompasses the entire San Joaquin Valley (Figure 6-1). The SJVAB is about 250 miles long and averages 35 miles wide. The area is bounded by the Sierra Nevada foothills to the east, the Coast Ranges to the west, and the Tehachapi mountains to the south. The San Joaquin Valley floor is essentially flat with a slight downward gradient to the northwest, opening to the San Francisco Bay Area at the Carquinez Straits.

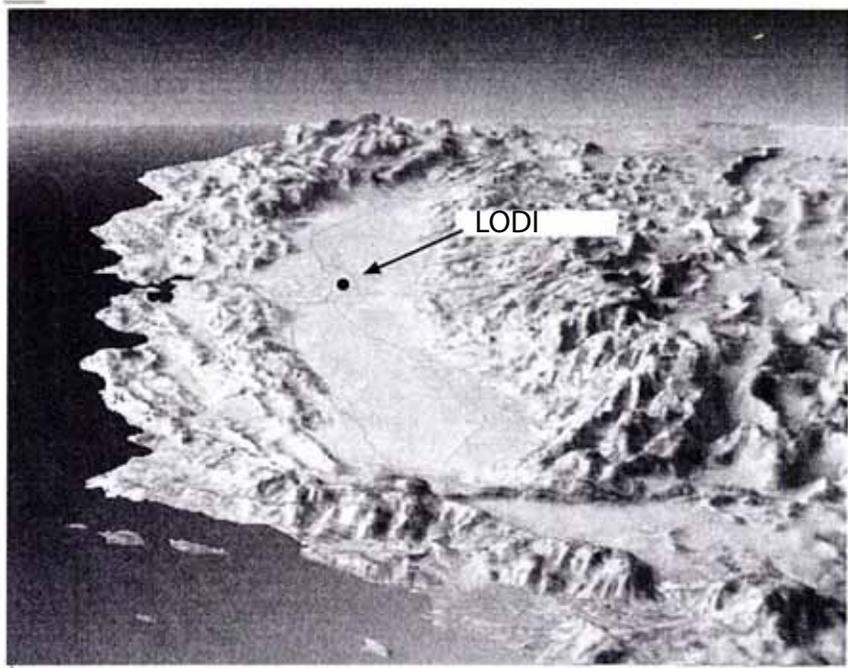
#### Climate

The climate of the San Joaquin Valley is characterized by hot summers, mild winters, and small amounts of precipitation. The major climatic controls in the Valley are the mountain ranges on three sides and the semi-permanent Pacific High pressure system over the eastern Pacific Ocean.

During the summer, the Pacific High moves northward and dominates the regional climate, producing persistent temperature inversions and a predominantly southwesterly wind field. Clear skies, high temperatures, low humidity and very little precipitation characterize this season. In the fall, the Pacific High weakens and shifts to the southwest, and its dominance is diminished in the San Joaquin Valley. During the transition period, the storm belt and zone of strong westerly winds also moves southward into California. The prevailing weather patterns during this time of year include storm periods with rain and gusty winds, clear weather that can occur after a storm or because of the Great Basin High pressure area, or persistent fog caused by temperature inversion (NCPA, 2008).



AIR BASIN MAP



AERIAL VIEW OF  
SAN JOAQUIN VALLEY



NORTH SOURCE: SJCAPCD 2002

INSITE ENVIRONMENTAL, INC.

Figure 6-1  
AIR BASIN/AERIAL VIEW  
SAN JOAQUIN VALLEY

April 7, 2010

Precipitation and temperature data have been recorded at the meteorological monitoring station located in Lodi. In summer (June, July, and August), daily high and low temperatures at the project area average 89.7°F (degrees Fahrenheit) and 55.0°F, respectively. In winter (December, January, and February), average daily high and low temperatures are about 56.6°F and 38.8°F, respectively. The average annual rainfall at the project site is about 17.6 inches, of which about 81% occurs between November and March. Between rainstorms, skies are fair, winds are light, and temperatures are moderate (NCPA, 2008).

Summer winds in the SJVAB come from marine airflow into the basin from the west and north via the Carquinez Straits and the Sacramento-San Joaquin Delta. These air movements, which are the prevailing winds, go to the south and southeast through the Valley, and over the Tehachapi Pass into the Southeast Desert Air Basin. During the winter, regional winds occasionally originate from the southeast. The area is also subject to diurnal breezes - a sea breeze flows inward during the day and outward at night (SJVAPCD, 1998).

The mountains that surround the SJVAB restrict air movement, result in generally weak airflow, and prevent dispersion of pollutants. Air movement is further restricted vertically by persistent high barometric pressure over the Valley and both summer and winter temperature inversions that generally occur below the elevation of the surrounding mountains. As a result, the SJVAB is susceptible to pollutant accumulation over time (SJVAPCD, 1998).

## Air Pollutants and Related Health Concerns

This section identifies and describes the pollutants of potential concern in the APCD in a human health context. Emissions of carbon dioxide (CO<sub>2</sub>) are not of direct health concern, but are of concern in the global climate change context. Global climate change issues are addressed in detail in Chapter 10.0 and are not treated further in this chapter.

### Ozone

Ozone is a colorless gas with a pungent odor. Most ozone in the atmosphere is formed as a result of the interaction of ultraviolet light, reactive organic gases (ROG), and oxides of nitrogen (NO<sub>x</sub>). Because these reactions occur on a regional scale, ozone is considered a regional pollutant. Studies have indicated “high ozone concentrations in the Valley were due to varying combinations of local and transported pollutants”. Ozone causes eye irritation and respiratory function impairment.

### Carbon Monoxide

Carbon monoxide (CO) is an odorless, colorless, gas. The incomplete combustion of petroleum fuels in on-road vehicles is a major cause of CO. CO is also produced during the winter from wood stoves and fireplaces that are not burning efficiently. CO tends to dissipate rapidly into the atmosphere, but increased CO levels may occur in the winter when temperature inversions trap pollutants near the ground and concentrate the CO. CO causes a number of health problems, including fatigue, headache, confusion and dizziness.

High concentrations of CO can cause heart difficulties for people with chronic diseases. It can impair mental abilities and in some cases can result in death.

### Suspended Particulate Matter

Particulate matter includes smoke and ash, dust, and chemical droplets. PM-10 conditions in San Joaquin County are a result of a mix of rural and urban sources, including agricultural activities, industrial emissions, dust suspended by vehicle traffic, and secondary aerosols formed by reactions in the atmosphere.

Health concerns associated with suspended particulate matter focus on those particles small enough to reach the lungs when inhaled. Few particles larger than 10 microns in diameter reach the lungs. Consequently, both the federal and State air quality standards for particulate matter apply to particulate matter 10 microns or less in diameter (PM10). Particulate matter is known to bypass the body's defense mechanisms and becomes deeply embedded in the lung, and also can disrupt cellular processes. Research has demonstrated a strong linkage between elevated particulate levels and premature deaths, hospital admissions, emergency room visits, and asthma attacks. Particle pollution may significantly reduce lung function growth in children.

Most particulate matter in the County (84% of PM10) is generated from miscellaneous processes, which are made up primarily of agriculture, road dust, fugitive dust from other sources, and waste disposal, among others. Of these sources, agriculture accounts for 38% of PM10 emissions, while road dust accounts for an additional 27%. About 10% of the PM10 generated by miscellaneous processes is fugitive windblown dust from other sources (ARB, 2006).

### Toxic Air Contaminants

"Toxic air contaminants" (TACs) are defined by California Health and Safety Code Section 39655 as "air pollutant(s) which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." State TACs also include federally listed air toxics. The State's Air Toxics Inventory (2008) includes more than 250 substances. Examples of toxic air pollutants include benzene, which is found in gasoline; perchlorethylene, which is emitted from some dry cleaning facilities; and methylene chloride, which is used as a solvent and paint stripper by a number of industries. Other listed air toxics include dioxin, asbestos, toluene, particulate matter emitted by diesel engines, and metals such as cadmium, mercury, chromium, and lead compounds. TACs cause or may cause cancer or other serious health effects, such as chronic eye, lung or skin irritation, reproductive effects or birth defects, neurological and reproductive disorders, or adverse environmental and ecological effects.

Diesel particulate matter (PM) is of particular concern because it is highly toxic, it is a potential source of both cancer and non-cancer health effects, and it is present at some concentration in all developed areas of the state. Diesel PM makes the largest single contribution to air toxic emissions in the San Joaquin Valley Air Basin; about 60% of diesel PM is derived from mobile sources.

## Existing Local Air Pollution Sources

Existing air pollution sources associated with land uses in the project area include agriculture, an intermittent non-point source of particulate matter and off-road equipment exhaust emissions. Agriculture contributes criteria pollutants to the local and regional airshed. In addition, rural residences in the project area may use wood-burning fireplaces and heaters. These sources contribute criteria pollutants as well as toxic air contaminants (TACs) to the local and regional airshed. Criteria pollutants and TACs are described later in this chapter.

The existing Northern California Power Agency (NCPA) power plant near the Lodi Water Pollution Control Plant (WPCP) site generates emissions from its combustion turbine (LM5000 STIG) and its emergency diesel fire pump engine. Emissions from the combustion turbine are limited by permit, so the annual potential to emit is calculated assuming maximum daily operation for 365 days per year. Emissions from the emergency fire pump engine are calculated based on a 50-hours-per-year limitation on testing and maintenance operations in the applicable ARB Air Toxic Control Measure. Table 6-1 presents the annual potential to emit for the NCPA plant.

TABLE 6-1  
POTENTIAL TO EMIT FOR EXISTING NCPA PLANT EQUIPMENT  
Emissions, tons per year

Unit	NO <sub>x</sub>	SO <sub>2</sub>	CO	VOC	PM <sub>10</sub> / PM <sub>2.5</sub>
LM5000 STIG	20.4	5.7	58.8	25.9	8.8
Emergency Diesel Fire Pump Engine	0.08	<0.01	0.04	0.01	0.01

*Source: NCPA, 2008*

## REGULATORY SETTING

The federal and state governments are responsible for the overall regulation of air quality and for the establishment of air quality standards. The actual implementation of these air quality standards is left to the local and regional air quality districts. Air quality standards have been established with the principal goal of protecting public health with a margin of safety. These standards are expressed in terms of parts per million (ppm) or micrograms per cubic meter (ug/m<sup>3</sup>).

Both the federal and state government have established pollution standards for what are termed "criteria" pollutants, which include ozone, carbon monoxide, particulate matter, nitrogen dioxide, sulfur dioxide and lead. Table 6-2 provides a summary of existing federal and State air quality standards for several criteria pollutants, along with their major sources and their potential health and atmospheric effects. It should be noted that California has additional criteria pollutants for which it has air quality standards. However, since the SJVAB is in either attainment or unclassified status for these pollutants, Table 6-2 does not list them. However, Table 6-3 lists these additional pollutants, along with their attainment status.

TABLE 6-2  
STATE AND FEDERAL CRITERIA AIR POLLUTANT STANDARDS, EFFECTS AND SOURCES

Pollutant	Averaging Time	State Standard	Federal Standard	Pollutant Health and Atmosphere Effects	Major Pollutant Sources
Ozone	1 Hour	0.09 ppm	--	High concentrations can directly affect lungs, causing irritation. Long-term exposure may cause damage to lung tissue.	Formed when reactive organic gases and nitrogen oxides react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial/industrial mobile equipment.
	8 Hour	0.07 ppm	0.075 ppm		
Carbon Monoxide	1 Hour	20 ppm	35 ppm	Classified as a chemical asphyxiant, carbon monoxide interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 Hour	9.0 ppm	9 ppm		
Nitrogen Dioxide	1 Hour	0.25 ppm	--	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown.	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships and railroads.
	Annual	--	0.053 ppm		
Sulfur Dioxide	1 Hour	0.25 ppm	--	Irritates upper respiratory tract; injurious to lung tissue. Can yellow the leaves of plants, destructive to marble, iron, and steel. Limits visibility and reduces sunlight.	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	3 Hour	--	0.5 ppm		
	24 Hour Annual	0.04 ppm	0.14 ppm 0.03 ppm		
Respirable Particulate Matter (PM10)	24 Hour	50 ug/m	150 ug/m	May irritate eyes and respiratory tract, decreases in lung capacity, cancer and increased mortality. Produces haze and limits visibility.	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g. wind-raised dust and ocean sprays).
	Annual	20 ug/m	50 ug/m		
Fine Particulate Matter (PM2.5)	24 Hour	--	65 ug/m	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and results in surface soiling.	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning. Also, formed from photochemical reactions of other pollutants, including nitrogen oxides, sulfur oxides, and organics.
	Annual	12 ug/m	15 ug/m		
Lead	Month	1.5 ug/m	--	Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurological dysfunction.	Present source: lead smelters, battery manufacturing & recycling facilities. Past sources: combustion of leaded gasoline.
	Quarter	--	1.5 ug/m		

*Note: ppm = parts per million; ug/m<sup>3</sup> = micrograms per cubic meter.*

*Source: California Air Resource Board; <http://www.arb.ca.gov/aqs/aaqs2.p>*

TABLE 6-3  
 SAN JOAQUIN VALLEY APCD ATTAINMENT STATUS  
 WITH FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS

Pollutant	Designation/Classification	
	Federal Standards	State Standards
Ozone - One hour	No Federal Standard <sup>d</sup>	Nonattainment/Severe
Ozone - Eight hour	Nonattainment/Serious <sup>c</sup>	Nonattainment
PM10	Attainment <sup>a</sup>	Nonattainment
PM2.5	Nonattainment <sup>b</sup>	Nonattainment
Carbon Monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Lead (Particulate)	No Designation/Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified
Vinyl Chloride	No Federal Standard	Attainment

<sup>a</sup> In September 2008, EPA redesignated the San Joaquin Valley to attainment for the PM10 National Ambient Air Quality Standard (NAAQS) and approved the PM10 Maintenance Plan

<sup>b</sup> The Valley is designated nonattainment for the 1997 PM 2.5 federal standards. EPA designations for the 2006 PM 2.5 standards will be finalized in December 2009. The APCD has determined, as of the 2004-06 PM 2.5 data, that the Valley has attained the 1997 24-Hour PM 2.5 standard.

<sup>c</sup> In April 2007, the Governing Board of the APCD voted to request EPA to reclassify the SJVAB as extreme nonattainment for the federal 8-hour ozone standards. The ARB approved this request in June 2007. This request must be forwarded to the EPA by ARB and would become effective upon EPA final rulemaking; it is not yet in effect.

<sup>d</sup> Effective June 2006, the EPA revoked the federal 1-hour ozone standard, including associated designations and classifications. However, EPA had previously classified the SJVAB as extreme nonattainment for this standard. Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.

Source: SJVAPCD, 2008

## Federal

Federal air quality regulation stems from the Federal Clean Air Act (CAA), as amended. The federal CAA requires the U.S. Environmental Protection Agency (EPA) to establish the air quality standards for criteria pollutants, known as the National Ambient Air Quality Standards (NAAQS), as shown in Table 6-2. The primary standards are based on EPA medical research and specific concentration thresholds derived thereby. Secondary standards are intended to protect the public welfare from effects such as visibility reduction, soiling, nuisance, and other forms of damage.

Regions of the country are classified with respect to their attainment, or the extent of their "nonattainment", of these standards. The federal CAA requires the states to submit a State Implementation Plan (SIP) for nonattainment areas; the SIPs are reviewed and approved by EPA subject to their adequacy in demonstrating how the federal standards will be achieved. The corresponding attainment/nonattainment designations for the SJVAB are presented in Table 6-3.

## State

### California Clean Air Act

The California Clean Air Act (CCAA) provides the planning framework for California air quality. The CCAA establishes the State's own set of ambient air quality standards (CAAQS) for criteria pollutants that differ from but are generally more stringent than the corresponding NAAQS. Responsibility for implementation of the CCAA requirements, and for preparation of the State Implementation Plan under the federal CAA, rests with the California Air Resources Board; the local air pollution or air quality management districts are responsible for preparation of Air Quality Attainment Plans, which are input to the SIP.

The local air districts are charged to reduce pollutant concentrations for which the district is nonattainment by 5% per year. The local air district is also required to prepare an Air Quality Attainment Plan (AQAP) if the district exceeds the State air quality standards for ozone, carbon monoxide, nitrogen dioxide or sulfur dioxide. No AQAP is required for particulate nonattainment. The local AQAPs are required to address locally generated air pollutant emissions. "Upwind" air districts are required to establish control programs that address pollutant transport to downwind districts. Air Quality Maintenance Plans have been adopted for particulate matter and carbon monoxide. The APCD has adopted an AQAP only for ozone nonattainment, which describes the actions the APCD will take to work toward ozone attainment.

No particular schedule is established for achieving attainment with the CAAQS. However, the CCAA imposes increasingly severe requirements based on the degree of nonattainment. Nonattainment is classified into the following categories: Moderate, Serious, Severe and Extreme.

### Air Toxics

The State 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); under these programs, the State is responsible for an inventory of TACs, for analysis of exposure and risk and for planning to reduce risk. As with other federal and State air quality requirements, the various elements of the State air toxics program are implemented locally by the local air districts.

## Local

The San Joaquin Valley Air Pollution Control District (APCD) is responsible for air quality management in San Joaquin County as well as the other seven counties that make up the District. The APCD's responsibilities include AAQS attainment planning, regulation of emissions from non-transportation sources, and mitigation of emissions from on-road sources through its Indirect Source Rule.

The APCD has adopted required attainment plans for ozone and PM 2.5 and maintenance plans for attainment pollutants. The status of APCD attainment planning is summarized below:

- Ozone. The 2004 Extreme Ozone Demonstration Plan was recommended for approval by EPA in October 2008.
- Carbon Monoxide. The APCD is attainment for carbon monoxide. The approved SIP includes measures for attainment maintenance known as the Carbon Monoxide Maintenance Plan.
- Particulate Matter (PM10). The APCD is attainment for PM10 federal standards. EPA approved a PM10 Maintenance Plan in September 2008.
- Fine Particulate Matter (PM2.5). The APCD adopted a PM2.5 Plan in April 2008.

The APCD has adopted a regulation that is potentially applicable to the project - Regulation VIII (Fugitive Dust PM10 Prohibitions). Rules 8011-8081 are designed to reduce PM<sub>10</sub> emissions (predominantly dust) generated by construction and demolition activities, among other potential sources. Rule 8021 applies specifically to construction, demolition and earthmoving. The rules that make up Regulation VIII require compliance with the District's 20% opacity standard.

## Existing Air Quality

### Criteria Air Pollutants

Existing air quality is monitored regularly by the APCD and reported to the ARB. Air pollutant concentration data from the District's Stockton-Hazelton monitoring station for recent years, as well as the extent to which ambient air quality standards were exceeded, are summarized in Table 6-4. The Stockton station is the closest monitoring station to the project area.

The table data indicate that the State one-hour ozone standard of 0.09 ppm have been exceeded at the Stockton station between two and six days per year during two of the preceding three years. There were no exceedences of this standard during 2007. Both the State and federal maximum eight-hour-average ozone standards were exceeded in Stockton during each of the last three years. The State standard of 0.07 ppm was exceeded between four and 21 days, while the higher federal standard of 0.08 ppm was exceeded from three to 13 days. The SJVAB is classified as nonattainment for the State one-hour ozone standard, as well as for both the State and federal 8-hour ozone standards (see Table 6-2).

The SJVAB as a whole regularly violates the PM10 standards. In Stockton, the 24-hour average federal PM10 standard of 150 ug/m<sup>3</sup> has not been exceeded during the previous three years. However, exceedence of the lower State PM10 standard of 50 ug/m<sup>3</sup> occurred between four and 11 times during the previous three years. Similarly, the federal annual average PM10 standard of 50 ug/m<sup>3</sup> was not exceeded during the previous three years, while the State standard of 20 ug/m<sup>3</sup> was exceeded in all three years.

**TABLE 6-4  
STOCKTON/SAN JOAQUIN COUNTY AIR QUALITY MONITORING RESULTS**

Pollutant	Pollutant Concentration		
	2006	2007	2008
<b>Carbon Monoxide (Hazelton)</b>			
Highest 8-Hour Average (ppm)	2.25	2.31	1.86
Second Highest 8-Hour Average (ppm)			
1 hour levels not monitored	2.24	2.13	1.76
Days > National Standard (9.0 ppm)	0	0	0
Days > State Standard (9.0 ppm)	0	0	0
<b>Ozone (Hazelton)</b>			
Highest 1-Hour Measurement (ppm)	0.109	0.093	0.105
Second Highest 1-Hour Measurement (ppm)	0.105	0.092	0.101
Days > State Standard (1-hour average) (0.09 ppm)	6	0	2
Highest 8-Hour Average (ppm)	0.092	0.082	0.090
Second Highest 8-Hour Average (ppm)	0.086	0.081	0.081
Days > State Standard (8-hour average) (0.07 ppm)	21	4	7
Days > Federal Standard (8-hour average)(0.08 ppm)	13	3	4
<b>PM 10 (Hazelton)</b>			
Highest 24-Hour Average, State (ug/m <sup>3</sup> )	85.0	75.0	105.0
Second Highest 24-Hour Average, State (ug/m <sup>3</sup> )	85.0	73.0	83.7
Days > State Standard (50 ug/m <sup>3</sup> )	11	4	8
Highest 24-Hour Average, Fed (ug/m <sup>3</sup> )	82.0	71.0	104.5
Second Highest 24-Hour Average, Fed (ug/m <sup>3</sup> )	80.0	68.0	83.0
Days > National Standard (150 ug/m <sup>3</sup> )	0	0	0
Annual Average (State) (20 ug/m <sup>3</sup> )	Exceeds	Exceeds	Exceeds
Annual Average (Fed) (90 ug/m <sup>3</sup> )	No Exceed	No Exceed	No Exceed
<b>PM 2.5 (Hazelton)</b>			
Highest 24-Hour Average, Fed (ug/m <sup>3</sup> )	47.0	52.0	81.0
Second Highest 24-Hour Average, Fed (ug/m <sup>3</sup> )	47.0	50.0	61.7
Days > Federal Standard	7.0	11.0	9.0
Annual Average (State) (12 ug/m <sup>3</sup> )	Exceeds	Exceeds	Exceeds
Annual Average (Fed) (15 ug/m <sup>3</sup> )	No exceed	No exceed	No exceed

Note: ppm=parts per million; ug/m<sup>3</sup>=micrograms per cubic feet.  
Source: California Air Resources Board web site; <http://www.arb.ca.gov>

Monitoring at the Stockton station indicates that the federal 24-hour PM2.5 standard of 65 ug/m<sup>3</sup> was exceeded between seven and 11 times during the last three years. There is no 24-hour State standard for this pollutant. Similar to PM10, measured annual average PM2.5 levels did not exceed the federal standard in the last three years, but did exceed the State standard in all those years.

Carbon monoxide monitoring in Stockton shows that carbon monoxide levels are consistently below both the State and federal 8-hour standards. San Joaquin County is classified Unclassified/Attainment for both federal and State for carbon monoxide. As previously shown in Table 6-3, the County is classified Attainment or Unclassified for other criteria pollutants.

The APCD maintains an inventory of criteria air pollutant emissions within the SJVAB and within San Joaquin County. ROG emissions are produced primarily by stationary and area-wide sources, and mobile sources produce the majority of NO<sub>x</sub> emissions. Mobile sources are the primary source of carbon monoxide emissions in the SJVAB, but area sources produce over 80% of PM<sub>10</sub> emissions in the basin (ARB, 2006).

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

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### Significance Thresholds

For the purposes of this EIR, impacts related to air quality are considered significant if the proposed project would:

- Conflict with or obstruct implementation of an Air Quality Attainment Plan,
- Violate or worsen an existing violation of an ambient air quality standard,
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under federal or state standards,
- Expose sensitive receptors to substantial pollutant concentrations, or
- Create objectionable odors affecting a substantial number of people, be located in an area of substantial odor complaints, or would result in a sensitive odor receptor being located within a mile of an undesirable odor generator.

The impact analysis is based largely on the methodology defined in the *Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI)*, prepared by the San Joaquin Valley Air Pollution Control District. The analysis includes consideration of both project construction and long-term operation effects on criteria pollutants and air toxics. GAMAQI defines certain thresholds of significance for the assessment of air quality impacts. Based on GAMAQI, the proposed project will be considered to have a significant impact in the following situations:

- For ozone precursor emissions, if the project would generate more than 10 tons per year of either ROG or NO<sub>x</sub>.
- For particulate matter emissions, if the project would cause “visible dust emissions” due to onsite operations, and thereby violate APCD Regulation VIII.

- For carbon monoxide emissions, if the project would:
  - Degrade operation of an intersection to level of service (LOS) E or F, or substantially worsen an intersection already operating at LOS F, and
  - The *Transportation Project-Level Carbon Monoxide Protocol* or CALINE4 modeling indicates that CO standards would be exceeded adjacent to an impacted intersection.
  
- For air toxics exposure effects, if the project would result in:
  - Lifetime cancer risk for sensitive land uses (including residential) exceeds 10 in one million.
  - Ground-level concentrations of non-carcinogenic toxic air contaminants that would result in a Hazard Index greater than one (1).

### *Impacts of Project Construction on Air Quality*

All construction activities under the project would involve emissions consisting of PM10 from soil disturbance and equipment operation in unpaved areas, and ozone precursor emissions from worker commute vehicles and construction equipment. Soil disturbance for line construction projects is generally very minimal, limited to pole hole drilling and minor disturbance associated with equipment movement and conductor stringing for projects along existing roads.

Carbon monoxide and ozone precursor emissions are considered significant only in the cases of "very large or very intense construction projects." The project would involve the placement of power poles in a narrow area. Even though the length of the project is approximately seven miles, the amount of disturbed land involved would be minimal. Consequently, potential construction impacts related to ozone precursors and carbon monoxide emissions are considered less than significant.

The APCD has determined that PM10 is the pollutant of greatest concern for construction projects. Construction dust impacts are not quantified in this document, but they would be related to the amount of soil disturbance associated with the project. As noted above, this would normally range from negligible to minor. For purposes of this document, the creation of any dust is considered potentially significant. The GAMAQI indicates that construction dust impacts need not be quantitatively analyzed, but that management should focus on implementation of effective and comprehensive control measures. These measures are specified in the APCD's Regulation VIII. The APCD has determined that compliance with Regulation VIII, and implementation of the applicable measures identified in GAMAQI Tables 6-2 and 6-3, will constitute sufficient mitigation to reduce PM-10 impacts to less than significant. Appropriate measures from these tables are identified in the mitigation measure below.

Level of Significance: Potentially significant

Mitigation Measures:

- 6-1 All project construction activities shall comply with relevant provisions of the San Joaquin Valley Air Pollution Control District Regulation VIII - Control Measures for Construction Emissions of PM-10, as described in Table 6-2 of the District's Guide for Assessing Air Quality Impacts, or the applicable regulation of the APCD with jurisdiction. These requirements would typically include:
- a. All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, or vegetative ground cover.
  - b. All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
  - c. All land clearing, grubbing, scraping, excavation, land leveling, grading, cut & fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.
  - d. When materials are transported off-site, all material shall be covered, effectively wetted to limit visible dust emissions, or at least six inches of freeboard space from the top of the container shall be maintained.
  - e. All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.
  - f. Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.
  - g. Limit traffic speeds on unpaved roads to 15 mph.

Significance After Mitigation: Less than significant. Implementation of the mitigation measures would reduce the amount of dust emissions generated by project construction.

Implementation: The Lodi EUD, and any contractors hired by the EUD, shall be responsible for implementing the dust control measures.

Monitoring: The Lodi EUD will monitor all construction activities and will ensure compliance with the dust control measures.

## *Impacts of Project Operations on Air Quality*

Operation of the new 60 kV power line will not involve any substantial air emissions, and no significant direct air quality effects. The new power line and the power poles would require occasional maintenance, which would generate associated vehicle traffic. This traffic will involve incidental ozone precursor contributions to the air basin, as well as local contributions to carbon monoxide. The effects on ozone conditions would be minimal, since the number of vehicle miles traveled by these maintenance vehicles would be extremely low, compared with background traffic associated with regional travel and commuter commercial and industrial activities. Maintenance vehicle traffic would not substantially contribute to the existing nonattainment status in San Joaquin County.

As discussed in Chapter 21.0, Growth-Inducing Impacts, the project would not have growth-inducing impacts. Any secondary emissions associated with future growth served by the project would be addressed in conjunction with local agency environmental review of specific land development projects.

Level of Significance: Less than significant

Mitigation Measures: None required

## *Exposure to Toxic Air Contaminants*

Chapter 11.0, Health and Safety describes the hazardous materials that may be used in project construction and operation. None of the hazardous materials are TACs. The use of diesel fuel by construction equipment and vehicles would generate diesel particulate matter emissions, which are considered a TAC. However, these emissions would be temporary, and would cease once construction work is completed. It is unlikely that diesel particulate matter emissions from construction would be of a sufficient duration or concentration to pose a health risk.

Diesel particulate matter may be generated by project operations, through the use of maintenance vehicles that use diesel fuel. However, such use would be infrequent and would not generate a quantity of diesel particulate matter. No other TACs are likely to be generated during project construction or operation.

Level of Significance: Less than significant

Mitigation Measures: None required

## *Exposure to Odors*

Project construction may generate some odors, mainly from diesel vehicles and equipment. These odors generally would be confined to the construction site, and they would cease once construction work is completed. The power line itself would generate no odors once operations begin.

Level of Significance: Less than significant

Mitigation Measures: None required

## 7.0 BIOLOGICAL RESOURCES

### ENVIRONMENTAL SETTING

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An inventory of the biological resources of the project area was prepared at a general level by Moore Biological Consultants (2010). The focus of this work was to conduct a preliminary evaluation of the Primary Route for wetlands and suitable habitat for or presence of special-status plant and wildlife species. The 2010 letter report from Moore Biological Consultants, which documents methodology and results, is available in Appendix B.

Moore Biological conducted a search of California Department of Fish and Game's (CDFG) California Natural Diversity Database (CNDDDB, 2010) to identify wildlife and plant species that have been previously documented in the project vicinity or have the potential to occur based on suitable habitat and geographical distribution. The CNDDDB records search encompassed the Lodi South and Terminous USGS 7.5-minute topographic quadrangles, an area of approximately 240 square miles surrounding the project site.

Field surveys were conducted in December 2009 and January and March 2010, which consisted of driving and walking along the proposed project alignment, making observations and noting habitat conditions, surrounding land uses, and plant and wildlife species. The fieldwork included an assessment of potential jurisdictional Waters of the U.S. and wetlands, as defined by the U.S. Army Corps of Engineers (ACOE, 1987, 2008), and a search for special-status species and suitable habitat for these species (e.g., blue elderberry shrubs, vernal pools). Additionally, trees along the alignment were assessed for the potential use by nesting raptors, especially Swainson's hawk, and burrows along the alignment were inspected for evidence of burrowing owl occupancy.

#### Vegetation

The Primary Route follows roads for most of its length (see photographs in Appendix C). Habitats along the Primary Route are primarily highly-disturbed agricultural lands. Virtually all of the parcels along the Primary Route are farmed in alfalfa, vineyards, or almond and fruit orchards.

The orchard floors, vineyard edges, road shoulders, and other ruderal (weedy) areas along the Primary Route are vegetated with various native and non-native annual grass and weed species. Oats, soft chess brome, ripgut brome, foxtail barley, annual bluegrass, Bermuda grass and perennial ryegrass are dominant grass species in these areas. Other grassland species are intermixed with the predominant grasses, such as fiddleneck, black mustard, bull thistle, prickly lettuce, pigweed, dove weed, common mallow and filaree.

Beyond the orchards, trees along the Primary Route include blue gum, willows, Fremont cottonwood, olive, valley oak, mulberry, black locust and a number of other ornamentals.

Very few of these trees appear to be in potential conflict with some of the new poles and lines. No blue elderberry shrubs were observed within or adjacent to the Primary Route.

## Wildlife

A variety of wildlife species were observed along the Primary Route. Some of the more common birds observed include red-tailed hawk, mourning dove, western scrub jay, American crow, yellow-billed magpie, northern mockingbird, white-crowned sparrow and house finch. All of these are species commonly found in agricultural areas in the greater project vicinity.

A limited variety of mammals common to agricultural and semi-rural areas are expected to use habitats along the Primary Route. A few California ground squirrels and sign of raccoon were observed along the Primary Route. Coyote, black-tailed hare, striped skunk, and Virginia opossum are expected to occur in the area. A number of species of small rodents, including mice and voles, also likely occur.

Based on habitat types present, only a few amphibian and reptile species are expected to use habitats along the Primary Route. Although none were observed, western fence lizard, Pacific chorus frog, western toad, coast horned lizard, gopher snake, common king snake, and common garter snake are expected to occur in the area.

## Special-Status Species

Special-status species are plants and animals that are legally protected under the state and/or federal Endangered Species Act or other regulations. The Federal Endangered Species Act (FESA) of 1973 declares that all federal departments and agencies shall utilize their authority to conserve endangered and threatened plant and animal species. The California Endangered Species Act (CESA) of 1984 parallels the policies of FESA and pertains to native California species. Both FESA and CESA prohibit unauthorized "take" (i.e., killing) of listed species, with take broadly defined in both acts to include activities such as harassment, pursuit and possession.

Special-status wildlife species also include species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat. The federal Migratory Bird Treaty Act and the California Fish and Game Code protect special-status bird species year-round, as well as their eggs and nests during the nesting season. The Fish and Game Code also provides protection for mammals and fish.

Special-status plants include species that are designated rare, threatened, or endangered and candidate species for listing by the U.S. Fish and Wildlife Service (USFWS). Special-status plants also include species considered rare or endangered under the conditions of Section 15380 of the CEQA Guidelines, such as those plant species identified on Lists 1A, 1B and 2 in the Inventory of Rare and Endangered Vascular Plants of California by the California Native Plant Society (CNPS, 2001). Finally, sensitive plants may include other species that are considered sensitive or of special concern due to limited distribution or

lack of adequate information to permit listing or rejection for state or federal status, such as those included on List 3 in the CNPS Inventory.

Table 7-1 provides a summary of the listing status and habitat requirements of special-status plant and wildlife species that have been documented in the project vicinity, or for which there is potentially suitable habitat along the Primary Route. This table also includes an assessment of the likelihood of occurrence of each of these species along the Primary Route. The evaluation of the potential for occurrence of each species is based on the distribution of regional occurrences (if any), habitat suitability, and field observations.

Of the special-status species identified in the CNDDDB, Swainson's hawk, burrowing owl, and tricolored blackbird are the only species that have potential to occur along the Primary Route on more than a transitory or very occasional basis. These species are discussed in more detail below.

### **Swainson's Hawk**

The Swainson's hawk is a migratory hawk listed by the State of California as a threatened species. The Migratory Bird Treaty Act and Fish and Game Code of California protect Swainson's hawks year-round, as well as their nests during the nesting season (March 1 through September 15). Swainson's hawk are found in the Central Valley primarily during their breeding season (March 1 through September 15); a population is known to winter in the San Joaquin Valley.

Swainson's hawks prefer nesting sites that provide sweeping views of nearby foraging grounds consisting of grasslands, irrigated pasture, hay, and wheat crops. Most Swainson's hawks are migratory, wintering in Mexico and breeding in California and elsewhere in the western United States. This raptor generally arrives in the Central Valley in mid-March, and begins courtship and nest construction immediately upon arrival at the breeding sites. The young fledge in early July, and most Swainson's hawks leave their breeding territories by late August.

The CNDDDB contains several records of nesting Swainson's hawk in the project vicinity. The nearest occurrence of nesting Swainson's hawks is right along the Primary Route on Kingdon Road, approximately one-half mile west of Ray Road. During the March 19, 2010 survey, a few Swainson's hawks were observed soaring and perching on poles and trees near Interstate 5.

### **Burrowing Owl**

The Migratory Bird Treaty Act and California Fish and Game Code protect burrowing owls year-round, as well as their nests during the nesting season (February 1 through August 31). Burrowing owls are a year-long resident in a variety of grasslands as well as scrub lands that have a low density of trees and shrubs with low growing vegetation. Burrowing owls that nest in the Central Valley may winter elsewhere.

TABLE 7-1  
SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status <sup>1</sup>	State Status <sup>2</sup>	CNPS List <sup>3</sup>	Habitat	Likelihood of Occurrence in Project Area
<b>PLANTS</b>						
Rose-mallow	<i>Hibiscus lasiocarpus</i>	None	None	2	Freshwater marshes and swamps; blooms August-September.	Unlikely: there is no suitable marsh or swamp habitat along the Primary Route. The nearest occurrence of rose-mallow is approximately 1 mile west of the Primary Route.
Delta tulle pea	<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	None	None	1B	Freshwater and brackish marshes, usually along the edges; blooms May-September.	Unlikely: there is no suitable marsh or swamp habitat along the Primary Route. The nearest occurrence of Delta tulle pea is approximately 3 miles northwest of the Primary Route.
Legenere	<i>Legenere limosa</i>	None	None	1B	Vernal pools; blooms April – June.	Unlikely: there is no suitable vernal pool habitat along the Primary Route. The nearest occurrence of legenere is approximately 8 miles north of the Primary Route.
Mason’s lilaopsis	<i>Lilaopsis masonii</i>	None	R	1B	Freshwater and brackish marshes, riparian scrub; blooms April - November.	Unlikely: there is no suitable marsh habitat along the Primary Route. The nearest occurrence of Mason’s lilaopsis is approximately 6 miles northwest of the Primary Route.
Delta mudwort	<i>Limosella subulata</i>	None	None	2	Marshes and swamps.	Unlikely: there is no suitable marsh or swamp habitat along the Primary Route. The nearest occurrence of Delta mudwort is approximately 7 miles northwest of the Primary Route.
Blue skullcap	<i>Scutellaria lateriflora</i>	None	None	2	Marshes and swamps.	Unlikely: there is no suitable marsh or swamp habitat along the Primary Route. The nearest occurrence of blue skullcap is approximately 7 miles west of the Primary Route.
Suisun marsh aster	<i>Symphotrichum lentum</i>	None	None	1B	Marshes and swamps.	Unlikely: there is no suitable marsh or swamp habitat along the Primary Route. The nearest occurrence of Suisun marsh aster is approximately 4 miles west of the Primary Route.
<b>WILDLIFE</b>						
Burrowing owl	<i>Athene cucularia</i>	None	SC	N/A	Open, dry grasslands, deserts and scrublands characterized by low-growing vegetation.	Low: there are very few ground squirrels and ground squirrel burrows along the Primary Route. No burrowing owls or evidence of occupancy were found during the 2010 survey. The nearest occurrence of nesting burrowing owls is approximately 4 miles south of the Primary Route.

TABLE 7-1  
SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status <sup>1</sup>	State Status <sup>2</sup>	CNPS List <sup>3</sup>	Habitat	Likelihood of Occurrence in Project Area
Swainson's hawk	<i>Buteo swainsoni</i>	None	T	N/A	Nesting: large trees, usually within riparian corridors. Foraging: agricultural fields and annual grasslands.	Moderate: there are a few suitable nest trees along and near the Primary Route. The open grassland, alfalfa, and other cropland near these trees provide high-quality foraging habitat and increases the suitability of the trees in the area being used for nesting. There are numerous occurrences of nesting Swainson's hawks, including one occurrence right along the Primary Route on Kingdon Road.
Tricolored blackbird	<i>Agelaius tricolor</i>	None	SC	N/A	Requires open water and protected nesting substrate, usually cattails and riparian scrub with surrounding foraging habitat.	Moderate: blackberry brambles and marsh vegetation associated with wetlands in the vicinity of the west end of the Primary Route are suitable nesting habitat for this species. Grasslands along the Primary Route are also suitable for foraging. There are two occurrences of nesting tricolored blackbirds in the CNDDDB search area, with the closest being approximately 8 miles northeast of the Primary Route.
California black rail	<i>Laterallus jamaicensis coturniculus</i>	None	T	N/A	Salt marshes bordering larger bays.	Unlikely: there are no salt marshes along the Primary Route. The nearest occurrence of California black rail is approximately 0.5 miles west of the west tip of the Primary Route.
California tiger salamander	<i>Ambystoma californiense</i>	T	T	N/A	Seasonal water bodies without fish (i.e., vernal pools and stock ponds) near grassland/ woodland habitats with summer refugia (i.e., burrows).	Unlikely: there is no suitable habitat along the Primary Route. The only record of California tiger salamander documented in the CNDDDB within the 240+/- square-mile search area is an historical occurrence approximately 8 miles north of the Primary Route in downtown Galt; this population is described as "extirpated" (i.e., no longer existent). The Primary Route is not within designated critical habitat for California tiger salamander (USFWS, 2005a).
Giant garter snake	<i>Thamnophis gigas</i>	T	T	N/A	Freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches.	Unlikely: while giant garter snake is known from Delta waterways just west of the west end of the Primary Route, the upland habitats along the Primary Route are unsuitable for this species. The closest occurrence of giant garter snake is approximately 1 mile northwest of the Primary Route.
Foothill yellow-legged frog	<i>Rana boylei</i>	None	SC	N/A	Partly shaded, shallow streams with a rocky substrate in a variety of habitats.	Unlikely: there is no habitat along the Primary Route. The nearest documented occurrence of this species is a 1958 record approximately 5 miles north of the Primary Route.

TABLE 7-1  
SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status <sup>1</sup>	State Status <sup>2</sup>	CNPS List <sup>3</sup>	Habitat	Likelihood of Occurrence in Project Area
Western pond turtle	<i>Actinemys marmorata</i>	None	SC	N/A	Ponds, marshes, streams, and ditches with emergent aquatic vegetation and basking areas.	Unlikely: while western pond turtle is known from Delta waterways west of the west end of the Primary Route, the upland habitats along the Primary Route are unsuitable for this species. The closest occurrence of western pond turtle is approximately 1 mile west of the Primary Route.
Sacramento splittail	<i>Pogonichthys macrolepidotus</i>	None	SC	N/A	Lakes and rivers of the central valley.	Unlikely: there is no habitat along the Primary Route. The closest occurrence of Sacramento splittail is 3 miles north of the Primary Route in the Mokelumne River.
Vernal tadpole shrimp	<i>Lepidurus packardii</i>	E	None	N/A	Vernal pools	Unlikely: there are no vernal pools along the Primary Route. The CNDDB contains one record of vernal pool tadpole shrimp within the 240+/- square-mile search area, which is only generally mapped in the Lodi area. The Primary Route is not within designated critical habitat for vernal pool species (USFWS 2005b).
Valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	T	None	N/A	Elderberry shrubs, usually in Central Valley riparian habitats	Unlikely: there are no blue elderberry shrubs along the Primary Route. The nearest documented occurrence of valley elderberry longhorn beetle is approximately 10 miles northeast of the Primary Route.

1 T = Threatened; E = Endangered.

2 T = Threatened; E = Endangered; SC= State of California Species of Special Concern.

3 CNPS List 1B includes species that are rare, threatened, or endangered in California and elsewhere; List 2 includes species that are rare, threatened, or endangered in California, but more common elsewhere.

Source: Moore Biological Consultants, 2010.

The primary habitat requirement of the burrowing owl is small mammal burrows for nesting. The owl usually nests in abandoned ground squirrel burrows, although they have been known to dig their own burrows in softer soils. In urban areas, burrowing owls often utilize artificial burrows, including pipes, culverts and piles of concrete pieces. This semi-colonial owl breeds from March through August, and is most active while hunting during dawn and dusk.

The nearest occurrence of nesting burrowing owls in the CNDDDB (2010) search area is approximately 4 miles south of the Primary Route. No burrowing owls were observed along the Primary Route during the 2009 and 2010 surveys.

### **Tricolored Blackbird**

The tricolored blackbird is a State of California Species of Concern and is also protected by the federal Migratory Bird Treaty Act. Tricolors are colonial nesters requiring very dense stands of emergent wetland vegetation and/or dense thickets of wild rose or blackberries adjacent to open water for nesting. This species is endemic to California.

There are two occurrences of nesting tricolored blackbirds in the CNDDDB (2010) search area, with the closest being approximately 8 miles northeast of the Primary Route. No tricolored blackbirds were observed nesting, foraging or perching along the Primary Route during the 2009 or 2010 surveys.

## **San Joaquin County Multi-Species Habitat Conservation Plan**

San Joaquin County, the San Joaquin County COG, the City of Lodi and other municipalities and agencies within the county adopted the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) in 2000-2001 after considering the Final EIR/EIS prepared for the plan. The EIR/EIS, known as the *Final EIR/EIS for the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan*, was certified by the San Joaquin Council of Governments on December 7, 2000.

The SJMSCP is a voluntary plan through which development projects can obtain coverage under the state and federal Endangered Species Acts. The SJMSCP includes an overall inventory of the special-status biological resources of the County, an analysis of the potential biological impacts of land development and other anticipated conversion of habitats, and a plan for habitat acquisition and enhancement that is expected to reduce the potential biological effects of various habitat conversion activities to a less than significant level. Participation in the SJMSCP is considered sufficient to reduce the potential environmental impacts of a project on species covered by the plan to a less than significant level.

SJMSCP covered species include those ordinarily occurring along the Primary Route. Losses of habitat values associated with conversion of such lands are compensated by payment of fees that are used for habitat acquisition and improvement. The most recent

(2010) HCP per-acre fees are listed below; the “Agriculture” fees would apply to the upland portions of the SPA.

Multi-Purpose Open Space	\$7,307
Agriculture	\$14,615
Grasslands	\$42,071
Wetlands	\$80,766

The majority of the Primary Route is located within public road alignments outside the City of Lodi and is not classified by the SJMSCP although the project is eligible for coverage. Lands adjacent to the proposed alignment are predominantly Multi-Purpose Open Space and Agriculture.

## Waters of the U.S. and Wetlands

Waters of the U.S., including wetlands, are broadly defined under 33 Code of Federal Regulations (CFR) 328 to include navigable waterways, many of their tributaries, and adjacent wetlands. State and federal agencies regulate these habitats and Section 404 of the Clean Water Act requires that a permit be secured prior to the discharge of dredged or fill materials into waters of the U.S. Both CDFG and ACOE have jurisdiction over modifications to riverbanks, lakes, stream channels and other wetland features.

Although definitions vary to some degree, wetlands are generally considered to be areas that are periodically or permanently inundated by surface or ground water, and support vegetation adapted to life in saturated soil. Jurisdictional wetlands are vegetated areas that meet specific vegetation, soil, and hydrologic criteria defined by the ACOE *Wetlands Delineation Manual* (ACOE, 1987). Waters of the U.S. are drainage features or water bodies as described in 33 CFR 328.4. Currently, ACOE and the U.S. Environmental Protection Agency (EPA) share authority to determine the jurisdictional status of waters of the U.S., including wetlands. Jurisdictional wetlands and Waters of the U.S. include, but are not limited to, perennial and intermittent creeks and drainages; lakes, seeps, and springs; emergent marshes; riparian wetlands; and seasonal wetlands.

Potentially jurisdictional waters of the U.S. along the Primary Route include irrigation laterals and ditches and a relatively large ditch that is tributary to White Slough near the western terminus of the project. There are also seasonal wetlands in soil borrow areas adjacent to Interstate 5 and some ditches and other low areas supporting wetlands near the existing NCPA power plant (west end of the Primary Route).

The westernmost approximately 2,000 feet of the Primary Route (i.e., west of Interstate 5) parallels a channelized tributary to White Slough, prior to turning north and connecting to the existing substation. In this area, the Primary Route is in upland grasslands just north of the channelized tributary. White Slough is a jurisdictional water of the U.S. that drains into the San Joaquin River delta. This hydrologic relationship of the channelized tributary to White Slough with the delta would likely lead to a jurisdictional determination by ACOE.

The Primary Route crosses over a number of irrigation laterals and ditches. Review of USGS topographic maps reveals that the network of irrigation laterals in the project vicinity is mapped as intermittent "blue-line" streams. These irrigation laterals and ditches return excess water back to the San Joaquin River delta and the hydrologic relationship of the irrigation laterals and ditches with the delta would likely lead to a jurisdictional determination by ACOE.

To the north and south of the Interstate 5 Frontage Road under-crossing of Interstate 5, there are seasonal wetlands in soil borrow areas adjacent to the elevated freeway. In this area, the Primary Route follows a fence line along the east edge of the soil borrow areas. The wetlands do not appear to pond water, but remain saturated long enough in the winter and spring to support hydrophytic vegetation. Due to hydrologic isolation from jurisdictional water of the U.S., it is considered unlikely ACOE would assert jurisdiction over the seasonal wetlands in these soil borrow areas.

Finally, there are some ditches and low areas supporting wetlands in the vicinity of the entrance to the power plant (west end of the Primary Route) that appear to have been excavated during construction of roads, the power plant, and the substation. The Primary Route is in upland grasslands and/or along the edge of a dirt road just north of the channelized tributary to White Slough and will not encroach into any of these ditches and low areas supporting wetlands.

No other areas were observed along the Primary Route appearing to have any potential to fall under ACOE jurisdiction. Specifically, no vernal pools, seasonal wetlands, marshes, ponds, or lakes of any type were observed along the alignment. The minor roadside drainage ditches and agricultural tailwater return ponds in parcels along the Primary Route do not meet the technical or regulatory criteria of jurisdictional Waters of the U.S. or wetlands.

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

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### Significance Thresholds

For the purposes of this EIR, impacts related to biological resources are considered significant if the proposed project would:

- Adversely impact, either directly or through habitat modifications, any endangered, rare, or threatened species, as listed in Title 14 of the California Code of Regulations (sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (sections 17.11 or 17.12).
- 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 CDFG or USFWS.

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies and regulations, or by the CDFG or USFWS.
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- 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 Conservation Community Plan, or other approved local, regional, or state habitat conservation plan.

### *Impacts on Special Status Plants*

Special-status plants identified in the CNDDDB query, and listed in Table 7-1, include rose-mallow, legenere, Delta tule pea, Mason’s lilaepsis, delta mudwort, blue skullcap, and Suisun marsh aster. All of the special-status plants found in the greater project vicinity generally occur in relatively undisturbed areas within vegetation communities such as vernal pools, marshes and swamps, and riparian scrub. None of these habitat types occur along the Primary Route. Due to lack of suitable habitat, no special-status plant species are expected to occur along the Primary Route. Therefore, the project would have no impact on any special-status plant species.

Level of Significance: Less than significant

Mitigation Measures: None required

### *Impacts to Special Status Wildlife Species*

The potential for intensive use of habitats along the Primary Route by special-status wildlife species is generally considered low. Sensitive wildlife species that have been recorded in the greater project vicinity include Swainson’s hawk, burrowing owl, tricolored blackbird, California black rail, California tiger salamander, giant garter snake, foothill yellow-legged frog, western pond turtle, Sacramento splittail, vernal pool tadpole shrimp, and valley elderberry longhorn beetle.

While the Primary Route and surrounding areas may have provided habitat for some of the special-status wildlife species listed in Table 7-1 at some time in the past, farming, development, and road and canal construction and maintenance along the Primary Route

and in surrounding parcels have substantially modified natural habitats within the greater project vicinity. Of the special-status wildlife species identified, Swainson's hawk, burrowing owl, and tricolored blackbird are the only species that have potential to occur along the Primary Route on more than a transitory or very occasional basis. These species are discussed further below because they could be disturbed by construction if they nest along or near the Primary Route during construction. Other special-status birds may fly over the area on occasion, but would not be expected to nest along the Primary Route. There is no habitat along the Primary Route for the remaining species in Table 7-1.

As previously noted, Swainson's hawk has been observed in the project area. There are a few suitable nest trees along and near the Primary Route and there are some notable raptor stick nests in some large oaks and willows near Interstate 5. It is likely one or more of these nests have been used by nesting Swainson's hawks in the past. Open grassland, alfalfa, and other cropland near these trees provide high-quality Swainson's hawk foraging habitat and increases the suitability of the trees in the area to be used for nesting.

No burrowing owls were observed in the field surveys. However, there are a few areas of open grassland and cropland near the Primary Route that could be used by foraging burrowing owls. In addition, a few suitable ground squirrel burrows were observed along ditches, banks of irrigation laterals, and in some of the parcels adjacent to the Primary Route. None of these burrows had any evidence of burrowing owl occupancy (i.e. whitewash, feathers and/or pellets). Despite these negative findings, burrowing owls could nest along or near the Primary Route in the future.

As previously noted, no tricolored blackbirds were observed nesting, foraging or perching along the Primary Route during field surveys. However, the patches of blackberry brambles and marsh vegetation associated with wetlands in the vicinity of the west end of the Primary Route provides potentially suitable nesting habitat for tricolored blackbird. Open grassland and cropland in and near the Primary Route may be used for foraging.

There are a number of relatively large trees along the Primary Route that are suitable for nesting raptors and other protected migratory birds, including Swainson's hawk. The final survey was conducted in the very early part of the avian nesting season, and no active raptor nests were observed. However, there are some notable raptor stick nests in some large oaks and willows near Interstate 5, and both Swainson's hawks and red-tailed hawks were observed soaring and perching on poles and trees in the area. There are also a number of large eucalyptus and other ornamentals throughout the project area that could support nesting raptors. Given the presence of trees along the Primary Route and raptor foraging habitat (i.e., open fields) near the Primary Route, it is likely one or more pairs of raptors, plus a variety of songbirds, nest along one or more of the Primary Route each year.

Mitigation for the identified potential impacts would be addressed by conducting pre-construction surveys to identify whether lands or trees adjoining the project site are in use by special-status species. The mitigation measures specified below would reduce these potential impacts to a less than significant level. Alternatively, the City could participate in the SJMSCP, which would also have the effect of reducing potential impacts to a less than significant level.

Level of Significance: Potentially significant

Mitigation Measures:

- 7-1. Pre-construction surveys for nesting Swainson's hawks along the Primary Route shall be conducted if construction commences between March 1 and September 15. The surveys shall include all large trees visible from the Primary Route. If active nests are found, a qualified biologist shall recommend any necessary temporal restrictions on construction to avoid or minimize disturbance of the nests. Such restrictions may include, but are not limited to, a buffer area around nests within which no construction activities would occur until the young have fledged.
- 7-2. Pre-construction surveys for burrowing owls along the Primary Route shall be conducted if construction commences between February 1 and August 31. The surveys shall include the ruderal areas along the roads that the Primary Route follows, and all areas of open grassland visible from the Primary Route. If occupied burrows are found, a qualified biologist shall recommend any necessary temporal restrictions on construction to avoid or minimize disturbance of the nests. Such restrictions may include, but are not limited to, a buffer area around nests within which no construction activities would occur until the young have fledged.
- 7-3. Pre-construction surveys for tricolored blackbird shall be conducted if construction commences between March 15 and August 1. The survey shall include the blackberry brambles and marsh vegetation associated with wetlands in the vicinity of the west end of the Primary Route. If active nests are found, a qualified biologist shall recommend any necessary temporal restrictions on construction to avoid or minimize disturbance of the nests. Such restrictions may include, but are not limited to, a buffer area around nests within which no construction activities would occur until the young have fledged.
- 7-4. Any trees that need to be removed or trimmed as part of the project shall be felled or trimmed outside of the general bird nesting season (February 1 through August 31), or a nesting bird survey shall be conducted immediately prior to the proposed tree removal or trimming. If active nests are found, tree felling or trimming shall be delayed until the young have fledged.
- 7-5. As an alternative to the above mitigation measures, the proponent may seek coverage under the SJMSCP. In this event, the proponent shall request coverage under the SJMSCP, pay required fees and observe any Incidental Take Minimization Measures specified for the project by the San Joaquin County COG.

Significance After Mitigation: Less than significant

Implementation: The Lodi EUD shall hire a qualified biologist to conduct the required surveys. The Lodi EUD, and any contractors hired by the EUD, shall be responsible for implementing the recommendations of the qualified biologist. The Lodi EUD will be responsible for obtaining SJMSCP coverage if desired and for fulfilling SJMSCP-related requirements.

Monitoring: The Lodi EUD will monitor all construction activities and will ensure compliance with the mitigation measures, including any ITMMs that may be prescribed by the SJCOG.

### *Impacts on Wetlands and Waters of the U.S.*

Potentially jurisdictional waters of the U.S. were identified along the Primary Route by field surveys, as previously noted. They include irrigation laterals and ditches and a relatively large ditch that is tributary to White Slough adjacent to the western portion of the Primary Route. There are also seasonal wetlands in soil borrow areas adjacent to Interstate 5 and some ditches and other low areas supporting wetlands near the power plant. Beyond these features, no vernal pools, stock ponds, streams, lakes, or other potentially jurisdictional waters of the U.S. or wetlands of any kind were observed along the Primary Route. The minor roadside drainage ditches and agricultural tailwater return ponds in parcels along the Primary Route do not meet the technical or regulatory criteria of jurisdictional Waters of the U.S. or wetlands.

The project is expected to avoid direct impact of these potential waters of the U.S. and wetlands. The poles would not be placed in any of the irrigation laterals and ditches in the project area, nor is it anticipated that the project would disturb the seasonal wetland area adjacent to I-5. While power poles will be placed along the tributary ditch to White Slough (near the proposed western terminus of the project), it is expected the poles will be installed in ruderal uplands adjacent to the ditch.

Under this scenario of complete avoidance of all potential waters of the U.S. and wetlands, the project would not require a Section 404 permit from ACOE or a Section 1602 permit from CDFG. However, if material from the holes drilled for the power poles discharges or spills into potential waters of the U.S. and wetlands, or if modifications to the banks of potential waters of the U.S. and wetlands are required to support pole installation, a Section 404 permit from ACOE and/or a Section 1602 permit from CDFG may be required. Both permits typically include attached conditions designed to reduce the environmental impact of a project on an affected water body or wetland.

Level of Significance: Potentially significant

Mitigation Measures:

7-6. Potentially jurisdictional waters of the U.S. and wetlands shall be avoided to the maximum extent practicable through placing the power poles outside the potentially jurisdictional areas. If power poles must be placed within potentially jurisdictional water of the U.S. or wetland and/or modifications to the jurisdiction areas are needed to support the pole installation, a wetland

delineation shall be conducted and submitted to ACOE to determine the jurisdictional or non-jurisdictional status of mapped features. If the project will involve encroachment into potentially jurisdictional waters of the U.S. and wetlands, all necessary permits and/or certification shall be obtained from ACOE, CDFG, and the Regional Water Quality Control Board, and the project shall comply with all conditions of these permits and/or certifications.

Significance After Mitigation: Less than significant

Implementation: The Lodi EUD, or its subcontractors, shall retain a qualified biologist to conduct the wetland delineation if necessary, and shall obtain any required permits. The Lodi EUD, and any contractors hired by the EUD, shall be responsible for implementing the conditions of any required permits.

Monitoring: The Lodi EUD will monitor all construction activities and will ensure compliance with permit conditions.

### *Other Biological Resource Impacts and Related Conservation Plan*

The Moore Biological report did not indicate any project impacts on special-status fish species, such as salmon. It also did not indicate any impacts on wildlife corridors or native wildlife nesting sites, other than potential nesting sites for bird species discussed previously. No sensitive natural communities were identified in the Moore Biological report.

The only conservation plan potentially applicable to the project is the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), a comprehensive program/plan for assessing and mitigating the biological impacts of land development in San Joaquin County. The plan provides compensation for the conversion of open space to non-open space uses that affect plant, fish, and wildlife species covered by the plan. The plan is voluntary; applicants may use the plan or choose an alternate mitigation strategy for a project. Optional coverage of the project under the SJMSCP, including the implementation of any required Incidental Take Minimization Measures is available, and applicable conditions shall be observed by the contractor and/or City. A project that complies with the SJMSCP can be deemed to result in less than significant impacts on biological resources under CEQA.

The project area is located within the SJMSCP coverage area. However, project proponents may opt to not participate in the SJMHCP. Under this circumstance, the project proponent would be required to comply with all applicable local, state and federal laws and regulations concerning biological resource protection. As discussed in this chapter, the project would have little impact on biological resources, and mitigation measures would be implemented for identified impacts. These mitigation measures would be consistent with state and federal laws and regulations.

As previously noted, the SJMSCP covers conversion of open space to non-open space uses. The project would be located on existing public road and public utility rights-of-way, which are already non-open space uses. No additional open space would be converted as

a result of the project. Therefore, even if the project does not participate in the SJMSCP, the project would not conflict with the plan.

Level of Significance: Less than significant

Mitigation Measures: None required

## 8.0 CULTURAL RESOURCES

This section of the EIR describes the cultural resources in the project area. Cultural resources include prehistoric and historic structures, artifacts and sites. Information for this section comes from an archaeological survey of the project area by Sean Jensen of Genesis Society. Appendix C contains a copy of the survey report. The report includes results of a records search conducted at the Central California Information Center at CSU Stanislaus, part of the California Historical Resources Information System. It also includes consultation with affected Native American representatives and results of a field survey conducted in the project area.

Since the proposed project would involve physical disturbance to ground surface and sub-surface components, the potential exists to impact any cultural resources that may be located within the Area of Potential Effect (APE), also referred to as the Primary Route. In this case, the APE would consist of the approximate seven-mile linear corridor. Evaluation of the project's potential to impact significant cultural resources must be undertaken in conformity with San Joaquin County rules and regulations, and in compliance with requirements of CEQA and the CEQA Guidelines as amended.

### ENVIRONMENTAL SETTING

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#### Prehistoric Background

The project area is located within territory claimed by the Penutian-speaking Northern Valley Yokuts at the time of initial European-American entry into this region (c. 1800). The Yokuts occupied a fairly extensive area, extending from the crest of the Coast Range easterly into the foothills of the Sierra Nevada, north to the American River, and south to the upper San Joaquin River.

The basic social unit for the Yokuts was the family, although the village may also be considered a social, a political and economic unit. Villages were often located on elevated features adjoining streams (e.g., natural levees, knolls, ridges). They were inhabited mainly in the winter, as it was necessary to seasonally relocate, sometimes to hills and higher elevation zones, to establish temporary camps during food gathering seasons (spring, summer and fall). Villages typically consisted of a scattering of small structures, numbering from four or five to several dozen in larger villages, each house containing a single family of from three to seven people. Larger villages, from twelve to fifteen or more houses, might also contain an earth lodge.

As with most California Indian groups, economic life for the Yokuts revolved around hunting, fishing and the collecting of plant foods, with deer, acorns, and aquatic resources representing primary staples. The collection and processing of these various food resources was accomplished with the use of a wide variety of wooden, bone and stone

artifacts. The Yokuts were very sophisticated in their knowledge of the uses of local animals and plants, and of the availability of raw material sources that could be used in manufacturing an immense array of primary and secondary tools and implements. However, only fragmentary evidence of their material culture remains, due in part to perishability, and in part to the impacts to archaeological sites resulting from later (historic) land uses.

## Historical Background

Anglo-American fur trappers, Russian scientists, and Spanish-Mexican expeditions visited the interior of California during the early part of the 19th century. These early explorations were followed by a rapid escalation of European-American activities, which culminated in the massive influx fostered by the discovery of gold at Coloma in 1848.

Early Spanish expeditions arrived from Bay Area missions as early as 1804, penetrating the northwestern San Joaquin Valley. By the mid-1820s, hundreds of fur trappers were annually traversing the Valley on behalf of the Hudson's Bay Company. By the late 1830s and early 1840s, several small permanent European-American settlements had emerged in the Central Valley and adjacent foothill lands, including ranchos in the interior Coast Range, and the settlement at New Helvetia (Sutter's Fort) at present-day Sacramento.

With the discovery of gold in the Sierra Nevada, large numbers of European-Americans, Hispanics and Chinese arrived in and traveled through the Valley. The Valley's eastside mining communities' demands for hard commodities led quickly to the expansion of ranching and agriculture throughout the Central Valley and the interior valleys of the Coast Range. Stable, larger populations arose and permanent communities slowly emerged in the Central Valley, particularly along major transportation corridors.

Of particular importance was the transformation brought about by the railroad. The Southern Pacific, Central Pacific, and Atchison Topeka and Santa Fe Railroads and a host of smaller interurban lines around the cities of Sacramento, Stockton and Modesto began intensive projects in the late 1860s. By the turn of the century, nearly 3,000 miles of lines connected the cities of Modesto and Stockton with points south and north. Many of the valley's cities, including many in San Joaquin and adjacent counties, were laid out as isolated railroad towns in the 1870s and 1880s by the Southern and Central Pacific.

## Project Area Resources

Several sources of information were considered relevant to evaluating the types of archaeological and historical sites and site distribution that might be encountered within the project area. The information evaluated prior to conducting pedestrian field survey includes data maintained by the Central California Information Center at CSU Stanislaus, consultation with Yokuts tribal representatives, the Native American Heritage Commission (NAHC), and review of available published and unpublished documents relevant to regional prehistory, ethnography and early historic developments.

## Records Search

Prior to conducting the pedestrian field survey, the official San Joaquin County archaeological records maintained by the Central California Information Center were examined for any existing recorded prehistoric or historic sites. Approximately five miles of the seven-mile APE (Primary Route) has been subjected to previous archaeological survey as a result of twelve previous investigations:

	<u>Report #</u>	<u>Author/Date</u>
1)	735	Cupples, 1977
2)	850	Wohlgemuth, 1990
3)	4508	Jones & Stokes, 2001
4)	5498	Leach-Palm, et al., 2004
5)	5501	Rosenthal, et al., 2004
6)	5503	Leach-Palm, et al., 2004
7)	5572	Busby, 2004
8)	6097	Jones & Matzen, 2006
9)	6185	Bonner, 2006
10)	6687	PMC, 2006
11)	6770	Lawson and Helton, 2008
12)	7085	Aspen Environmental Group, 2008

In addition to examining the official records of San Joaquin County as maintained by the Central California Information Center, the following were also reviewed by the Information Center, or separately:

- The National Register of Historic Places (1986, Supplements).
- The California Inventory of Historic Resources (State of California 1976).
- The California Historical Landmarks (State of California 1996).
- The California Points of Historical Interest (May 1992 and updates).
- The Directory of Properties in the Historic Property Data File (OHP listing 9/17/2009) and the Archaeological Determinations of Eligibility (OHP listing 9/17/2009).
- GLO Plat Maps and other historic maps referenced by the Information Center in the attached CCIC File # 7453L.
- The Native American Heritage Commission (NAHC) re. Sacred Land Listings.

No prehistoric sites have been recorded within or adjacent to the Area of Potential Effect or Primary Route. One historic-era site has been identified, but not formally recorded, within the APE. The Western Pacific Railroad alignment (CA-SJO-292-H) trends generally northwest-southeast, and bisects the Primary Route at Harney Lane.

## Archaeology Survey

An archaeological field survey was undertaken by Sean Michael Jensen on February 5 and 6, 2010. All of the project area was subjected to pedestrian survey, accomplished by walking two transects along both sides of the proposed 20-foot wide power line corridor. In searching for cultural resources, the surveyor took into account the results of

background research and was alert for any unusual contours, soil changes, distinctive vegetation patterns, exotic materials, artifacts, feature or feature remnants and other possible markers of cultural sites.

Disturbance to the ground surface and subsurface components has been moderate to substantial throughout the project area. Most of the power line corridor is located within/adjacent to existing paved road rights-of-way. Additionally, farming and residential developments have resulted in ground disturbance along the study corridor. Finally, Interstate 5, the White Slough Water Pollution Control Plant and the Northern California Power Agency facility have all resulted in substantial disturbance to the APE or Primary Route and immediately adjacent lands.

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

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### *Potential Impacts on Prehistoric Cultural Resources*

No evidence of prehistoric use or presence was observed during the pedestrian survey. No artifacts, flakes, and no elevated spots or other soil characteristics suggesting a possible village encampment were observed. The degree of prior disturbance to which all of the project area has been subjected partially explains the absence of prehistoric cultural material along the study corridor, combined with the absence of a permanent surface water source within the immediate vicinity.

As part of the process of identifying prehistoric cultural resources and in conjunction with the records search and background data review, Native American consultation was undertaken for this project. As noted, the NAHC was requested to supply any information they had concerning Sacred Land listings for the project area, with negative results. The contact list from the NAHC included individuals, groups and tribes, as follows:

- Katherine Erolinda Perez, North Valley Yokuts Tribe, Linden, California.
- Randy Yonemura, Sacramento, California.
- Buena Vista Rancheria, Sacramento, California.
- Silvia Burley, California Valley Miwok Tribe, Stockton, California.
- Debra Grimes, California Valley Miwok Tribe, West Point, California.
- Briana Creekmore, California Valley Miwok Tribe, Wilseyville, California.
- Matthew Franklin, Lone Band of Miwok Indians, Lone, California.
- Billie Blue, Lone Band of Miwok Indians, Galt, California.
- Mary Daniels-Tarango, Wilton Rancheria, Sacramento, California.
- Leland Daniels, Wilton Rancheria, Sacramento, California.

All of the listed parties were requested, via letter, to supply any specific information they might have concerning prehistoric sites, traditional use areas or other concerns they might have for lands within or near the project area. To date, one response had been received. On January 29, Ms. Billie Blue, representing the Lone Band of Miwok Indians, responded

via email. Ms. Blue indicated that the Lone Band did not have any information or comments at this time.

The present evaluation is based on the findings of an inventory-level surface survey only. There is always the possibility that important unidentified cultural materials could be encountered on or below the surface during the course of future development or construction activities. This possibility is particularly relevant considering the constraints generally to archaeological field surveys, and particularly where past road construction and farming activities have either completely (roadways) or partially (agricultural fields) obscured ground surface visibility, as in the present case. Proper treatment of any resources encountered during construction would be necessary to avoid significant environmental effects. Evidence of human burial or scattered human remains related to prehistoric occupation of the area could be inadvertently encountered during actions involving disturbance to the ground surface and subsurface components. The following mitigation measures would address these issues.

Level of Significance: Potentially significant

Mitigation Measures:

- 8-1 If any subsurface cultural resources, including either prehistoric or historic resources, are encountered during construction, all construction activities in the vicinity of the encounter shall be halted until a qualified archaeologist can examine these materials and make a determination of their significance.
- 8-2 If human remains are encountered at any time during the development of the project, all work in the vicinity of the find shall halt and the County Coroner shall be notified immediately. If it is determined that the remains are those of a Native American, the Coroner must contact the Native American Heritage Commission. At the same time, a qualified archaeologist must be contacted to evaluate the archaeological implications of the finds. The CEQA Guidelines detail steps to be taken when human remains are found to be of Native American origin.

Significance After Mitigation: Less than significant

Implementation: The EUD will be responsible for imposing cultural resource protection controls on line construction contractors, and for retaining a qualified archaeologist if cultural resources are encountered during construction.

Monitoring: The EUD will be responsible for ensuring that archaeological monitoring occurs, if necessary. Monitoring shall consist of comparing construction activities to the archaeologist's recommendations.

## *Potential Project Effects on Historic Resources*

As noted previously, one historic-era site, the Western Pacific Railroad (CA-SJO-292-H), bisects Harney Lane and the Primary Route. However, pole placement for the proposed 60 kV power line would not encroach within the existing railroad right-of-way. Consequently, no historic-era sites are located within the APE (Primary Route).

Similar to prehistoric resources, there is always the possibility that potentially significant but unidentified historic cultural materials could be encountered below the surface during construction activities. Mitigation Measure 8-1 described above for prehistoric resources would account for this potential and reduce potential impacts to less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

- 8-3 The EUD shall be responsible for compliance with Mitigation Measure 8-1, if necessary, regarding unidentified subsurface cultural resources exposed during excavation activities, including unidentified historic resource.

Significance After Mitigation: Less than significant

Implementation: The EUD will be responsible for imposing cultural resource protection controls on grading and excavation contractors, and for retaining a qualified archaeologist if cultural resources are encountered during construction.

Monitoring: The EUD will be responsible for ensuring that archaeological monitoring occurs, if necessary. Monitoring shall consist of comparing construction activities to the archaeologist's recommendations.

## 9.0 GEOLOGY AND SOILS

This section of the EIR describes the existing geology, soils, seismic conditions and mineral resources in the project area and analyzes the potential physical environmental effects related to seismic hazards and erosion. Information used in preparation of this section were obtained primarily from a soil survey report from the U.S. Department of Agriculture, Natural Resources Conservation Service (formerly the Soil Conservation Service); previously published information from the California Geological Survey (formerly the California Division of Mines and Geology); and from the Lodi Energy Center EIR.

### ENVIRONMENTAL SETTING

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#### Geology and Topography

The proposed project area is located near the approximate center of California's Central Valley, a large, northwest-trending, sediment-filled trough that extends more than 400 miles from the Tehachapi Mountains in the south to the Cascade Range on the north. The Central Valley of California is an expansive plain formed from a combination of marine sediments and Sierra Nevada and Coastal Range alluvial sediments. The Central Valley formed as a consequence of the accumulation of sediments that eroded from the Sierra Nevada to the east, and were deposited in this region approximately 65 million years ago. Six to 10 miles of sediment have been deposited in the Central Valley, including both marine and continental gravels, sands, silts, and clays.

The California Division of Mines and Geology's Geologic Map of the Sacramento Quadrangle (1981) indicates that the underlying geology of the project area is the Modesto Formation, which consists of alluvium (soil deposited by a river or other running water).

The eastern end of the Primary Route of the project is at an elevation of approximately 30 feet above mean sea level. The western end of the Primary Route has an elevation slightly greater than 5 feet above mean sea level. The general gradient of the project area slopes to the southwest. The project area is relatively flat, with little surface relief.

#### Soils

Soils generally are moderately deep to very deep, with slow runoff. Most soils are varieties of sandy loam. The sandy loams generally are moderately well-drained and have moderately rapid permeability, indicating that rain will more readily percolate into the ground, thereby reducing the amount of standing water and potential flooding. Table 9-1 lists the characteristics of the soils in the project area.

TABLE 9-1  
SOIL CHARACTERISTICS  
LODI WEST 60 KV POWER LINE PROJECT AREA

Name*	Depth	Drainage	Permeability	Shrink/Swell	Runoff	Water Erosion Hazard
101 - Acampo Sandy Loam	Deep to hardpan	Moderately well-drained	Moderately rapid	Low	Slow	Slight
149 - Devries Sandy Loam	Moderately deep to hardpan	Somewhat poorly drained	Moderately rapid	Low	Slow	Slight
189 - Kingdon Fine Sandy Loam	Very deep	Moderately well-drained	Moderate	Low	Slow	Slight
256 - Tokay Fine Sandy Loam	Very deep	Well-drained	Moderately rapid	Low	Slow	Slight
259 - Tujunga Loamy Sand	Very deep	Somewhat excessively drained	Rapid	Low	Slow	Slight

\*Refer to Figure 9-1 for location of soil types.

*Sources: US Dept. of Agriculture, Soil Conservation Service, Soil Survey of San Joaquin County, California, 1992; US Dept. of Agriculture, Natural Resources Conservation Service, Custom Soil Resource Report for San Joaquin County, California, Lodi EUD Power Line, 2009*

Approximately 46% of the soils on the site are classified as Devries sandy loam, 27% are Acampo sandy loam, and 20% are Tokay fine sandy loam. The remaining soils consist of fine sandy loam and loamy sand.

### Soil Hazards

Soil erosion is the process by which soil particles are removed from a land surface by wind, water, or gravity. Most natural erosion occurs at slow rates; however, the rate of erosion increases when land is cleared of vegetation or structures, or otherwise altered and left in a disturbed condition. Soil erosion potential is a function of soil texture, steepness, rainfall and runoff and disturbance. Table 9-1 indicates that erosion hazards are slight throughout the project area.

Expansive soils are those with generally high clay mineral content which, when wetted and dried, are subject to expansion and shrinkage (shrink/swell). Expansion/contraction can lead to damage to structures placed in or on these soils. All soils in the project area have low shrink-swell potential.

Subsidence is the lowering of the ground surface. Ground subsidence is the result of hydrocompaction, groundwater withdrawal or peat oxidation. Hydrocompaction is the settling and hardening of land due to application of large amounts of water for irrigation. Removal of groundwater from alluvial materials results in settlement and compaction of these materials and cumulative reductions in elevation at ground level. This phenomenon

occurs widely in the San Joaquin Delta area. Peat oxidation subsidence, which occurs widely in the Delta area together with groundwater withdrawal subsidence, is the result of oxidation, burning, wind erosion, drying and machine compaction. Most of the subsidence in the Delta area has occurred in the western portion, where subsidence greater than 15 feet has been noted. In the eastern portion, subsidence has ranged from zero to 10 feet (USGS, 2000, cited in NCPA, 2008).

## Seismicity and Seismic Hazards

San Joaquin County is situated in an area considered seismically active. The seismicity of the region is related to activity on the San Andreas fault system, which forms the boundary between the North American and Pacific tectonic plates (Jennings, 1994). However, there are no active or potentially active faults located in the project area, and no Alquist-Priolo Special Studies Zones are designated there (see Regulatory Setting below). The nearest active fault is known as Segment 5 of the Great Valley Fault, located approximately 20 miles west of the project area. Other faults within a 50-mile radius of the project area include the Greenville Fault, the Concord-Green Valley Fault, the Calaveras Fault and the Hayward Fault. Ground shaking from a magnitude 7.3 earthquake could occur within a 50-mile radius of the project area (NPCA, 2008).

The Lodi area is subject to seismic shaking from the distant fault features located east and west of the City. The Lodi General Plan states that the maximum earthquake intensity to be reasonably expected in the Lodi area would correspond to Modified Mercalli Intensity VIII, on a scale of I to X, with X being the most intense. Table 9-2 shows the Modified Mercalli Intensity Scale, along with descriptions of potential affects associated with each intensity level.

During an Intensity VIII event, some damage would occur to well-made structures and chimneys, and poorly constructed or weak structures would be heavily damaged. However, an Intensity VIII event would be most probable in areas where the water table is shallow. Where the water table is deeper than 30 feet, a maximum earthquake intensity of VII would be more reasonably expected. At intensity VII, well-built structures would experience slight damage (City of Lodi, 1991). In the project area, the groundwater table varies in elevation both seasonally and by location. At the Lodi WPCF site, groundwater elevations tend to be less than 30 feet deep, while elevations in the eastern portion of the project area tend to be deeper than 30 feet (City of Lodi, 2006). Chapter 12.0, Hydrology and Water Quality, discusses groundwater in detail.

During a strong earthquake, soils that are loose and saturated can experience a temporary loss of strength and act as a fluid – a phenomenon known as liquefaction. The occurrence of liquefaction depends on the depth to groundwater, soil grain size distribution, relative soil density, degree of saturation, and intensity and duration of the earthquake. The potential hazard associated with liquefaction is seismically induced settlement.

No other geologic hazards have been identified in the project area. Tsunamis and seiches are not considered significant threats in the area, since there are no oceans or large bodies of water nearby. There is insufficient slope in the project area to promote landslides, and the nearest active volcanic area, Mt. Lassen, is approximately 175 miles to the northeast.

TABLE 9-2  
MODIFIED MERCALLI INTENSITY SCALE

Modified Mercalli Intensity	Description
I	Detected by only sensitive instruments
II	Felt by a few people at rest
III	Felt noticeably indoors, but not always recognized as a quake; vibration like a passing truck
IV	Felt indoors by many and outdoors by few
V	Felt by most people. Some breakage of windows, dishes, and plaster
VI	Felt by all; falling plaster and chimneys; damage small
VII	Damage to buildings varies; depends on quality of construction
VIII	Walls, monuments, chimneys fall; panel walls thrown out of frames
IX	Buildings shift off foundations; foundations crack; ground cracks; underground pipes break
X	Most masonry and frame structures destroyed; ground cracks; landslides
XI	Ground fissures; pipes break; landslides; rails bent; new structures remain standing
XII	Damage total; waves seen on ground surface; objects thrown into the air

*SOURCE: Nuclear Reactors and Earthquakes, Atomic Energy Commission, TID7024.*

## Mineral Resources

The California Division of Mines and Geology prepares Mineral Land Classification Maps. These maps designate Mineral Resource Zones that indicate the presence of significant mineral deposits, or lack thereof. For the Stockton-Lodi area, the Division of Mines and Geology evaluated potential Portland cement concrete (PCC) grade aggregate (sand and gravel) deposits. The project area does not have any classified Mineral Resource Zones. However, classified areas adjacent to the project area have the designation MRZ-1, which indicates that no significant mineral deposits are present, or that the likelihood of their presence is small (Division of Mines and Geology, 1988).

Natural gas deposits have been identified in the Delta region. Gas fields of potential value are present within five miles of the project area. Although several wells have been drilled within two miles of the Lodi WPCF site, most were labeled as “plugged and abandoned – dry hole,” according to maps by the California Division of Oil, Gas and Geothermal Resources.

The nearest known active gas field is the King Island Gas field, approximately two miles to the west-southwest. One active well, “Piacentine,” was identified. The Lodi Airport Gas field, approximately 2.5 miles to the southeast, is present, but this field contains no completed wells. The abandoned Harte Gas field is approximately three miles to the south-southwest (NCPA, 2008).

## REGULATORY SETTING

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### State

#### Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (formerly the Alquist-Priolo Special Studies Zone Act), signed into law December 1972, requires the delineation of zones along active faults in California. The purpose of the Alquist-Priolo Act is to regulate development on or near active fault traces to reduce the hazard of fault rupture, and to prohibit the location of most structures for human occupancy across these traces. Cities and counties must regulate certain development projects within the zones, and may withhold permits until geologic investigations demonstrate that development sites are not threatened by future surface displacement. Surface fault rupture is not necessarily restricted to the area within an Alquist-Priolo Zone. No Alquist-Priolo zones have been identified in the project area or in San Joaquin County.

### Local

#### San Joaquin County General Plan Safety Element

The Safety Element is one of the seven State-mandated elements of local general plans, and contains goals, policies, and implementation actions for the protection of the city or county from risks associated with seismic and geologic hazards, flooding, and wildland and urban fires. As such, all counties and cities include seismic and other geologic hazards in the development of their respective general plans and zoning. San Joaquin County has developed general plan goals and policies that specifically address reduction of geologic hazards within its jurisdiction. The County regulates earthwork and construction activities through the land use entitlement and permit review process. This review process ensures consistency with County codes and ordinances and also provides consistency review with the Uniform Building Code and the California Building Code. Grading permits are required for most types of earthwork, and additional permits are typically needed depending on the type of construction proposed.

#### City of Lodi General Plan

The Health and Safety Element of the City of Lodi's General Plan contains goals pertinent to geology, soils and seismicity issues, including:

**Goal B.** To prevent loss of lives, injury, and property damage due to the collapse of buildings and critical facilities and to prevent disruption of essential services in the event of an earthquake.

**Goal F.** To ensure that City emergency procedures are adequate in the event of potential natural or human-made disasters.

# ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

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## Significance Thresholds

For the purposes of this EIR, impacts related to geology and soils are considered significant if the proposed project would:

- Expose people or structures to potential substantial adverse impacts, including risk of loss, injury, or death through the rupture of a known earthquake fault, strong seismic shaking, seismic-related ground failure, soil liquefaction, or landslides;
- Locate project facilities on a geologic unit that is unstable, or that would become unstable as a result of the proposed project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse;
- Locate project facilities on expansive soil, creating substantial risks to property;
- Result in substantial soil erosion or the loss of topsoil;
- Result in the loss of availability of known mineral resources that would be of value to the region and the residents of the state; or
- Result in the loss of availability of a locally important mineral resources recovery site delineated on the general plan.

### *Project Exposure to Faulting and Seismic Shaking Hazards*

There are no active or potentially active faults located on or in the vicinity of the Primary Route. As a result, no portion of the 60 kV power line would be exposed to fault rupture hazards.

The 60 kV power line would be exposed to potential ground shaking associated with earthquake activity occurring on more distant fault systems to a potential Modified Mercalli Intensity of VIII. The concern related to ground shaking would be the stability of the poles carrying the power line. The power line would be constructed in accordance with adopted Lodi EUD construction standards, which would avoid the potential for substantial seismic damage. Specifically, as discussed in Chapter 2.0, Project Description, new steel and wooden poles would be used to carry the power line. Steel poles would be anchored by bolts to a concrete foundation or placed below grade similar to a wooden pole installation. Wooden poles would be 65 feet in length but would be only 57 feet in height above ground surface, indicating that eight feet of pole would be buried under ground. This would provide structural stability for the exposed portions of the wooden poles. Pole construction, therefore, would reduce the likelihood of pole collapse and subsequent damage during an anticipated maximum earthquake intensity event (Intensity VIII).

Level of Significance: Less than significant

Mitigation Measures: None required

### *Project Exposure to Liquefaction*

The potential hazard of liquefaction depends in part on the depth to groundwater. As discussed in Chapter 12.0, Hydrology and Water Quality, the depth to groundwater ranges from shallow in the western portion of the project area to moderately deep in the eastern portion. Based on this information, the potential for liquefaction would most likely occur near the western endpoint of the Primary Route – the Lodi WPCF area. A geotechnical report for the proposed Lodi Energy Center adjacent to the WPCF site indicated that the likelihood of liquefaction is moderate (NCPA, 2008).

Liquefaction of an area where a pole has been installed may lead to the pole sagging. However, this would not likely lead to a downed power line unless several poles in the same area were to sag or fall down to the ground. The probability of this is considered low due to the spacing of poles over the approximately 7-mile route. Moreover, the only area of concern would be the area surrounding the Lodi WPCF site. This area is void of residential units, so no residents would be exposed to the hazard. Construction of the poles as described in Chapter 2.0, Project Description, would reduce the hazard posed by liquefaction.

Level of Significance: Less than significant

Mitigation Measures: None required

### *Exposure of Project to Soil Hazards*

The installation of overhead power lines would involve minimal physical disturbance, as described in Chapter 2.0, Project Description. Most soils along the Primary Route have at least moderate permeability and low shrink/swell potential (see Table 9-1). A limited amount of soils would be exposed to potential erosion, but the project area is relatively flat and the soils have only a slight erosion hazard. As indicated by Table 9-1, erosion hazards are slight throughout the project area. This is probably due to the existence of little to no slopes.

The project area is located on the eastern edge of the Delta region. As such, it is in an area where subsidence has not been severe. Subsidence has not been identified as a hazard at the Lodi WPCF site, according to the seismic and geological hazards section of the San Joaquin County General Plan (San Joaquin County, 1992, cited in NCPA, 2008).

Level of Significance: Less than significant

Mitigation Measures: None required

### *Effects on Mineral Resources*

There are no known mineral resources present in the project area. Based on the results of previously drilled wells, there are no natural gas deposits. The project would be limited mostly to rights-of-way along existing roads, so it would have no effect on the availability of or access to any mineral resources that may be discovered in the future.

Level of Significance: Less than significant

Mitigation Measures: None required

## 10.0 GLOBAL CLIMATE CHANGE

This chapter assesses the potential contribution of the project to the worldwide phenomenon of global climate change. There is general consensus that global climate change is occurring and that it is related to increasing atmospheric levels of greenhouse gases (GHGs). GHGs are emitted by natural processes and human activities, which consist largely of combustion of fossil fuels. The GHG emissions that are related to human activity are the subject of increasing scientific and public concern, and of government action.

In California, the Legislature has declared that global climate change is an important environmental issue that must be addressed under CEQA. Efforts are underway at all levels of government to further define and quantify CEQA analysis issues, and relevant efforts are discussed below. One such effort by the California Association of Environmental Professionals (AEP, 2007) indicates that land development projects that is, projects whose GHG contribution is related primarily and indirectly to vehicle travel and household energy use will ordinarily have less than significant effects on global climate change at a project (i.e., local) level. Under CEQA, then, global climate change associated with land development is considered as a potential *cumulative* effect, and it is in that framework that the issue is discussed in this chapter.

### ENVIRONMENTAL SETTING

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Chapter 6.0, Air Quality, describes most of the local setting as it relates to climate change. The following focuses more on the regional, state and international levels of climate change setting and regulation.

#### Global Climate Change Background

Global climate change is a subject of increasing scientific and public dialogue and concern. A major source of global climate change is understood to be atmospheric concentrations of GHGs that trap heat in the earth's atmosphere. GHGs include carbon dioxide (CO<sub>2</sub>), by far the most common GHG and the largest contributor to global climate change. Others include methane, nitrous oxide and other less-abundant gases. Total worldwide emissions of GHGs in 2004 were estimated at 20,135 million metric tons (MMT) of CO<sub>2</sub> equivalent (CO<sub>2</sub>e). U.S. emissions during the same year were estimated at 7,074 MMT CO<sub>2</sub>e. One million metric tons equals approximately 1.1 million U.S. tons.

Some GHGs have considerably higher global warming potential (GWP) than others. The GWP is the potential of a gas or aerosol to trap heat in the atmosphere. The reference gas for GWP is carbon dioxide, which has an assumed GWP of one. Methane has a GWP of 21, which means that it has a global warming effect 21 times greater than carbon dioxide on a molecule-by-molecule basis. GWPs for other GHGs include 120 for nitrous oxide and 264 for HFC-23.

GHG emissions are associated with numerous human activities, primarily those that involve the combustion of carbon-based fuels. The major sources of greenhouse gases in California include transportation (40.7%), electric power generation (20.5%), industrial activity (20.5%), agriculture and forestry (8.3%) and others (8.3%) (California Energy Commission, 2006). GHG emissions in California in 2004 were estimated at 484 million metric tons CO<sub>2</sub>e.

Concerns related to global climate change include the direct consequences of an altered, warmer climate, but also include indirect effects such as reduced air quality, reduced snowpack, higher-intensity storms and the impact of these changes on water resources. Melting of polar ice will contribute to rising sea level. All of these changes have implications for the human environment as well as existing ecosystems and the species that depend on them.

The 2005 GHG concentration in the atmosphere was estimated at 375 parts per million (ppm). The United Nations Intergovernmental Panel on Climate Change (IPCC) has constructed several emission trajectories of greenhouse gas concentrations needed to stabilize global temperatures and climate change impacts. The IPCC concluded that stabilization of greenhouse gases at a concentration of 400-450 parts per million (ppm) carbon dioxide-equivalent is required to keep mean global warming below 2° Celsius, which is assumed to be necessary to avoid dangerous climate change (IPCC, 2001).

## REGULATORY SETTING

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### International

Global climate change is a subject of longstanding international dialogue and action, dating from the 1988 establishment of the Intergovernmental Panel on Climate Change (IPCC) to further the understanding of human-induced climate change, its potential impacts, and options for adaptation and mitigation (IPCC, 2004). The United States joined other countries around the world in the United Nations Framework Convention on Climate Change (UNFCCC), which established an agreement to gather and share related information and take action to address the impacts of climate change (UNFCCC, 2007).

The Kyoto Protocol, a treaty negotiated under the auspices of the UNFCCC, committed the participants to reduce emissions of GHGs or to engage in emissions trading. However, the United States did not ratify the treaty.

In 2009, the UNFCCC held its annual Climate Change Conference in Copenhagen, Denmark. At the conference, member states agreed to make voluntary pledges for GHG emission reductions to be achieved by 2020. If the pledges are considered insufficient to meet the goal of global temperature rise to no more than 2° Celsius, then the accord would be reviewed no later than 2015 (UNFCCC, 2009).

## Federal

Until recently, the federal government has not adopted any comprehensive national strategy for reducing GHG emissions. However, under the current administration, efforts have been made to institute new federal fuel economy and GHG emissions standards modeled after existing California standards. In a related action, the U.S. Environmental Protection Agency in 2009 granted California the authority to implement GHG-reducing auto standards. The federal government is planning additional efforts to support alternative and renewable energy sources, including a new requirement that 25% of energy generation be derived from renewable sources by 2025. Additional energy conservation standards and institution of a federal cap-and-trade system are being considered. Additional action by Congress and the President is expected in the near future.

## State

### Assembly Bill (AB) 32

The Governor of California and the State Legislature have declared their concern with regard to global climate change and have set State agencies in motion to identify and implement strategies for the reduction of GHG emissions, primarily through AB 32, the Global Warming Solutions Act of 2006. AB 32 identifies global climate change as a “serious threat to the economic well-being, public health, natural resources and the environment of California.” A project that would contribute substantially to global climate change may involve a significant effect on the environment that needs to be considered under CEQA.

Primary responsibility for AB 32 implementation was placed with the California Air Resources Board (ARB). ARB’s Climate Action Team directs a variety of activities oriented toward meeting the AB 32 goals of reducing GHG emissions to 2000 levels by 2010 and to 1990 levels by 2020. These specific legislative goals are directly related to the Governor’s overall objective established in Executive Order S-3-05 of reducing GHG levels 80% below 1990 levels by the year 2050. The State’s current planning efforts are oriented toward meeting the legislated 2010 and 2020 goals while placing the State on a trajectory that will facilitate eventual achievement of the 2050 goal. The desired GHG emission reduction of 80% below 1990 levels is consistent with the IPCC goals for stabilizing global climate change.

### Climate Change Scoping Plan

ARB planning efforts recognize that reducing GHG emissions will require a broad response across the spectrum of human activity in the state. GHG reduction strategies being explored include, among others, new industrial and emission control technologies; alternative energy generation technologies; advanced energy conservation in building lighting, heating, cooling and ventilation; reduced-carbon fuels; hybrid, electric and other no-, low- or lower-carbon vehicles; and other methods of improving vehicle mileage; and changes in travel patterns.

In December 2008, ARB adopted the Climate Change Scoping Plan, its plan for meeting the AB 32 targets. The Climate Change Scoping Plan details the GHG reduction initiatives that will be undertaken by the State or passed down to local government and quantifies the GHG emission reductions associated with each of the initiatives. Self-described as “ambitious but achievable”, the Scoping Plan proposes to achieve a 30% reduction in projected business-as-usual emission levels for 2020, which is assumed to achieve the 2020 goal of reducing GHG emissions to 1990 levels. The provisions of the Scoping Plan include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related greenhouse gas emissions for regions throughout California, and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California’s clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State’s long-term commitment to AB 32 implementation.

The Scoping Plan defines the 2020 GHG emissions target as 427 MMT CO<sub>2</sub>e. Achieving this level will require a reduction of 169 MMT CO<sub>2</sub>e from the State’s projected 2020 business-as-usual emissions of 596 MMT CO<sub>2</sub>e, which is approximately 30% of those emissions and a 10% reduction of 2002-2004 average emissions.

Table 10-1 lists the Scoping Plan’s recommended reduction measures. As indicated in Table 10-1, these measures are projected to result in a total GHG emission reduction of 174 MMT CO<sub>2</sub>e by 2020, which exceeds the target reduction by 5 MMT CO<sub>2</sub>e. Of these reductions, nearly 85% will be achieved under the proposed regional cap-and-trade system and “complementary measures.” Several other identified measures, including reduction in state and local government operations, would contribute an addition 42 MMT CO<sub>2</sub>e or more of GHG reductions. The potential contribution of these other identified measures is not quantified in the scoping plan or counted in the projected reductions, although estimates of reductions are provided for some of them.

TABLE 10-1  
CLIMATE CHANGE SCOPING PLAN  
RECOMMENDED GREENHOUSE GAS REDUCTION MEASURES

Recommended Reduction Measures	Reductions Counted Towards 2020 Target (MMT CO <sub>2</sub> e)
<i>Estimated Reductions from Cap-and-Trade Program and Complementary Measures</i>	
California Light-Duty Vehicle Greenhouse Gas Standards	31.7
Energy Efficiency	26.3
Renewables Portfolio Standard (33% by 2020)	21.3
Low Carbon Fuel Standard	15.0
Regional Transportation-Related GHG Targets	5.0
Vehicle Efficiency Measures	4.5
Goods Movement	3.7
Million Solar Roofs	2.1
Medium/Heavy Duty Trucks	1.4
High Speed Rail	1.0
Industrial Measures (for sources covered under cap-and-trade program)	0.3
Additional Reductions Necessary to Achieve the Cap	34.4
Subtotal	146.7
<i>Estimated Reductions from Uncapped Sources/Sectors</i>	
High Global Warming Potential Gas Measures	20.2
Sustainable Forests	5.0
Industrial Measures (for sources not covered under cap-and-trade program)	1.1
Recycling and Waste (landfill methane capture)	1.0
Subtotal	27.3
<i>Total Reductions Counted Towards 2020 Target</i>	<i>174.0</i>
Other Recommended Measures	Estimated 2020 Reductions (MMT CO <sub>2</sub> e)
State Government Operations	1.0-2.0
Local Government Operations	TBD
Green Buildings	26.0
Recycling and Waste (mandatory commercial recycling, other measures)	9.0
Water Sector Measures	4.8
Methane Capture at Large Dairies	1.0
<i>TBD - to be determined</i>	
<i>Source: Climate Change Scoping Plan, California Air Resources Board (2008)</i>	

## San Joaquin Valley APCD

In August 2008, the San Joaquin Valley APCD adopted its Climate Change Action Plan. The Climate Change Action Plan directed the APCD's Air Pollution Control Officer to develop guidance to assist APCD staff, Valley businesses, land use agencies and other permitting agencies in addressing GHG emissions as part of the CEQA process. Regarding CEQA guidance, some of the goals of the Climate Change Action Plan are to assist local land use agencies, developers and the public by identifying and quantifying GHG emission reduction measures for development projects and by providing tools to streamline

evaluation of project-specific GHG effects, and to assist Valley businesses in complying with State law related to GHG emissions.

A product of this direction to provide CEQA guidance is the *Final Staff Report – Climate Change Action Plan: Addressing GHG Emissions Impacts*, presented to the APCD Board in December 2009. A central component of the *Final Staff Report* is the establishment of Best Performance Standards (BPS), which are specifications or project design elements that identify effective, feasible GHG emission reduction measures. Emission reductions achieved through BPS implementation would be pre-quantified, thus negating the need for project-specific quantification of GHG emissions. For projects not implementing BPS, demonstration of a 29% reduction in GHG emissions from business-as-usual conditions is required to determine that a project would have a less than cumulatively significant impact. This reduction percentage is consistent with the goal of the state’s Scoping Plan, which is an approximate 30% reduction from business-as-usual GHG emissions.

## City of Lodi

### Energy Sources and Service Providers

Electrical service to the City is provided by the Lodi Electric Utility. The Lodi Electric Utility is a customer-owned and city operated utility that provides electrical services for residential, commercial and industrial customers in the City. For 30 years, the Lodi Electric Utility has been a member of the Northern California Power Agency, which is a collective group comprised of utilities that own and operate their own electrical power systems.

A Resolution (Resolution No. 2006-205) by the Lodi City Council endorses the California Municipal Utilities Association’s Principles Addressing Greenhouse Gas Reduction Goals. This endorsement included several measures consistent with AB 32. These measures include:

- Developing a GHG reduction plan consistent with the state’s reduction goals.
- Proactively implementing state law, which requires that “...each local publicly owned electric utility, in procuring energy, shall first acquire all available energy efficiency and demand reduction resources that are cost-effective, reliable and feasible.”
- After first investing in energy efficiency, then pursuing renewable energy supplies, and other non-GHG emitting energy resources and clean fossil resources:
  1. Continue to aggressively pursue renewable energy supply.
  2. Facilitating distributed generation/combined heat and power projects.
- Quantifying the financial risk of GHG-producing resources in the planning and procurement process, including, but not limited to, quantifying a carbon emissions risk “adder” (credit) for both in-state and out-of-state resources.
- Considering environmental justice issues in its overall resource procurement and greenhouse gas reduction policies.
- Supporting standardized, mandatory greenhouse gases reporting from all significant sources.

- Providing measurement and verification of programs that reduce greenhouse gas emissions.
- Providing education to customers on ways they can reduce their greenhouse gas emissions, and providing assistance where feasible.

### City Energy Conservation Programs

The City currently administers and implements a variety of local energy conservation and sustainability programs. They include, but are not limited to water conservation, rebate programs, transit services, energy efficient vehicle fleet and use of drought tolerant landscaping materials.

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

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### Significance Thresholds

Effective March 18, 2010, Appendix G of the CEQA Guidelines includes questions that will serve as qualitative significance thresholds to determine project impacts on global climate change. Based on these questions, a project may have a significant effect on the environment if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose reducing the emissions of greenhouse gases.

The ARB is charged with the development of significance thresholds for global climate change. ARB staff issued a paper outlining a potential approach to establishing quantitative significance thresholds in late 2008. However, no additional guidance has been issued by ARB to date.

The ARB prepared the Climate Change Scoping Plan, which outlines the State's strategy to achieve the 2020 greenhouse gas emissions limit. The APCD adopted its Climate Change Action Plan, which is designed to implement the mandates of AB 32. Therefore, the project will be evaluated against the following qualitative measure.

- Consistency with the ARB's Climate Change Scoping Plan and the APCD's Climate Change Action Plan.

### *Impacts of Project-Related Greenhouse Gas Emissions*

GHG emissions would result directly and indirectly from the construction and maintenance of the project components. Potential construction sources of direct GHG emissions would include construction employee travel and the operation of heavy and light internal combustion construction equipment. Indirect GHG emissions would result from use of commercial energy during the construction process and from resource

extraction and manufacturing of construction materials. These emissions would be short-term and limited to the period of project construction. Maintenance of the project facilities would also generate GHG emissions. These emissions would be long-term, continuing indefinitely. However, such emissions would be minimal, mainly related to vehicle travel associated with operations and maintenance.

Estimated GHG emissions associated with the project are shown in Table 10-2. These include projected construction emissions and operational/maintenance emissions for the most substantial sources. ARB's URBEMIS 2007 (v 9.2.4) computer model was used to estimate direct CO<sub>2</sub> emissions from construction activities, and the California Climate Action Registry Protocol was used to estimate mobile source methane (NH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O) emissions from vehicular travel associated with the project.

Indirect emissions also would occur with the generation of electricity that would be transmitted by the 60 kV power line. However, generation of electricity would occur independently of the project, and transmission of this electricity would occur even if the project were not built. Therefore, these indirect emissions are not included in the project estimate.

TABLE 10-2  
ESTIMATED GREENHOUSE GAS EMISSIONS  
FROM PROJECT CONSTRUCTION, NO MITIGATION

Source	Estimated Emissions (CO <sub>2</sub> e Lbs.)
Construction Emissions*	2,701.63
Mobile Source Methane and NO <sub>2</sub> Emissions	0.17
Total GHG Emissions (lbs)	2,701.80
Total GHG Emissions (MMT)	0.00000123

\* Includes mobile source emissions of CO<sub>2</sub>. Emissions would cease once construction is completed.  
Sources: URBEMIS 2007 v 9.2.4; General Reporting Protocol Version 3.1, California Climate Action Registry (2009)

Table 10-3 presents the greenhouse gas emissions inventory for California in 2006, broken out by category as defined in the Scoping Plan. As shown in Table 10-3, the total net greenhouse gas emissions were 479.80 million metric tons (MMTs). The total estimated greenhouse gas emissions from project construction would be an extremely low percentage of the total state emissions in 2006.

Project operations are expected to generate very little greenhouse gases. The only source of greenhouse gases would be from vehicles conducting routine inspections and maintenance, although some more vehicles may be sent out for emergency electrical line repairs. These emergency repairs are anticipated to be infrequent, and therefore not a major source of greenhouse gases. For a proposed transmission line project in Tulare County, it was assumed that ground inspection would involve a crew truck with a 300-horsepower diesel engine, and would occur 7.5 days per year. This activity would emit 287.25 lbs of CO<sub>2</sub> and 0.003 pounds of methane (ESA, 2009). It is anticipated that inspection of the proposed power line would emit fewer greenhouse gases, as most of the

power line would be easily accessible along paved roads, and the length of the power line would be less than eight miles.

TABLE 10-3  
CALIFORNIA GREENHOUSE GAS INVENTORY

Category	Emissions (MMT CO <sub>2</sub> e)
Transportation	185.77
Electric Power	105.92
Commercial and Residential	44.37
Industrial	96.05
Recycling and Waste	6.31
High Global Warming Potential*	15.15
Agriculture	30.13
Forestry	0.19
<b>Total Gross Emissions</b>	<b>483.87</b>
<i>Forestry Net Emissions</i>	<i>-4.07</i>
<b>Total Net Emissions</b>	<b>479.80</b>
* High Global Warming Potential emissions include ozone depleting substance (ODS) substitutes, electricity grid SF <sub>6</sub> losses, and semiconductor manufacturing.	
Source: "California Greenhouse Gas Inventory for 2000-2006," California Air Resources Board (2009)	

Level of Significance: Less than significant

Mitigation Measures: None required.

### *Project Consistency with Applicable Plans*

#### Climate Change Scoping Plan

As with other individual small projects (e.g., projects that are not cement plants, oil refineries, electric generating facilities/providers, co-generation facilities, or hydrogen plants or other stationary combustion sources that emit more than 25,000 metric tons of CO<sub>2</sub>e per year), the emissions increases that would result under the proposed 60 kV Power Line Project would not be expected to individually have a significant impact on global climate change (CAPCOA, 2008). The primary concerns would be whether implementation of the proposed project would conflict with the State goals for reducing GHG emissions and whether it would have a cumulatively considerable impact on global climate change.

As discussed above, the Climate Change Scoping Plan includes 16 recommended measures that would produce estimated GHG reductions of 174 MMT CO<sub>2</sub>e by 2020 and achieve the State's goal of reducing GHG emissions to 1990 levels by 2020. Implementation of these measures would result in statewide changes in vehicle efficiency, use of lower-carbon fuel sources, building energy efficiency. These changes would be effected through a cap-and-trade system and "complementary measures."

Many of the Scoping Plan's 16 recommended reduction measures do not directly apply to a utility, power line project. Most of the applicable measures to the project would be related to the use of EUD's vehicles for project operations and maintenance. The following measures are potentially applicable to the project:

California Light-Duty Vehicle Greenhouse Gas Standards. Under this measure, California would implement new standards to reduce greenhouse gas emissions from passenger and light-duty vehicles. Specifically, the State would implement the Pavley greenhouse gas vehicle standards that seek to lower such emissions to the maximum extent technologically feasible, beginning with the 2009 model year. It is expected that, if EUD purchases any new light-duty vehicles for its operations and maintenance fleet after the 2009 model year, the vehicles would comply with the Pavley standards.

Low Carbon Fuel Standard. In addition to including vehicle efficiency improvements and lowering vehicle miles traveled, the State is proposing to reduce the carbon intensity of transportation fuels consumed in California. ARB is developing a Low Carbon Fuel Standard that would reduce the carbon intensity of California's transportation fuels by at least 10% by 2020, as called for in Executive Order S-01-07. It is expected that EUD operations and maintenance vehicles would use lower-carbon fuels as they become available.

Vehicle Efficiency Measures. Several additional measures are being considered by ARB and the California Integrated Waste Management Board to reduce light-duty vehicle greenhouse gas emissions. It is expected that EUD vehicles would comply with any new regulations related to vehicle efficiency.

Medium/Heavy-Duty Vehicles. The State is considering the adoption of efficiency measures for medium- and heavy-duty vehicles. Requiring retrofits to improve the fuel efficiency of heavy-duty trucks could include a requirement for devices that reduce aerodynamic drag and rolling resistance. It is expected that, if EUD purchases any new medium or heavy-duty vehicles for its operations and maintenance fleet, the vehicles would comply with any implemented vehicle efficiency regulations.

In summary, the project is expected to comply with all applicable regulations arising from the Climate Change Scoping Plan. Compliance with the Scoping Plan would reduce the potential greenhouse gas emissions that would be generated from project operation and maintenance activities. Project maintenance would occur infrequently, during routine maintenance and inspection of the power line or during emergency repairs. Given the limited time of project maintenance, greenhouse gas emissions generated by the project are expected to be less than significant.

### **APCD's Climate Change Action Plan**

The APCD's Climate Change Action Plan was prepared as guidance to assist APCD staff, businesses, land use agencies and other permitting agencies in addressing GHG emissions as part of the CEQA process. From the perspective of the APCD, the effects of project-specific GHG emissions are cumulative, and their incremental contribution to global climate change could be considered significant unless reduced or mitigated. Therefore,

APCD staff concluded that this impact is best addressed by requiring all projects subject to CEQA to reduce their emissions through project design elements (APCD, 2009).

The Action Plan has proposed performance-based standards for development projects and for specific stationary sources of GHG emissions, such as power generators, landfills and livestock operations. Most of the standards proposed for development projects do not apply to the 60 kV Power Line Project. The only potential source of GHG emissions from the project is maintenance vehicle trips. One potential standard that may apply to the project is vehicle use. Three overarching strategies for reducing GHG emissions from vehicle use are more efficient vehicles, lower-carbon fuels, and reduction in vehicle miles traveled. The measures designed to implement these strategies are the same as the recommended measures in the Scoping Plan. As discussed previously, the project expects to be in compliance with these measures.

Level of Significance: Less than significant

Mitigation Measures: None required

### *Impacts of Climate Change on Project*

Aside from impacts a project may have on climate change, recent CEQA guidance also encourages an evaluation of impacts that climate change may have on a project. One of the impacts anticipated as a result of climate change is an increase in average temperatures. A consequence of this increase is an additional demand for electricity to operate air conditioning systems. An August 2009 study by the California Climate Change Center sought to quantify the additional demand by residences. Based on simulations using climate change models, predicted aggregate demand ranges from an 18% to 55% increase in total demand by the end of the century (California Climate Change Center, 2009).

The increased electrical demand would place a greater burden on California's electrical transmission system. Expansion of the California transmission system has not kept pace with demand over the last 20 years preceding 2003, according to a California Energy Commission report. This has resulted in congestion, reliability problems, and higher costs related to insufficient transmission infrastructure. During the hot summer months, maintaining system reserves can be precarious and the increasing frequency of system emergencies are a result, in part, of inadequate transmission infrastructure. During heavy summer peak load periods, critical transmission paths in the state are often constrained. These constraints can make it impossible to transfer adequate power from one area of the state to another and restricts the import of less expensive power from out-of-state. One consequence is that less efficient plants are being run to meet demand (California Energy Commission, 2003). Less efficient plants tend to generate more greenhouse gases.

The purpose of the project is to increase the reliability of the electrical system serving Lodi. An increased reliability ensures that City residents and businesses would receive the electricity necessary to operate air conditioning and other systems with a minimum of down time. It also would reduce potential congestion on transmission lines, thereby improving the delivery efficiency of the electrical system. Increased efficiency would

reduce the need for the generation of additional power, especially from less efficient plants. Therefore, a more reliable system would not only ensure that City residents and businesses have available power to cope with increased temperature changes, but also would avoid situations in which more greenhouse gases would be generated.

Level of Significance: Less than significant

Mitigation Measures: None required

## 11.0 HEALTH AND SAFETY

This chapter addresses existing and potential future conditions in the project area that could present a health or safety concern to construction workers, future occupants and users of the project site, in particular concerns related to transportation of hazardous materials and hazardous material/waste contamination. The absence, presence and level of concern associated with each is identified and discussed in the following sections. A report prepared by Info Services provided much of the information in this chapter, along with the GeoTracker database maintained by the State Water Resources Control Board (SWRCB) and the Lodi Energy Center EIR. Potential concerns with respect to flooding are addressed in Chapter 12.0, Hydrology and Water Quality. Potential concerns related to geologic hazards and noise are addressed in Chapter 9.0, Geology and Soils, and Chapter 13.0, Noise.

### ENVIRONMENTAL SETTING

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#### Hazardous Materials and Sites

Hazardous materials are defined as substances or combinations of substances that may contribute to increases in serious illness or mortality, or pose a substantial hazard to human health or the environment when improperly treated, stored, transported or disposed. Hazardous wastes are hazardous materials that no longer have a practical use. Hazardous materials or wastes are generally classified as toxic (heavy metals, pesticides, solvents), ignitable (gasoline, natural gas), corrosive (strong acids and bases) and/or reactive (explosives, among others). Although distinct from hazardous materials, as defined above, petroleum products also represent potential concerns for health and environmental contamination. Health risks inherent in existing site contamination would affect construction workers during project construction. Routes of exposure may include skin contact with soil, inhalation of particles/vapors from soil in outdoor air, inhalation of vapors from gas released into indoor air, and contact with groundwater.

The project area historically has been in agricultural use. Agricultural activities have typically included the use of pesticides, herbicides and fertilizers. The County's support for expansion and intensification of the agricultural economy increases risks associated with agricultural chemical (pesticides and organic/inorganic fertilizers) product residuals and waste. However, the recent increase in the use of natural organic supplements and best farming practices to control insects and fertilize rangeland is decreasing the potential residual agricultural chemical impacts from farming (San Joaquin County, 2009). Database searches by Environmental Data Resources and Info Services did not reveal any significant contamination occurring as a result of agricultural activities in the project area.

A site detail report by Info Services indicated a few locations adjacent to the project area that have a record of hazardous materials or waste. An agricultural supply business owned

by Simplot is located along the Union Pacific railroad tracks near the intersection of Harney Lane and DeVries Road. A search of the GeoTracker database revealed the Simplot site is on record under the Spills, Leaks, Investigation and Cleanup (SLIC) program. The record indicated a reported leak, but is not specific on the type of leak or when the incident occurred. Also, there is no other record of any contamination occurring at the site. The Central Valley Regional Water Quality Control Board (RWQCB) considered this case “open-inactive” as of 1988 (Info Services, 2009).

The Lodi WPCF site contains the City’s wastewater treatment plant and adjacent to that is the NCPA power plant. The wastewater treatment plant uses chlorine in its operations. On January 2000, a process upset caused the release of 26 pounds of chlorine into a ditch. No injuries occurred, and no significant adverse impacts of the release were reported (Info Services, 2009). The NCPA power plant stores anhydrous ammonia, which has toxic effects on people who make contact with the substance in its liquid or vapor form, as well as when the substance is inhaled or ingested (NCPA, 2008). No anhydrous ammonia releases have been recorded at the power plant site (Info Services, 2009). No record exists of any contamination occurring at the Lodi WPCF site (EDR, 2008).

## Highway Transportation

Highways, railroads and airports represent human health and safety risks associated with noise and accidents that could result in injury to persons or damage to structures located on adjoining or nearby lands. Noise concerns associated with transportation sources are addressed in detail in Chapter 13.0, Noise, and are related primarily to traffic noise.

The two main roadways in the vicinity of the project area are Interstate 5 and SR 12. Both highways carry significant amounts of truck traffic (see Chapter 17.0, Transportation). Some of these trucks carry materials defined as hazardous, although data on the number of trucks are not available. Throughout San Joaquin County, spills resulting in evacuation or closing of vital infrastructure such as a major freeway occur several times per year. Due to the close relationship between hazardous materials and transportation systems, a hazardous materials release can occur anywhere along any of the roadways or freeways (San Joaquin County, 2008).

## Rail Transportation

A Union Pacific railroad track crosses the center of the Primary Route. Precise details of the number of daily train trips this track accommodates, and the type and volume of potentially hazardous materials transported on this track, are not available to the public for security reasons. Nonetheless, it is assumed that substantial amounts of hazardous materials are transported along this line.

Another potential hazard associated with railroads is accidents at places where roads cross railroad tracks. Harney Lane crosses the Union Pacific tracks near the intersection with DeVries Road. This crossing has an automatic gate that descends when a train approaches. This reduces the potential hazard at this crossing.

## Air Transportation

Kingdon Airpark is located directly south of Tredway Road, where the Primary Route of the project travels. The recently adopted Airport Land Use Compatibility Plan (ALUCP) Update, dated July 2009, by the San Joaquin Council of Governments sets forth compatibility zones for Kingdon Airpark (Figure 11-1).

The compatibility zones in part are used to establish height criteria for development in these zones. Height limits in these zones are based on Part 77 Subpart C of the Code of Federal Regulations, the United States Standard for Terminal Instrument Procedures, and applicable airport design standards published by the Federal Aviation Administration (FAA) (Coffman Associates, 2009). Table 11-1 shows the height criteria for each compatibility zone.

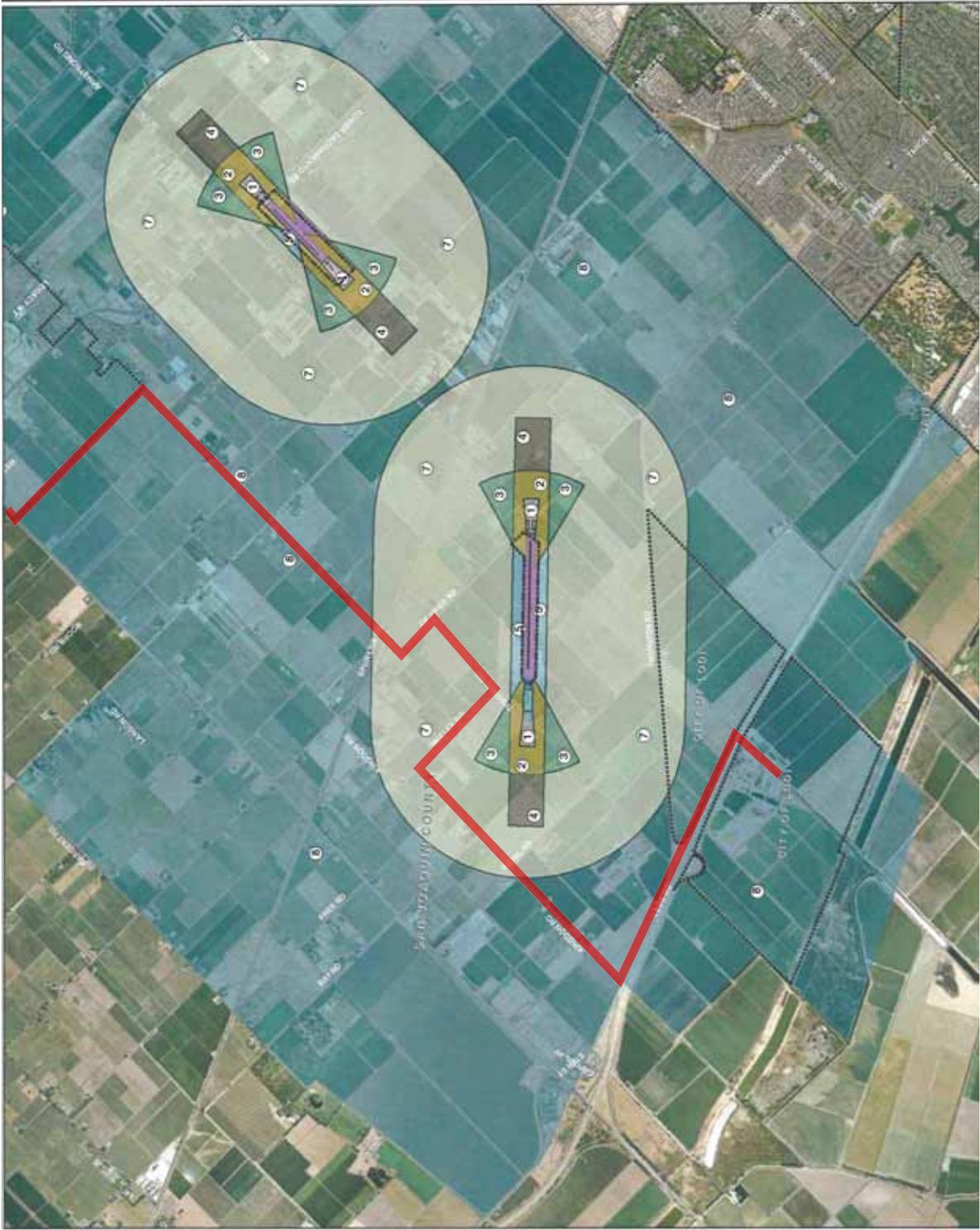
TABLE 11-1  
HEIGHT CRITERIA FOR AIRPORT COMPATIBILITY ZONES

Zone	Zone Name	Height Criteria
1	Runway Protection Zone	Airport Land Use Commission (ALUC) review required.
2	Inner Approach/Departure Zone	ALUC review required for any proposed object taller than 35 feet above ground level (AGL), unless the airport controls an easement on the land on which the object is to be located and grants a waiver to height restrictions.
3	Inner Turning Zone	ALUC review required if taller than 70 feet AGL.
4	Outer Approach/Departure Zone	ALUC review required if taller than 70 feet AGL.
5	Sideline Safety Zone	ALUC review required if taller than 35 feet AGL.
6	Airport Property	ALUC review required if taller than 35 feet AGL.
7	Traffic Pattern Zone	ALUC review required if taller than 100 feet AGL.
8	Airport Influence Area	ALUC review required if taller than 100 feet AGL.

*Source: San Joaquin Airport Land Use Compatibility Plan, Coffman Associates, 2009.*

## High-Voltage Power Lines

High-voltage power lines are defined as those with a line voltage of 50 kilovolts (kV) or more. High-voltage power lines generate electromagnetic fields (EMFs), the strength of which vary in proportion to the line voltage and distance from the line. Power lines of about 60 kV are used to distribute electrical power to lower-voltage neighborhood distribution systems and are ubiquitous in developed areas, including the project area.



**LEGEND**

- Airport Property
- Municipal Boundary

**COMPATIBILITY ZONES**

- 1 Runway Protection Zone
- 2 Inner Approach/Departure Zone
- 3 Inner Turning Zone
- 4 Outer Approach/Departure Zone
- 5 Sideline Safety Zone
- 6 Airport Property
- 7 Traffic Pattern Zone
- 8 Airport Influence Area
- Primary 60 kV Power Line Route

Figure 11-1  
KINGDON AIRPORT COMPATIBILITY ZONES

SOURCE: SAN JOAQUIN GIS SYSTEM

INSITE ENVIRONMENTAL, INC.

There has been public concern since 1979 that long-term exposure to EMFs surrounding major power lines and other electrical equipment has the potential to contribute to increased risk of cancer. The topic of EMF hazards has been studied intensively and debated for many years. A 1996 report by the National Research Council determined that there is no convincing evidence that EMFs harm human health in any way (Leary, 1996). A 1998 report from an international panel of experts convened by the National Institute of Environmental Health Sciences indicated that EMFs should be regarded as a “possible human carcinogen.” However, the panel chairman indicated that the risk “is probably quite small, compared to many other public health risks (NIOSH, 1998).” A congressionally mandated study by the National Institute of Environmental Health Sciences concluded in June 1999 that the evidence for a risk of cancer and other human disease from EMFs around power lines is “weak” (NIOSH, 1999).

As a precaution, the California Department of Education, School Facilities and Planning Division recommends maintaining a minimum of a 100-foot setback between new school sites and power lines operating at 50 kilovolts or higher. No other known EMF standards exist. The project would not be located on or near any existing or proposed school sites.

## REGULATORY SETTING

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### Federal

#### 29 Code of Federal Regulations (CFR) 1910 *et seq.* and 1926 *et seq.*

These sections contain requirements for equipment used to store and handle hazardous materials for the purpose of protecting worker health and safety. This regulation also addresses requirements for equipment necessary to protect workers in emergencies. It is designed primarily to protect worker health, but also contains requirements that affect general facility safety. The California regulations contained in Title 8 (California equivalent of 29 CFR) are generally more stringent than those contained in Title 29. The administering agency for the above authority is the Occupational Safety and Health Administration (OSHA) and the California Division of Occupational Safety and Health (Cal/OSHA).

#### 49 CFR Parts 172, 173, and 179

These regulations provide standards for labels, placards, and markings on hazardous materials shipments by truck (Part 172), standards for packaging hazardous materials (Part 173) and for transporting hazardous materials in tank cars (Part 179). The administering agencies for the above authority are the U.S. Department of Transportation and the California Highway Patrol (CHP).

## State

Title 8, California Code of Regulations (CCR), Section 339; Section 3200 *et seq.*, Section 5139 *et seq.* and Section 5160 *et seq.*

Section 339 of Title 8 of the CCR lists hazardous chemicals relating to the Hazardous Substance Information and Training Act. Title 8, CCR Section 3200 *et seq.* and 5139 *et seq.* address control of hazardous substances. Title 8, CCR Section 5160 *et seq.* addresses hot, flammable, poisonous, corrosive, and irritant substances.

### Health and Safety Code Section 25500

California Health and Safety Code, Section 25500, *et seq.*, and the related regulations in 19 CCR 2620 *et seq.*, require local governments to regulate local business storage of hazardous materials in excess of certain quantities. The law also requires that entities storing hazardous materials be prepared to respond to releases. Those using and storing hazardous materials are required to submit a Hazardous Materials Business Plan (HMBP) to their local Certified Unified Program Agency (CUPA) and to report releases to their CUPA and the State Office of Emergency Services. The threshold quantities for hazardous materials are 55 gallons for liquids, 500 pounds for solids, and 200 cubic feet for compressed gases measured at standard temperature and pressure.

### Worker Health and Safety Regulations

There are various state regulations related to worker health and safety. Regulations relevant to this project include:

- 8 CCR 1509 *et seq.*, and 1684, *et seq.* Addresses construction hazards, including head, hand, and foot injuries and noise and electrical shock.
- 8 CCR 2700 *et seq.* Addresses high-voltage electrical hazards.
- 8 CCR 3940 *et seq.* Requirements for addressing hazards associated with power transmission, compressed air, and gas equipment.
- 8 CCR 5160 *et seq.* Requirements for addressing hot, flammable, poisonous, corrosive, and irritant substances.

## Local

The San Joaquin County Environmental Health Department was approved by the State as the CUPA for San Joaquin County in January of 1997. The San Joaquin County Environmental Health Department administers the Hazardous Waste Generator, Hazardous Waste Onsite Treatment (Tiered Permitting) and Underground Storage Tank programs. The San Joaquin County Office of Emergency Services is a Participating Agency (PA), assisting the CUPA and administering the Hazardous Material Release Response Plan and Inventories and the California Accidental Release Program (CalARP).

Both the San Joaquin County Environmental Health Department (as the CUPA) and the San Joaquin County Office of Emergency Services (as the PA) are responsible for administering HMBPs and other related plans filed by businesses located in the county. In addition, the San Joaquin County Environmental Health Department is responsible for ensuring that businesses and industry store and use hazardous materials safely and in conformance with various regulatory codes. The San Joaquin County Environmental Health Department performs inspections at established facilities to verify that hazardous materials are properly stored and handled and that the types and quantities of materials reported in a firm's HMBP are accurate (NCPA, 2008).

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

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### Significance Thresholds

For the purposes of this EIR, impacts related to hazardous materials and public health are considered significant if the proposed project would:

- Create a public health hazard through the use, production, generation, release, or disposal of materials that pose a hazard to human, animal, or plant populations;
- Expose construction workers to hazardous materials that would create health risks during construction; or
- Expose long-term employees or residents to health or potential health hazards.

### *Impacts from Hazardous Materials during Construction*

Construction and maintenance of the project components would involve the use of limited amounts of potentially hazardous materials. Construction and maintenance vehicles transport and use fuels in ordinary quantities. Other substances are consumer products that are stored in approved containers, and used in generally small quantities and in accordance with the manufacturers recommendations and/or applicable regulations. Hazardous materials used in construction and maintenance include the following:

- Fluids from construction and maintenance vehicles, such as gasoline, diesel, transmission fluid, battery acid, antifreeze, brake fluid, and lubricating materials
- Aerosols, including insect killer, paints, solvents, corrosion inhibitors, lubricators and cleaners
- Safety flares
- Cable cleaning and hot stick wipes
- Connector grease
- Petroleum products and solvents

The probability of spills or leaks occurring during construction activities is low. Any spills or leaks would be minor in nature due to the quantities within the project area at any one

time. If any larger spills or leaks occur, the Woodbridge Fire Protection District would be called for containment and cleanup, with assistance from the Lodi and Stockton Fire Departments if necessary.

Level of Significance: Less than significant

Mitigation Measures: None required

### *Hazardous Material Impacts During Project Operation and Maintenance*

Maintenance and operations of the project would involve the same hazardous materials that would be used during project construction. As with project construction, the probability of spills or leaks occurring during maintenance and operations is low. In fact, the probability would likely be lower, as maintenance activities along the power line corridor would be infrequent and less intensive than construction.

Replacing poles would involve the re-installation of existing pole-mounted transformers on to the new poles. Insulating oil within the pole-mounted transformers is a regulated hazardous substance. On average, the mineral oil content of a pole-mounted transformer is approximately 10 gallons. To prevent oil spills, all transformer units are sealed. All transformers would be subject to regular inspection for leakage and repair or replacement if warranted. Minor spills would ordinarily be cleaned up with materials found in maintenance vehicles. In the event of a more extensive fuel or other spill, as discussed above, EUD would contact the Woodbridge Fire Protection District for containment and cleanup. Spills would be reported to appropriate authorities when required by law, and contaminated soil and/or cleanup materials would be transported to an appropriate disposal site. As a result, no significant hazardous materials impacts are likely to occur as a result of transformer oil spills.

Level of Significance: Less than significant

Mitigation Measures: None required

### *Transport of Hazardous Materials*

As previously described, the amount of hazardous materials used during project construction and operations would be low. Any hazardous materials transported for project construction and operation that are released accidentally would be cleaned up by the appropriate agencies.

The risk of rail accidents, and more specifically accidents involving hazardous materials, is relatively low. The U.S. Department of Transportation, Federal Railroad Administration, found the Union Pacific train accident rate to be 4.18 train accidents per one million train miles traveled, resulting in a less than 0.001% chance of an accident adjacent to the project area. The possibility of a railroad accident containing hazardous materials is considered much lower, as only an average of eight accidents involving hazardous material spills occur annually in all of California. Union Pacific implements a security plan in compliance with the Department of Transportation Final Rule 49 CFR Part 172

Hazardous Materials (HM 232): Security Requirements for Offerors and Transporters of Hazardous Materials. The plan includes requirements to enhance the security of transported hazardous materials and ensures proper cleanup procedures in the instance of an accidental release.

Level of Significance: Less than significant

Mitigation Measures: None required

### *Impact of High-Voltage Power Lines*

The project proposes the installation of a 60 kV power line, which is considered to be "high-voltage." Portions of the power line would pass through agricultural and other undeveloped/unoccupied lands, so EMF exposure would not be an issue. Other portions of the proposed power line will be located near rural residences located adjacent to the Primary Route segments, including Harney Lane, DeVries Road, Neeley Road, Kingdon Road and Thornton Road. As previously described, the evidence for a risk of cancer or other human health concerns from EMFs around power lines is not solid, even in the vicinity of power lines with much higher voltage. Based on this evidence and the fact that the project's power line voltage is at the low end of the range of potential concern, the project would not subject residents to a significant health risk from EMFs.

Level of Significance: Less than significant

Mitigation Measures: None required

### *Hazards Related to Airport Operations*

Kingdon Airpark is located directly south of Tredway Road, a segment in which the Primary Route is located. The current project alignment (the Primary Route) would follow Tredway Road from DeVries to Neeley Road, then turn north onto Neeley Road. The alignment would follow Neeley Road to Kingdon Road, then turn left and follow Kingdon Road until it reaches Thornton Road. Under the current alignment of the Primary Route, the project would encroach only on Kingdon Airpark's Zone 7 (Traffic Pattern Zone) and Zone 8 (Airport Influence Area).

According to the ALUCP Update, dated July 2009, "outdoor stadiums" and similar uses with high intensities (of people) are listed as a prohibited use in Zone 7. Also listed in Zone 7 and Zone 8, as a prohibitive use, is "hazards to flights." Hazards to flights are defined in the ALUCP Update as follows; "Hazards to flight include physical (e.g., tall objects), visual, and electronic forms of interference with the safety of aircraft operations. Land use development that may cause the attraction of birds to increase is also prohibited." Another development condition cited by the ALUCP Update for Zones 7 and 8 is that the Airport Land Use Commission (ALUC) review is required for proposed objects taller than 100 feet (above ground level).

The steel poles and wooden poles will be a minimum of 57 feet above ground level. Heights up to approximately 90 feet or greater will be required for crossing of existing

PG&E transmission lines, the Union Pacific Railroad tracks, and I-5. The Union Pacific Rail tracks and the existing 60 kV power line owned and operated by PG&E along Ray Road will need to be crossed and the Primary Route power poles will exceed the minimum pole height of 57 feet in these locations. Both these crossing are located in compatibility Zone 7 which requires review by the ALUC if proposed objects exceed 100 feet above ground level. The crossing of I-5 is located within Zone 8 and a similar condition regarding review by the ALUC if the proposed objects (the power poles) exceed 100 feet above ground level within this zone. If power pole heights within Zones 7 and 8 exceed 100 feet above the ground level, the power pole or poles could be consider a hazard to flights, thus would be considered a potentially significant impact and would require review by the ALUC and Federal Aviation Administration (FAA).

Level of Significance: Potentially significant

Mitigation Measures:

11-1. If design modifications require power pole heights to exceed 100 feet above ground level along the Primary Route, the Airport Land Use Commission and Federal Aviation Administration shall be notified and a request made to review the land use action (e.g., installation of power poles that exceed 100 feet in height within Compatibility Zones 7 and 8).

Implementation: The Lodi EUD shall be responsible for notifying the ALUC and FAA, if any power pole height exceeds 100 feet.

Monitoring: The Lodi EUD shall be responsible for documenting that notification to the ALUC and FAA has been made prior to plan approval, if required.

Significance After Mitigation: Less than significant.

### *Electrocution Hazards*

Construction of new electrical facilities, including power and distribution lines, would involve increased potential for public exposure to accidental electrocution hazards, usually in connection with pole or line damage when conductor clearance from the ground is reduced or eliminated. The project would be constructed in accordance with all applicable safety standards. Power line failures are anticipated events that are addressed by existing Lodi Electric Utility procedures. Lodi Electric Utility employees are dispatched to inspect any malfunctions or downed lines to prevent public exposure to electrocution hazards and to make repairs if necessary. Existing procedures would reduce potential electrocution hazards to a less than significant level.

Level of Significance: Less than significant

Mitigation Measures: None required

## 12.0 HYDROLOGY AND WATER QUALITY

This chapter describes the existing surface water hydrology, existing groundwater resources and water quality conditions of the project area, and the potential impacts of the project on these resources. It also identifies and evaluates the potential effects of the project as they relate to flooding and drainage within the project area. Information for this section is from the Lodi Energy Center EIR and other public documents.

### ENVIRONMENTAL SETTING

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#### Surface Waters

The western endpoint of the project area (Lodi WPCF) is located on the eastern edge of the Sacramento-San Joaquin Delta. In the Delta, the Sacramento and San Joaquin rivers combine with tidal action from the San Francisco Bay to produce a biologically rich estuarine environment. However, the Delta has been highly modified by channelization and water diversions for municipal, industrial and agricultural uses. As a result, the Delta is a patchwork of numerous islands and tracts surrounded by natural and man-made channels and sloughs. The southern portion of the Lodi WPCF site is bordered by a drainage ditch that discharges into Dredger Cut, which drains into White Slough. White Slough ultimately drains into the Delta (NPCA, 2008).

As a result of the relatively flat topography and agricultural activities, drainage patterns on the project area have been extensively modified. There are no natural surface water features in the project area. The most significant surface water features are the detention ponds at the Lodi WPCF. Several irrigation and drainage ditches traverse the project area. Extensive wetland resources are located in the waterways of the Sacramento-San Joaquin Delta to the west. Chapter 7.0, Biological Resources, discusses wetlands in detail.

Water quality in the rivers and streams of the region varies widely, from resource to resource, and from season to season. During the winter months, waters are generally more turbid as a result of erosion and runoff, colder and richer in dissolved oxygen, and more dilute in terms of dissolved constituents. During the warmer months, flows decrease, temperatures rise, dissolved oxygen levels fall, and bacterial contamination levels increase.

The Delta is classified as an impaired water body under the provisions of the federal Clean Water Act. An impaired water body is one that does not meet water quality standards. For an impaired water body, the Regional Water Quality Control Board (RWQCB) with jurisdiction must establish a total maximum daily load (TMDL) for each pollutant that has caused the water body to be listed as impaired, along with an implementation program to meet the TMDL. There are 11 pollutants for which the Delta does not meet water quality standards. Three of these – chlordane, DDT and dieldrin – are chemicals associated with agricultural operations. A fourth, selenium, has been associated with the leaching of

selenium compounds from normally dry undeveloped lands by agricultural runoff. Two others, mercury and nickel, are associated with mining activities and urban runoff. Other pollutants include dioxin compounds, furan compounds, two types of polychlorinated biphenyls (PCBs), and exotic species from ballast water (NCPA, 2008).

## Ground Water

The project area is in the Eastern San Joaquin Subbasin of the San Joaquin Valley Groundwater Basin. The Eastern San Joaquin Subbasin is defined by the extent of sedimentary deposits that are bounded by the Mokelumne River on the north and northwest, the San Joaquin River on the west, the Stanislaus River on the south, and bedrock on the east. Most groundwater in the Eastern San Joaquin Subbasin is characterized by calcium-magnesium bicarbonate or calcium-sodium bicarbonate types. Bicarbonate is predominant in the eastern part of the subbasin. Large areas of chloride type water occur along the western margin of the subbasin (NCPA, 2008).

Domestic wells in the Eastern San Joaquin Subbasin range from approximately 25 to 993 feet in depth, averaging approximately 242 feet. Irrigation wells in the subbasin range from approximately 75 to 780 feet in depth, averaging approximately 349 feet (DWR, 2006, cited in NCPA, 2008). According to a groundwater investigation for the Lodi WPCF, Department of Water Resources (DWR) wells in the vicinity indicate a relatively shallow depth to groundwater in the project area. For wells close to the WPCF site, depth to groundwater ranged from approximately two feet to 21 feet. Wells farther east recorded greater depth to groundwater, as deep as 68 feet at one DWR well near Lower Sacramento Road and Armstrong Road (West Yost Associates, 2006). The primary use of groundwater in the project area is agricultural, but rural residences also use groundwater.

Groundwater elevations in the project area fluctuate seasonally and in response to variations in precipitation from year to year (West Yost Associates, 2006). However, groundwater levels in the Eastern San Joaquin Subbasin have shown a continuous decline over the past 40 years. During this period, groundwater levels have declined at an average rate of 1.7 feet per year and have dropped as much as 100 feet in some areas (DWR, 2006, cited in NCPA, 2008). Regionally, the hydrologic gradient and groundwater movement are controlled by a pumping cone depression east of the City of Stockton that persists throughout the year. This causes the groundwater to move in an east-southeasterly direction. Groundwater use for irrigation is higher to the east of the Lodi WPCF site, resulting in a local gradient that is consistently to the east (West Yost Associates, 2006).

Saltwater intrusion, occurring as a result of declining groundwater levels, has caused water quality to deteriorate eastward along a 16-mile front on the east side of the Delta. In addition, large areas of elevated nitrate levels exist in groundwater supplies within the subbasin southeast of Lodi.

Substantial groundwater recharge occurs in the vicinity of the project area. Sources of groundwater recharge include irrigation of Delta lands and seepage from related Delta waterways to the west, surface-water-irrigated lands, percolation from WPCF storage

ponds, and recharge from WPCF land application areas (City of Lodi, 2006, cited in NPCA, 2008).

## Flooding

San Joaquin County is located in a historic natural floodplain. Flooding in San Joaquin County can result from heavy storms, snow melt with heavy runoff, levee failure, dam failure, and localized drainage problems. Of these, levee failure has caused most of the recent major floods (San Joaquin County, 1992). Many of the levees in the Delta are unstable and may fail during severe storms (NCPA, 2008).

Flood Insurance Rate Maps (FIRMs), prepared by the Federal Emergency Management Agency (FEMA), designate areas prone to flooding. The base flood designated on FIRMs is the “100-year” flood, or the flood that is expected to occur on average once every 100 years. FIRMs for the project area indicate that the project area east of Interstate 5 is located in an area designated as Zone B (FEMA, 2002). Zone B is the area located between the limits of the 100-year flood and the 500-year flood (occurs on average once every 500 years), or is an area protected by levees from the base (100-year) flood. The project area west of Interstate 5 is located in Zone A, which is the area where a 100-year flood is expected to occur (FEMA, 2002).

The project area is subject to potential flooding from the failure of dams in the foothill areas to the east. The San Joaquin County General Plan indicates that the project area could be flooded as a consequence of the failure of Camanche Dam, as well as the dams for Pardee Reservoir and Salt Springs Reservoir. Flooding also could occur as a result of the failure of the South Camanche Dikes (San Joaquin County, 1992).

## REGULATORY SETTING

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### Federal

#### Clean Water Act

The Clean Water Act of 1972 (and as amended) is the major federal legislation governing water quality. The objective of the Clean Water Act is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” Important applicable sections of the act are:

- Sections 303 and 304, which provide for water quality standards, criteria, and guidelines.
- Section 401, which requires an applicant for any federal permit that proposes an activity that may result in a discharge to “waters of the United States” to obtain certification from the state that the discharge will comply with other provisions of

the Act. In California, certification is provided by the State Water Resources Control Board (SWRCB).

- Section 402, which establishes the National Pollutant Discharge Elimination System (NPDES), a permitting system for the discharge of any pollutant (except for dredge or fill material) into waters of the United States. In California, this permit program is administered by the Regional Water Quality Control Boards.

## Executive Order 11988

Under Executive Order 11988, FEMA is responsible for management of floodplain areas defined as the lowland and relatively flat areas adjoining inland and coastal waters subject to a one percent or greater chance of flooding in any given year (the 100-year floodplain). FEMA requires that local governments be covered by federal flood insurance pass and enforce a floodplain management ordinance that specifies minimum requirements for any construction within the 100-year floodplain.

## State

### Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1967, as revised in 2007, provides that all activities that may affect the quality of waters of the state shall be regulated to obtain the highest water quality that is reasonable, considering all demands being made and to be made on those waters. The Act establishes provisions for a statewide program for the control of water quality, which is administered on a local level with statewide oversight.

Within this framework, the Act authorizes two agencies to oversee responsibility for the coordination and control of water quality within California. The State Water Resources Control Board (SWRCB) holds authority over water resources allocation and water quality protection within the state. Among other activities, the SWRCB establishes water quality standards, and guides the nine Regional Water Quality Control Boards. The Regional Water Quality Control Board (RWQCB) implements water quality protection measures by formulating and adopting water quality plans for specific groundwater and surface water basins, and by prescribing and enforcing requirements on all agricultural, domestic, and industrial waste discharges. The project area is within the jurisdiction of the Central Valley RWQCB.

One of the programs that the Central Valley RWQCB implements is the statewide General Permit for Stormwater Discharges Associated with Construction Activity (SWRCB Water Quality Order No. 99-08-DWQ) that applies to construction projects that would disturb one or more acres of soil. The General Permit requires the preparation of a construction Storm Water Pollution Prevention Plan that specifies site management activities that would reduce the amount of contaminants in runoff from the project site.

### Groundwater Acts

The State has enacted several pieces of legislation applicable to groundwater issues. The Porter-Dolwig Ground Water Basin Protection Law (California Water Code Section 12920

*et seq.*) gives the DWR the authority to initiate or participate in investigations, studies, plans and design criteria for projects to prevent degradation of ground water throughout the State. Provisions of the law state that DWR shall, in conjunction with other public agencies, identify the state's groundwater basins and investigate existing general patterns of groundwater pumping and groundwater recharge within such basins to the extent necessary to identify basins subject to critical conditions of overdraft. The Groundwater Ambient Monitoring and Assessment Program, administered by the SWRCB, is a recently enacted program that provides a comprehensive assessment of water quality in water wells throughout the state. The program has two main components - the California Aquifer Susceptibility Assessment and the Voluntary Domestic Well Assessment Project.

## Local

### City of Lodi

The City of Lodi Municipal Code, Title 15 (Buildings and Construction) addresses flood damage prevention (Chapter 15.60) and sets guidelines for development in flood hazard areas. A development permit shall be obtained before construction or development begins within any area of special flood hazards (Section 15.60.070 of the Lodi Municipal Code). Furthermore, all construction and development in flood hazard areas must adhere to the Standards of Construction in Section 16.60.140, Article III, Provisions for Flood Hazard Reduction.

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

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### Significance Thresholds

For the purposes of this EIR, impacts related to geology and soils are considered significant if the proposed project would:

- Substantially alter the existing drainage pattern and result in substantial erosion or siltation on- or off-site;
- Substantially alter the existing drainage pattern and, in turn, increase local storm runoff that would create localized flooding or contribute to flooding downstream;
- Violate any water quality standards, or otherwise substantially degrade the quality of surface water and groundwater;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table (e.g. the production rate of pre-existing nearby wells would decline to a level which would not support existing land uses or planned uses for which permits have been granted);

- Groundwater pumping associated with project operations would alter the existing surface hydrology or would result in land subsidence;
- Place within a 100-year flood hazard area structures that would impede or redirect flood flows;
- Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary Map, Flood Insurance Rate Map, or other flood delineation map; or
- Expose people or structures to a significant risk of loss, injury, or death resulting involving flooding, including flooding as a result of the failure of a dam or levee;

### *Impacts on Surface Water Supply and Quality*

The project is not expected to result in any significant adverse effects on surface water resources. There are no named natural streams or other bodies of water in the project area, but there are manmade channels that the project would be located next to, like the ditch adjacent to the NCPA facility that is tributary to White Slough. Potential for soil erosion, described in Chapter 9.0, Geology and Soils, would involve a corresponding potential for sediment contamination of surface waters. However, construction activities that would disturb soil would be limited mainly to the drilling of holes for power pole installation and the construction of footings for the rack system installed in the NCPA facility. The project would not involve any grading. Should proposed construction involve disturbance of one or more acres, EUD would be required to obtain a General Permit for construction and prepare a SWPPP that would contain erosion control measures. However, project construction at each pole site would disturb very little land. Assuming a 3-foot diameter hole and a 225-square foot stock piled area at each hole for the soil from the drilled holes, it is anticipated each pole location would have a disturbed area of 235 square feet. Assuming each of the 140 pole locations had a similar disturbed area, the total amount of land that would be disturbed would be approximately 32,900 square feet; less than one acre of land (one acre = 43,560 square feet).

Project construction would involve the use of some heavy equipment but little use of hazardous materials (see Chapter 11.0, Health and Safety). Consequently, the potential for contamination of surface water resulting from hazardous materials spills would be less than significant. Project operations would not require the use of surface water, nor would they generate any contaminants that could enter surface water.

Level of Significance: Less than significant

Mitigation Measures: None required

### *Impacts on Groundwater Supply and Quality*

The project is not expected to result in any significant adverse effects on groundwater resources. No large-scale grading that could expose or cause physical changes in groundwater systems would occur. Construction activities would be limited mainly to drilling holes for power pole installation. The depth of the holes would be insufficient to reach groundwater throughout most of the project area. As previously described, depth to groundwater near the Lodi WPCF may be shallow, up to two feet below ground surface in some areas. However, these shallower areas are located north and west of the WPCF. It is anticipated that that drilling of holes at the WPCF site would have little impact on groundwater movement or quality.

As previously noted, project construction would involve the limited use of hazardous materials. Consequently, there would be limited potential for contamination of groundwater resources by hazardous material spills. Project operations would not require the use of either surface water or groundwater.

Level of Significance: Less than significant

Mitigation Measures: None required

### *Project Effects on Stormwater Runoff*

The project would not involve paving or the installation of other impervious surfaces. Additional impervious surfaces would generate additional stormwater runoff, as precipitation would be unable to percolate into the ground. The project would occur in existing easements that are mostly undeveloped and would remain so after construction is complete. Therefore, the project would not lead to the generation of additional stormwater runoff.

Project construction would involve some disturbance of soils, which would increase the potential for runoff to carry and discharge sediments into adjacent channels. However, as previously described, ground disturbance would be minimal. Therefore, there would be minimal soil exposure to any runoff that occurs. In addition, dust control mitigation measures described in Chapter 6.0, Air Quality, would further reduce the likelihood of any sediments being transported to water channels.

Level of Significance: Less than significant

Mitigation Measures: None required.

### *Exposure of Proposed Primary Route to Flooding Hazards*

According to FEMA maps, the project area east of I-5 is outside the 100-year floodplain. However, the power pole locations west of I-5 would be located within Zone AE, within

the 100-year floodplain. Given the flat topography of the project area on both the west and east side of I-5, localized flooding potentially could occur. However, since the project involves no habitable structures, such potential flooding would not likely affect the power line or the poles carrying this line.

The project area is exposed to potential flooding from catastrophic failure of dams located in the foothill areas. The likelihood of failure of these facilities has been judged to be low, and less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

## 13.0 LAND USE AND PLANNING

This chapter of the EIR describes the potential project impacts on land uses in the project area. It describes existing land uses, along with their applicable General Plan and zoning designations, and the potential impacts the project would have related to existing land uses. Information for this section came from various public documents, along with field visits and maps of the project area. Issues related to agricultural land uses are addressed in Chapter 5.0, Agricultural Resources.

### ENVIRONMENTAL SETTING

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#### Existing Land Use

Land use within the Central Valley is dominated by intensive agriculture, including field crops, orchards, vineyards and feed production. Agricultural product processing sites are scattered throughout this area, ranging from small to large. The Central Valley area is also home to several developing urban centers, populations ranging from 50,000 to approximately 250,000 persons, including the cities of Stockton and Lodi. Land area within the urban centers is predominately for residential use with substantial lands devoted to local and regional commercial uses. The larger cities include extensive areas of industrial development; smaller cities host large industrial facilities. Outside of the major urban centers are several smaller unincorporated areas of development, ranging in size from a few structures at a crossroads to sizable areas of urban development.

The project area is located southwest of the City of Lodi and north of the City of Stockton. Land uses in this area consist mainly of agriculture. Vineyards, orchards and row crops are grown in the vicinity of the project area. A dairy is located along the eastern side of Thornton Road south of Kingdon Road. There are single-family residences scattered throughout the area, along with farm buildings and small agriculture-related businesses. There are small concentrations of residences along Harney Road, Neeley Road and on Kingdon Road near Ray Road. The Union Pacific railroad tracks cross the center of the Primary Route. Interstate 5 is along the project area's western boundary, while SR 12 is adjacent to the eastern endpoint of the project. Several local roads, paved and unpaved, are located in the project area. The Kingdon Airpark is located in the project area south of Tredway Road and west of DeVries Road.

The eastern terminus of the Primary Route is located on vacant land owned by the City of Lodi. The western terminus is located within the Northern California Power Agency (NCPA) power plant site. Also located in this area of the project, west of I-5, is the Lodi Water Pollution Control Facility (WPCF) to the north of the Primary Route and the San Joaquin County Mosquito and Vector Control District facility, located south of the Primary Route.

Existing land uses near the project area along SR 12 include the Flag City highway commercial area at the southeastern corner of the intersection of I-5 and SR 12. Flag City contains restaurants, gas stations, a truck stop and other related uses. Wineries and agriculture-related land uses are located along SR 12.

The eastern terminus of the Primary Route, the future Westside Substation site is adjacent to a future approved commercial and retail development at the southwest corner of SR 12 and Lower Sacramento Road. Further south of this intersection, residential development has occurred east of Lower Sacramento Road. The Lodi Airpark is located southeast of the Primary Route, near the intersection of Lower Sacramento Road and Armstrong Road.

Adjacent to and west of the NCPA power plant site is a 230 kV electrical power line owned by PG&E. The 230 kV power lines are supported by four legged steel towers trending in a north-south direction.

## Existing General Plan and Zoning

Most of the project site is located in the planning jurisdiction of San Joaquin County. The San Joaquin County General Plan indicates that the project area under County jurisdiction is designated General Agriculture (Figure 13-1). The General Agriculture designation is applied to areas generally committed to agriculture with viable commercial enterprises that require large land areas to efficiently produce their crops. The zoning for the project area under County jurisdiction, including the Kingdon Airpark, is AG-40, General Agricultural with a 40-acre minimum parcel size (Figure 13-2). The AG zone is established to preserve agricultural lands for the continuation of commercial agricultural enterprises. Minor utility services are permitted in the AG zone. "Minor utility services," as defined in the County's Zoning Regulations, include electrical distribution lines, utility poles and pole transformers (San Joaquin County, 2001).

The western terminus of the Primary Route is the Lodi NCPA power plant site. This site is under the jurisdiction of the City of Lodi. The Lodi General Plan has designated the site Public/Quasi-Public. The Public/Quasi-Public designation provides for government-owned facilities, public and private schools, and quasi-public uses such as hospitals and churches (City of Lodi, 1991). This designation extends to a triangular-shaped property between Interstate 5 and Thornton Road, east of the WPCF site. This property is also owned by the City of Lodi, and a portion of the Primary Route crosses this property. The City's Zoning Ordinance has zoned the NCPA and WPCF sites and the adjacent property east of I-5 Public and Community Facility (PF). The PF zone is applied to areas suitable for public land uses. A utility facility is an allowable use in the PF zone (City of Lodi, 2003, cited in NCPA, 2008).

The eastern terminus of the Primary Route, at which the future Westside substation is proposed, is located within the Lodi city limits, on property owned by the City of Lodi. The Lodi General Plan designation for the substation parcel is Public/Quasi-Public. The zoning is Public and Community Facility (PF).

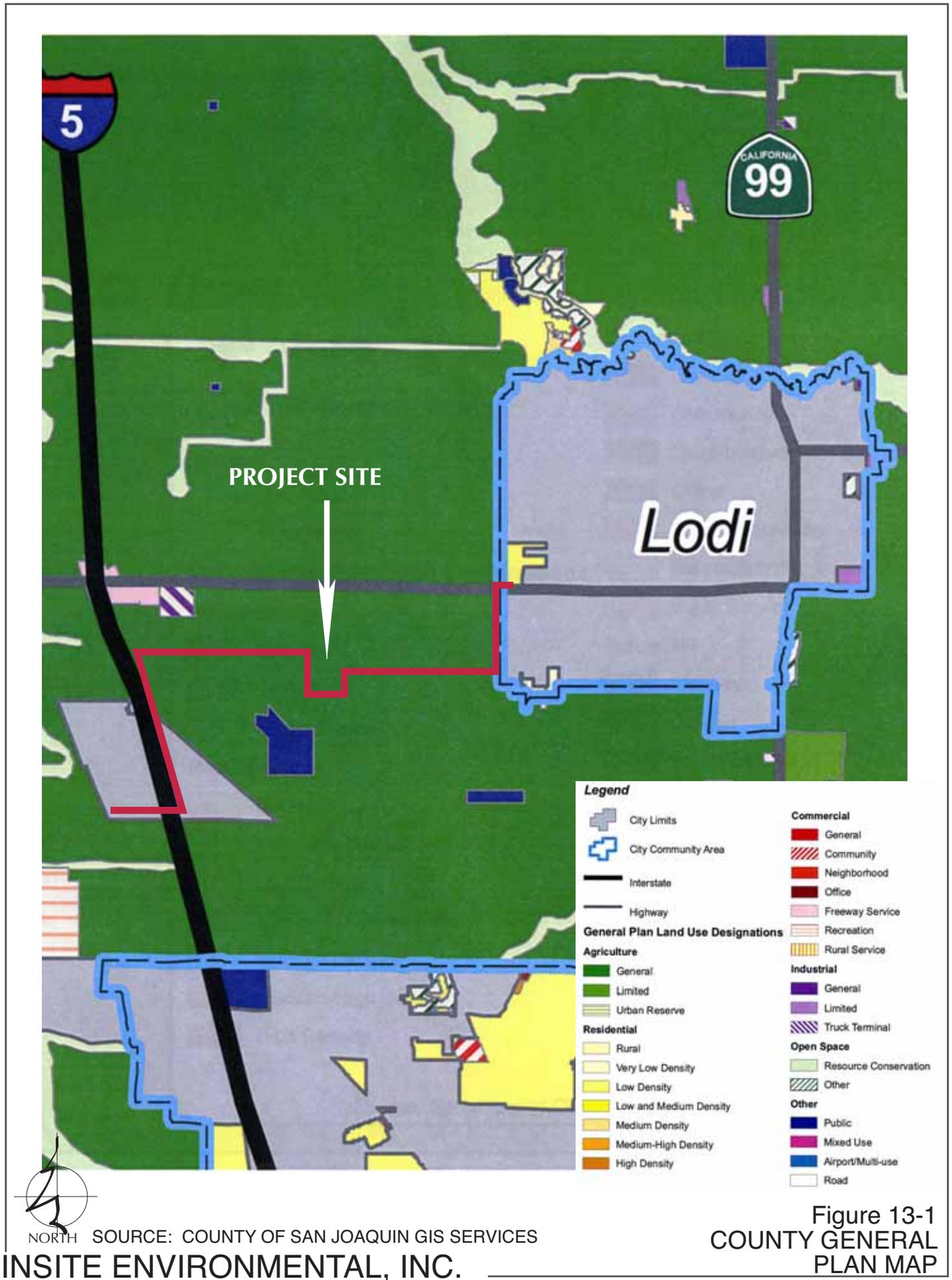
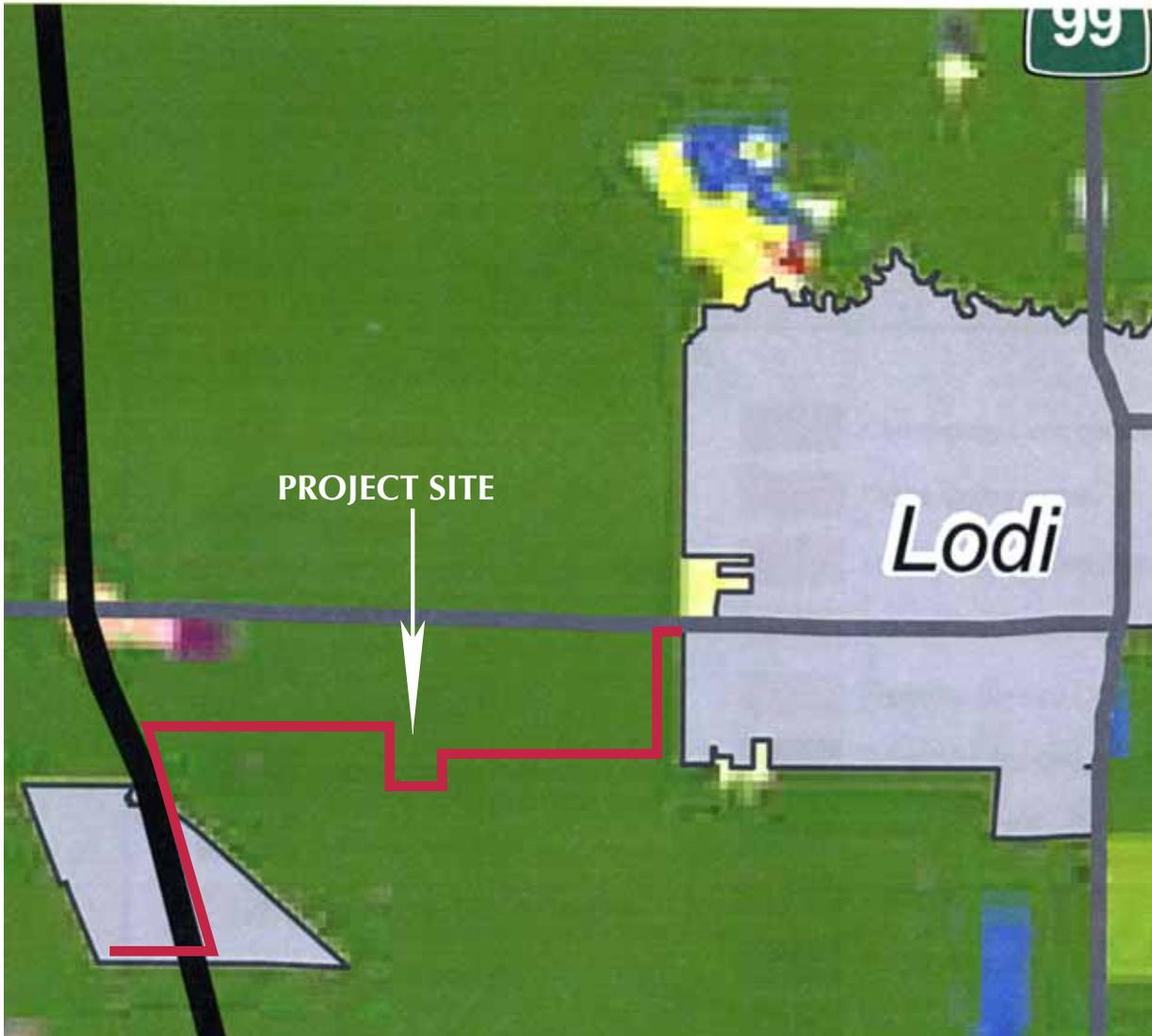


Figure 13-1  
 COUNTY GENERAL  
 PLAN MAP



**Legend**

- |                           |                                 |  |                            |
|---------------------------|---------------------------------|--|----------------------------|
|                           | City Limits                     |  | Community Commercial       |
|                           | Interstate                      |  | Office Commercial          |
|                           | Highway                         |  | Neighborhood Commercial    |
| <b>Zoning</b>             |                                 |  | Crossroads Commercial      |
| <b>Zoning Designation</b> |                                 |  | Freeway Service Commercial |
|                           | General Agriculture             |  | Rural Service Commercial   |
|                           | Limited Agriculture             |  | Recreation Commercial      |
|                           | Agriculture Urban Reserve       |  | Limited Commercial         |
|                           | Rural Residential               |  | Airport/Multi-Use          |
|                           | Very Low Density Residential    |  | General Industrial         |
|                           | Low Density Residential         |  | Warehouse Industrial       |
|                           | Medium Density Residential      |  | Industrial Park            |
|                           | Medium-High Density Residential |  | Limited Industrial         |
|                           | High Density Residential        |  | Truck Terminals            |
|                           | Mixed Use                       |  | Public Facilities          |
|                           | General Commercial              |  |                            |



NORTH SOURCE: COUNTY OF SAN JOAQUIN GIS SERVICES

## EMF-Sensitive Land Uses

There are several land uses that may be sensitive to the location of nearby electrical facilities. Sensitivity may include potential health effects associated with electromagnetic fields (EMFs) or aesthetic concerns. Sensitive land uses would include residential areas, convalescent facilities, schools, day care centers, recreation sites and others.

There is ongoing controversy regarding the potential health effects of EMFs. Some scientific studies have indicated a link between EMFs and health effects, but the reported results are inconclusive. There is no regulation of land use related to EMFs in the project area. The California Department of Education and the State Public Utilities Commission attempt to maintain a minimum of 100 feet between new school sites and existing electrical power lines with a voltage of more than 50 kV to avoid any potential risks associated with EMFs. These requirements do not apply to existing schools. Further discussion on this issue is provided in Chapter 11.0, Health and Safety.

## REGULATORY SETTING

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### State

#### State Planning and Zoning Laws

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 the City or County and of any land outside its boundaries that, in the City's or County'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 City's or County'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.

The State Zoning Law (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(c)).

## Local

### City of Lodi and San Joaquin County General Plans and Zoning Ordinances

Both the City of Lodi and San Joaquin County – the two local governments with jurisdiction over the project area – have prepared General Plans addressing future development. Policies under each General Plan relevant to the project are listed in the Environmental Impacts section of this chapter. Both the City and the County have zoning ordinances, which are required to be consistent with their respective General Plans per State law.

### San Joaquin County Habitat Conservation Plan

The San Joaquin County Multi-Species Habitat Conservation and Open Space Plan covers San Joaquin County and the cities in the County. For projects that convert open space on agriculturally-zoned properties to urban uses or other non-agricultural activities, the Habitat Conservation Plan allows the issuance of incidental take permits or allows project applicants to mitigate for impacts on species covered by the plan. "Open space uses," as defined in the plan, include open space for "plants, fish and wildlife, agricultural use, recreational use, scenic enjoyment, and other beneficial Open Space uses" (SJCOG, 2000, p. 1-1). Chapter 7.0, Biological Resources discusses project impacts related to the Habitat Conservation Plan.

### Airport Zoning

State statutes require every county with an airport served by one or more commercial air carriers to have an Airport Land Use Commission (ALUC). For San Joaquin County, the San Joaquin Council of Governments (SJCOG) Board of Directors is the designated ALUC. State statutes require each County's ALUC to prepare an Airport Land Use Compatibility Plan (ALUCP) with a 20-year planning horizon. The Airport Land Use Plan (ALUP) for San Joaquin County's Aviation System was first prepared and adopted in 1983, and updated in 1993. In June 2009, the SJCOG adopted an ALUCP Update that essentially updated the 1993 ALUP.

The ALUCP addresses six airports located within San Joaquin County, one of which is Kingdon Airpark. The airport, a privately owned facility, has an asphalt runway 3,705 feet long and 60 feet wide and oriented to the northwest/southeast. It also has several types of hangars and aviation fuel service. Kingdon Airpark hosts a variety of aviation activities, including pilot training and aerial application of agricultural chemicals. In 2008, there were 24,272 operations at Kingdon Airpark, with 20,460 operations being local (Coffman Associates, 2009).

The ALUCP establishes zones of land use compatibility that indicate appropriate land uses for specific areas in and around the airport. Figure 11-1 in Chapter 11.0, Health and Safety depicts the compatibility zones for Kingdon Airpark. Table 13-1 shows land use criteria for each zone, including prohibited land uses. The Primary Route (project area) crosses through Zones 7 and 8.

**TABLE 13-1  
LAND USE CRITERIA FOR COMPATIBILITY ZONES**

Zone	Maximum Densities/Intensities/ Required Open Land			Additional Criteria	
	Dwelling Units per Acre <sup>1</sup>	Maximum Non- Residential Intensity <sup>2</sup>	Required Open Land <sup>3</sup>	Prohibited Uses <sup>4</sup>	Other Development Conditions <sup>5</sup>
1	None	None	All unused	<ul style="list-style-type: none"> <li>• All structures except ones with location set by aeronautical function</li> <li>• Assemblages of people</li> <li>• Public &amp; quasi-public services</li> <li>• Objects exceeding FAR Part 77 height limits</li> <li>• Storage of hazardous materials</li> <li>• Chemicals and allied products &amp; storage</li> <li>• Petroleum refining &amp; storage</li> <li>• Electrical &amp; natural gas generation &amp; switching</li> <li>• Oil &amp; gas extraction</li> <li>• Natural gas &amp; petroleum pipelines<sup>6</sup></li> <li>• Dumps or landfills, other than those consisting entirely of earth &amp; rock</li> <li>• Hazards to flight</li> </ul>	<ul style="list-style-type: none"> <li>• Aviation easement dedication</li> </ul>
2	1 d.u. per 10 acres	50 persons per acre	30%	<ul style="list-style-type: none"> <li>• Residential, except for very low residential</li> <li>• Manufacturing and industrial uses</li> <li>• Chemicals and allied products &amp; storage</li> <li>• Petroleum refining &amp; storage</li> <li>• Rubber &amp; plastics</li> <li>• Passenger terminals &amp; stations</li> <li>• Radio, TV &amp; telephone centers</li> <li>• Electrical &amp; natural gas generation &amp; switching</li> <li>• Oil &amp; gas extraction</li> <li>• Natural gas &amp; petroleum pipelines<sup>6</sup></li> <li>• Petroleum truck terminals</li> <li>• Businesses &amp; personal services</li> <li>• Hotels, motels, restaurants</li> <li>• Public &amp; quasi-public services</li> <li>• Children's schools, day care centers, libraries</li> <li>• Hospitals, nursing homes</li> <li>• Places of worship</li> <li>• Schools</li> <li>• Recreational uses, athletic fields, playgrounds, &amp; riding stables</li> <li>• Theaters, auditoriums, &amp; stadiums</li> <li>• Dumps or landfills, other than those consisting entirely of earth &amp; rock</li> <li>• Waterways that create a bird hazard</li> <li>• Hazards to flight</li> </ul>	<ul style="list-style-type: none"> <li>• Aviation easement dedication</li> <li>• Locate structures maximum distance from extended runway centerline</li> <li>• Minimum NLR of 45 dB residences (including mobile homes) and office buildings</li> <li>• ALUC review required for objects &gt; 35 feet tall</li> </ul>
3	1 d.u. per 5 acres	120 persons per acre	20%	Same as Zone 2	Same as Zone 2
4	1 d.u. per 5 acres	180 persons per acre	20%	<ul style="list-style-type: none"> <li>• Children's schools, day care centers, libraries</li> <li>• Hospitals, nursing homes</li> <li>• Buildings with &gt;3 aboveground habitable floors</li> <li>• Highly noise-sensitive outdoor nonresidential</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum NLR of 25 dB in residences (including</li> </ul>

TABLE 13-1  
LAND USE CRITERIA FOR COMPATIBILITY ZONES

Zone	Maximum Densities/Intensities/ Required Open Land			Additional Criteria	
	Dwelling Units per Acre <sup>1</sup>	Maximum Non- Residential Intensity <sup>2</sup>	Required Open Land <sup>3</sup>	Prohibited Uses <sup>4</sup>	Other Development Conditions <sup>5</sup>
				uses <sup>6</sup>	mobile homes) and office buildings <sup>7</sup>
				• Hazards to flight	• ALUC review required for objects >70 feet tall <sup>8</sup>
5	1 d.u. per 2 acres	160 persons per acre	25%	Same as Zone 2	Same as Zone 2
6	None	No limit	None	• Hazards to flight	• Airspace review required for objects >70 feet tall <sup>9</sup>
7	No limit	450 persons per acre	10%	• Hazards to flight • Outdoor stadiums	• Airspace review required for objects >100 feet tall <sup>10</sup>
8	No limit	No limit	None	• Hazards to flight	• Airspace review required for objects >100 feet tall <sup>11</sup>

*Notes:*

- 1 Residential development must not contain more than the indicated number of dwelling units (excluding secondary units) per gross acre (d.u./ac). Clustering of units is encouraged. Gross acreage includes the property at issue plus a share of adjacent roads and any adjacent, permanently dedicated, open lands.
- 2 Usage intensity calculations shall include all people (e.g., employees, customers/visitors, etc.) who may be on the property at a single point in time, whether indoors or outside. Multiplier bonus for Special Risk-Reduction Bldg. Design is 1.5 for Zone 2 and 2.0 for Zones 3, 4, 5, and 7. (Appropriate risk reduction measures are specified in the California Code of Regulations, Title 24, Part 2.)
- 3 Open land requirements are intended to be applied with respect to an entire zone. This is typically accomplished as part of a community general plan or a specific plan, but may also apply to large (10 acres or more) development projects.
- 4 The uses listed here are ones that are explicitly prohibited regardless of whether they meet the intensity criteria. In addition to these explicitly prohibited uses, other uses will normally not be permitted in the respective compatibility zones because they do not meet the usage intensity criteria.
- 5 As part of certain real estate transactions involving residential property within any compatibility zone (that is, anywhere within an airport influence area), information regarding airport proximity and the existence of aircraft overflights must be disclosed. This requirement is set by state law. Easement dedication and deed notice requirements indicated for specific compatibility zones apply only to new development and to reuse if discretionary approval is required.
- 6 Hazards to flight include physical (e.g., tall objects), visual, and electronic forms of interference with the safety of aircraft operations. Land use development that may cause the attraction of birds to increase is also prohibited.
- 7 Examples of highly noise-sensitive outdoor nonresidential uses that should be prohibited include amphitheaters and drive-in theaters. Caution should be exercised with respect to uses such as poultry farms and nature preserves.
- 8 NLR = Noise Level Reduction, the outside-to-inside sound level attenuation that the structure provides.
- 9 Objects up to 35 feet in height are permitted. However, the Federal Aviation Administration may require marking and lighting of certain objects.
- 10 This height criterion is for general guidance. Shorter objects normally will not be airspace obstructions unless situated at a ground elevation well above that of the airport. Taller objects may be acceptable if determined not to be obstructions.
- 11 Natural gas & petroleum pipelines less than 36 inches below the surface.

Source: San Joaquin Airport Land Use Compatibility Plan, Coffman Associates, 2009.

# ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

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## Significance Thresholds

For the purposes of this EIR, impacts on land use are considered significant if the proposed project would:

- Involve substantial alteration of the present or planned land use of an area;
- Disrupt or divide the physical arrangement of an established community;
- Conflict with established recreational, educational, religious or scientific uses of the area;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigation an environmental effect;
- Conflict with the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (MSHCP), the Delta Protection Act, and/or any other applicable habitat conservation plan or natural community conservation plan; or
- Result in a conflict with adjacent land uses.

## *Issues Associated with Existing Land Uses*

The project would be consistent with other existing land uses in the project area and would not involve a substantial alteration of present land uses. The project would be constructed within existing utility easements and public road rights-of-way where existing poles, power and transmission lines are located. Because of the project's location, the project components would not affect existing residential or agricultural uses. Since the project would be replacing existing poles along the majority of the Primary Route, it would not disrupt or divide the physical arrangement of established areas, including agricultural operations.

Level of Significance: Less than significant

Mitigation Measures: None required

## *Consistency with General Plan Policies*

The project is located in an area partially under the jurisdiction of the City of Lodi, and partially under the jurisdiction of San Joaquin County. The project would be consistent with applicable goals and policies of both general plans, especially those related to agricultural land preservation due to the type of project being proposed. The installation of power poles as proposed would not result in the loss or conversion of agricultural resources.

The Conservation Element of the City of Lodi General Plan establishes policies for the conservation of natural resources in Lodi. Topics addressed included agricultural and soil resources; biological resources; cultural and historic resources; hydrology and water quality; energy and climate change; and air quality. Each of these topics are discussed in detail in corresponding chapters of this EIR.

Other notable guiding policies in the City of Lodi General Plan including the following:

#### Land Use Element

**LU-G6:** Ensure the continued economic sustainability of the community and fiscal health of the City government.

**Project Consistency:** The objective of the project is to increase the reliability of the City's electrical system by providing a second point of supply from the regional power grid. The City's system is presently served with power supply from a single PG&E substation located in an unincorporated area to the east of the city. This line has experienced several interruptions in the past years, which have resulted in the loss of power to the entire city. Citywide interruptions of the power supply will have economic impacts. A second point of power supply will minimize this potential economic impact.

#### Growth Management and Infrastructure

**GM-G3:** Promote conservation of resources in order to reduce the load on existing and planned infrastructure capacity, and to preserve existing environmental resources.

**GM-P10:** Develop new facilities and rehabilitate existing facilities as needed to serve existing development and expected development, in accordance with the General Plan and relevant infrastructure master plans.

**Project Consistency:** As noted above, the objective of the project is to increase the reliability of the City's electrical system by providing a second point of supply from the regional power grid. This will reduce the dependency on the existing connection point to the regional power grid while still allowing Lodi Electric Utility to continue serving the existing uses within the City of Lodi.

#### Safety

**S-G4:** Minimize vulnerability of infrastructure and water supply and distribution systems.

**Project Consistency:** The objective of the project is to minimize vulnerability of the City's electrical system by securing a second connection point to the regional power grid.

In summary, the installation of the Lodi West 60 kV Power Line Project will be consistent with General Plan policies.

Level of Significance: Less than significant

Mitigation Measures: None required

### *Consistency with Zoning*

As previously described, the zoning for the project area under County jurisdiction is AG-40, General Agricultural. The AG zone permits minor utility services, which include electrical distribution lines, utility poles and pole transformers. Therefore, the utility pole portion of the project would be consistent with existing zoning. The endpoints would be on City of Lodi property, with a zoning of Public and Community Facility (PF). The PF zone allows utility related facilities.

Level of Significance: Less than significant

Mitigation Measures: None required

### *Consistency with San Joaquin County Habitat Conservation Plan*

The San Joaquin County Habitat Conservation Plan applies to projects involving the conversion of open space to non-open space uses, which could affect plant and wildlife species covered by the plan. The project would not convert existing open space areas, including agricultural lands, to urban uses, as the majority of the Primary Route would be located within existing road rights-of-way and utility easements. Chapter 7.0, Biological Resources discusses project impacts related to the Habitat Conservation Plan in more detail.

Level of Significance: Less than significant

Mitigation Measures: None required

### *Consistency with the Airport Land Use Compatibility Plan*

Kingdon Airpark is located south of Tredway Road. As described in Chapter 11.0, Health and Safety, the Tredway Road and Neeley Road segments of the project would cross Zone 7 (Traffic Pattern Zone). The ALUCP Update does not prohibit power line uses in Zone 7, unless they pose a hazard to flight. As discussed in Chapter 11.0, the project would not likely pose a flight hazard in its proposed alignment as long as the power pole heights do not exceed 100 feet above ground level. Therefore, the project would be consistent with the ALUCP Update.

Level of Significance: Less than significant

Mitigation Measures: None required

# 14.0 NOISE

This chapter describes the existing noise environment in and near the project area and the potential noise impacts associated with installation and operation of the 60 kV power line along the Primary Route. The analysis includes a discussion of applicable noise standards. Information for this chapter came from various public documents.

## ENVIRONMENTAL SETTING

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### Acoustical Terminology

Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and are called sound. Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel (dB) scale was devised. The decibel scale uses the hearing threshold as a point of reference, defined as 0 dB, and allows a million-fold increase in pressure to be expressed as 120 dB. Changes in decibel levels 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 the A-weighting network. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives noise. 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. A graphic representation of the relative "loudness" of A-weighted noise is shown in Table 14-1.

Community noise is commonly described in terms of the "ambient" noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (Leq), 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 Leq is the foundation of the composite noise descriptor, Ldn, and shows very good correlation with community response to noise.

The Day-Night Average Level (Ldn) is based upon the average noise level over a 24-hour day, with a +10 dB weighting applied to noise occurring during nighttime (10:00 PM to 7:00 AM) 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 Ldn represents a 24-hour average, it tends to disguise short-term variations in the noise environment. The CNEL (community noise equivalent level) is also based on the weighted average hourly Leq over a 24-hour period. In addition to the +10 dB weighting

at nighttime, the CNEL has a +5 dB weighting applied to noise occurring during the hours of 7:00 PM to 10:00 PM.

TABLE 14-1  
TYPICAL NOISE LEVELS

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	--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, October 1998

Excessive noise exposure can cause adverse physical and psychological responses, in addition to interfering with speech, concentration and performance. These effects are particularly disruptive for noise-sensitive and uses, such as schools, churches, hospitals, convalescent homes and residential neighborhoods (San Joaquin County, 1999). Guidelines for the acceptability of noise have been adapted by the California Office of Noise Control in its "Guidelines for the Preparation and Content of Noise Elements of the General Plan". While cities, counties and other agencies are free to adopt their own standards, most general plans incorporate these standards or a modified version of them. The General Plans of both San Joaquin County and the City of Lodi have established noise standards, which are described later in this chapter.

## Existing Noise Environment

Several noise sources are located in or adjacent to the area containing the Primary Route. These include highways and local roads, railroad tracks, the Lodi WPCF and adjacent NPCA power plant, Kingdon Airpark, and agricultural operations.

### *Highways and Local Roads*

Two highways in the vicinity carry large volumes of motor vehicle traffic – Interstate 5 (I-5) and State Route 12 (SR 12). Because of these large traffic volumes, these two highways are the most significant noise generators in the project area. In addition, several local roads traverse the project area. However, these roads carry primarily local traffic, and therefore have a lower traffic volume than the main highways. Therefore, they are not significant noise generators.

### *Railroad Tracks*

The Union Pacific railroad tracks cross the center of the Primary Route. Train operations generate the noise from this source.

### *Lodi WPCF Site*

The Lodi WPCF site contains the City's wastewater treatment plant and the NPCA's power plant. As part of the environmental evaluation of the proposed Lodi Energy Center, noise measurements were taken at four locations of varying distance from the WPCF site – from 0.75 miles to approximately two miles. The results indicated that the primary noise source at each location was traffic from I-5 and local roads. Power plant operations were not audible at any of the locations (NPCA, 2008). Noise from wastewater treatment plant operations was apparently not considered significant.

### *Kingdon Airpark*

Kingdon Airpark is located adjacent to the project site at Tredway Road. Airport operations, mainly aircraft takeoffs and landings, generate noise at this site. Figure 14-1 shows the noise contours at the airport, as delineated in the recently adopted San Joaquin County Airport Land Use Compatibility Plan.

### *Agricultural Operations*

The predominant land use along the Primary Route is agriculture. Agricultural use produces more intermittent or occasional noise, which are associated with phases of agricultural production.



Figure 14-1  
KINGDON AIRPORT NOISE  
EXPOSURE CONTOURS

SOURCE: SAN JOAQUIN GIS SYSTEM

INSITE ENVIRONMENTAL, INC.

## REGULATORY SETTING

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### Local

#### San Joaquin County General Plan

The San Joaquin County General Plan, which covers most of the project area, contains policies that establish acceptable noise level criteria for both transportation and non-transportation noise sources. According to the County General Plan, the following noise levels shall be considered acceptable:

- Maximum allowable noise exposure from transportation noise sources for outdoor activity areas shall be 65 dB for residential development; transient lodging; hospitals, nursing homes and similar health-related facilities; churches, meeting halls and similar community assembly facilities.
- Maximum allowable noise exposure from transportation noise sources for indoor spaces shall be 45 dB for residential development; transient lodging; hospitals, nursing homes and similar health-related facilities; churches, meeting halls and similar community assembly facilities; office buildings; schools; libraries; museums; and day care centers.
- Hourly equivalent sound level from stationary noise sources for outdoor activity areas shall be 50 dB during the daytime and 45 dB during the nighttime for residential development; transient lodging; hospitals, nursing homes and similar health-related facilities; churches, meeting halls and similar community assembly facilities; office buildings; schools; libraries; museums; and day care centers.
- Maximum sound level from stationary noise sources for outdoor activity areas shall be 70 dB during the daytime and 65 dB during the nighttime for residential development; transient lodging; hospitals, nursing homes and similar health-related facilities; churches, meeting halls and similar community assembly facilities; office buildings; schools; libraries; museums; and day care centers.

#### City of Lodi General Plan

The City of Lodi General Plan Policy 1 of its Noise Element states that the City shall use the outdoor CNEL criteria on the designated land use compatibility chart as a primary guide to determine whether all or part of an existing or proposed development site should be considered "noise impacted." Table 14-2 summarizes the land use compatibility chart. According to Policy 1, areas shall be considered "noise impacted" if current or projected exterior noise levels would classify the area as "conditionally acceptable," "normally unacceptable," or "presumed to be unacceptable" for the existing or proposed use.

TABLE 14-2  
LAND USE COMPATIBILITY CHART, CITY OF LODI NOISE ELEMENT

Land Use Category	Land Use Compatibility by Outdoor Ldn or CNEL Value				Supplemental Indoor Noise Criteria
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Presumed to be Unacceptable	
Residential, including apartments and mobile homes	< 60 dB	60-65 dB	65-75 dB	> 75 dB	Ldn or CNEL <45 dB in sleeping quarters
Motels, hotels, other transient lodgings, hospitals and convalescent facilities	<60 dB	60-70 dB	70-75 dB	>75 dB	Ldn or CNEL <45 dB in sleeping quarters
Schools, libraries, churches and meeting halls	<60 dB	60-70 dB	70-75 dB	>75 dB	Leq <40 dBA for the noisiest hour of the day
Theaters, auditoriums and concert halls	<65 dB	65-70 dB	70-75 dB	>75 dB	Leq <35 dBA for the noisiest hour of the day
Business offices, medical and dental offices, retail and wholesale facilities	<65 dB	65-75 dB	75-80 dB	>80 dB	Ldn or CNEL <50 dB in fully enclosed portions of the building
Manufacturing and other industrial facilities	<70 dB	70-75 dB	75-80 dB	>85 dB	Not applicable
Sports arenas, amusement parks and outdoor spectator sports	<65 dB	65-75 dB	75-80 dB	>80 dB	Not applicable
Parks, playgrounds, golf courses, riding stables, outdoor amphitheaters, and passive open space	<65 dB	65-70 dB	70-75 dB	>75 dB	Not applicable

**NOTES:**

*CNEL criteria apply to outdoor noise from sources that operate continuously or that operate frequently throughout most of a 24-hour period.*

*CNEL criteria should be applied to noise conditions that are typical for the noise source, not to conditions reflecting temporary peak activity periods.*

*Land use compatibility classifications for areas affected primarily by intermittent or discontinuous noise sources must be made on a case-by-case basis, reflecting the magnitude, duration, and temporal pattern of ambient noise.*

*Supplemental indoor noise criteria apply to the noise increment contributed by outdoor noise sources.*

*Supplemental indoor noise criteria represent minimum performance standards to be met through building design and acoustic insulation.*

*Source: City of Lodi General Plan (1991)*

# ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

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## Significance Thresholds

For the purposes of this EIR, impacts related to noise are considered significant if the proposed project would:

- Expose persons to, or generate, noise levels in excess of adopted standards.
- Generate excessive groundborne vibration or groundborne noise levels.
- Cause a substantial permanent increase in ambient noise levels in the project vicinity, above levels existing without the project.
- Cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity, above levels existing without the project.
- Expose people residing or working at an airstrip in the project area to excessive noise levels.

## *Construction Noise*

During the construction phases of the project, noise from construction activities would add to the noise environment in the immediate project vicinity. Equipment potentially involved in construction would generate maximum noise levels ranging from 85 to 88 dB at a distance of 50 feet, as indicated in Table 14-3. Construction activities would be temporary in nature and are anticipated to occur during normal daytime working hours.

TABLE 14-3  
CONSTRUCTION EQUIPMENT NOISE

Type of Equipment	Maximum Level, dB at 50 feet
Bulldozers	87
Heavy Trucks	88
Backhoe	85
Pneumatic Tools	85

*Source: Environmental Noise Pollution, Patrick R. Cunniff, 1977.*

Noise would also be generated during the construction phase by increased truck traffic on area roadways. A significant project-generated noise source would include truck traffic associated with transport of heavy materials and equipment to and from construction sites and the movement of heavy construction equipment on the project site, especially during

pole installation. This noise increase would be of short duration, and would likely occur primarily during daytime hours. However, there are rural residences adjacent to the proposed Primary Route that would be impacted by construction activities.

Construction noise can be minimized by limiting construction work to daytime hours and by requiring that construction equipment be fitted with “residential-type” mufflers; “residential-type” is an industry term that implies adequacy for use in residential areas without exceedence of typical residential noise standards.

Level of Significance: Potentially significant

Mitigation Measures:

14-1 Temporary noise impacts resulting from project construction shall be minimized by restricting hours of operation by noise-generating equipment to 7:00 AM to 7:00 PM Monday through Saturday when such equipment is to be used near noise-sensitive land uses. No construction activities shall occur Sundays or national holidays.

14-2 All construction equipment shall be fitted with factory equipped mufflers, and shall be maintained in good working order, at all times.

Significance After Mitigation: Less than significant

Implementation: The Lodi EUD shall be responsible for management of construction contractors.

Monitoring: The Lodi EUD will be responsible for ensuring that noise mitigation measures have been incorporated in improvement plans as a note to contractors.

### *Impacts of Project Operations*

Some high power lines emit a “buzzing” sound during operation. This sound is referred to as corona discharge and may result in the production of audible noise. Corona discharge is the ionization of the air that occurs at the surface of the energized conductor and suspension hardware due to high electric field strength at the surface of the metal during certain conditions. Corona discharge is a function of the voltage of the line, the diameter of the conductor, and the condition of the conductor and suspension hardware. Corona discharge typically becomes a design concern for transmission lines having voltages of 345 kV and above (NCPA, 2008). Since the proposed power line is at a 60 kV voltage level, it is expected that no corona-related design issues will be encountered, including noise.

The only other type of noise that project operations may generate is traffic noise by maintenance vehicles and equipment, which would be used only when the power line and poles require routine maintenance or emergency repairs. Such situations are considered infrequent, and therefore noise from maintenance vehicles and equipment is not considered significant.

Level of Significance: Less than significant

Mitigation Measures: None required

### *Airport Noise*

As discussed in Chapter 11.0, Health and Safety, the project would encroach on Zones 7 (Traffic Pattern Zone) and 8 (Airport Influence Area) of Kingdon Airpark, as designated in the County's ALUCP Update. The project does not propose any residences or other land uses sensitive to noise.

Construction workers and maintenance workers may be exposed to noise from airport operations. The exposure of construction workers to noise would be temporary and would cease with completion of work in the project area near the airport. Maintenance workers would be exposed to noise levels no greater than 60 dB, even when the 2028 CNEL noise contours are used. The 60 dB level is below the 65 dB maximum allowable noise exposure from transportation noise sources for outdoor activity areas.

Level of Significance: Less than significant

Mitigation Measures: None required

## 15.0 POPULATION AND HOUSING

This chapter evaluates the potential impacts of the project on population and housing in the project area and in the city of Lodi. Since one of the project objectives is to improve reliability of electrical supply for Lodi's Electric Utility customers, the impact analysis includes all of Lodi. Information for this chapter came primarily from California Department of Finance data.

### ENVIRONMENTAL SETTING

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#### Population

The project area is located in the unincorporated area of San Joaquin County, southwest of the City of Lodi. Lodi has grown from a 1990 population of 51,874 to an estimated January 1, 2009 population of 63,313 (California Department of Finance, 2009, 2009a), an increase of approximately 22%. During the same period, the population of unincorporated San Joaquin County increased from 124,747 to 146,196, an increase of 17.2%. By comparison, the entire population of San Joaquin County increased from 480,628 to 689,480, a 43.5% increase (California Department of Finance, 2007, 2009a).

The population of Lodi has more than doubled from its 1970 U.S. Census figure of 28,691. The greatest increase took place during the 1980s, when the City's population grew by 16,653 from its 1980 population of 35,221 (California Department of Finance, 2003). Population growth has moderated since then - Lodi's average annual population growth rate since 1990 has been approximately 1.1%.

San Joaquin County's unincorporated area has experienced relatively little population change. The population in the unincorporated area has increased by 30.1% since 1970 - an average annual increase of approximately 0.5%. From 1990 to 2009, the average annual growth rate in the unincorporated County has been approximately 0.8%. By comparison, California's population increased by an average annual rate of approximately 1.4% during the same period (California Department of Finance, 2007, 2009a).

#### Housing

The California Department of Finance Report E-5a (2009b) states that an estimated total of 23,368 housing units were in the City of Lodi as of January 1, 2009. This is an increase from 21,381 housing units in 2000. Approximately 65% of the 2009 housing units were single-family detached units, which accounted for all but 74 units of the increase in housing units between 2000 and 2009. Approximately 27% of the units were multi-family units, and the remainder was mobile homes and single-family attached units.

There were an estimated 47,611 housing units in the unincorporated area of San Joaquin County as of January 1, 2009 - an increase from 42,143 housing units in 2000. Approximately 81% of the 2009 housing units were single-family detached units, which accounted for the same percentage increase in housing units between 2000 and 2009. Approximately 13% of the units were mobile homes, and the remainder was single-family attached units and multi-family units (California Department of Finance, 2009b).

The Primary Route of the project is mostly in the unincorporated area of San Joaquin County, with only the endpoints in the Lodi city limits. The project area is used primarily for agricultural activities, and has only scattered rural residential development. Rural residences seen in the project area were predominantly single-family detached homes. A few mobile homes were observed during site visits.

## REGULATORY SETTING

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The General Plans for San Joaquin County and the City of Lodi each contain a Housing Element. The Housing Element describes existing housing conditions in the jurisdiction, identifies housing needs, and sets forth policies and programs to meet those needs. Housing needs are identified, in part, by projected population and household growth. Additional factors, such as household income levels and projected growth of populations with special housing needs (e.g., seniors, disabled, homeless), are taken into consideration. Programs in the Housing Element are implemented by a variety of means – enactment of ordinances, funding of programs to rehabilitate existing housing, zoning of property to accommodate new housing, and other measures.

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

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### Thresholds of Significance

According to CEQA, the project may have a significant population or housing effect if it would induce substantial growth or concentration of population; displace a large number of people; or displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

### *Project Effects on Population Growth*

The proposed project is not expected to result in any direct effect on the amount or rate of population growth, either in the project area or in Lodi. Electrical service is currently available throughout the Lodi area from Lodi Electric Utility. The project would be constructed to improve reliability of the existing electrical system. While additional reliability is expected to be of tangible benefit to new Lodi Electric Utility customers, these improvements are not expected to result in any substantial or measurable influence on the rate or amount of population growth or community development. These improvements

related to the 60 kV Power Line Project would represent only one of many factors considered in new developments and the planning that is required and would not significantly promote development in areas of new Lodi Electric Utility service.

The proposed project is not expected to induce any substantial population growth. Additional discussion on this issue is addressed in Chapter 21.0, Growth-Inducing Impacts.

Level of Significance: Less than significant

Mitigation Measures: None required

### *Project Effects on Housing*

The project would not involve any adverse impacts on housing. The project would involve the installation of a power line and supporting poles in existing utility rights-of-way. While residences are near these rights-of-way, none of them would need to be removed. Therefore, there would be no displacement of existing housing or the residents in them.

As discussed above, the proposed project is not expected to result in direct or indirect effects on the amount or rate of population growth. Although many factors influence the provision of housing, an increase in housing stock is typically tied to population growth. Since the project is not expected to induce population growth, it is not expected to have an influence on the provision of housing in the area.

Level of Significance: Less than significant

Mitigation Measures: None required

## 16.0 PUBLIC SERVICES

This chapter addresses the potential direct and indirect environmental effects of the proposed project on public service providers, including the following:

- Police protection
- Fire protection
- Schools
- Parks and Recreation

Information for this chapter primarily came from the Lodi Energy Center EIR, and was supplemented by information provided by public service agencies.

### ENVIRONMENTAL SETTING

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#### Police Protection

The San Joaquin County Sheriff's Department provides law enforcement services for the unincorporated portion of the project area and for the Lodi WPCF site. The Sheriff's Department has approximately 350 sworn officers. It has one station – the headquarters located at 7000 Michael Canlis Boulevard in French Camp, approximately 22 miles from the project area. The average response time to a call from the WPCF site was estimated to be 20 minutes (Picone, 2008, cited in NPCA, 2008).

The eastern terminus of the Primary Route is within the Lodi city limits. Therefore, the City of Lodi Police Department provides law enforcement services for this area. The Police Department has 125 full-time employees, of whom 78 are sworn officers. It has one police station, located at 215 Elm Street.

The California Highway Patrol (CHP) is the primary law enforcement agency for State highways and roads. Services provided by the CHP include law enforcement, traffic control, accident investigation, and hazardous materials spill incident management.

#### Fire Protection

The Woodbridge Rural Fire District provides fire protection for the unincorporated project area and the Lodi WPCF site. The Fire District has a staff of 74 full-time firefighters, including the fire chief and two division chiefs, and a reserve staff of 39 firefighters (Kirkle and Martin, 2008, cited in NPCA, 2008). The closest Fire District station to the project area is Station 74 at Flag City.

The Lodi Fire Department covers the eastern terminus of the Primary Route. The Fire Department has 64 personnel, all but three of who are firefighters, engineers or chiefs. The

closest Fire Department stations to the eastern terminus are Station #3 on Ham Lane and Station #4 on Lower Sacramento Road near Elm Street.

## Schools

The project area is located within the boundaries of the Lodi Unified School District, which serves students in kindergarten through 12th grades. According to the California Department of Education's Dataquest database, the School District had a 2008–2009 school year enrollment of 31,611 students. This total includes 16,874 students in grades K–6 (54% of total students), 4,805 students in middle school (7-8) grades, and 9,537 students in high school grades (California Department of Education, 2009). The nearest school to the project area is Henderson Community Day School, located at the southwestern corner of Harney Lane and Extension Road.

## Parks and Recreation

There are no parks or recreational facilities in the project area. San Joaquin County operates one regional County park facility in the vicinity of the project area. The 180-acre Oak Grove Regional Park, on Eight Mile Road south of the project area, includes fishing, paddleboats, disc golf, picnicking, and nature study opportunities. In addition, the County operates Woodbridge Community Park in Woodbridge. This two-acre park contains a basketball court, horseshoe pits, a children's playground and picnic tables.

The City of Lodi Parks and Recreation Department operates 26 park and recreation facilities throughout the City. City parks in the vicinity of the project area include Beckman Park and Kofu Park, both along Ham Lane. Beckman Park has baseball and soccer fields, a dog area, a play area and a picnic area. Kofu Park contains baseball and soccer fields, tennis courts and a skate park.

## REGULATORY SETTING

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### City of Lodi General Plan

The City of Lodi General Plan contains the following relevant goals and policies related to public services:

#### **Parks, Recreation and Open Space Element**

**Goal D.** To provide adequate land for open space as a framework for urban development and to meet the active and passive recreational needs of the community.

Policy 1. The City shall discourage the premature conversion of agricultural lands to urban uses.

## **Health and Safety Element**

**Goal C.** To prevent loss of lives, injury, and property damage due to urban fires.

Policy 7. The City shall endeavor through adequate staffing and station locations to maintain the minimum feasible response time for fire and emergency calls. The goal for travel time by the fire department in responding to an emergency shall be 3 minutes. As areas are developed beyond the 3-minute standard, additional fire stations, capital equipment, and personnel shall be provided or alternative fire protection measures shall be required.

**Goal D.** To prevent crime and promote the personal security of Lodi residents.

Policy 5. The City shall endeavor through adequate staffing and patrol arrangements to maintain the minimum feasible police response time for police calls. The goal for average response time for emergency calls shall be 3 minutes and no longer than 40 minutes for nonemergency calls.

## **San Joaquin County General Plan**

The San Joaquin County General Plan contains the following relevant goals and policies related to public services:

### **Community Development Element**

#### Recreation

Policy 23. Scenic corridors along recreation travelways and scenic routes shall be protected from unsightly development.

### **Public Health and Safety Element**

#### Fire Safety and Law Enforcement

Policy 1. The fire protection and law enforcement services and facilities shall provide adequate protection throughout the County, including waterways used by boaters.

Policy 4. Fire stations shall be strategically located so as to offer fire protection to all portions of the community, consistent with standards for comparable communities in the County.

Policy 7. The standard for law enforcement shall be 1.5 line officers assigned to patrol duty per 1,000 residents in urban communities and one line officer assigned to patrol duty per 1,000 residents in the remaining unincorporated portions of the County.

# ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

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## Significance Thresholds

According to CEQA, a project may have a significant effect on the environment if it would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time or other performance objectives for the following public services:

- Police protection
- Fire protection
- Schools
- Parks
- Other public facilities

## *Project Impacts on Public Services*

Population growth typically increases demand for public services such as police protection, fire protection, schools, parks and other services. This demand, in turn, has potential impacts on response times and the need for new facilities to maintain desired levels of service for fire and police protection, and to accommodate an increase in the student population. A larger population also places additional demand on existing parks and recreational facilities, which can lead to their deterioration if new facilities are not built or existing facilities are not improved.

As discussed in Chapter 15.0, Population and Housing, the proposed project would not directly induce population growth. Therefore, there would be no additional demand for police protection, or additional school or park facilities to accommodate increased demand. It is possible that there may be an incremental demand for fire protection services generated by the project. A downed power line or a spark from a faulty line could start a fire in the adjacent rural area, particularly in areas with weeds. In addition, the project would use mostly wooden poles, which would be more vulnerable to fire. Such events occur rarely, and can be handled by the appropriate fire protection agency without the need for expanded facilities and with assistance from other fire protection agencies if necessary.

By increasing the reliability of the electrical system, the project may have a beneficial impact in terms of public services and safety. By eliminating the threat of a total city-wide blackout, should the existing power line be interrupted, police services would not experience a peak in calls as a result in a possible increase in criminal activity during a city-wide blackout.

Level of Significance: Less than significant

Mitigation Measures: None required

# 17.0 TRANSPORTATION

This chapter evaluates the potential transportation impacts of the project. The focus of this chapter is on roads in the project area, although other modes of transportation are discussed. Information for this chapter came primarily from the Lodi Energy Center EIR and from California Department of Transportation (Caltrans) data.

## ENVIRONMENTAL SETTING

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### Existing Transportation Systems

#### *Roads and Highways*

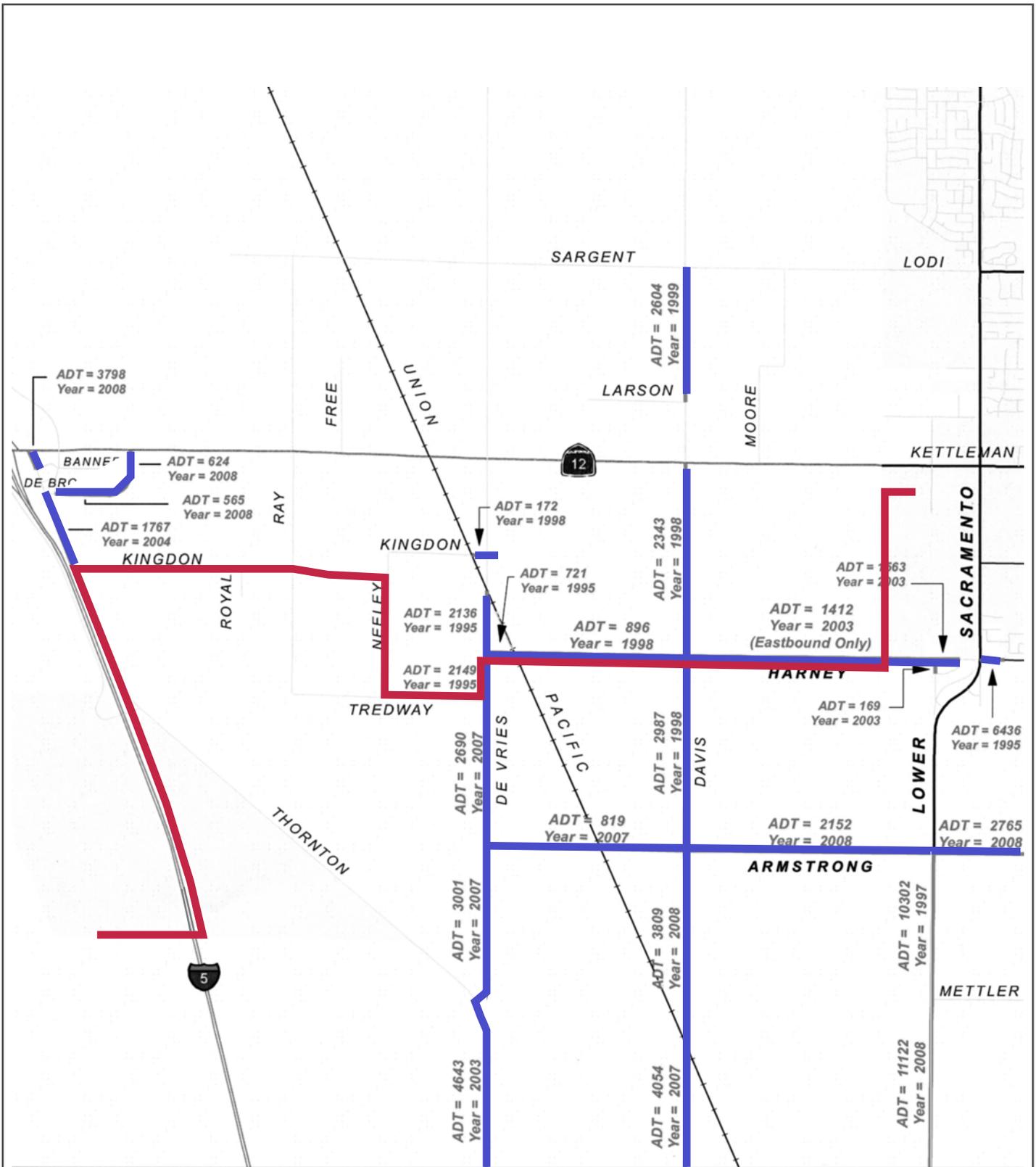
The general project area contains a network of rural roads and two major highways. The project area is generally located between the City of Lodi and Interstate 5 (I-5) freeway. Figure 17-1 depicts the road system in the project area. Roadways that currently provide primary circulation for the project area are as follows:

**Interstate 5** – I-5 is a north-south freeway from California to Washington. I-5 connects to State Route (SR) 12 north of the project area. Access from Interstate 5 to the site is provided from the south via West Eight Mile Road, and from the north via SR 12. In the immediate vicinity of the project area, Interstate 5 has three lanes in each direction, and two lanes in each direction north of SR 12. According to traffic counts published by the California Department of Transportation (Caltrans) in 2008, the average annual daily traffic (AADT) volume on I-5 near the SR 12 interchange is 77,000 vehicles per day. Trucks were approximately 20 percent of this traffic in 2007 (Caltrans, 2008).

**State Route 12** – SR 12 is an east-west state highway that provides indirect access to the project site from the northeast and northwest. It has one or two lanes in each direction in the vicinity of the project area. According to Caltrans, the AADT on SR 12 near the I-5 interchange was 17,700 vehicles per day in 2008. Trucks were approximately 14 percent of this traffic (Caltrans, 2008).

**Thornton Road** - Thornton Road is a two-lane, north-south, undivided roadway that parallels Interstate 5 in a portion of the project area. Thornton Road connects West Eight Mile Road in northern Stockton to SR 12. It connects with eastbound SR 12 via De Broggi Road. According to San Joaquin County, Thornton Road carries about 10,000 vehicles per day near its intersection with DeVries Road (NCPA, 2008).

**DeVries Road** - DeVries Road is a two-lane, north-south, undivided roadway through the project site. This road connects North Thornton Road with SR 12. The ADT on DeVries Road ranges from 3,001 near its intersection with Thornton Road to 2,136 north of Harney Lane (San Joaquin County Department of Public Works, 2009).



ADT Counts

Primary 60 kV Power Line Route



NORTH SOURCE: CITY OF LODI

**Harney Lane** - Harney Lane is a two-lane, east-west, undivided roadway in the project area. From DeVries Road, Harney Lane goes eastward, eventually going through the City of Lodi and connecting with SR 99. According to the most recent figures available from the County, the average daily traffic (ADT) on the segment of Harney Lane between DeVries Road and Davis Road is 896 (Figure 17-1). On the segment between Davis Road and Lower Sacramento Road, the ADT is 1,412 (San Joaquin County Department of Public Works, 2009).

**Kingdon Road** - Kingdon Road is a local, east-west road that connects Thornton Road with DeVries Road. Approaching its intersection with Neeley Road from the west, Kingdon Road turns left and then turns right. It primarily serves the rural residences and agricultural fields in the vicinity. A small segment of Kingdon Road between the Union Pacific Railroad tracks and DeVries Road had an ADT count of 172 trips. No traffic figures are available for the remaining portion of Kingdon Road along the Primary Route.

**Tredway Road** - Tredway Road is a local, east-west road that extends from the end of Ray Road to DeVries Road. It primarily serves the rural residences and agricultural fields in the vicinity. No traffic figures are available for Tredway Road.

**Neeley Road** - Neeley Road is a local, north-south road that is one lane in width. It connects Tredway Road with Kingdon Road, and it serves primarily the rural residences in the vicinity. No traffic figures are available for Neeley Road.

The flow of traffic on a roadway is identified with a "level of service" (LOS). LOS is a qualitative assessment of traffic flow, based on the quantitative effects of such factors as traffic volume, roadway geometrics, speed, delay and maneuverability. Table 17-1 describes roadway traffic flow characteristics for different LOS. Table 17-2 provides the LOS on roadway segments in the vicinity of the project area, according to information in the environmental impact analysis for the proposed Lodi Energy Center. The "frontage road" refers to the connection between Thornton Road and the frontage road to the Lodi WPCF site on the west side of Interstate 5.

TABLE 17-1  
LEVEL OF SERVICE (LOS) CRITERIA FOR ROADWAYS

LOS	V/C	Traffic Flow Characteristics
A	0.00-0.60	Free flow; insignificant delays
B	0.61-0.70	Stable operation; minimal delays
C	0.71-0.80	Stable operation; acceptable delays
D	0.81-0.90	Approaching unstable flow; queues develop rapidly but no excessive delays
E	0.91-1.00	Unstable operation; significant delays
F	> 1.00	Forced flow; jammed conditions

*V/C - traffic volume (demand)/roadway capacity ratio*  
*Source: Highway Capacity Manual, Transportation Research Board, 2000.*

TABLE 17-2  
LOS OF ROADWAY SEGMENTS IN PROJECT VICINITY

Roadway Segment	LOS
Interstate 5 from Eight Mile Road to SR 12	B
SR 12 from Junction I-5 to Thornton Road	A
SR 12 from Thornton Road to Lower Sacramento Road	A
North Thornton Road from N. DeVries Road to frontage road	D
North Thornton Road from to frontage road to De Broggi Road	A
North Thornton Road from De Broggi Road to SR 12	F
De Broggi Road from North Thornton Road to Star Street	A
Flag City Boulevard from SR 12 to Republic Way	A

*Source: Lodi Energy Center, Northern California Power Agency, 2008.*

### *Public Transportation*

The project area is not directly served by public transportation. The Lodi Grape Line provides bus service for destinations in Lodi. The San Joaquin Regional Transit District (RTD) provides bus service between cities in San Joaquin County. San Joaquin RTD Route 23 connects Lodi with Stockton via Lower Sacramento Road. Lodi Grape Line Routes 1, 2, 3 and 4 all make stops at the shopping center on the northeastern corner of Lower Sacramento Road and Kettleman Lane (SR 12).

### *Rail Traffic*

The Union Pacific Railroad operates a track that crosses the center of the Primary Route on Harney Lane. This rail line does not provide passenger service (NCPA, 2008). Another Union Pacific track goes through the City of Lodi and a branch of Amtrak's San Joaquin route uses this track.

### *Pedestrian/Bicycle Facilities*

The 2002 Unincorporated San Joaquin County Bikeway Plan provides a blueprint for developing a bikeway system that includes both on-street as well as support facilities and programs throughout the unincorporated area. Bikeways are divided into three classes:

- Class I Bike Path – bicycle path separated from road
- Class II Bike Lane – bicycle lane painted on road
- Class III Bike Route – no dedicated lane on road, usually designated only by sign

The Bikeway Plan indicates only two bikeways in the project area – a bike route on DeVries Road from Thornton Road to Armstrong Road, and a bike route on Davis Road from the railroad crossing to SR 12. There are no pedestrian facilities (e.g., sidewalks, walking paths) in the project area.

#### *Air Traffic*

As described in Chapter 13.0, Land Use and Planning, Kingdon Airpark is a privately-owned airport located south of Tredway Road and west of DeVries Road. In 2005, there were on average 42 daily operations at Kingdon Airpark (NCPA, 2008). The approach/departure zone for the airport extends past Tredway Road. The airport has indicated plans for an extension of the runway, adding 1,000 feet to its current length of 3,705 feet (Coffman Associates, 2009).

## REGULATORY SETTING

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### City of Lodi General Plan

The Circulation Element of the Lodi General Plan contains policies that address transportation issues. Goal A, Policy 1 states that the City shall strive to maintain LOS C on local streets and at intersections. The acceptable LOS goal will be consistent with the financial resources available and the limits of technical feasibility.

### San Joaquin County General Plan

The Transportation section of the Community Development Element of the San Joaquin County General Plan contains policies that address transportation issues. Policies relevant to this project include the following:

#### **Roadways**

- Policy 8. On Minor Arterials and roads of higher classification, the County shall maintain a Level of Service (LOS) no lower than "D" at all intersections and the following on the throughway:
- (a) on State highways, LOS D.
  - (b) within a city's sphere of influence, LOS D, or LOS C when the city plans for that level of service or better.
  - (c) on Mountain House Gateways, as defined in the Master Plan, LOS D.
  - (d) on other roads, LOS C.

## Aviation

Policy 4. Airport operations shall be protected from:

- (a) projections of structures into navigable airspace;
- (b) light and glare;
- (c) emissions affecting visibility;
- (d) interference with communications; and
- (e) bird hazards, such as from ponds and landfills.

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

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### Significance Thresholds

For the purposes of this EIR, impacts on transportation are considered significant if the proposed project would:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Result in inadequate emergency access.
- Conflict with adopted policies, plans or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

The San Joaquin County Traffic Impact Study Guidelines indicate that all County roadways shall operate at LOS C or better. In addition, intersections shall operate at LOS D or better on minor arterials and roadways of higher classification, and LOS C on all other roads. The Lodi General Plan establishes LOS C as the minimum LOS to achieve on all roadway links and intersections (NCPA, 2008). Since the roads affected by the project are in the jurisdiction of San Joaquin County, the Lodi General Plan threshold is not used. For State highways, Caltrans

indicates that it “endeavors to maintain a target LOS at the transition between LOS C and LOS D on State highway facilities.” Based on these thresholds, LOS D has been taken as the general threshold of acceptable operations for all intersections and roadways analyzed in this chapter.

### *Impacts on Roadway and Intersection Operations*

The project would generate some vehicle traffic associated with project construction. Construction traffic would include equipment to drill holes, install poles and set up the power line. A few additional vehicles that transport workers to the construction site also may be present. The amount of construction traffic would be minimal and would end once the project is completed. Construction along roadways may slow down traffic, as the work area may expand into the road itself, requiring some traffic control. However, no roads would likely be closed, and any traffic controls would likely be set up on the local roads, where traffic volumes are smaller. Construction work would not seriously disrupt traffic flow on roadways and at intersections. Potential impacts would cease once construction work is completed.

Since the project would be installed at the outside edge of the existing road rights-of-way, the project would not interfere with traffic on adjacent roadways. Project operations would not generate traffic, other than maintenance vehicles that would perform routine maintenance or emergency repairs. Maintenance vehicles would visit the project area infrequently and would have no impact on the LOS of roads and intersections in the vicinity. Therefore, the project would have no conflict with the traffic policies of the County General Plan.

Level of Significance: Less than significant

Mitigation Measures: None required

### *Impacts on Railroad and Public Transit Operations*

The project would cross the Union Pacific railroad tracks that traverse the center of the Primary Route at Harney Lane. Project construction would not interfere with railroad operations, as power poles will be placed outside the railroad rights-of-way and the power line would pass a safe distance above the tracks.

There are currently no public transit routes in the project area. Since the project would not affect population growth, it would not generate additional demand for such services, so there would be no need to extend public transit services to the project area. Therefore, the project would have no conflict with the public transit policies of the County General Plan.

Level of Significance: Less than significant

Mitigation Measures: None required

### *Impacts on Pedestrian and Bicycle Facilities*

There are no pedestrian facilities in the project area, so the project would have no impact on this issue. Existing and proposed bicycle routes in the project area would be located on the paved area of roadways. The project would be installed in the rights-of-way adjacent to the roadways, so it would not obstruct any bike routes. As with motor vehicles, project construction may partially obstruct some roadways, which could interfere with bicycle traffic. However, such obstruction would be removed once construction is complete, and traffic controls would allow bicycle traffic to move past the construction site. Therefore, the project would have no conflict with the bicycle/pedestrian policies of the County General Plan.

Level of Significance: Less than significant

Mitigation Measures: None required

### *Impacts on Air Traffic*

As discussed in Chapter 11.0, Health and Safety, the project would pass through the Traffic Pattern Zone of Kingdon Airpark as well as Zone 8, Airport Influence Area. As long as power pole heights don't exceed 100 feet above the ground level, the installation of power poles in these zones are not expected to interfere with airpark operations, especially since the Primary Route would avoid the approach-departure zones. Refer to Chapter 11.0, Health and Safety, for additional discussion and mitigation measure.

As discussed in Chapter 15.0, Population and Housing, the proposed project would not directly induce population growth, nor is it expected to result in substantial industrial growth or any associated influence on population. Because of this, the project is not expected to generate additional demand for air services, requiring expanded facilities.

Level of Significance: Less than significant

Mitigation Measures: None required

## 18.0 UTILITIES AND ENERGY

This chapter addresses the potential effects of the project on the utility systems that provide service to residents and businesses in the project area. These utilities include drinking and irrigation water, wastewater, storm drainage, solid waste, and the state-regulated utilities that provide electrical, gas, telephone, cable television and related services. This chapter also discusses energy consumption, as it is associated with other environmental issues such as air quality and global climate change. Please refer to the appropriate EIR chapter for an analysis of project impacts related to these issues. Information for this section came primarily from field observations, public agency websites, and public documents.

### ENVIRONMENTAL SETTING

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#### Drinking and Irrigation Water

The project area is not served by a drinking water system. Residences and businesses receive water from individual wells. The Woodbridge Irrigation District provides irrigation water to several parcels located in the project area.

#### Wastewater

There are no wastewater collection lines in the unincorporated portion of the project area. Residences and businesses in the area use individual septic systems to collect and dispose of wastewater. The White Slough Water Pollution Control Facility is located near the western terminus of the 60 kV power line's Primary Route. This facility collects and treats wastewater from the City of Lodi before discharging it into Dredger Cut or applying it onto an adjacent 900-acre plot of land. Some of the treated wastewater is re-used for irrigation purposes.

#### Storm Drainage

There are no storm drainage systems serving the project area. There are various lined and unlined channels in the project area that can receive runoff. Some of these are ditches along public roads. Others are Woodbridge Irrigation District canals. However, the project area has no established detention or retention basins that are part of a drainage system.

#### Solid Waste

Central Valley Waste Services provides solid waste collection services for both San Joaquin County and the City of Lodi. It operates a transfer and processing facility on Turner Road in Lodi. This facility encompasses 16 acres and is permitted to receive 1,700 tons of solid waste per day. The primary disposal facility is the North County Recycling Center and Sanitary Landfill, located in Victor. Owned and operated by San Joaquin County, this

landfill recently activated a new disposal module that will give the landfill adequate capacity until 2035. Another County-owned landfill, Foothill Sanitary Landfill near Linden, added a new module that extended the capacity of the landfill to 2054. The County also owns a transfer facility in Manteca that can accept solid waste (NCPA, 2008).

## State-Regulated Utilities

The City of Lodi, through its Electric Utility Department (EUD), provides electric services to Lodi residents and businesses. When the City of Lodi was incorporated in 1906, Bay Cities Gas, Water and Electric Works, a privately owned company, provided area water and minimal electricity. By 1910, operation of the existing utility had been transferred to City jurisdiction (LEU website, 2009). For 30 years, the Lodi Electric Utility has been a member of the Northern California Power Agency (NCPA), which is a California Joint Action Agency comprised of utilities that own and operate their own electrical power systems. The NCPA allows the Lodi Electric Utility to purchase and supply electricity at cost. The NCPA owns and operates Combustion Turbine Project No. 2, a 49-megawatt (MW) steam-injected gas turbine plant located at the Lodi WPCF site (City of Lodi, 2007).

The Pacific Gas & Electric Company (PG&E) provides natural gas and electric services to the unincorporated area of San Joaquin County. PG&E electrical facilities include overhead 12 kV distribution lines located throughout the project area. A PG&E gas line is located along a service road connecting the Lodi WPCF site with Thornton Road. This line provides natural gas to the NCPA power plant. PG&E is also the provider of natural gas service to the city of Lodi.

AT&T provides telephone services to the project area. Services are available to the project area from existing lines located on joint pole systems with the above-described electrical facilities. Comcast provides cable television services to the city of Lodi and vicinity; existing cable facilities are generally located on the electrical pole system.

## Energy Consumption

The State of California ranks second only to Texas in overall petroleum, electrical and gas consumption, yet California is the nation's most efficient in terms of per capita electricity consumption and a leader in total energy consumption. Since 1973, while per capita electrical consumption in the nation increased by 50 percent, California's per capita consumption was constant, increasing at a rate of only 0.1% per year. This is attributed to the state's efforts to promote energy efficiency, which have resulted in substantial energy savings (Coito and Rufo, 2003). Per capita total energy use in California is approximately 67% of the national average (EIA, 2001).

The highest relative electricity use in California is commercial use (38%), followed by residential (35%) and industrial (17%). Commercial electrical usage averages approximately 69,000 kilowatt hours (kWh) annually for each of the state's 1.7 million commercial customers. Within PG&E's Stockton vicinity climate area, residential electrical usage averages about 6,800 kWh/household annually. Industrial usage averages 603,000 kWh annually for the approximately 82,000 PG&E industrial customers in the state (KEMA-XENERGY, 2004).

Approximately 50% of natural gas usage in California is for electrical power generation. About 22% is consumed by residences, 18% by industrial uses, and approximately 9% by commercial uses. Within the PG&E service area, average natural gas usage is approximately 340 therms per household. Most of this amount is used for space heating, followed closely by water heating (KEMA-XENERGY, 2004). As previously noted, a natural gas line in the project area supplies gas to the NCPA power plant at the Lodi WPCF site. Despite the presence of the natural gas line in the project area, field observations indicated that many residents in the project area use propane stored in individual tanks.

California has implemented numerous energy efficiency and conservation programs that have resulted in substantial energy savings. The state adopted comprehensive energy codes in the 1970s that imposed substantial new energy requirements on new residential and commercial construction, which included new insulation and window thermal transmission standards. These requirements are incorporated into the 2007 California Building Code, adopted by San Joaquin County. Additional programs have focused on improving the efficiency of lighting and appliances, and on the replacement of less-efficient and outdated equipment in existing buildings.

Motor vehicle use also accounts for substantial energy usage. Locally, the San Joaquin County Council of Governments (SJCOG) estimates countywide vehicle miles traveled (VMT) will be approximately 16.1 million miles in 2010 (Kim Kloeb, pers. comm.). Travel mileage in the Lodi area has been influenced by changes in employment patterns. The percentage of Lodi residents working outside the city increased from 51% in 1990 to 54% in 2000. Also, the percentage of people employed in Lodi who live outside the city increased from 36% in 1990 to 49% in 2000 (City of Lodi, 2007).

## REGULATORY SETTING

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### Local

#### San Joaquin County Code

Title 9, Section 11 of the San Joaquin County Code sets forth the requirements for septic systems and water wells, among other infrastructure. Chapter 9-1105 provides the general requirements for wastewater disposal, while Chapter 9-1110 more specifically addresses individual septic systems. Chapter 9-1115 describes water well and well drilling regulations. Both septic systems and wells require a permit from the County Environmental Health Department prior to installation.

Title 5, Division 2 of the County Code sets forth regulations on solid waste collection and disposal. Unless specified by the County Board of Supervisors, all properties with 1-10 residential units zoned specifically for residential uses are included in a "mandatory solid waste collection area," within which collection services are provided and disposal rates must be paid by residents. The Board of Supervisors specifically designates these areas. None of the project area is included in a mandatory solid waste collection area.

## San Joaquin County General Plan

The San Joaquin County General Plan contains the following relevant goals and policies related to utilities:

### Community Development Element

#### Utility Corridors

Policy 1. The environmental assessment of new or expanded utility lines shall address the potential adverse impacts on development as a result of a rupture or malfunction, and shall identify mitigation measures to be adopted by the utility to safeguard against such accidents and to respond in the event of an accident.

Policy 2. Utility lines shall not adversely impact significant plant and animal species.

Policy 3. Utility distribution and transmission facilities for all new development in urban communities shall be placed underground.

Policy 4. The County shall encourage the use of existing transmission corridors for new lines, except in the case of electrical transmission lines over 500 kv, which for safety reasons shall be separated from existing corridors by at least 500 yards.

Policy 5. The County shall encourage the joint-use and development of appropriate utility corridors for recreational and trail uses.

Policy 6. The County shall encourage utilities to route their facilities along property lines and where they will not interfere with agricultural operations or other land use activities.

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

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### Significance Thresholds

For the purposes of this EIR, impacts on utilities and energy are considered significant if the proposed project would:

- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Require new or expanded entitlements to water supplies.
- Result in a determination by the wastewater treatment provider that serves or may serve the project that it may have inadequate capacity to serve the project's projected demand, in addition to the provider's existing commitments.
- Be served by a landfill with inadequate capacity to accommodate the project's solid waste disposal needs.
- Not comply with federal, state and local statutes and regulations related to solid waste.
- Require or result in the construction of new state-regulated utility facilities or expansion of existing facilities (e.g., electrical substations, gas pipelines), the construction of which could cause significant environmental effects.
- Result in a substantial increase in energy consumption, the provision for which could cause significant environmental effects.

### *18.1 Water and Wastewater Systems*

The proposed 60 kV Power Line Project would not by itself generate a demand for water or wastewater services. The project would connect to the existing NCPA power plant. Any demand for water or wastewater services generated by the Power Line Project – specifically, by Lodi Electric Utility employees – is already provided for at the NCPA site or by other facilities available to employees.

The project is not likely to result in any impacts on existing buried sewer or water lines. Overhead existing electrical and/or communication lines that would be placed on the new power poles would involve minimal underground work, limited primarily to drilling holes for the new power poles within the existing utility easements. The EUD would avoid any existing water or sewer lines during project construction.

Level of Significance: Less than significant

Mitigation Measures: None required

### *18.2 Storm Drainage Systems*

The 60 kV Power Line Project would not by itself generate a demand for storm drainage services. Pole installation required by the project would cover only a minimal amount of land area, thereby limiting the amount of runoff that could potentially be generated. The

project is not likely to result in significant effects on existing storm drains, irrigation canals or related facilities. Overhead existing electrical and/or communication lines that would be placed on the new power poles would involve minimal underground work, limited primarily to drilling holes for the new power poles within the existing utility easements. The EUD would avoid any existing facilities related to storm drainage during project construction.

Level of Significance: Less than significant

Mitigation Measures: None required

### *18.3 Solid Waste Generation*

The 60 kV Power Line Project would contribute to solid waste generation during its construction phase. Solid waste that may be generated during construction work may include wood, concrete and metal scraps. This would cease once the project is completed, and Lodi Electric Utility would be responsible for cleaning up its construction work. The amount of waste generated is expected to be small compared with building construction projects, as the primary activities would be the installation of poles and the connection of the power line to these poles, as well as the attachment of existing distribution and communication lines. Also most of the poles within the Primary Route will replace existing poles that will need to be disposed of. Their disposal would be consistent with all state and local regulations.

The project would not place additional demands on landfill capacity once construction work is completed. As previously mentioned, there is adequate capacity at the existing County landfills to accommodate solid waste.

Level of Significance: Less than significant

Mitigation Measures: None required

### *18.4 Project Impacts on Non-Electrical Utilities*

The proposed project would not generate additional demand for telephone and cable television services. However, the project would involve installation of power lines along roads and other corridors within which existing utilities are already located.

As previously noted, where new and existing facilities must occupy the same corridor, they would be located on "joint" poles, where an inter-utility joint pole agreement exists. Under this agreement, existing poles would be replaced and existing electrical, cable and/or phone utility lines would be reconstructed, as required. Where reconstruction is necessary or desirable, project design and reconstruction activity will be coordinated with the affected utility and conducted so as to avoid or minimize service interruption.

Level of Significance: Less than significant

Mitigation Measures: None required

### *18.5 Project Impacts on Electrical System*

The project would add a 60 kV Power Line to Lodi Electric Utility's electrical service system, which would be a significant addition. As stated in Chapter 2.0, Project Description, the objective of the project is to improve the reliability of Lodi's electrical infrastructure. Therefore, the project would be compatible with the current system and would improve its performance. Other environmental impacts associated with this project are discussed in other chapters of this document.

Proposed electrical expansion would not result in any substantial change in demand for electrical power. Demands are dictated by overall rates of urban and other growth in the project area. Growth rates are a function of environmental, economic and social conditions in the Lodi area, and regulation of growth is the province of local government. As part of the City of Lodi, Lodi Electric Utility would operate within this framework. Marginal cost and reliability improvements offered by the project are not expected to result in any substantial changes in growth rates, as discussed in Chapter 15.0, Population and Housing.

Level of Significance: Less than significant

Mitigation Measures: None required

### *18.6 Project Effects on Energy Consumption*

CEQA requires that Environmental Impact Reports consider the potential significant energy implications of proposed projects. The emphasis of the analysis is to identify inefficient, wasteful and unnecessary consumption of energy that can be reduced or avoided.

Project construction would consume energy in the processes of installing power poles and setting up the power line. Fuels used by construction vehicles and equipment would provide most of the energy consumed. Due to the relatively flat slopes and limited area of construction, the project would not require any extraordinary earthwork or other site preparation requirements, which would require larger amounts of fuel consumption.

Once the project is completed, it would require only fuel consumption associated with maintenance vehicles. There is no evidence that construction and operation of the project would involve inefficient, wasteful and unnecessary consumption of energy.

Level of Significance: Less than significant

Mitigation Measures: None required

## 19.0 CUMULATIVE IMPACTS

### INTRODUCTION

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As defined in CEQA Guidelines Section 15355, a "cumulative impact" is an environmental effect that may result from the combination of two or more environmental effects associated with a proposed project, or from the combination of one or more project environmental effects with related environmental effects caused by other closely related projects. Cumulative impacts may also result when a project's environmental effects compound or increase other environmental impacts. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

CEQA Guidelines Section 15130 provides that an EIR must discuss the cumulative environmental impacts of a project "when the project's incremental effect is cumulatively considerable." "Cumulatively considerable" effects occur when the incremental effects of an individual project are significant when viewed in connection with the effects of other closely related projects, including past projects, current projects and probable future projects (CEQA Guidelines Section 15065[a][3]). If the project does not involve a cumulatively considerable contribution to a significant cumulative impact, the project's effect need not be considered significant, and discussion in the EIR can be limited to the basis for that conclusion.

Projects that do involve cumulatively considerable contributions may involve significant cumulative impacts. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. As provided in *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1996), a project's cumulatively considerable contribution to a significant cumulative impact can be reduced to a less than considerable level with mitigation measures. Mitigation measures may include contribution of a project's fair share toward an established mitigation program designed to mitigate the cumulative effect, such as the payment of traffic mitigation fees and habitat conservation fees.

The analysis of cumulative impacts may be based on either 1) a list of past, present, and probable future projects producing related or cumulative impacts, or 2) a summary of projections contained in an adopted general plan or related planning document, or in a prior certified environmental document which described or evaluated regional or area-wide conditions contributing to the cumulative impact (CEQA Guidelines Section 15130[b][1]). Where significant cumulative impacts are identified, the EIR must examine reasonable, feasible options for mitigating or avoiding the project's contribution to a less than considerable level. In some cases, the only feasible mitigation may involve the adoption of ordinances or regulations. The potential cumulative impacts of the proposed project have been examined pursuant to the direction provided by the CEQA Guidelines, using the list approach.

When using a project list, the cumulative impact analysis should account for the nature of each environmental resource to be impacted, as well as the location of the project and its type. This reflects the fact that the context for cumulative impacts varies from one environmental discipline to another. For example, cumulative ozone impacts are reasonably considered in the context of an air basin, cumulative hydrologic impacts would be meaningfully addressed at a watershed level, and aesthetic impacts would ordinarily be addressed only at a local level.

## CUMULATIVE IMPACT ANALYSIS

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The following cumulative impact analysis determines for each environmental discipline 1) the geographic context for the analysis, 2) whether there exists the potential for a significant cumulative impact in that environmental discipline, 3) whether the project would make a cumulatively considerable contribution to a significant cumulative impact, or make significant an impact that was otherwise less than significant, and 4) whether and how a significant cumulative impact or a considerable contribution can feasibly be reduced to a less than significant or less than considerable level.

This cumulative impact analysis employs the list approach, as provided for by CEQA Guidelines Section 15130(b)(1). The list of past, present, and probable future projects used for this analysis is limited to those projects that are related to the Lodi Electric Utility Department (EUD) electrical system. Since the project objective is to improve the reliability of the electrical system, independent of any development occurring in the EUD service area, this is a reasonable limitation. These related approved and/or pending projects are described below:

1. Lodi Energy Center: This is a proposed power plant project by the Northern California Power Agency (NCPA). The project would be located on 4.4 acres adjacent to and west of the City of Lodi White Slough Water Pollution Control Facility (WPCF), west of Interstate 5. The project would be a 255-megawatt power generation facility consisting of a "Rapid Response" General Electric Energy Frame 7FA combustion turbine-generator, powered by natural gas. Other components would include a single condensing steam turbine, a seven-cell cooling tower, and associated plant equipment. Most of the electricity generated by the proposed plant would be transmitted to the electrical grid through an existing 230-kilovolt line adjacent to an existing NCPA plant (see below). In September 2008, NCPA filed an application for construction with the California Energy Commission. On April 21, 2010, the Energy Commission approved the project. Construction of the power facility from site preparation, demolition, and grading to commercial operation is expected to take approximately 24 months (Central Valley Business Times, 2010).
2. NCPA Combustion Turbine Project: This is an existing 49-megawatt power plant located west of the City's WPCF. NCPA operates this plant. Power is generated by a steam turbine injected gas turbine, with a natural gas line supplying the fuel. The plant has a 230-kilovolt switchyard and an interconnect, which allows power

generated by the plant to enter the electrical grid. The Lodi Energy Center project, which would be located adjacent to and east of the existing plant, proposes to share this switchyard, along with other existing plant facilities.

3. Westside Substation: The EUD is considering the construction of a substation that would be located at the eastern terminus of the proposed project's Primary Route. The tentative location of the substation is adjacent to and south of Kettleman Lane (SR 12), west of Lower Sacramento Road. The purpose of the substation would be to convert electricity from the City's 60 kV backbone system, and the proposed project, to a lower voltage that can be distributed to EUD customers. Although the substation would tie into the eastern end of the Primary Route, the substation is not necessary for operation of the proposed project (pers. comm. Gary Mai, LEU). At present, EUD has not prepared any final plans for the substation site, but has prepared tentative plans in order to identify how components within the substation site could be positioned.

## 19.1 Aesthetics

For the purposes of this analysis, the geographic context for cumulative aesthetic analysis is defined as the project area and vicinity. The project area is predominantly rural and agricultural in visual character. The proposed project would extend approximately eight miles through this rural landscape. Most of the power line would be located along public rights-of-way, in which power lines currently exist. Along most of this route, the proposed project would share poles carrying distribution and communication lines of other utilities. However, on some segments of the route, new poles carrying just the proposed 60 kV Power Line would be installed. These segments would include Tredway Road from DeVries Road to Neeley Road, and along Thornton Road from Kingdon Road to the WPCF's southern entrance. Therefore, power poles and lines would be added to the landscape, giving an incrementally more "urban" appearance to a rural area. In addition, the project would connect to the existing power plant and to the proposed Lodi Energy Center, which proposes the construction of a cooling tower and other facilities in a rural area. The proposed Westside Substation, although it would be within Lodi city limits, would be located within a planned urban commercial development, adjacent to a rural area. As a result, the project's contribution to aesthetic impacts is deemed "cumulatively considerable" as all three projects will introduce mechanical (non-agricultural) systems in a rural environment. There are no mitigation measures available that would reduce aesthetic impacts to less than significant.

Contribution to Significant Cumulative Impacts: Considerable and Significant

Mitigation Measures: None available

Contribution After Mitigation: Considerable and Significant

## 19.2 Agricultural Resources

Potential cumulative impacts on agricultural resources may be appropriately addressed at the regional or local level. The significance of project contributions would be potentially higher in a local context. For the purposes of this EIR, the geographic context for cumulative analysis of agricultural resource impacts is defined as San Joaquin County.

Project development would not result in the conversion of Important Farmland, or any other type of agricultural land. The project would mostly be located in existing rights-of-way of local roads. No additional right-of-way would need to be acquired, and the project would not encroach on adjacent agricultural lands. The one segment of the project that would not be located adjacent to a public road or within an existing utility easement is the segment that parallels the eastern boundary of I-5 (west of Thornton Road). This segment is located along an existing dirt road that provides access to an adjacent agricultural field. No agricultural fields would be taken out of use to install or operate this segment of the Primary Route. This is also true for the Westside Substation and Lodi Energy Center, no existing agricultural fields would be taken out of use to install or operate these uses. The project would not contribute to the cumulative loss of Important Farmland and other agricultural lands in San Joaquin County.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

## 19.3 Air Quality

Cumulative impacts on air resources may be assessed at both a regional and local level. The project would involve contributions to potential air quality impacts at the regional level (San Joaquin Valley Air Basin), as well as the local level. For the purposes of this EIR, the geographic context for cumulative analysis of air quality impacts is defined as the San Joaquin Valley Air Basin. Local impacts are considered only in the context of regional impacts.

Chapter 6.0, Air Quality, notes that the air basin, which includes San Joaquin County, is in nonattainment of federal and state standards for ozone and PM<sub>2.5</sub>, and nonattainment of state PM<sub>10</sub> standards. As discussed in Chapter 6.0, project operations would likely generate few emissions of criteria pollutants. The only emissions associated with the project would be from construction and maintenance vehicles and equipment. Construction vehicle emissions would cease upon completion of project work, and mitigation measures listed in Chapter 6.0 would reduce emissions from construction activities. Maintenance vehicles would be used for routine inspections and maintenance and for repairs, which are expected to occur relatively infrequently. Also, California has adopted a Climate Change Scoping Plan that in part proposes a reduction in greenhouse gas emissions in vehicles and a reduction in the carbon content of vehicle fuels. Implementation of these proposals would further reduce vehicle pollutant emissions. The

project's contribution to the air basin's existing nonattainment status for ozone and particulate matter would be minimal.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

## 19.4 Biological Resources

The geography of biological resources impact can be defined by region, by political subdivision or by the geography of the biological resources present in an area, where sufficient inventory data is available to define it. The cumulative context for the biological resources analysis for the proposed project is the study area defined in the Biological Assessment, available in Appendix D of this document.

As development in the cities of Lodi and Stockton, and in the San Joaquin County region continues, habitat for plant and wildlife species native to the region is lost through conversion to urban development. Although more mobile species may be able to survive these changes in their environment by moving to new areas, less mobile species would simply be extirpated. With continued conversion of natural habitat to human use, the availability and accessibility of remaining foraging and natural habitats in this ecosystem would dwindle and those remaining natural areas would not be able to support additional plant or animal populations above their current carrying capacities through increased competition for resources, displacement and development-induced introduction of non-native species. The conversion of plant and wildlife habitat on a regional level would therefore result in a cumulatively significant impact to biological resources.

The Primary Route of the 60 kV power line is located adjacent to agricultural land that provides suitable foraging habitat for Swainson's hawk and other raptors, some potential raptor nesting trees, and a limited amount of potential jurisdictional waters of the United States. Installation and operation of the 60 kV power line is not anticipated to cause the loss and/or degradation of potential Waters of the U.S., loss or degradation of special status species and their potential habitat, and loss of foraging and nesting habitat for Swainson's hawk and other raptors. Also, the related projects would be built on fallow, previously disturbed areas, thus would not contribute to the loss of regional biodiversity.

Construction of the proposed project, in combination with the other electrical projects in the vicinity, would not contribute to a fragmentation and loss of regional biodiversity through the incremental conversion of foraging habitat for special-status species to human use. Plant and wildlife habitat in the vicinity of the Primary Route and related projects have been altered due to the introduction of agricultural uses and public facilities (NCPA power plant and WPCF), and supports only those special-status species that are fairly widespread in the region. The proposed project's contribution to the loss of plant and wildlife habitat in the region would be less than considerable. In addition, since local projects within San Joaquin County have the option of participating within the SJMSCP, provisions of which would help offset any cumulative effect of the projects. These

provisions include Incidental Take Minimization Measures for special-status species and compensation for loss of specific habitats.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

## 19.5 Cultural Resources

The geography of cultural resources impact can be defined by region, by political subdivision or by the geography of the cultural resources present in an area, where sufficient inventory data is available to define it. Cultural resource information, however, is ordinarily available only for small percentages of a given area, i.e. those areas that have been intensively surveyed, and this is true for the project area as well. However, the project area has geographical, land use and agricultural history in common with other lands in the vicinity of the City of Lodi. For the purposes of this EIR, then, the geographic context for cumulative analysis of cultural resources is defined as the vicinity of the City of Lodi.

As described in Chapter 8.0, Cultural Resources, the project area did not have any known prehistoric sites. It has one known historic-era site, the Western Pacific Railroad. However, the project would not encroach on the railroad's right-of-way. The project, therefore, would have no impact on known cultural resources. It is possible that undiscovered cultural resources may be found beneath the ground surface, both in the project area and throughout the vicinity of Lodi. However, mitigation measures described in Chapter 6.0 would reduce the potential impacts of the project to a level that is less than significant. Since the project would have a less-than-significant impact on cultural resources, it would have a cumulative impact that is less than considerable.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

## 19.6 Geology and Soils

Impacts related to geology and soils are not inherently cumulative. Geology and soils concerns are related to risks, hazards or development constraints that are largely site-specific. However, seismic hazards are regional, and management of seismic hazards is vested with the local planning and building authority. For this reason, the potential for cumulative geology and soils impacts are considered in the context of the project area and vicinity.

The proposed project would add power poles that could be exposed to potential seismic hazards such as ground shaking and settlement, as well as soil hazards such as expansive soils. Potentially adverse environmental effects associated with these hazards usually are site-specific and generally would not combine with similar effects that could occur with

other projects in the vicinity. Also, as discussed in Chapter 9.0, Geology and Soils, the potential project-specific impacts are not considered significant. Consequently, impacts would not be cumulatively considerable.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

## 19.7 Global Climate Change

As mentioned in Chapter 10.0, Global Climate Change, climate change associated with land development is considered as a potential cumulative effect. While GHGs are generated locally, the impacts of these emissions occur on a larger scale. Therefore, the analysis in Chapter 10.0 is applicable to the analysis of cumulative impacts in this chapter.

The proposed project would result in a temporary increase in GHG emissions from construction activities. These emissions are a very small percentage of the total GHG emissions generated in California, and these emissions would cease once construction work ends. Project operations would generate no GHGs, other than from maintenance vehicles conducting routine inspections and maintenance and repairs, if necessary. As mentioned in Chapter 10.0, the adopted Climate Change Scoping Plan proposes various measures that would reduce the amount of GHGs generated by these sources, including GHG emission standards for vehicles and lower carbon content for fuels.

A development project typically has indirect impacts on climate change through the generation of electricity needed to supply the project. This presumes that the development project would have activities requiring the use of electricity. As this project would transmit electricity only, it would not require an increase in electricity supply for its operations. As discussed in Chapter 15.0, Population and Housing, electricity generation for Lodi Electric Utility customers is affected by many factors and would occur independently of the project. Therefore, the project would not have an impact on electricity production, which is a main source of GHG emissions.

The purpose of the project is to increase the reliability of Lodi's city-wide electrical infrastructure system. As discussed in Chapter 3.0, Project Description, the city-wide system is currently connected by one line to PG&E's regional power grid, and this line has experienced several failures leading to city-wide blackouts. While procedures for restoring power to a blacked-out area vary by the cause and extent of the blackout, many procedures for a widespread blackout typically require additional electricity, the generation of which may increase output of GHGs. Moreover, many activities that require a constant source of electricity (e.g., hospitals, emergency agencies) must use backup generators during blackouts. Some of these generators may be fueled by diesel or gasoline, and their operation would lead to GHG emissions. A more reliable electric system would reduce the blackout incidents, thereby reducing the potential need for actions that may increase GHG emissions.

No thresholds of significance have yet been established for GHG emissions. Nevertheless, based on the anticipated project emissions and on compliance with the applicable provisions of the Climate Change Scoping Plan, the project is not likely to have a cumulatively considerable impact on GHG emissions and global climate change.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

## 19.8 Health and Safety

Impacts related to health hazards are not inherently cumulative. Health hazards concerns are related to risks, hazards or development constraints that are largely site-specific. However, hazard incidents could occur in, or have impacts over, a broad area. Management of health hazards is vested with the local environmental health and other appropriate authorities. Therefore, for the purposes of this EIR, the cumulative context for the analysis of cumulative hazards and human health impacts is the project area and vicinity.

As discussed in Chapter 11.0, project operations would use hazardous materials contained in maintenance vehicles and in existing transformers. Based on information in the environmental analysis submitted by NCPA, the Lodi Energy Center would use hazardous materials required for facility operation and maintenance, such as lubrication of equipment, or would be contained in transformers and electrical switches (NCPA, 2008). Although no plans are currently available for the Westside Substation, it is expected that the substation would use transformers and switches, which would contain hazardous materials.

All hazardous materials used by these projects are subject to strict federal, State and local regulations of their transport, storage, use and disposal. Most releases of hazardous materials used by the projects would be confined to the immediate area of release and generally would not affect the vicinity. The project would not use any quantities of hazardous materials that could spread beyond the release area. Implementation of applicable hazardous materials management laws and regulations adopted at the federal, State, and local levels would ensure impacts related to hazardous materials use would not be cumulatively considerable.

Other hazards, such as airport operations and transportation hazards, are site-specific. The project would not place workers at a permanent site subject to transportation hazards, including airport zones. As discussed in Chapter 11.0, the EMF hazards from power lines have not been found significant. Moreover, most of the project would be located in a rural area, away from residences. Therefore, project impacts related to other hazards are not cumulatively considerable.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

## 19.9 Hydrology and Water Quality

Potential cumulative issues associated with surface waters can be addressed on a watershed basis, or in the context of a groundwater basin for groundwater issues. As described in Chapter 12.0, Hydrology, drainage patterns on the project area have been extensively modified as a result of the relatively flat topography and agricultural activities. The project would have a minimal effect on the hydrology of the San Joaquin River and Delta. Therefore, the geographic context for cumulative surface hydrology impacts is defined in this EIR as the project area and vicinity. However, cumulative groundwater impacts are considered in the context of the Eastern San Joaquin Subbasin.

The proposed project would not have a significant impact on either surface or groundwater resources. As discussed in Chapter 12.0, the project would not add any significant amount of impervious surface to the project area, which means that very little additional stormwater runoff would be generated. Most of the project area would be located in public rights-of-way that are unpaved. Therefore, precipitation would continue to percolate into the ground. As discussed in Chapter 11.0, Health and Safety, very little hazardous materials would be used by the project, and releases of hazardous materials would be minor. Therefore, percolation of pollutants to the aquifers beneath the project area would be unlikely to occur.

The proposed project is located outside the 100-year floodplain. Therefore, the proposed project would not contribute to a cumulative increase in flood elevations through the removal of areas from the 100-year floodplain. As previously mentioned, the project would not generate any additional stormwater during flood events. In other words, the project would not contribute any significant cumulative impacts that might be caused by related projects, including the Lodi Energy Center and the Westside Substation.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

## 19.10 Land Use and Planning

The Land Use analysis in an EIR does not typically include a discussion of cumulative impacts, because impacts involving land use plans or policies and zoning generally would not combine to result in cumulative impacts. The determination of significance for impacts related to these issues, as considered in Appendix G of the State CEQA Guidelines, is whether a project would conflict with any applicable land use plan or policy adopted for the purpose of reducing or avoiding environmental impacts. Such a conflict is site-specific; it is addressed on a project-by-project basis. Because the project-specific analysis considers both existing and future planned land uses, impacts resulting from the additive effect of other proposed or speculative land use plans would not differ from those identified in the above impact discussions. Similarly, because the analysis of applicable land use

goals and policies considers both existing and planned land uses, cumulative land use compatibility impacts are not considered independently.

As described in Chapter 12.0, Land Use and Planning, implementing the proposed project would not result in significant land use planning impacts, and the project would be consistent with all applicable local land use plans, policies and ordinances. The project is also consistent with the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan, a regional-scale planning document. Furthermore, related projects are, to the extent that proposed land uses have been identified, apparently consistent with environmental plans and policies.

Because no land use impacts would occur on a project-specific basis, the project would not contribute to any potential cumulative land use impacts.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

## 19.11 Noise

Noise impacts are typically localized. The impacts of noise are reduced with distance, and unless there is a very significant existing or proposed noise source, the potential for cumulative noise impacts will ordinarily be limited to a few hundred yards from the source. Other than the Union Pacific Railroad line, Kingdon Airpark, Interstate 5 and SR 12, there are no major noise sources in the project area. For the purposes of this EIR, the geographic context for cumulative noise analysis is defined as the project area and vicinity.

As analyzed in Chapter 14.0, Noise, the project would not have a significant noise impact. The only noise associated with project operations would be the use of maintenance vehicles, which would be used relatively infrequently. No increases in traffic would occur, and the power line would not generate any significant noise. Construction activities may generate significant noise, but such noise would cease once work ends, and mitigation measures in this EIR would reduce construction noise impacts. Project construction is not anticipated to occur simultaneously with related projects, so construction noise would not be cumulatively significant. Therefore, the project would not make a cumulatively considerable contribution to noise impacts.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

## 19.12 Population and Housing

Population growth, by itself, is not considered a significant cumulative effect because it is not an environmental impact. However, population growth, and the housing and infrastructure to support it, does lead to conversion of land to other uses. The proposed

project, along with related electrical infrastructure projects, would provide greater reliability regarding the city-wide electrical system to the current users. As discussed in Chapter 15.0, Population and Housing, these infrastructure improvements represent only one of many factors considered when identifying sites for new development. Decisions on development projects in and around Lodi would occur independently of project implementation. Therefore, the project would not have any cumulative impact on population or housing.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

### 19.13 Public Services

The appropriate service providers are responsible for ensuring adequate provision of public services within their jurisdictional boundaries. For the project area, this would include the City of Lodi, San Joaquin County and special districts. For the purposes of this EIR, the geographic context for cumulative public service analysis is defined as the project area.

An analysis of the potential impacts conducted in Chapter 16.0, Public Services, concluded that the project by itself would not generate an additional demand for services such as police protection, schools, libraries and other public services. There may be an increase in potential demand for fire protection service, due to the greater possibility of downed lines or sparks. However, the Woodbridge Fire Protection District can handle any fire incidents in the project area without requiring new or expanded facilities, which would create environmental impacts. The Lodi Energy Center and the proposed Westside Substation may increase the risk of fire hazard in the area. However, such incidents would generally be confined to the sites, and the Lodi Fire Department can handle such incidents without the need for new or expanded facilities, especially with the Woodbridge Fire Protection District providing mutual aid. The Lodi Fire Department would also provide mutual aid for fires caused by the power line, if necessary. Therefore, the proposed project would not generate an incremental impact on public services that is cumulatively considerable.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

### 19.14 Transportation/Circulation

An analysis of cumulative transportation impacts typically focuses on motor vehicle traffic. This analysis usually establishes a "cumulative base," which describes traffic conditions in a specific area in a selected future year. The general plan of a jurisdiction generally determines the area and the year for which the cumulative base is developed, as a general plan specifies the time for which it applies. Once the cumulative base is established, then the analysis applies the amount of estimated traffic the project would generate to the cumulative base, and notes the potential impact on road segments or intersections within

the study area designated by the analysis. The traffic analysis is usually quantitative in its character. However, no such analysis was conducted for this project, as the amount of traffic the project would likely generate is minimal. Therefore, what follows is a qualitative summary of potential cumulative impacts on transportation. The geographic context for the cumulative analysis is defined as the project area and vicinity.

The project would not lead to new employees or residents being attracted to the project area, or to the City of Lodi (see Chapter 15.0, Population and Housing). Population growth is connected to traffic increases, so the project would not generate traffic on the local road system. The only vehicle traffic anticipated as a result of the project would be maintenance vehicles conducting inspections or performing emergency repairs. This traffic would occur infrequently and would not noticeably affect traffic flow in the area. Some vehicles may need to encroach on the roadway to perform inspection or repair work. However, traffic controls would be installed in these situations to maintain traffic flow. Overall, the project would have little influence on traffic flow in the project area and vicinity, and therefore would not make a cumulatively considerable contribution to traffic impacts in the area.

As previously noted, the project would not lead to a significant addition of residents or employees. Therefore, the project would not increase demand for alternative modes of transportation, such as public transit, bicycling and walking. The project would not make a cumulatively considerable contribution to demand for these modes of transportation.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

## 19.15 Utilities and Energy Systems

Cumulative utility impacts are appropriately considered at the level of the service area of the utilities potentially affected by a project. Often, different utility companies serve a particular area. Therefore, the geographic context for the analysis of utility impacts is the project area and vicinity.

As discussed in Chapter 18.0, Utilities and Energy, the proposed project would not generate demand for water and wastewater services, stormwater conveyance, or solid waste services. The project also would not generate demand for services provided by non-electrical utilities such as natural gas, telephone or cable television.

As noted in Chapter 15.0, Population and Housing, the project would not by itself generate an increase in residents or employees. Therefore, it would not generate an increase in the demand for services needed by them. Since the project would not generate a demand for these utilities, it would not make a significant contribution to cumulative impacts on them.

The project would have an impact on Lodi's electrical system, as the objective of the project is to increase the reliability of the system. However, the project would not have an effect on the supply or demand for electricity, nor on any potential physical expansion of

the system beyond the installation of the project. As explained in Chapter 18.0, electricity demands are dictated by overall rates of urban and other growth factors, and marginal cost and reliability improvements offered by the project are not expected to result in any substantial changes in growth rates. The supply of electricity is dictated by market demand. While the project would make delivery of electricity more reliable, it would not by itself increase the demand for electricity, which would drive any need for additional facilities such as power lines and substations. Therefore, the project would not significantly contribute to cumulative impacts on the electrical system.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

# 20.0 ALTERNATIVES TO THE PROPOSED PROJECT

## 20.1 INTRODUCTION

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CEQA requires that an EIR describe and analyze the relative environmental effects of alternatives to a proposed project and evaluate their comparative merits. The EIR must consider a range of reasonable alternatives that can feasibly attain most of the basic objectives of the project while avoiding or substantially lessening one or more of the significant effects of the project, even if the alternative would impede to some degree the attainment of the project objectives or would be more costly. The environmentally superior alternative must be identified among the alternatives considered.

The alternatives analysis must identify the potential alternatives and include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. If an alternative is not feasible, or does not provide an opportunity to avoid or substantially reduce environmental effects, the alternative need not be analyzed in detail. If this is the case, the reasons for limiting the analysis should be identified. Similarly, if an alternative would cause one or more significant environmental effects, in addition to those that would be caused by the project, the significant effects of the alternative shall be discussed, but in less detail than the analysis of the project.

The alternatives analysis must always include evaluation of a "no project" alternative. "No project" is defined as no action with respect to the proposed project and continuation of existing circumstances without approval of the project. As a result, the "no project" alternative may also consider what could reasonably occur on or near the project site if existing development trends continue, to the degree that current general plans, zoning, infrastructure, services or other relevant conditions permit.

This chapter evaluates alternatives to the proposed Lodi 60 kV Power Line project. The following sections describe the process used to select alternatives for evaluation in this chapter; the sections identify the alternatives to the project that were considered but that were not subjected to detailed analysis as well as the alternatives to the project that were analyzed in detail. The alternatives considered in this chapter include:

- No Project Alternative
- Alternate Route 1
- Alternate Route 2
- Combinations of Primary Route and Alternative Routes
- Alternative Eastern Terminus Tie-in

The analysis of alternatives conforms to the guidelines of CEQA and the CEQA Guidelines and represents the best professional opinion of the EIR preparer, City of Lodi staff and their technical reviewers. However, it must be recognized that the authority for the approval of the proposed project, the selection of or rejection of alternatives, and the feasibility or infeasibility of alternatives rests with the decision-makers of the City of Lodi.

## Selection of Alternatives

Alternatives to the project meet the criteria set forth in the CEQA Guidelines Section 15126.6. These criteria include: 1) ability of the alternative to meet most of the basic objectives of the project, 2) feasibility of the alternative, and 3) ability of the alternative to avoid or substantially reduce one or more of the significant environmental effects of the project.

### Ability of the Alternative to Meet Most Project Objectives

Potential alternatives to the project were evaluated with respect to project objectives, as identified in Chapter 3.0, Project Description. The objective of the project is to increase the reliability of the City's electrical system by providing a second point of supply from the regional power grid. The existing power line, which connects to a PG&E substation east of Lodi, has experienced failures in the past years, resulting in the loss of power to the entire city. An additional power line would provide an alternate electric supply in case of an accidental interruption of the existing line.

### Feasibility of the Alternative

Alternatives to the project were evaluated with respect to the "rule of reason" and general feasibility criteria suggested by the CEQA Guidelines. The general criteria include the suitability of the site or alternative site; the economic viability of the alternative; the availability of infrastructure; the consistency of the alternative with general plan designations, zoning or other plans or regulatory limitations; the effect of applicable jurisdictional boundaries; and whether the proponent can reasonably acquire, control or otherwise have access to an alternative site, including consideration of whether or not the site is already owned by the applicant.

### Avoidance or Substantial Reduction of Significant Effects

The evaluation of alternatives must take into account the potential of the alternative to avoid or substantially lessen any of the significant effects of the proposed project, as identified in Chapters 4.0 through 18.0 of this EIR. The potentially significant environmental effects of the project are summarized in Chapter 2.0, Summary of this EIR, and very briefly highlighted below.

*Air Quality.* The project would involve potentially significant particulate matter emissions due to construction activities only. Mitigation measures would reduce potential impacts to a less-than-significant level.

*Biological Resources.* The project would not involve any large-scale habitat conversion and impacts on associated sensitive species use. Of the special status

wildlife species identified, Swainson's hawk, burrowing owl, and tricolored blackbird are the only species that have potential to occur along the primary route on more than a transitory or very occasional basis. Construction activities could potentially disturb these species. Mitigation measures would reduce potential impacts to these species to a less-than-significant level. The 60 kV Power Line Primary Route would not involve impacts on wetlands and Waters of the U.S.; these issues are not considered in detail in the alternatives analysis.

*Cultural Resources.* Although it is possible that undiscovered resources may be encountered during construction, the project would not impact any known archaeological sites, historical structures, or other resources of significance. This issue is not considered in detail in the alternatives analysis.

*Noise.* The project would involve potential exposure of rural residences to construction noise. Mitigation measures would reduce this impact to a less-than-significant level.

## 20.2 ALTERNATIVES NOT CONSIDERED IN DETAIL

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The following alternatives were not addressed in detail, as they did not meet the criteria for detailed analysis defined above. That is, the following alternatives 1) would not meet the basic objective of the project, 2) were infeasible, or 3) did not have the ability to avoid or substantially lessen the significant environmental effects of the project. Alternatives that might conceivably meet the analysis criteria were subject to detailed analysis, as documented in Section 20.3. The "No Project" alternative is not among the following alternatives, as CEQA requires that this alternative be addressed in detail.

### Undergrounding Alternative

This alternative would involve installing the power line underground, rather than on power poles as proposed by the project. As conceived, this alternative would be consistent with the basic objective of the project, which is to provide a second connection to the regional power grid. However, placing 60 kV and larger power lines underground is a practice generally used only when there is no viable overhead corridor. Underground lines present significant challenges due to the environmental disturbances, additional repair time and the much-higher installation and repair costs. All electric lines produce heat and therefore have a limit on the amount of power they can carry to prevent overheating. Underground lines cannot dissipate heat as well as overhead lines. Factors such as the type or surrounding soil conditions, adjacent underground utilities and the depth of installation all affect the wire's ability to dissipate heat. Lower thermal ratings for underground power lines mean they do not have as much flexibility as overhead lines to carry heavy volumes of power on hot summer days. Once lines are constructed underground, there is little or no flexibility to upgrade the facilities to respond to changes on the system.

Moreover, this alternative would lead to some greater environmental impacts than the proposed project. The placement of power lines underground requires specific engineering construction measures to ensure the safe and reliable operation of the line.

Because a single power line circuit requires three wires, each must be installed in an individual pipe. The three pipes are encapsulated in thermal concrete and surrounded by special thermal backfill materials. These facilities require significant trenching of at least five feet in depth and width. Because the repair of failed underground lines can be costly, environmentally disruptive and time-intensive, underground construction design includes the installation of a spare pipe that can be used to replace a damaged cable or pipe without reopening the entire trench. The underground design also must accommodate a dedicated fiber-optic cable for operation of line protection and control devices, which protect the system during faults and other anomalies.

These design elements would require significantly more space than the proposed project. This could remove some land from its previous uses, including agriculture. Trenching also would increase construction dust emissions and may directly impact biologically sensitive lands. The longer construction time may expose rural residences in the area to construction noise for a longer period. There would even be some temporary aesthetic impacts, as construction would leave an exposed area at the surface that would be readily visible in a predominantly rural area.

In summary, while the undergrounding alternative is consistent with the proposed project objective and may reduce specific impacts, it may be infeasible from an engineering perspective and it would substantially increase some environmental effects over those of the proposed project. Therefore, this alternative was not subjected to a detailed alternatives analysis.

## Alternative Locations For The Project

CEQA Guidelines Section 15126.6(f)(2) indicates that alternative locations for the proposed project should be considered if any of the significant effects of the project would be avoided or substantially lessened at an alternative location. Only locations that have the potential to avoid or substantially reduce any of the significant effects of the project need be considered for inclusion in the EIR. As with all potential alternatives, project location alternatives must be reasonable, feasible and able to meet most of the basic objectives of the project.

Prior to settling on the two alternative routes analyzed in this chapter, the Lodi Electrical Utility Department (EUD) evaluated three other alternative routes. Two of these alternative routes were similar to the proposed route and the alternatives analyzed in this EIR, so they were not selected for further analysis. The third alternative would have the power line go along SR 12 from the proposed substation to the Flag City development. It would go behind Flag City, following Debroggi Road, until it reached Thornton Road. From there, the route would follow a similar alignment to the proposed project until it ended at the NCPA power plant site.

This route would meet the project objective, however, it would have aesthetic impacts along SR 12, as well as agricultural impacts due to the placement of the poles. This impact is significant, as the City of Lodi has made enhancement of the SR 12 "gateway" a policy of its General Plan (City of Lodi, 1991, p. 10-4). In addition, proposed improvements along SR 12, including widening of the roadway, could lead to a need to acquire easements from

adjacent property owners to implement this alternative, which would add more expense to the project. Work in these additional easements would have environmental impacts, including loss of agricultural land, disturbance of ground surface with attendant air quality and erosion impacts, and potential traffic safety issues. Therefore, this alternative is potentially economically infeasible; this alternative would increase some environmental impacts over those of the proposed project, and it will not be analyzed in this EIR.

## 20.3 ALTERNATIVES CONSIDERED IN DETAIL

The alternatives to the proposed project that have been considered in detail are addressed in the following sections. The overall analysis is summarized in Table 20-1.

TABLE 20-1  
COMPARISON OF ALTERNATIVES

Impact	Primary Route (Proposed Project)	No Project	Alternate Route #1	Alternate Route #2	Combination of Primary and Alternate Routes	Alternate Eastern Terminus Tie-In
<i>Air pollutant emissions from construction</i>	Potentially significant without Mitigation	Avoided	Potential increase without mitigation	Potential increase without mitigation	Potential increase without mitigation	No reduction
<i>Impacts to special status wildlife species</i>	Potentially significant without Mitigation	Avoided	No reduction	No reduction	No reduction	No impact
<i>Undiscovered cultural resources</i>	Potentially significant without Mitigation	Avoided	No reduction	No reduction	No reduction	No reduction
<i>Exposure of residences to construction noise</i>	Potentially significant without Mitigation	Avoided	Impact reduced	Impact reduced	Impact reduced	No impact
<i>Conversion of agricultural lands</i>	No impact	No impact	Potential loss of agriculture	No impact	Potential loss of agriculture	No impact
<i>Conflict with airport compatibility zones</i>	No impact	No impact	Potential conflict	Potential conflict	No impact	No impact
<i>Effect Scenic Routes and Scenic Vistas</i>	No impact	No impact	Potentially significant	Potentially significant	Potentially significant	Potentially significant

### 20.3.1 No Project Alternative

The No Project Alternative is defined as the continuation of existing conditions in the project area. Under the No Project Alternative, no 60 kV Power Line would be installed between the NCPA power plant site and the future Westside Substation site. No new power poles would be installed, and existing power lines would remain in place, subject to occasional repair or replacement as conditions warrant. The City of Lodi would continue to rely on its existing connection to the regional power grid at the substation east of Lodi.

The continuation of existing uses would not result in any change to existing physical environmental conditions in or near the project area. Existing earth, water, biological and cultural resources would be unchanged. This alternative would involve no change in land use, no disturbance of land, and no interference with existing land use activities. This alternative would not result in any impacts associated with project construction, including increased traffic, increased dust generation, and increased noise at construction sites.

Selection of the No Project Alternative would eliminate all of the potentially significant environmental effects described in Section 20.1, including:

- Air pollutant emissions from construction
- Biological disturbance of special status wildlife species
- Undiscovered cultural resources
- Exposure of residents to construction noise

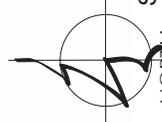
However, the No Project Alternative would not fulfill the objective of the proposed project, which is to increase the reliability of the City's electric system. The electric system would remain vulnerable to potential failures, which may continue to cause citywide blackouts. The City currently has no alternative to the proposed project to increase the system's reliability, other than alternate western routes to the regional power grid. Also, the No Project Alternative would not allow the City to directly connect to the proposed NCPA power plant, in which the City is a participant through its membership in the NCPA.

### 20.3.2 Alternate Route #1

#### Description of Alternative

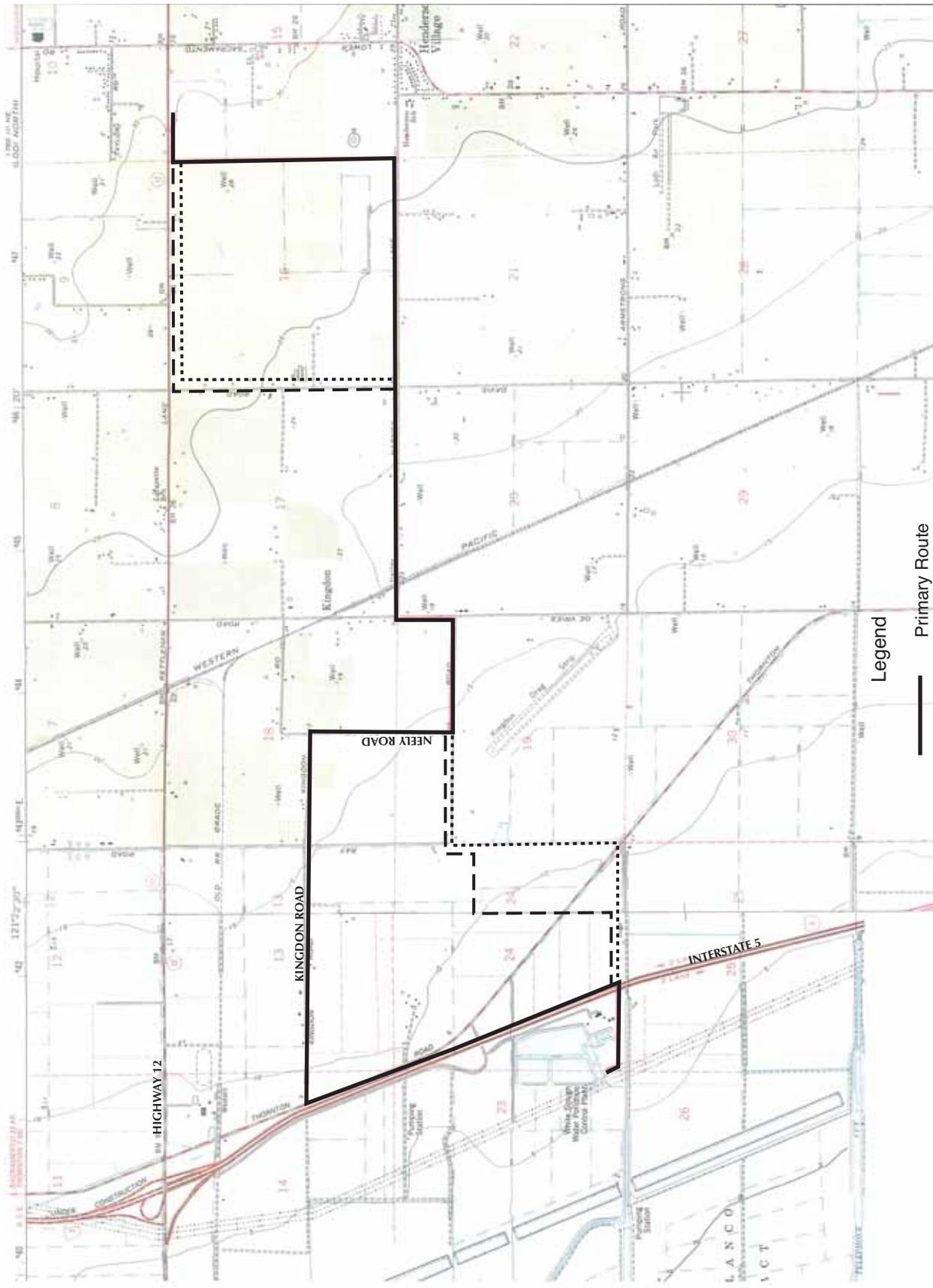
This alternative would be similar to the proposed project, in that it would begin at the proposed Westside Substation and end at the NCPA power plant site. However, the route alignment would be different than the Primary Route. Figure 20-1 shows the Primary Route alignment and the two alternate route alignments, including Alternate Route #1.

The following is a detailed description of each segment of Alternate Route #1. As with the proposed project, each straight, linear run of line corresponds to a segment. A descriptive title has also been given each segment. Unless steel pole locations are specifically identified in the detailed description, all other poles should be assumed to be wooden.



SOURCE: USGS TERMINOUS AND LODI SOUTH  
NORTH QUADRANGLE 7.5 MINUTE SERIES

**INSITE ENVIRONMENTAL, INC.**



**Figure 20-1**  
**ALTERNATIVE ROUTES 1&2**

#### Segment A (Future Westside Substation)

- The power line begins at the easternmost interconnection point, the future Westside Substation. The 60 kV Power Line exits the proposed Westside Substation at the southwest corner of the substation and crosses SR 12 to a point on the north side of the SR 12 right-of-way.
- The first power pole across SR 12 would be steel.

#### Segment B (SR 12)

- The power line turns west and continues along SR 12 to Davis Road. The entire segment would be constructed jointly with PG&E distribution and existing communication lines.
- This east-west trending section ends with a steel pole at the northeast corner of SR 12 and Davis Road.

#### Segment C (Davis)

- The power line turns south along the east side of Davis Road and continues to the intersection with Harney Lane. For approximately one-third of this segment, the power line would be constructed jointly with PG&E distribution lines. For the remaining two-thirds, the line would be constructed jointly with PG&E distribution and existing communication lines.
- This north-south trending section ends with a steel pole near the northeast corner of Davis Road and Harney Lane. This power pole would be constructed with PG&E distribution lines only (no communication lines).

#### Segment D (Harney)

- The power line turns west along the north side of Harney Lane and continues approximately 12,000 feet to DeVries Road, same as the proposed. This section of line will be constructed jointly with PG&E distribution and existing communication lines. The last 1,000 feet before DeVries Road would joint use with PG&E distribution only (no communication).
- This east-west trending segment ends with a steel pole at the northeast corner of DeVries Road and Harney Lane.

#### Segment E (DeVries)

- This segment is the same as the one for the proposed project. Refer to Chapter 3.0, Project Description, for a description of this segment (called Segment D).

#### Segment F (Tredway)

- The line heads west on the north side of Tredway Road to Ray Road. The line would leave the joint pole at DeVries Road and consist of a solo attachment (the 60 kV power line only) along this segment.
- This east-west trending segment ends with a joint steel pole at the northwest corner of Tredway Road and Ray Road.

#### Segment G (South of Ray)

- The power line turns south and crosses private property from the steel pole along Ray Road to its intersection with Thornton Road. Existing power poles are located along this segment, but the power line would be carried solo on its own poles.
- This north-south trending segment ends with a steel pole on the south side of Thornton Road.

#### Segment H (White Slough)

- The power line turns west and follows an entrance road to the White Slough WPCF area, including the NCPA power plant. It crosses I-5 in the same location as an existing PG&E 12kV distribution line crossing. This section of power line would be constructed jointly with PG&E distribution. The section of line east of the I-5 crossing would be constructed jointly with PG&E distribution and existing communication lines.
- The power line continues west on City of Lodi property to the proposed connection point inside the NCPA facility. A part of this section of power line would be constructed jointly with PG&E distribution, but the end pole would consist of a solo attachment.
- Steel poles would be used at both ends of this segment.

### **Analysis of Alternative**

This alternative would fulfill the objective of the project, which is to provide a second connection to the regional power grid, thereby improving the reliability of the City's electric system. Alternate Route #1 would be a more direct route between the eastern terminus and the NCPA power plant site than would the proposed project, so less power line and fewer poles would be needed. Since the route would mostly use existing public rights-of-way and City property, no additional easements would need to be acquired in those areas. However, an easement may need to be acquired for the segment south of Ray Road, especially if there are no plans to construct poles for joint use with the transmission line currently in the area. The existing power line is a PG&E 60 kV facility. The feasibility of acquiring an adjacent easement and the physical requirements to have two similar lines located in such close proximity would require additional evaluation.

Many of the impacts of Alternate Route #1 would be similar to those of the proposed project. This route would avoid some of the rural residences along Harney Lane, Neeley Road, Kingdon Road and Thornton Road that would be affected by the proposed project, thereby avoiding the potentially adverse air quality and noise impacts on these residences from construction activities. However, these impacts would only be transferred to residences and businesses along SR 12 and Davis Road.

Construction on the segment south of Ray Road may lead to greater dust emissions, as construction would occur on mostly undeveloped land; a construction access road would need to be developed, and a greater land area would be disturbed. Mitigation measures to control dust would reduce impacts, especially since there would be no residences or other sensitive uses south of Ray Road. Air quality impacts of construction on other segments of this route would be similar to those of the proposed project.

If the segment south of Ray Road adds poles next to those currently in that location, this could have a slight impact on land use in that area. With poles running parallel, the land area beneath the lines would in general become less available for existing agricultural use. The amount of land area that would be lost to agricultural production would be minimal compared to the available agricultural land in the vicinity. Nevertheless, there may be some conversion of land classified as Important Farmland by the California Department of Conservation.

The segment along Tredway Road would cross over safety zones designated for Kingdon Airpark by the County's Airport Land Use Compatibility Plan (see Chapter 11.0, Health and Safety). In particular, the alignment passes through the Runway Protection Zone (Zone 1), the Inner Approach/Departure Zone (Zone 2), and the Inner Turning Zone (Zone 3). Structures in Zone 1 require ALUC review for any height. In Zone 2, structures of a height taller than 35 feet above ground level would require ALUC review. In Zone 3, objects taller than 70 feet require ALUC review. Any poles set in Zone 1 would require ALUC review, while poles in Zone 2 would likely require review, as most poles likely would be taller than 35 feet. Depending on the results of the ALUC review, pole sizes may need to be shortened, or poles may not be allowed in the zones. This may affect the feasibility of this alternative.

Table 20-1 compares the potential impacts of Alternate Route #1 with those of the proposed project.

### 20.3.3 Alternate Route #2

#### Description of Alternative

This alternative would be similar to the proposed project, in that it would begin at the proposed Westside Substation and end at the NCPA power plant site. However, the route alignment would be different. Figure 20-1 shows the proposed alignment under Alternate Route #2.

The following is a detailed description of each segment of Alternate Route #2. Segments A through F are the same as described under Alternate Route #1, above. Refer to Subsection

20.3.2 above for a description of these segments. The following segments differ Alternate Route #1:

Segment G (South of Ray)

- The power line turns south and traverses private property for the length of two power pole spans. Existing power poles are located along this segment, but the power line would be carried solo on its own poles.
- This north-south trending segment ends with a steel pole.

Segment H (Southwest of Ray and Tredway)

- The power line turns west from the steel pole ending Segment G and traverses private property for the length of two pole spans. The power line would consist of a solo attachment along this segment.
- This east-west trending segment ends with a steel pole.

Segment I (South to Thornton)

- The power line turns south and crosses private property from the steel pole ending Segment H. It crosses Thornton Road and continues south until it encounters an entrance road to the WPCF area. The power line would consist of a solo attachment along this segment.
- This north-south trending segment ends with a steel pole on the north side of the entrance road.

Segment J (White Slough)

- The power line turns west and follows an entrance road to the White Slough WPCF area. It crosses I-5 in the same location as an existing PG&E 12kV distribution line crossing. This section of power line would be constructed jointly with PG&E distribution. The section of line east of the I-5 crossing would be constructed jointly with PG&E distribution and existing communication lines.
- The power line continues west on City of Lodi property to the NCPA facility. A part of this section of power line would be constructed jointly with PG&E distribution, but the end pole would consist of a solo attachment.
- Steel poles would be used at both ends of this segment.

### Analysis of Alternative

This alternative would fulfill the proposed project objective. Alternate Route #2 would be a more direct route between the eastern terminus and the NCPA power plant site than would the proposed project, so less power line and fewer poles would be needed. Since

the route would mostly use existing public rights-of-way and City property, no additional easements would need to be acquired in those areas. However, an easement may need to be acquired for Segments G, H and I. Segment G does have existing transmission lines, but these may not be placed on the new poles. Segments H and I currently have no power poles, so utility easements would likely have to be acquired in the areas where they cross private property.

Many of the impacts of Alternate Route #2 would be similar to those of Alternate Route #1. This route would avoid many of the rural residences along Harney Lane, Neeley Road and Kingdon Road that would be affected by the proposed project, thereby avoiding the adverse air quality and noise impacts on these residences. As with Alternate Route #1, these impacts may be transferred to residences and businesses along SR 12 and Davis Road.

Construction on Segments G, H and I may lead to greater dust emissions, as construction would occur on mostly undeveloped land and a greater land area would be disturbed. Mitigation measures to control dust would reduce impacts, especially since there would be no residences or other sensitive uses along these segments. Air quality impacts of construction on other segments of this route would be similar to those of the proposed project.

The segment along Tredway Road would cross over safety zones designated for Kingdon Airpark by the County's Airport Land Use Compatibility Plan (see Chapter 11.0, Health and Safety). The potential impacts would be the same as those described in Alternate Route #1. Refer to Subsection 20.3.2 for a discussion of these impacts.

Table 20-1 compares the potential impacts of Alternate Route #2 with those of the proposed project.

### **20.3.4 Combination of Primary and Alternate Routes**

#### **Description of Alternative**

This alternative would be similar to the proposed project, in that it would begin at the proposed eastern terminus and end at the NCPA power plant site. However, the alignment would be a combination of the Primary Route and the Alternate Routes. Essentially, this alternative would utilize Alternate Routes #1 and #2 segments along SR 12 and Davis Road and then follow the remaining segments of the Primary Route to the western terminus at the NCPA power plant.

#### **Analysis of Alternative**

This alternative would fulfill the proposed project objective while avoiding potential conflicts with the Kingdon Airport compatibility zones along Tredway Road and Ray Road that the Alternate Routes encounter. This alternative alignment would have many of the same potential impacts identified under the Primary Route.

Although this alternative route would avoid some of the rural residences along Harney Lane, thereby avoiding the potential short-term air quality and noise impacts on these

residences from construction activities, these potential impacts would only be transferred to residences and businesses along SR 12 and Davis Road. Mitigation measures described in this EIR would reduce these construction impacts to less than significant levels.

As noted, this route would meet the project objective, however, it would have aesthetic impacts along SR 12, as well as agricultural impacts due to the placement of the poles. This impact is potentially significant, as the City of Lodi has made enhancement of the SR 12 “gateway” a policy of its General Plan (City of Lodi, 1991, p. 10-4). In addition, long range planning improvements along SR 12, including widening of the roadway, could lead to a need to acquire easements from adjacent property owners to implement this alternative, which would add more expense to the project and possibly result in the loss of agricultural land. These issues would be confined to the segment of SR 12 between Davis Road and the future Westside Substation (the project’s eastern terminus).

### 20.3.5 Alternate Eastern Terminus Tie-In

#### Description of Alternative

This alternative would entail by-passing the future Westside Substation site and connecting the 60 kV Power Line into existing 60 kV power lines closer to Lower Sacramento Road. The Primary Route’s eastern terminus would need to be extended east to the future extension of Westgate Drive. The power line would then travel north to SR 12. It would then proceed east to Lower Sacramento Road and tie into the existing system. Steel poles would be used at each 90-degree turn. Approximately six poles would be required to extend this alternative from Westgate Drive to Lower Sacramento Road.

#### Analysis of Alternative

This alternative would fulfill the proposed project objective without the construction of the Westside Substation site. This alternative would have many of the same potential impacts identified under the proposed project, however, it would have additional aesthetic impacts along SR 12 due to the placement of the poles between Westgate Drive and Lower Sacramento Road. This impact is potentially significant, as the City of Lodi has made enhancement of the SR 12 “gateway” a policy of its General Plan (City of Lodi, 1991, p. 10-4).

## 20.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

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The No Project alternative would have the least environmental impact of the alternatives considered in detail. This would be considered the “Environmentally Superior Alternative.” However, this alternative does not meet the objective of the proposed project.

In the event that the No Project Alternative is considered the environmentally superior alternative, CEQA Guidelines Section 15126(d)(3) requires the identification of an environmentally superior “build alternative.” The Combination of the Primary and

Alternate Routes Alternative would be the Environmentally Superior Build Alternative, assuming the propose power poles on SR 12 between Davis and the eastern terminus were located within the existing right-of-way and replaced existing poles, could this alternative be considered the Environmentally Superior Build Alternative. This Alternative would keep the entire alignment within existing public right-of-way and land controlled by the City of Lodi.

## 21.0 GROWTH-INDUCING IMPACTS

The CEQA Guidelines require that an EIR discuss the ways in which a project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this required discussion are projects that would remove obstacles to population growth. These impacts are called "growth-inducing impacts."

Growth can be induced in a variety of ways. Some new development may create demands for other types of development – a large new industrial facility that creates numerous new jobs may increase or accelerate demands for housing. In an area of relative housing shortage, this effect could induce growth. However, the same project in a labor surplus area may have no growth-inducing effect at all. Development of significant new amenities may also encourage development of other land uses nearby. An example would be the development of major new shopping or entertainment facilities that spur development of new residential areas.

Growth can also be induced by removing obstacles to development or by reducing development costs. New or additional development can result from new infrastructure that expands capacity (e.g., a new sewage treatment facility or potable water system) or the extension of street or utility infrastructure or other facilities. These facilities may stimulate development of previously underserved areas or areas lacking service. However, the construction of new infrastructure in conjunction with proposed development that would be served by the new facilities may not have a distinguishable growth-inducing effect, other than supporting the proposed development.

Government actions that permit or promote additional development may induce growth. Such actions may include a general plan amendment or re-zoning that favors additional development, issuance of permits or approvals that establish new precedents for land development, and changes in policy that have the same result.

This chapter analyzes the potential growth-inducing impacts of the project. This analysis includes discussion of the potential characteristics of the project that may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. The CEQA Guidelines note that it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

### GROWTH INDUCEMENT ANALYSIS

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The project area has a rural setting due to the predominantly agricultural use of the area. Rural residences are scattered throughout the project area, along with a few commercial activities predominantly related to agriculture and the Kingdon Airport. The project area is accessible by SR 12 and several local roads. Interstate 5 forms a portion of the western boundary of the project area, but access from Interstate 5 is limited to the SR 12

interchange. Electrical lines are found throughout the project area, mainly along the public roads. The poles on which the electrical lines are carried also carry lines for telephone and cable television service. No local water or wastewater lines serve the project area – residents and businesses are served by private wells and septic systems. A large sewer main line does cross portions of the project area as it connects the City of Lodi to the WPCF site, west of I-5.

The project would involve the installation of a 60 kV Power Line from the NCPA power plant site to the western city limits of Lodi, near Lower Sacramento Road and SR 12. This power line would convey electricity from the existing power plant site to a proposed substation, which in turn would distribute the electricity to Lodi Electric Utility's (LEU's) service area in existing facilities. No other power or distribution lines would be installed as part of the project, either within the project area or in LEU's service area. The project does not propose the construction of any housing or other buildings.

The project would not introduce new infrastructure that would provide service to an underserved area or an area that lacks service. Electrical service is currently available throughout the project area and Lodi, and its availability is not a constraint to new development. Moreover, the portion of the project area in the County receives electrical service from PG&E. Therefore, the proposed Lodi West 60 kV Power Line would have no impact on service in the County area.

The project is expected to provide more reliable electrical service in the LEU service area. As discussed in Chapter 9.0, Population and Housing, while additional reliability is expected to be of tangible benefit to new and existing LEU customers, this improvement is not expected to result in any substantial or measurable influence on the rate or amount of population growth or community development. Development and population growth are a function of environmental, economic and social conditions, and regulation of growth is the province of local government. While infrastructure is one factor in new growth and development, it is only one of many factors considered. Moreover, electricity is typically supplied in response to demand, which is dictated by overall rates of urban and other growth in the City of Lodi and surrounding regions. While electrical facilities deliver electricity, they have no effect on electricity supply or demand. Consequently, the proposed project is not expected to induce any substantial development, which in turn would induce population growth.

In summary, the project provides a conveyance for electricity to be supplied to LEU's service area only. While it would increase the reliability of the electrical supply, it would not have an impact on growth in the City of Lodi or in the area through which the project would pass. Therefore, the project would have no growth-inducing impacts.

## 22.0 IRREVERSIBLE ENVIRONMENTAL CHANGES

CEQA requires that an EIR address any significant irreversible environmental changes that would be involved in the 60 kV Power Line Project if it were implemented. Significant irreversible environmental changes could include conversion or use of substantial amounts of nonrenewable resources during the construction or operation of the project, or the commitment of resources to other uses, or to their permanent non-use. Resources that may be considered subject to irreversible change may include materials, land, energy or state of development/non-development. Consumption, use or commitment of resources is considered irreversible when it is likely that future generations will be committed to similar uses. Irreversible damage can also result from environmental accidents associated with the project. CEQA suggests that irremediable commitments of resources be evaluated to assure that such current consumption is justified.

The 60 kV Power Line Project would involve the irreversible commitment of construction materials and energy consumption to install the power poles and associated infrastructure. Construction materials would involve sand and gravel, concrete, asphalt, plastics and metals, along with various renewable resources. Energy use would occur as a result of operation of equipment used in installation of project components. These materials would not be used in highly significant or unusual quantities and would be obtained from existing commercial sources.

Implementation of the project would not involve significant irreversible environmental changes. The purpose of the project is to increase the reliability of Lodi's city-wide electrical infrastructure system. As discussed in Chapter 3.0, Project Description, the city-wide system is currently connected by one line to PG&E's regional power grid, and this line has experienced several failures leading to city-wide blackouts. While the project would make delivery of electricity more reliable, it would not by itself increase the demand for electricity, which would drive the need for additional facilities such as transmission lines and substations and cause significant irreversible environmental changes.

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## 23.2 PERSONS CONSULTED

---

Brennan, Jim. Principal. j.c. brennan and associates.

Jensen, Sean. Principal, Genesis Society.

Kapahi, Ray. Air Permitting Specialists.

Kloeb, Kim. Senior Regional Planner, San Joaquin Council of Governments.

Moore, Diane. Principal, Moore Biological Consultants.

Gary Mai, City of Lodi Electric Utility.

## 23.3 WEB SITES CONSULTED

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APPENDIX A  
NOTICE OF PREPARATION AND RESPONSES

NOTICE OF PREPARATION  
OF AN  
ENVIRONMENTAL IMPACT REPORT

FOR THE  
LODI WEST 60kV POWER LINE PROJECT  
City of Lodi, California

February 4, 2010

*Prepared for:*  
CITY OF LODI  
Community Development Department  
221 West Pine Street  
Lodi, CA 95241

NOTICE OF PREPARATION  
OF AN  
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Prepared for:

CITY OF LODI  
Community Development Department  
221 West Pine Street  
Lodi, CA 95241  
(209) 333-6800

Prepared by:

INSITE ENVIRONMENTAL, INC.  
6653 Embarcadero Drive, Suite Q  
Stockton, CA 95219

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## Project Brief

The proposed project involves construction and operation of a planned 60 kilovolt (kV) power line by the City of Lodi Electrical Utility Department. The line would connect the City's proposed Westside substation with existing Northern California Power Agency (NCPA) facilities near the City's White Slough wastewater plant located west of Interstate 5 (I-5) and south of Highway 12. The purpose of the project is to increase the reliability of the City's electrical system by providing a second point of supply; the City system is presently served with power supply from a single PG&E substation located in an unincorporated area to the east of the City. The White Slough facility is not contiguous with the City of Lodi but is within the City limits.

The primary power line alignment would be approximately 7.5 miles in length and would extend west from the future Westside Substation, located at the southwest corner of Highway 12 and the future Westgate Drive, to a private road west of the proposed substation. The proposed power line will extend south along the private road to Harney Lane; then west along Harney Lane; south along DeVries Road; west along Tredway Road; north along Neeley Road; west along Kingdon Road; south along Thornton Road; continues south, paralleling I-5; and west across I-5 where it will terminate inside the existing Northern California Power Agency facility.

Except for the private land sections near the future Westside Substation and along the east side of I-5, the project would be located within existing highway and road rights-of-way. The project would involve the installation of approximately 140 poles, some of which would be shared with existing PG&E distribution and other overhead facilities under a joint pole agreement; approximately 13 steel poles will be used where required (i.e., at corners).

## Purpose of Initial Study

The California Environmental Quality Act (CEQA) requires that public agencies document and consider the potential environmental effects of any agency actions that meet CEQA's definition of a "project;" briefly summarized, a "project" is an action that has the potential to result in direct or indirect physical changes in the environment. A project includes the agency's direct activities as well as activities that involve public agency approvals or funding. Guidelines for an agency's implementation of CEQA are found in the "CEQA Guidelines" (Title 14, Chapter 3 of the California Code of Regulations).

Provided that a project is not found to be exempt from CEQA, the first step in the agency's evaluation of the potential environmental effects of the project is the preparation of an Initial Study. The purpose of an Initial Study is to determine whether the project would involve "significant" environmental effects as defined by CEQA and to describe feasible mitigation measures that would be necessary avoid the significant effects or reduce them to a less than significant level. In the event that the Initial Study does not identify significant effects, or identifies mitigation measures that would reduce all of the significant effects of the project to a less than significant level, the agency may prepare a Negative Declaration.

If this is not the case, the agency must prepare an Environmental Impact Report (EIR); the agency may also decide to proceed directly with the preparation of an EIR without preparation of an Initial Study.

The approval of the design plans and the subsequent installation of the power line within the study area is a “project” as defined by CEQA. The City of Lodi has determined that the project involves the potential for significant environmental effects and that an EIR will be prepared for the project. The City of Lodi has also elected to prepare this Initial Study of the project in conjunction with the Notice of Preparation that is required when the City prepares an EIR. The Notice of Preparation is located on page iv of this document.

This Initial Study has been prepared by the City of Lodi pursuant to its decision to prepare an EIR. The purpose of this Initial Study is to describe the proposed project, briefly describe the environmental setting of the project, discuss the potential environmental effects of the project, and describe the proposed scope of the EIR. The Initial Study is intended to be attached to the Notice of Preparation (NOP) for the City’s EIR; the NOP will be circulated to agencies with potential permit or approval responsibility for the project (responsible agencies) as well as agencies that are responsible for the management of public trust resources (trustee agencies).

### **Scope of Initial Study**

This Initial Study evaluates the project’s potential to result in “significant” environmental effects, as defined by CEQA, in the following issue areas.

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Global Climate Change
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation/Traffic
- Utilities and Service Systems
- Mandatory Findings of Significance

Where the City can identify feasible mitigation measures that would avoid or reduce the potential significant effects of the project, they are identified, at least briefly in this Initial Study. The proposed scope of the EIR, i.e. the issues that the City will address in the EIR, is identified in each of the above-listed environmental issue areas. The subsequent preparation of the EIR will involve detailed analysis of each of the environmental issues identified and detailed consideration of any mitigation measures that may be needed to address those issues. The EIR will also address alternatives to the project, including alternative routes, cumulative impacts and a range of other topics required by CEQA.

## Environmental Evaluation Checklist Terminology

The potential environmental effects of the proposed project are evaluated in Chapter 3 of this document, which is the Environmental Evaluation Checklist. The checklist includes a list of environmental considerations against which the project is evaluated. For each question, the agency determines whether the project would involve: 1) No Impact, 2) a Less Than Significant Impact, 3) a Less Than Significant Impact With Mitigation Incorporated, or 4) a Potentially Significant Impact.

A Potentially Significant Impact occurs when there is substantial evidence that the project would involve a substantial adverse change to the physical environment, i.e. that the environmental effect may be significant, and mitigation measures have not been defined that would reduce the impact to a less than significant level. If there are one or more Potentially Significant Impact entries in the Initial Study, an EIR is required. The Potentially Significant issues will be addressed in detail in the EIR.

A Less Than Significant Impact occurs when the project would involve effects on a particular resource, but the project would not involve a substantial adverse change to the physical environment, and no mitigation measures are required. These issues will be addressed in the EIR but would not be treated to the same extent as Potentially Significant Impacts.

An environmental effect that is Less Than Significant With Mitigation Incorporated is a Potentially Significant Impact that can be avoided or reduced to a less than significant level with the application of mitigation measures. These issues as well as the mitigation measures needed to address them will receive detailed consideration in the EIR.

A determination of No Impact is self-explanatory.

## Initial Study Organization

Chapter 1, Introduction, briefly summarizes the project, the purposes of the Initial Study, the terminology used in the Initial Study, and the organization of the document.

Chapter 2, Project Description, describes the proposed development project, its location, planned land uses and the road and utility improvements required to serve planned development as well as required permits and approvals.

Chapter 3, the Environmental Checklist, contains additional information describing the project, the environmental evaluation of the project in the environmental issue areas described above, documentation of the resources used to prepare the Initial Study, and the lead agency's formal determination that an EIR is required. The proposed scope of the EIR evaluation is also described within each of the issue areas.

This chapter of the Initial Study provides a brief summary description of the project followed by project setting and background information, and detailed descriptions of the location and physical elements of the project.

### Project Purpose

The proposed project involves the adoption and implementation of the proposed Lodi West 60kV Power Line Project (“Project”). The purpose of the project is to increase the reliability of the City’s electrical system by providing a second point of supply; the City system is presently served with power supply from a single PG&E substation located in an unincorporated area to the east of the City of Lodi. This line has experienced several failures in the past years that resulted in the loss of power to the entire City. An additional power line as proposed will connect the City of Lodi to the regional power grid at a second location, providing an alternate electric supply in the case of an accidental interruption of service from the existing line.

### Project Location

The proposed project, which is linear in nature, will connect to the future Westside Substation site, located on the southwest corner of Kettleman Lane (also known as Highway 12) and future Westgate Drive, in the City of Lodi (Figures 2-1 through 2-3). The project traverses west across unincorporated territory and will terminate inside the existing NCPA facility near the White Slough Water Pollution Control Plant. Except for privately held land near the future Westside substation and along the east side of I-5, the project would be located within the following road rights-of-ways; Harney Lane, DeVries Road, Tredway Road, Neeley Road, Kingdon Road, and Thornton Road.

The White Slough facility is not contiguous with the City of Lodi but is within the City limits.

### Project Setting and Background

The proposed power line will receive electric supply from major statewide transmission lines that parallel the west side of I-5, south of Highway 12. The proposed new 60kV power line would extend approximately 7.5 miles, most of which would be located outside City of Lodi limits. The majority of the route, which will be located in public road rights-of-way, will be adjacent to agricultural areas located within the jurisdiction of San Joaquin County. The remaining portion of the project will traverse agricultural areas; some of these lines will be located along dirt access roads.

The project area is largely a rural agricultural area planted in vineyard, row and field crops (Figure 2-3). Land uses in the area include scattered residences, particularly adjacent to roadways and some small wineries and other agricultural related businesses. Within the project area are also two small private airports, Interstate 5 and State Highway 12.

The Electric Utility Department (EUD) has completed several route alternative studies that analyzed several possible routes and discussed the pros and cons of the alternative routes. From this body of work, the EUD has narrowed the choices of routes down and has identified what has become known as the “Primary Route” or “Project” analyzed in this CEQA document. Other less favorable but viable alternative routes (Alternate 1 Route and Alternate Route 2) will be addressed in the Environmental Impact Report (EIR) under the Alternatives Chapter. Figure 2-5 depicts the alternate routes that will be discussed in the Alternative Section of the CEQA document.

## Project Details

The proposed project (the Primary Route) involves construction and operation of a planned 60 kilovolt (kV) power line by the City of Lodi Electrical Utility Department. The line would connect the City’s future Westside Substation with electric supply from major statewide transmission lines that parallel the west side of I-5, south of Highway 12. This tie-in will occur inside the existing Northern California Power Agency facilities near the City’s White Slough Water Pollution Control Plant located west of I-5.

The majority of the proposed power line will be constructed with wooden poles (approximately 127). Approximately 13 steel poles will be used at main angle points (approximately 90 degrees) and at critical crossing locations such as roadways and/or drainage ways. Some sections of line will be constructed jointly with existing PG&E distribution lines. All PG&E poles will be replaced and existing facilities transferred to the new poles. The City’s preliminary estimate indicates 104 of the proposed poles will be joint with PG&E along the primary route and 36 poles will have EUD solo attachment.

The determination of the height of the poles is based on CPUC General Order 95 (GO-95) construction standards for a 60kV line. See Figure 2-4 for a schematic of types of pole design. The steel poles and wooden poles will be a minimum of 57 feet above ground level. Heights up to approximately 90 feet will be required for crossing of existing PG&E transmission lines, the Union Pacific Railroad tracks and I-5.

## Primary Route Description by Segment

The following is a detailed description of each segment of the primary route. Each straight, linear run of line corresponds to a segment. A descriptive title has also been given each segment. Unless steel pole locations are specifically identified in the detailed description or shown on the figures, all other poles should be assumed to be wooden.

### Segment A (Future Westside Substation)

- The power line begins at the easternmost interconnection point, the future Westside Substation, located on the southwest corner of Kettleman Lane and the future Westgate Drive. The 60kV power line exits the proposed Westside Substation at the southwest corner of the substation and proceeds west approximately 900 feet on the north side of a future street right-of-way to a private farm road.

- The first pole next to the future Westside Substation will be steel.

#### Segment B (Farm Road)

- The power line turns south, with the use of a steel pole, on the private farm road and continues approximately 4,800 feet to Harney Lane. The first approximately 900 feet of the power line will be constructed jointly with PG&E distribution. After approximately 900 feet the power line will leave the joint pole and consist of a solo attachment (the 60 kV power line only). A steel pole is used at this transition from joint to solo.
- The last 1,200 feet of this section, north of Harney Lane will be constructed jointly with PG&E distribution.
- This north-south trending section ends with a steel pole within the Harney Lane right of way.

#### Segment C (Harney)

- The power line turns west along the north side of Harney Lane and continues approximately 12,000 feet to DeVries Road. This section of power line will be constructed jointly with PG&E distribution and existing communication lines (i.e., telephone). The last 1,000 feet before DeVries Road will joint use with PG&E distribution only (no communication).
- This east-west trending segment ends with a steel pole at the northeast corner of DeVries Road and Harney Lane.

#### Segment D (DeVries)

- The power line turns south on the east side of DeVries Road for approximately 1,300 feet to Tredway Road. This section of power line will be constructed jointly with PG&E distribution.
- This north-south trending segment ends with a steel pole at the northeast corner of DeVries Road and Tredway Road.

#### Segment E (Tredway)

- The power line heads west on the north side of Tredway Road for approximately 2,800 feet to Neeley Rd. The power line will leave the joint pole at DeVries Road and consist of a solo attachment (the 60 kV power line only) along this segment.
- This east-west trending segment ends with a joint steel pole at the northeast corner of Neeley Road and Tredway Road.

#### Segment F (Neeley)

- The power line turns north along crosses Neely, then travels along the west side of Neeley Road for approximately 3,100 feet. A steel pole is located at the northwest corner of Neeley Road and Tredway Road.
- This section of power line will be constructed jointly with PG&E distribution and communication lines.
- This segment ends with a steel pole at the southwest corner of Kingdon Road and Neeley Road.

#### Segment G (Kingdon)

- The power line turns west along the south side of Kingdon Road for approximately 8,200 feet to the west side of Thornton Road.
- This section of power line will be constructed jointly with PG&E distribution and communication lines.
- This segment ends with a steel pole at the southwest corner of Kingdon Road and Thornton Road.

#### Segment H (Thornton and I-5)

- The power line turns south along the west side of Thornton Road for approximately 4,000 feet, at which point Thornton Road turns to the east. The proposed 60 kV power line continues south, paralleling I-5 for another 4,000 feet along private property owned by the City of Lodi.
- This section of power line consist of a solo attachment (the 60 kV power line only).

#### Segment I (White Slough)

- The power line crosses I-5 in the same location as an existing PG&E 12kV distribution line crossing. This section of power line will be constructed jointly with PG&E distribution.
- The power line continues west on City of Lodi property for approximately 1,300 feet to a proposed substation site at the NCPA facility near White Slough Water Pollution Control Plant.
- Steel poles will be used at both ends of this segment.

**Construction Methods**

Construction of the power lines would consist of drilling the holes for poles, setting the poles, installing associated cross-arms and other hardware, and pulling the conductors into place. Typically, the holes would be drilled and the poles placed with a line truck; approximately five poles can be placed per day by a three-man crew. Typically, once the poles are in place, a rope is strung along the alignment and over the pole fixtures. The rope is tightened and connected to the spooled conductor, and then is used to pull the conductors into place. Usually a 4,400-foot reel of conductor is pulled at once, although more or less may be pulled depending on the constraints of the site.

Construction of steel corner poles for power lines would involve excavation, pouring of a concrete foundation and placement of anchor bolts to which the flanged corner poles would be fastened.

Construction of power lines would involve temporary work and minor disturbances along existing roads and streets. Conflicts with travel lanes will be minimized at all times, and closure of more than one lane at a time (if any) would be unlikely. Where required, encroachment permits and required inspections of trenching, boring and pavement cutting would be obtained from the County or other agencies in whose jurisdiction construction would occur, and traffic safety cones or construction signage would be used to alert drivers to the presence of workers and equipment.

**Project Permits and Approvals**

**TABLE 2-1  
PERMITS AND APPROVALS**

Agency	Permit/Approval
Federal Aviation Administration (FAA)	Application for Construction of a Permanent Structure
California Department of Transportation	Encroachment Permit
San Joaquin County	Encroachment Permit
Lodi City Council	Final Environmental Impact Report Certification Construction Authorization

Insert figures 2-1 through 2-4

## Chapter 3.0 Environmental Significance Checklist

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### A. PROJECT DESCRIPTION

- 1. Project Title:** Lodi West 60kV Power Line Project
- 2. Project Entitlements:** Final Environmental Impact Report Certification  
Construction Authorization
- 3. Lead Agency Name and Address:** City of Lodi, City Hall, 221 West Pine Street, Lodi, CA 95241
- 4. Contact Person and Phone Number:** Konradt Bartlam, Interim Director of Community Development  
209-333-6711
- 5. Project Location:** The approximately 7.5-mile linear project is located in the western portion of the City of Lodi and unincorporated areas of San Joaquin County, California. The Primary Route initiates east of White Slough Water Pollution Control Plant (west of Interstate 5), travels east across both private land and public rights-of-way and terminates at the southwest corner of Highway 12 and the future Westgate Drive. A detailed description of the project location by segments is included in Chapter 2.0 of this Initial Study.
- 6. Project Sponsor's Name and Address:** Same as Lead Agency (Item 3 and 4, above)
- 7. General Plan Designation and Zoning:** City Designation – PUB, Public  
San Joaquin County - Agriculture
- 8. Description of Project:** A detailed description of the project is included in Chapter 2.0 of this Initial Study.
- 9. Surrounding Land Uses and Setting:** The project area is bounded by agricultural uses to the north west, south and east; the majority of the primary route is located in public road rights-of-way; crosses major transportation uses (Union Pacific Railroad tracks and Interstate 5); and rural residential units associated with the agricultural operations are located along the primary route, especially along Harney Lane, DeVries Road and Tredway Road
- 10. Other public agencies whose approval is required:** Federal Aviation Administration; California Department of Transportation; and San Joaquin County.

## B. ENVIRONMENTAL FACTOR POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- |   |   |  |
|---|---|--|
| <input checked="" type="checkbox"/> Aesthetics                    | <input type="checkbox"/> Agriculture Resources            | <input type="checkbox"/> Air Quality                                   |
| <input checked="" type="checkbox"/> Biological Resources          | <input checked="" type="checkbox"/> Cultural Resources    | <input type="checkbox"/> Geology /Soils                                |
| <input checked="" type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology/Water Quality          | <input type="checkbox"/> Land Use/Planning                             |
| <input type="checkbox"/> Mineral Resources                        | <input type="checkbox"/> Noise                            | <input type="checkbox"/> Population / Housing                          |
| <input type="checkbox"/> Public Services                          | <input type="checkbox"/> Recreation                       | <input type="checkbox"/> Transportation/Traffic                        |
| <input type="checkbox"/> Utilities/Service Systems                | <input checked="" type="checkbox"/> Global Climate Change | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

## C. LEAD AGENCY DETERMINATION

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

---

Konradt Bartlam, Interim Community Development Director  
City of Lodi

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Date

## D. EVALUATION OF ENVIRONMENTAL IMPACTS

The foregoing environmental determination is based on the evaluation of the potential environmental effects of the proposed project, as documented in the following checklist and supporting documentation. The checklist has been prepared in accordance with the following requirements:

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or Negative Declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
  - a) Earlier Analysis Used. Identify and state where the analysis(es) are available for review.
  - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of, and adequately analyzed in, an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
  - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Incorporated", describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

- 8) This is only a suggested form, and lead agencies are free to use different formats.
- 9) The explanation of each issue should identify:
  - a) the significance criteria or threshold, if any, used to evaluate each question; and
  - b) the mitigation measure identified, if any, to reduce the impact to less than significance

## E. ENVIRONMENTAL CHECKLIST AND NARRATIVE EXPLANATION

1. AESTHETICS -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### NARRATIVE EXPLANATION

#### *Environmental Setting*

The project setting is rural in nature, consisting of predominately agricultural and rural residential uses. Potentially affected viewer populations would consist of general-use motorists and local area residents. The rural alignments may represent an open space resource for residents of nearby urban areas and receive occasional dispersed use for this purpose. However, there are no identified scenic resources, scenic vistas or scenic routes located on or in the vicinity of the project area.

The potential aesthetic effects of the project would result from construction activities, and from the ongoing presence of the new power lines. Aesthetic effects are subjective in nature but can be related to the aesthetic quality of the existing setting, the nature and extent of change associated with the project, and the expectations and preferences of affected viewers.

Hole-drilling, pole-setting, installation of hardware, and conductor stringing in any particular area would involve temporary, minor and localized effects during the construction period and would require the presence of construction equipment and construction activity for no more than a few days in any location. The presence of construction equipment similar to agricultural equipment is familiar and unsurprising in the project area and would result in no significant aesthetic effect.

Physical changes associated with the proposed power line would include the addition of new poles, or the replacement of existing poles with taller poles; the addition of new insulators, cross-arms and other equipment. These new features would be added to the existing aesthetic environment, potentially resulting in significantly aesthetic effects. In some cases, new equipment may be combined with existing equipment, which would reduce potential visual impacts by reducing the number of new poles.

The proposed project will not introduce any new permanent source of light and glare along the primary route. However, improvements at the Westside Substation and at the NCPA facility will have security lighting, but the lighting will be contained within the boundaries of the facilities through directional lighting and limiting the “candle” power (i.e., brightness) of the light source. Since new lighting will be confined to the substation and NCPA facility and is not considered a new source of “substantial” light and glare, this issue is not discussed in the EIR.

*Issues to be addressed in the EIR would include:*

- Description of viewshed change associated with the addition of new poles and conductors, and the consolidation of existing lines on to a jointly used pole.
- In order to better understand the long-term aesthetic impacts, the EIR will include two visual simulations of the proposed project’s primary route at two specified locations.

<b>2. AGRICULTURE RESOURCES</b> -- In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**NARRATIVE EXPLANATION**

*Environmental Setting*

The State Department of Conservation’s Important Farmland Maps identify three farm land types adjacent to the project alignment: Prime Farmland, Unique Farmland and Farmland of Local Importance. The proposed power line alignment is located primarily within existing public road rights-of-way and in disturbed areas between agricultural areas. These right-of-way areas contain dirt roads, access points to residential areas, agricultural fields, roadway dirt shoulders and improved roadways.

Long-term operation of the proposed project has no potential to convert existing farmland to non-agricultural uses or conflict with existing zoning for agricultural use, or a Williamson Act contract. Short-term construction impacts may temporarily block access

points; and temporarily disturb agricultural fields within the existing right-of-way as installation of the power line occurs. Disturbance would occur in the immediate area around the pole installation, not under the power line.

*Issues to be addressed in the EIR would include:*

- Potential short-term and long-term operational impacts between the proposed electrical lines and adjacent agricultural crops.
- Potential long-term effects on agricultural pest control, including aerial application of pesticides, and existing irrigation systems.

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**3. AIR QUALITY** -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable Air Quality Attainment Plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

***NARRATIVE EXPLANATION***

*Environmental Setting*

The project site is within the northern portion of the San Joaquin Valley Air Basin (SJVAB). The SJVAB is subject to the air quality regulatory authority of the San Joaquin Valley Air Pollution Control District (SJVAPCD). The SJVAB is designated Nonattainment/Serious by the federal government, and Nonattainment/Severe by the state, for ozone. Both state and federal government classify the basin as Nonattainment for particulate matter. With the exception of the Fresno urbanized area, the SJVAB is in attainment of, or unclassified for, carbon monoxide and other applicable standards.

Construction of the project would involve emissions consisting of PM-10 from soil disturbance and equipment operation in unpaved areas, and ozone precursor emissions

from worker commute vehicles and construction equipment. Soil disturbance for power line construction will be very minimal, limited to pole hole drilling and minor disturbance associated with equipment movement and conductor stringing along the proposed alignment. The project will be subject to existing SJVAPCD dust control regulations that will reduce project construction impacts to less than significant levels.

Operation of new electrical lines will not involve any substantial air emissions, and no significant direct air quality effects. The electrical lines will require maintenance activity and associated vehicle traffic. This traffic will involve incidental new ozone precursor contributions to the air basin. This issue is considered less than significant.

The proposed project will not involve any known odor emissions, therefore, there will be no discussion regarding odor emissions in the EIR.

*Issues to be addressed in the EIR would include:*

- Identification of construction emissions and specification of control measures per GAMAQI requirements.
- Assessment of long-term area and mobile-source ozone precursor emissions.
- Energy efficiency and related air quality implications or benefits of alternative power supply (also of interest with respect to global climate change issue).

<b>4. BIOLOGICAL RESOURCES -- Would the project:</b>	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Adversely impact, either directly or through habitat modifications, any endangered, rare, or threatened species, as listed in Title 14 of the California Code of Regulations (sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (sections 17.11 or 17.12)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- c) 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 Game or US Fish and Wildlife Service?
- d) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- e) 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?
- f) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- g) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?

## ***NARRATIVE EXPLANATION***

### *Environmental Setting*

The project area primarily consists of agricultural fields and a network of rural roadways. A negligible amount of undisturbed, non-agricultural fields are present along the majority of the power line. If not in agricultural use, other uses along the power line include rural residential units; proposed commercial uses (currently a vacant lot) and the White Slough Water Pollution Control Plant.

The proposed power line will be located along dirt access roads, along agricultural fields, and within routinely maintained road shoulders of public roadways, between the paved roadways and adjacent agricultural lands. Data base review and field inspection of the project alignments for sensitive biological resources will be performed as part of the EIR preparation.

### *Issues to be addressed in the EIR would include:*

- Effects of proposed power line construction on the availability and utility of wildlife habitat, wildlife habitat diversity and utilization of any critical wildlife habitats which may be identified on or adjacent to the project site.
- Potential effects on special-status plant species.
- Potential effects on habitat, nesting activity or habitat use by special-status wildlife species.

- Potential effects on Waters of the U.S. and wetlands, if any
- Impacts on oak trees, including heritage oaks, if any.

**5. CULTURAL RESOURCES -- Would the project:**

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of a unique archaeological resource (i.e., an 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 contains information needed to answer important scientific research questions, has a special and particular quality such as being the oldest or best available example of its type, or is directly associated with a scientifically recognized important prehistoric or historic event or person)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**NARRATIVE EXPLANATION**

*Environmental Setting*

Agricultural operations and improved rural roads are located adjacent to and within the right-of-way of the proposed project. Agricultural operations and roadway construction have disturbed the surface soils along the Primary Route. In addition, no structures are located within the Primary Route that will need to be removed.

A cultural resources inventory of the proposed study area will be prepared in conjunction with preparation of the EIR; this will include an archaeological survey of the proposed Primary Route (also referred to as the Study Area). The EIR will need to document and describe known archaeological or historical sensitivities of the study area based on a search of database and other records.

*Issues to be addressed in the EIR would include:*

- Potential for direct disturbance of known surface and subsurface cultural resources, if any, as a result of power line construction.
- Potential for indirect disturbance of cultural resources, if any, as a result of project construction.

- Potential for avoidance, minimization, or mitigation of impacts through information recovery, site recordation, site protection, open space, or other measures as appropriate or as required by CEQA.

**6. GEOLOGY AND SOILS -- Would the project:**

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Be located on strata 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

***NARRATIVE EXPLANATION***

*Environmental Setting*

The topography of the Primary Route is flat. No significant geologic features or soil conditions are present along or adjacent to the Primary Route. Typical erosion control measures will reduce potential erosion impacts to less than significant levels.

The EIR will describe regional and local geology, topography, faulting, and seismicity including any fault displacement, seismic shaking, liquefaction, or settlement hazards from existing literature. The EIR will include a description of soil mapping units, soil productivity, soil characteristics (depth, texture, drainage, etc.), limitations (shrink/swell, saturation, etc.) and wind and water erosion potential.

*Issues to be addressed in the EIR would include:*

- Exposure of proposed electrical facilities to seismic, liquefaction, settlement or other geologic hazards.
- Exposure of proposed electrical facilities to soil constraints and construction concerns, if any.
- Potential effects on soil erosion, potential discharges, if any, need for erosion control measures. Relationship to City and County storm water quality management programs and criteria.

**7. GLOBAL CLIMATE CHANGE -- Would the project:**

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in a significant effect on, or a cumulatively considerable contribution to, global climate change?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

***NARRATIVE DISCUSSION:***

*Environmental Setting*

Global climate change is a subject of increasing scientific and public concern as well as of government action. Global climate change is understood to be the result of atmospheric concentrations of greenhouse gases (GHGs) that trap heat in the earth’s atmosphere. GHGs are naturally occurring and are emitted by human activity. GHGs include carbon dioxide (CO2), the most abundant GHG, as well as methane, nitrous oxide and other gases.

GHG emissions are associated with the combustion of carbon-based fuels; major GHG sources in California include transportation (40.7%), electric power (20.5%), industrial (20.5%), agriculture and forestry (8.3%) and others (8.3%).

The EIR will include a discussion of global climate change issues and their relationship to emissions of greenhouse gases (GHGs). Ongoing state and local planning to reduce greenhouse gas emissions will be discussed as will existing emissions per unit of power for power supply contributors to the Lodi Electric Utility, including NCPA.

*Issues to be addressed in the EIR would include:*

- Construction emissions of greenhouse gases
- Increases or decreases in greenhouse gas emissions associated with project operation reflecting potential changes in utility efficiency.

**8. HAZARDS AND HAZARDOUS MATERIALS -- Would the project:**

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

***NARRATIVE EXPLANATION***

*Environmental Setting*

Land uses along the Primary Route consist of rural residential uses, agricultural operations and transportation facilities. Transportation facilities include railroad tracks, Interstate 5 and Kingdon Airport. None of these land uses are anticipated to contain significant amounts of hazardous materials that would be impacted as a result of installation of the proposed project. However, installation of power poles near Kingdon Airport will need to conform with the airport land plan and air restriction in the vicinity of the airport. The EIR will expand on this discussion between the Primary Route and the Kingdon Airport Land Plan.

Due to the management of the adjacent lands under agricultural production, the threat of wildland fires is extremely low. In addition, due to the rural setting along the Primary

Route, the proposed project will not impair implementation or physically interfere with any emergency response or evacuation plans.

Power lines and substations involve varying types and degrees of environmental risk. Potential hazards include potential hazardous material spills during construction, increased electrocution risk, potential hazardous material spills from oil-filled electrical equipment and electro-magnetic fields. There has been public concern since 1979 that electromagnetic fields (EMFs) surrounding power lines and other electrical equipment have the potential to contribute to increased risk of cancer. The EIR will expand on this discussion and cite appropriate guidelines derived from multiple studies regarding the health implications of being exposed to EMFs.

*Issues to be addressed in the EIR would include:*

- Potential for exposure of construction personnel and future site users to environmental risks associated with previous hazardous materials usage or waste on or near the project area.
- Identification of potential for use of hazardous materials in construction of the project and controls on such use.
- Potential hazards associated with project operation, including a discussion of health hazards associated with electromagnetic fields (EMF).
- Potential conflicts between proposed electrical facilities and airspace restrictions at Kingdon Airpark.

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**9. HYDROLOGY AND WATER QUALITY -- Would the project:**

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| h) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| i) Inundation by seiche, tsunami, or mudflow?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

## ***NARRATIVE EXPLANATION***

### *Environmental Setting*

The project area is flat and no significant drainage features exist within the project area. The proposed power lines site would not encroach into natural waterways. The proposed power lines would cross irrigation canals and drainage ditches. These crossings would involve the placement of poles in upland areas and the suspension of electrical conductors over the waterways.

The project would not expose people to flooding hazards and will only create insignificant amounts of impervious surfaces. The EIR will describe the existing hydrology features in the vicinity of the study area and identify floodplain classifications from FEMA maps. Due to the nature of the proposed project and limited impervious surfaces associated with it, groundwater quantity and quality are not anticipated to be impacted by the proposed project.

### *Issues to be addressed in the EIR would include:*

- Changes in existing drainage patterns, features and runoff as result of the project.
- Potential construction sediment contributions to waterways and effects on water quality. Application of City and County storm water management requirements to the project, and identification of necessary erosion control measures.

**10. LAND USE AND PLANNING – Would the project:**

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural communities conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**NARRATIVE EXPLANATION**

*Environmental Setting*

Land uses along the proposed power line alignments are predominantly agricultural, primarily vineyards with some row crops and orchards. Rural residences, at low densities, are interspersed with agricultural uses along the proposed Primary Route. Other uses along the proposed Primary Route include, a privately-owned airport known as Kingdon Airpark, south of Tredway Road; wineries that are open to the public; and two major transportation facilities, Interstate 5 and the Union Pacific Railroad which both run north to south, intersecting the Primary Route at two specific locations.

Proposed facilities would be located within existing public road rights-of-way or adjacent easements and are exempt from local zoning requirements (Government Code Section 53091). There are no schools adjacent to the proposed power line alignments. There are no parks or day care facilities located along the proposed Primary Route.

The EIR will identify, describe, and map existing and planned land uses and circulation patterns in the study area and vicinity as well as proposals for development of other lands in the vicinity. The EIR will also address the project’s impact on the City of Lodi and County of San Joaquin land use planning documents since the Primary Route will be located in both jurisdictions.

*Issues to be addressed in the EIR would include:*

- Land use change associated with the project and effects on adjoining agricultural and rural lands.
- Consistency of the project with approved urban land uses as well as existing residential, agricultural and other land uses adjacent to the proposed Primary Route.
- Consistency of the project with land use/circulation designations and applicable policy provisions of the Lodi General Plan and the San Joaquin County General Plan and zoning.

- Consistency of the project with any other applicable adopted planning documents.

**11. MINERAL RESOURCES -- Would the project:**

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource classified MRZ-2 by the State Geologist that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**NARRATIVE EXPLANATION**

According to the Sate Department of Conservation’s Mineral Land Classification Map for San Joaquin County, there are no known mineral resources of value nor any locally-important mineral resource recovery sites within the project area. There will be no further discussion regarding impacts to mineral resources in the EIR.

**12. NOISE – Would the project result in:**

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**NARRATIVE EXPLANATION**

*Environmental Setting*

Major existing noise sources in the project area are related to vehicular and aviation traffic and railroad operations. Major transportation noise sources include County roads along which the proposed Primary Route is located, Interstate 5 that crosses the segment west of Thornton Road and the Union Pacific Railroad that crosses the Harney Lane segment. Noise is a significant influence in the immediate vicinity of these transportation facilities. On the more lightly-traveled county roads in the unincorporated area, traffic and related noise is minimal. Noise is locally high in the immediate vicinity of the Kingdon Airpark. Noise levels are intermittently and seasonally high in agricultural areas but otherwise incidental.

Sensitive receptors are limited to rural residences along the local roads in which the Primary Route is located.

Power line construction activity and related equipment use would result in temporary noise increases in the vicinity of construction. The EIR will evaluate the potential for construction noise and any controls necessary to minimize noise on sensitive receptors in the vicinity of the project.

No major new long-term noise sources are anticipated with the project.

*Issues to be addressed in the EIR would include:*

- Construction noise impacts on adjacent rural residential uses.

**13. POPULATION AND HOUSING -- Would the project:**

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

***NARRATIVE EXPLANATION***

None of the Primary Route segments would involve the demolition of housing or have any other direct effect on community population, housing stock, or growth rates.

Electrical service is presently available in the project area and is not a limit or an inducement to growth. The primary purpose of the proposed project is to increase the reliability of the City’s electrical system by providing a second point of supply that will prevent mass outages citywide should the initial point of supply be interrupted. Potential growth-inducing impacts will be addressed in a separate EIR chapter devoted to that subject.

**14. PUBLIC SERVICES** -- Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**NARRATIVE EXPLANATION**

*Environmental Setting*

Due to the rural nature of the Primary Route, certain services are not readily available. This becomes a more sensitive issue during the construction phase of the project when roadways may be temporarily blocked or detours identified. Under an operational scenario, the project will not modify existing response conditions. Also, a positive impact of the project will be the ability of the City of Lodi to maintain power to the City should one of the two connections to the state power grid becomes interrupted.

Due to type and nature of the proposed project, schools, parks and recreation facilities within both the City and County will not be impacted.

*Issues to be addressed in the EIR would include:*

- Identify and describe City, County and other service providers in the project area.
- Describe existing facilities crossed by or near the Primary Route.
- Identify the nature and operations of emergency response agencies and any relevant capacity or operational constraints for police and fire protection services due to short-term construction activities or operational activities.

**15. RECREATION**

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

***NARRATIVE EXPLANATION***

The project would not involve any new demands for recreational sites or facilities or involve any adverse physical impact on an existing or planned recreational facility. The project does not include recreational facilities, or require construction or expansion of recreational facilities.

**16. TRANSPORTATION/TRAFFIC – Would the project:**

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Conflict with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**NARRATIVE EXPLANATION**

*Environmental Setting*

The EIR will identify and describe existing transportation systems in the project vicinity, including I-5, SR 12, County roads crossed and followed by the Primary Route, and the Union Pacific Railroad line. The EIR will also describe Kingdon Airpark and related air traffic controls and other operational safety features.

*Issues to be addressed in the EIR would include:*

- Project effects on highway traffic operations, and on existing and projected local traffic operations during construction.
- Effects of proposed power line on operation of Kingdon Airpark and related air traffic control, based on analysis of conflicts with defined airport safety areas for the airport.
- Effects of the project on any other transportation systems in the project vicinity.

<b>17. UTILITIES AND SERVICE SYSTEMS -- Would the project:</b>	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Are sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Has the wastewater treatment provider which serves or may serve the project determined that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Is the project served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**NARRATIVE EXPLANATION**

*Environmental Setting*

The EIR will identify and describe existing and planned utility systems located in and serving the project area, including overhead utilities and pipelines. The EIR will discuss City of Lodi electrical utility operations, NCPA and applicable inter-agency relationships.

*Issues to be addressed in the EIR would include:*

- Potential effects of project construction on any existing or planned pipelines, communication, power, telephone or other utility facilities in the project vicinity.
- Beneficial effects in terms of improving system reliability and transmission capacity impacts.
- Effects of the project on availability of renewable energy supplies, if any.
- Potential effects on other utility system operations in the project area, if any.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>18. MANDATORY FINDINGS OF SIGNIFICANCE --</b>				
a) Does the project have the potential to degrade the quality of the environment, 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, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>

## **NARRATIVE EXPLANATION**

The proposed project would involve the possibility of significant effects on aesthetic, biological, hazards and cultural resources. These potential effects would be considered in detail in the EIR.

The project would involve the potential for cumulatively considerable contributions, and therefore potentially significant, cumulative impacts. Potential cumulative effects will be addressed in a separate chapter of the EIR and will address potential cumulative effects in each environmental discipline. In addition, the EIR will also include consideration of growth-inducing impacts, irreversible effects and other technical requirements of CEQA.

Other than the potential environmental effects described in this document, the project would involve no other known impacts that could cause substantial adverse effects on human beings, either directly or indirectly.

## **F. SOURCES**

### WORKS CITED

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<http://www.dfg.ca.gov/whdab/html/cnddb.html>
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- California Department of Conservation, Division of Mines and Geology. Mineral Land Classification of Portland Cement Concrete Aggregate in the Stockton-Lodi Production-Consumption Region. 1988.
- City of Lodi General Plan.
- City Lodi Website ([www.lodi.gov](http://www.lodi.gov))
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- County of San Joaquin Website
- San Joaquin County Council of Governments, *Airport Land Use Plan as Amended in 1993*, August 24, 1993.
- United States Census Bureau, 2005. *1990 and 2000 U.S. Census of Population and Housing Demographics*.

United States Department of Agriculture, 1988. *Soil Survey of San Joaquin County, California*. April 1988.

United States Geological Survey. Lathrop Quadrangle Map.

#### PERSONS/AGENCIES CONSULTED

Electric Utility Department, City of Lodi

Jensen, Sean. Archaeological consultant. Genesis Society.

Moore, Diane. Biological Consultant. Moore Biological.

Konradt Bartlam, City of Lodi

#### DOCUMENT PREPARERS

This document was prepared by InSite Environmental, Inc. of Stockton under the direction of the City of Lodi. InSite Environmental staff participating in document preparation included the following:

Charles Simpson, Principal  
Trevor Smith, Senior Project Manager  
Terry Farmer, Project Manager  
Victoria Jordan, Project Coordinator  
Tia Bunch, Administrative Coordinator

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF AERONAUTICS – M.S.#40

1120 N STREET

P. O. BOX 942874

SACRAMENTO, CA 94274-0001

PHONE (916) 654-4959

FAX (916) 653-9531

TTY 711

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MAR 03 2010

COMMUNITY DEVELOPMENT DEPT  
CITY OF LODI

February 24, 2010

Mr. Konradt Bartlam  
City of Lodi  
P.O. Box 3006  
Lodi, CA 95241

Dear Mr. Bartlam:

Re: City of Lodi's Notice of Preparation of a Draft Environmental Impact Report for the Lodi West 60 Kilovolt Power Line Project; SCH# 2010022012

The California Department of Transportation (Caltrans), Division of Aeronautics (Division), reviewed the above-referenced document with respect to airport-related noise and safety impacts and regional aviation land use planning issues pursuant to the California Environmental Quality Act (CEQA). The Division has technical expertise in the areas of airport operations safety, noise and airport land use compatibility. We are a funding agency for airport projects and we have permit authority for public-use and special-use airports and heliports.

The proposal is for a 7.5 mile long 60 kilovolt transmission line with poles that will range from 57 to 90 feet in height. A portion of the proposed transmission line appears to be approximately 1,000 feet northeast of approach end to Kingdon Airpark's Runway 12.

California Public Utilities Code Section 21658 prohibits structural hazards associated with utility poles and power lines near airports. Due to the proximity of the transmission line to Kingdon Airpark, a Notice of Proposed Construction or Alteration (Form 7460-1) will be required by the Federal Aviation Administration (FAA) in accordance with Federal Aviation Regulation, Part 77 "Objects Affecting Navigable Airspace." Form 7460-1 is available on-line at <https://oeaaa.faa.gov/oeaaa/external/portal.jsp> and should be submitted electronically to the FAA.

In Chapter 2, Project Description, the Notice of Preparation states that there are "two small private airports" within the project area. Please note, Kingdon Airport and Lodi Airpark, which is located at the southwest corner of the intersection of North Lower Sacramento Road and Armstrong Road, are both public use airports.

The proposal should be submitted to the San Joaquin Council of Governments, which represents the Airport Land Use Commission (ALUC) for a consistency determination.

We recommend that construction activities also be coordinated with the Kingdon Airpark manager, Mr. Amrit Grewal, at (209) 334-2961 to ensure that appropriate action, such as, Notice to Airmen (NOTAM), are publicized sufficiently in advance.

These comments reflect the areas of concern to the Division of Aeronautics with respect to airport-related noise, safety, and regional land use planning issues. We advise you to contact our District 10

Mr. Konradt Bartlam  
February 24, 2010  
Page 2

office concerning surface transportation issues.

Thank you for the opportunity to review and comment on this proposal. If you have any questions, please call me at (916) 654-5314 or by email at [sandy.hesnard@dot.ca.gov](mailto:sandy.hesnard@dot.ca.gov).

Sincerely,

A handwritten signature in cursive script that reads "Sandy Hesnard".

SANDY HESNARD  
Aviation Environmental Specialist

c: State Clearinghouse, Kingdon Airpark, San Joaquin County ALUC

**DEPARTMENT OF TRANSPORTATION**

P.O. BOX 2048 STOCKTON, CA 95201  
(1976 E. CHARTER WAY/1976 E. DR. MARTIN  
LUTHER KING JR. BLVD. 95205)  
TTY: California Relay Service (800) 735-2929  
PHONE (209) 941-1921  
FAX (209) 948-7194



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March 1, 2010

**10-SJ-Various  
SCH# 2010022012  
Lodi West 60kV Power  
Line Project**

Konradt Bartlam  
City of Lodi  
Planning Division  
221 West Pine Street  
Lodi, CA 95241-1910

Dear Mr. Bartlam:

The California Department of Transportation (Department) appreciates the opportunity to have reviewed the Notice of Preparation (NOP) for the proposed Lodi West 60kV Power Line Project. The Department has the following comment(s):

We have no comments concerning surface transportation issues at this time.

The Department sent this to the Division of Aeronautics for review and comment.

If you have any questions or would like to discuss our comments in more detail, please contact Kathy Selsor at (209) 948-7190 (e-mail: [kathy\\_selsor@dot.ca.gov](mailto:kathy_selsor@dot.ca.gov)) or me at (209) 941-1921.

Sincerely,

A handwritten signature in cursive script that reads "Kathy Selsor for".

TOM DUMAS, CHIEF  
OFFICE OF METROPOLITAN PLANNING

c: SMorgan State Clearinghouse



## S J C O G , I n c .

555 East Weber Avenue • Stockton, CA 95202 • (209) 235-0600 • FAX (209) 235-0438

*San Joaquin County Multi-Species Habitat Conservation & Open Space Plan (SJMSCP)*

### **SJMSCP RESPONSE TO LOCAL JURISDICTION (RTL) ADVISORY AGENCY NOTICE TO SJCOG, Inc.**

**RECEIVED**

MAR 01 2010

COMMUNITY DEVELOPMENT DEP  
CITY OF LODI

**To:** Konradt Bartlam, Interim Director of Community Development, City of Lodi

**From:** Anne-Marie Poggio, Regional Habitat Planner, SJCOG, Inc.

**Date:** February 24, 2010

**Local Jurisdiction Project Title:** Lodi West 60kV Power Line Project

**Total Acres to be converted from Open Space Use:** Undetermined

**Habitat Types to be Disturbed:** Agriculture and Urban Habitat Land

**Species Impact Findings:** Findings to be determined by SJMSCP biologist.

---

Dear Mr. Bartlam:

SJCOG, Inc. has reviewed the Lodi West 60kV Power Line Project. This project consists of the construction and operation of a planned 60kV power line by the City of Lodi Electrical Utility Department. The line would connect the City's future Westside Substation with electric supply from major statewide transmission lines that parallel the west side of I-5, south of Highway 12. This tie-in will occur inside the existing Northern California Power Agency Facilities near the City's White Slough Water Pollution Control Plant located west of I-5.

The majority of the proposed power lines will be constructed with wooden poles. Approximately 13 steel poles will be used at main angle points and at critical crossing locations such as roadways and/or drainage ways.

The proposed linear project will connect to the future Westside Substation site, located on the southwest corner of Kettleman Lane and future Westgate Drive in the City of Lodi. The project traverses west across unincorporated territory and will terminate inside the existing NCPA facility. Except for privately held land near the future Westside substation and along the east side of I-5, the project would be located within the following road rights-of-ways; Harney Lane, DeVries Road, Treadway Road, Neeley Road, Kingdom Road, and Thorton Road.

The City of Lodi is a signatory to San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP). Participation in the SJMSCP satisfies requirements of both the state and federal endangered species acts, and ensures that the impacts are mitigated below a level of significance in compliance with the California Environmental Quality Act (CEQA). The LOCAL JURISDICTION retains responsibility for ensuring that the appropriate Incidental Take Minimization Measure are properly implemented and monitored and that appropriate fees are paid in compliance with the SJMSCP. Although participation in the SJMSCP is voluntary, Local Jurisdiction/Lead Agencies should be aware that if project applicants choose against participating in the SJMSCP, they will be required to provide alternative mitigation in an amount and kind equal to that provided in the SJMSCP.

It should be noted that two important federal agencies (U.S. Army Corps of Engineers and the California Regional Water Quality Control Board) have not issued permits to the SJCOG and so payment of the fee to use the SJMSCP will not modify requirements that could be imposed by these two agencies. Potential waters of the United States [pursuant to Section 404 Clean Water Act] are believed to occur on the project site. It may be prudent to obtain a preliminary wetlands map from a qualified consultant. If waters of the United States are confirmed on the project site, the Corps and the Regional Water Quality Control Board (RWQCB) would have regulatory authority over those mapped areas [pursuant to Section 404 and 401 of the Clean Water Act respectively] and permits would be required from each of these resource agencies prior to grading the project site.

***This Project is subject to the SJMSCP*** and is located within the unmapped land use area. Per the requirements of the SJMSCP, unmapped projects are subject to case-by-case review. The project may also need to seek coverage due to required Army Corp permitting and Section 7 consultation. These types of projects are also subject to a case-by-case review. This can be a 90 day process and it is recommended that the project applicant contact SJMSCP staff as early as possible. It is also recommended that the project applicant obtain an information package. <http://www.sjco.org>

After this project is approved by the Habitat Technical Advisory Committee and the SJCOG Inc. Board, the following process must occur to participate in the SJMSCP:

- Schedule a SJMSCP Biologist to perform a pre-construction survey ***prior to any ground disturbance***
- Sign and Return Incidental Take Minimization Measures to SJMSCP staff (given to project applicant after pre-construction survey is completed)
- Pay appropriate fee based on SJMSCP findings. **Fees shall be paid in the amount in effect at the time of issuance of Building Permit**
- Receive your Certificate of Payment and release the required permit

If you have any questions, please call (209) 235-0600.



March 4, 2010

**RECEIVED**

MAR 09 2010

City of Lodi  
Community Development Dept.  
221 W. Pine Street  
Lodi, CA 95241

COMMUNITY DEVELOPMENT DEPT  
CITY OF LODI

**Project: Lodi West 60kV Power Line Project**  
**District CEQA Reference No: 20100066**

To Whom It May Concern:

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the Notice of Preparation (NOP) for the project identified above. The proposed project includes the construction and operation of 7.5 miles of power line, connecting the City's Westside substation to the existing Northern California Power Agency facilities. The District offers the following comments:

**District Comments**

- 1) The District recommends that any preliminary and final environmental review of the project's potential impact on air quality include the following:
  - 1a) A description of the regulatory environment and existing air quality conditions impacting the area. Information on the District's attainment status can be found on the District's web page at <http://valleyair.org/aqinfo/attainment.htm>.
  - 1b) A description of the project, including a discussion of existing and post-project emissions.
    - i) The discussion should include emissions from short-term activities such as construction, and emissions from long-term activities, such as operational, and area wide emission sources. Emissions from permitted (stationary sources) and non-permitted (mobile sources) sources should be analyzed separately. The project should be considered to have a significant adverse impact on air quality if emissions from either source exceed the following amounts: 10 tons per year of oxides of nitrogen (NOx), 10 tons per year of

Seyed Sadredin  
Executive Director/Air Pollution Control Officer

Northern Region  
4800 Enterprise Way  
Modesto, CA 95356-8718  
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)  
1990 E. Gettysburg Avenue  
Fresno, CA 93726-0244  
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region  
34946 Flyover Court  
Bakersfield, CA 93308-9725  
Tel: 661-392-5500 FAX: 661-392-5585

reactive organic gases (ROG), or 15 tons per year particulate matter of 10 microns or less in size (PM10).

- ii) A discussion of whether the project would result in a cumulatively considerable net increase of any criteria pollutant or precursor for which the San Joaquin Valley Air Basin is in non-attainment.
- 3) A discussion of the methodology, model assumptions, inputs and results used in characterizing the project's impact on air quality.
- 4) A discussion of all existing District regulations that apply to the project.
- 5) A discussion of all feasible measures that will reduce air quality impacts.
- 6) Based on information provided, the proposed project is subject to District Rule 9510 (Indirect Source Review). District Rule 9510 is intended to mitigate a project's impact on air quality through project design elements or by payment of applicable off-site mitigation fees. Any applicant subject to District Rule 9510 is required to submit an Air Impact Assessment (AIA) application to the District no later than applying for final discretionary approval, and to pay any applicable off-site mitigation fees before issuance of the first building permit. If approval of the subject project constitutes the last discretionary approval by your agency, the District recommends that demonstration of compliance with District Rule 9510, including payment of all applicable fees before issuance of the first building permit, be made a condition of project approval. Information about how to comply with District Rule 9510 can be found online at: <http://www.valleyair.org/ISR/ISRHome.htm>.
- 7) The proposed project may be subject to District Rules and Regulations, including: Regulation VIII (Fugitive PM10 Prohibitions), Rule 4102 (Nuisance), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). The above list of rules is neither exhaustive nor exclusive. To identify other District rules or regulations that apply to this project or to obtain information about District permit requirements, the applicant is strongly encouraged to contact the District's Small Business Assistance Office at (209) 557-6446. Current District rules can be found online at: [www.valleyair.org/rules/1ruleslist.htm](http://www.valleyair.org/rules/1ruleslist.htm).

If you have any questions or require further information, please call Jessica Willis at (559) 230-5818.

Sincerely,

David Warner  
Director of Permit Services



for Arnaud Marjollet  
Permit Services Manager

DW:jw

APPENDIX B  
BIOLOGY

# MOORE BIOLOGICAL CONSULTANTS

April 27, 2010

Mr. Trevor Smith  
InSite Environmental  
6653 Embarcadero Dr., Ste. Q  
Stockton, CA 95219

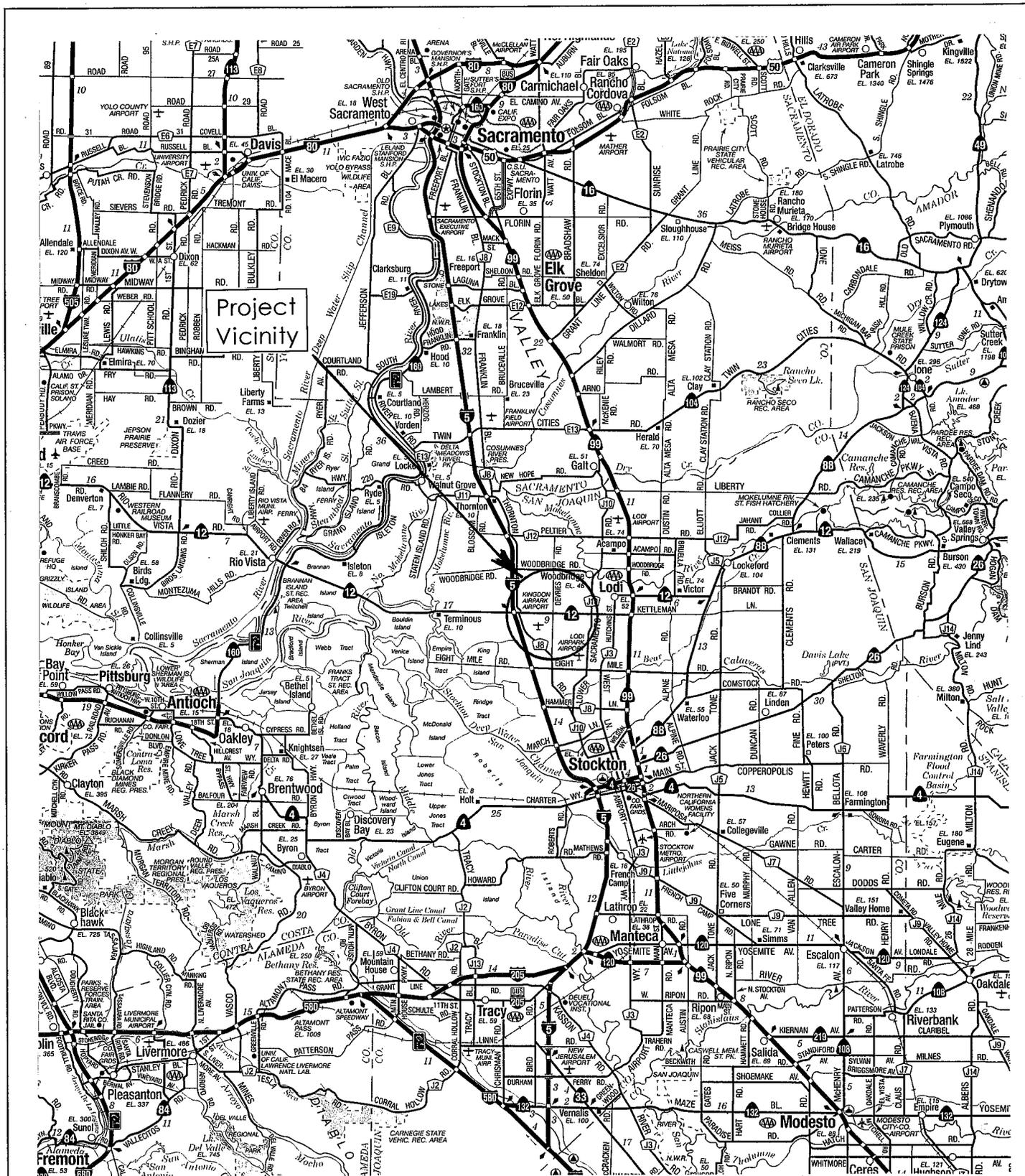
SUBJECT: LODI WEST 60-kV TRANSMISSION PROJECT: BASELINE  
BIOLOGICAL RESOURCES ASSESSMENT

Dear Trevor:

Thank you for asking Moore Biological Consultants to conduct a baseline biological resources assessment of the Lodi West 60-kV transmission line project (Figures 1 and 2). The focus of our work was to document existing biological resources along the proposed alignment, conduct a survey to determine presence or absence of waters of the U.S. and wetlands, and search for suitable habitat for or presence of special-status species along the proposed alignment. This letter report details the methodology and results of our investigation.

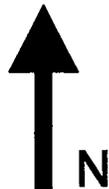
## **Methods:**

Prior to the field surveys, we conducted a search of California Department of Fish and Game's (CDFG) California Natural Diversity Database (CNDDB, 2010). This information was used to identify species that have been previously documented in the greater project vicinity or have the potential to occur based on presence of suitable habitat and geographical distribution. Since the proposed alignment is in



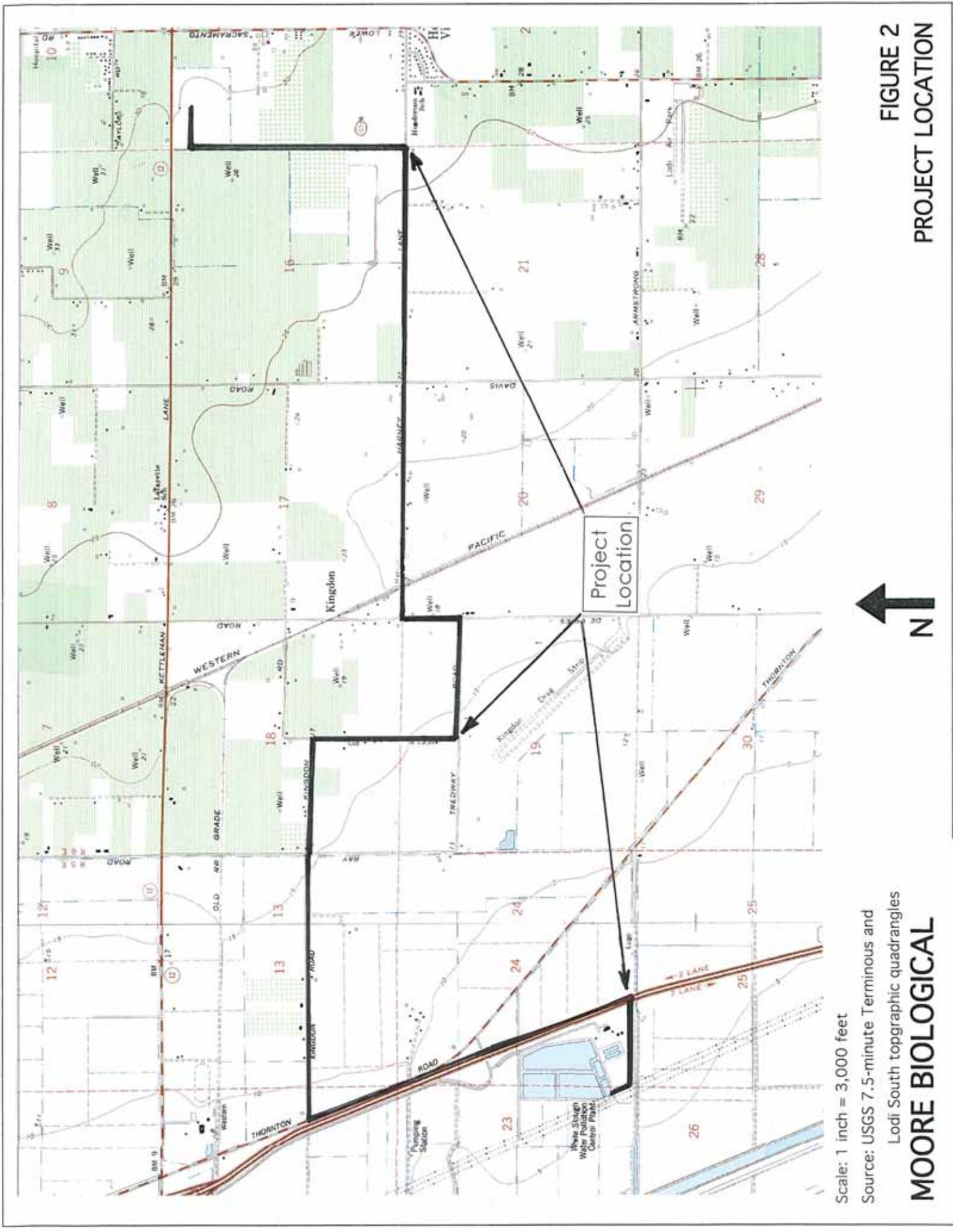
Scale: 1 inch = 9 miles

Source: Calif. State Automobile Association



**MOORE BIOLOGICAL**

**FIGURE 1  
PROJECT VICINITY**



Scale: 1 inch = 3,000 feet

Source: USGS 7.5-minute Terminous and

Lodi South topographic quadrangles

**MOORE BIOLOGICAL**



**FIGURE 2**  
**PROJECT LOCATION**

the north part of the USGS 7.5-minute Lodi South and Terminous topographic quadrangles, the CNDDDB search area encompassed these quadrangles, and the Thornton and Lodi North quadrangles, which are situated to the north. This CNDDDB search area is approximately 240 square miles surrounding the project area.

Field surveys were conducted on December 15 and 17, 2009, and January 5 and March 19, 2010. The surveys consisted of driving and walking along the proposed alignment, making observations and noting habitat conditions, surrounding land uses, and plant and wildlife species. The fieldwork included an assessment of potentially jurisdictional Waters of the U.S. and wetlands as defined by the U.S. Army Corps of Engineers (ACOE, 1987; 2008), and a search for special-status species and suitable habitat for special-status species (e.g., blue elderberry shrubs, vernal pools). Additionally, trees along the alignment were assessed for the potential use by nesting raptors, especially Swainson's hawk (*Buteo swainsoni*), and burrows along the alignment were inspected for evidence of burrowing owl (*Athene cunicularia*) occupancy.

## **Results:**

**GENERAL SETTING:** The project area is located in west Lodi, San Joaquin County, California (Figure 1). The proposed alignment is in Sections 15, 16, 17, 18, and 19 in Township 3 North, Range 6 East and in Sections 13, 14, 23, and 24 in Township 3 North, Range 5 East of the USGS 7.5-minute Lodi South and Terminous topographic quadrangles (Figure 2). The project area is essentially level and is at elevations of approximately 5 to 30 feet above mean sea level.

**VEGETATION:** The proposed alignment follows roads for most of its length (see attached photographs). Habitats along the proposed alignment are primarily highly disturbed agricultural lands. Virtually all of the parcels along the proposed alignment are farmed in alfalfa, vineyard, or almond and fruit orchards.

The orchard floors, vineyard edges, road shoulders, and other ruderal areas along the proposed alignment are vegetated with various native and non-native annual grass and weed species. Grasses including oats (*Avena* sp.), soft chess brome (*Bromus hordeaceus*), ripgut brome (*B. diandrus*), foxtail barley (*Hordeum murinum*), annual bluegrass (*Poa annua*) Bermuda grass (*Cynodon dactylon*), and perennial ryegrass (*Lolium perenne*) are dominant grass species in these areas. Other grassland species such as fiddleneck (*Amsinckia menziesii*), black mustard (*Brassica nigra*), bull thistle (*Cirsium vulgare*), prickly lettuce (*Lactuca serriola*), pigweed (*Amaranthus albus*), dove weed (*Eremocarpus setigerus*), common mallow (*Malva neglecta*), and filaree (*Erodium botrys*) are intermixed with the grasses. Table 1 is a list of plant species observed along the proposed alignment.

Beyond the orchards, trees along the proposed alignment include blue gum (*Eucalyptus* sp.), willows (*Salix* spp.), Fremont cottonwood (*Populus fremontii*), olive (*Olea europaea*), valley oak (*Quercus lobata*), mulberry (*Morus alba*), black locust (*Robinia pseudoacacia*), and a number of other ornamentals. Very few of these trees appear to be in potential conflict with some of the new poles and lines.

No blue elderberry (*Sambucus mexicana*) shrubs were observed within or adjacent to the proposed alignment.

**WILDLIFE:** A variety of wildlife species were observed along the proposed alignment. Some of the more common birds observed include red-tailed hawk (*Buteo jamaicensis*), mourning dove (*Zenaida macroura*), western scrub jay (*Aphelocoma coerulescens*), American crow (*Corvus brachyrhynchos*), yellow-billed magpie (*Pica nuttalli*), northern mockingbird (*Mimus polyglottos*), white-crowned sparrow (*Zonotrichia leucophrys*), and house finch (*Carpodacus mexicanus*). All of these are species commonly found in agricultural areas in the greater project vicinity (Table 2).

TABLE 1  
 PLANT SPECIES OBSERVED ALONG THE PROPOSED ALIGNMENT

---

<i>Amsinckia menziesii</i>	fiddleneck
<i>Avena sp.</i>	oat
<i>Brassica nigra</i>	black mustard
<i>Bromus diandrus</i>	ripgut brome
<i>Bromus hordeaceus</i>	soft-chess brome
<i>Capsella bursa-pastoris</i>	shepherd's purse
<i>Carduus pycnocephalus</i>	Italian thistle
<i>Centaurea solstitialis</i>	yellow star-thistle
<i>Chamomilla suaveolens</i>	pineapple weed
<i>Cirsium vulgare</i>	bull thistle
<i>Conium maculatum</i>	poison hemlock
<i>Conyza canadensis</i>	horseweed
<i>Cynodon dactylon</i>	Bermuda grass
<i>Distichlis spicata</i>	salt grass
<i>Eremocarpus setigerus</i>	dove weed
<i>Erodium botrys</i>	filaree
<i>Eucalyptus globulus</i>	blue gum
<i>Geranium dissectum</i>	cut-leaf geranium
<i>Grindelia camporum</i>	gumplant
<i>Hordeum marinum</i>	Mediterranean barley
<i>Hordeum murinum</i>	foxtail barley
<i>Juglans californica</i>	black walnut
<i>Lactuca serriola</i>	prickly lettuce
<i>Lolium perenne</i>	perennial ryegrass
<i>Malva neglecta</i>	common mallow
<i>Medicago sativa</i>	alfalfa
<i>Montia perfoliata</i>	miner's lettuce

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TABLE 1 (continued)  
 PLANT SPECIES OBSERVED ALONG THE PROPOSED ALIGNMENT

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<i>Morus alba</i>	mulberry
<i>Olea europaea</i>	olive
<i>Plantago</i> sp.	plantain
<i>Poa annua</i>	annual bluegrass
<i>Populus fremontii</i>	Freemont cottonwood
<i>Prunus dulcis</i>	almond
<i>Quercus lobata</i>	valley oak
<i>Raphanus sativus</i>	wild radish
<i>Robinia pseudoacacia</i>	black locust
<i>Rubus discolor</i>	Himalayan blackberry
<i>Rumex crispus</i>	curly dock
<i>Salix</i> sp.	willow
<i>Salsola iberica</i>	Russian thistle
<i>Scirpus acutus</i>	tule
<i>Silybum marianum</i>	milk thistle
<i>Typha</i> sp.	cattail
<i>Urtica dioica</i>	stinging nettle
<i>Verbena hastata</i>	verbena
<i>Vicia</i> sp,	vetch

---

There are a number of relatively large trees along the proposed alignment that are suitable for nesting raptors and other protected migratory birds, including Swainson's hawk. The final survey was conducted in the very early part of the avian nesting season and no active raptor nests were observed. However, there are some notable raptor stick nests in some large oaks and willows near Interstate 5 and both Swainson's hawks and red-tailed hawks were observed soaring and perching on poles and trees in the area. It is likely one or more of

TABLE 2  
WILDLIFE SPECIES OBSERVED ALONG THE PROPOSED ALIGNMENT

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**Birds**

Great blue heron	<i>Ardea herodias</i>
Great egret	<i>Casmerodius albus</i>
Canada goose	<i>Branta canadensis</i>
Northern shoveler	<i>Anas clypeata</i>
Turkey vulture	<i>Cathartes aura</i>
Swainson's hawk	<i>Buteo swainsoni</i>
Red-tailed hawk	<i>Buteo jamaicensis</i>
American kestrel	<i>Falco sparverius</i>
California gull	<i>Larus californicus</i>
Killdeer	<i>Charadrius vociferous</i>
American avocet	<i>Recurvirostra americana</i>
Black-necked stilt	<i>Himantopus mexicanus</i>
Mourning dove	<i>Zenaida macroura</i>
Belted kingfisher	<i>Ceryle alcyon</i>
Black phoebe	<i>Sayornis nigricans</i>
Western scrub jay	<i>Aphelocoma coerulescens</i>
Yellow-billed magpie	<i>Pica nuttalli</i>
American crow	<i>Corvus brachyrhynchos</i>
American robin	<i>Turdus migratorius</i>
White-crowned sparrow	<i>Zonotrichia leucophrys</i>
Red-winged blackbird	<i>Agelaius phoeniceus</i>
Western meadowlark	<i>Sturnella neglecta</i>
Brewer's blackbird	<i>Euphagus cyanocephalus</i>
House finch	<i>Carpodacus mexicanus</i>

**Mammals**

California ground squirrel	<i>Spermophilus beecheyi</i>
Raccoon	<i>Procyon lotor</i>

these nests have been used by nesting Swainson's hawks in the past. There are also a number of large eucalyptus and other ornamentals throughout the project area that could support nesting raptors. Given the presence of trees along the proposed alignment and raptor foraging habitat (i.e., open fields) near the proposed alignment, it is likely one or more pairs of raptors, plus a variety of songbirds, nest along one or more of the proposed alignment each year.

A limited variety of mammals common to agricultural and semi-rural areas are expected to use habitats along the proposed alignment. A few California ground squirrels (*Spermophilus beecheyi*) and sign of raccoon (*Procyon lotor*) were observed along the proposed alignment. Coyote (*Canis latrans*), black-tailed hare (*Lepus californicus*), striped skunk (*Mephitis mephitis*), and Virginia opossum (*Didelphis virginiana*) are expected to occur in the area. A number of species of small rodents including mice (*Mus musculus*, *Reithrodontomys megalotis*, and *Peromyscus maniculatus*) and voles (*Microtus californicus*) also likely occur.

Based on habitat types present, only a few amphibian and reptile species are expected to use habitats along the proposed alignment. Although none were observed, western fence lizard (*Sceloporus occidentalis*), Pacific chorus frog (*Pseudacris regilla*), western toad (*Bufo boreas*), coast horned lizard (*Phrynosoma coronatum*), gopher snake (*Pituophis melanoleucus*), common king snake (*Lampropeltis getulus*), and common garter snake (*Thamnophis sirtalis*) are expected to occur in the area.

WATERS OF THE U.S. AND WETLANDS: Waters of the U.S., including wetlands, are broadly defined under 33 Code of Federal Regulations (CFR) 328 to include navigable waterways, many of their tributaries, and adjacent wetlands. State and federal agencies regulate these habitats and Section 404 of the Clean Water Act requires that a permit be secured prior to the discharge of dredged or fill materials into waters of the U.S. Both CDFG and ACOE have jurisdiction over modifications to riverbanks, lakes, stream channels and other wetland features.

Although definitions vary to some degree, wetlands are generally considered to be areas that are periodically or permanently inundated by surface or ground water, and support vegetation adapted to life in saturated soil. Jurisdictional wetlands are vegetated areas that meet specific vegetation, soil, and hydrologic criteria defined by the ACOE *Wetlands Delineation Manual* (ACOE, 1987). Waters of the U.S. are drainage features or water bodies as described in 33 CFR 328.4. Currently, ACOE and the U.S. Environmental Protection Agency (EPA) share authority to determine the jurisdictional status of waters of the U.S., including wetlands.

Jurisdictional wetlands and Waters of the U.S. include, but are not limited to, perennial and intermittent creeks and drainages, lakes, seeps, and springs; emergent marshes; riparian wetlands; and seasonal wetlands. Wetlands and Waters of the U.S. provide critical habitat components, such as nest sites and a reliable source of water, for a wide variety of wildlife species.

Potentially jurisdictional waters of the U.S. along the proposed alignment include irrigation laterals and ditches, minor roadside ditches, and a relatively large ditch that is tributary to White Slough. There are also seasonal wetlands in a soil borrow area adjacent to Interstate 5 and some low areas supporting wetlands near the power plant (west end of the proposed alignment).

The proposed alignment crosses over a number of irrigation laterals and ditches, and then parallels the tributary to White Slough for 2,000+/- feet. Review of USGS topographic maps (Figure 2) reveals that the network of irrigation laterals in the project vicinity is mapped as intermittent "blue-line" streams. These laterals and ditches return excess water back to the San Joaquin River delta. The San Joaquin River is a jurisdictional water of the U.S. and the hydrologic relationship of the irrigation laterals and ditches with the San Joaquin River would likely lead to a jurisdictional determination by ACOE.

of irrigation laterals in the project vicinity is mapped as intermittent "blue-line" streams. These irrigation laterals and ditches return excess water back to the San Joaquin River delta and the hydrologic relationship of the irrigation laterals and ditches with the delta would likely lead to a jurisdictional determination by ACOE.

To the north and south of the Interstate 5 Frontage Road under-crossing of Interstate 5, there are seasonal wetlands in soil borrow areas adjacent to the elevated freeway (see attached photograph). In this area, the proposed alignment follows a fence line along the east edge of the soil borrow areas. The wetlands do not appear to pond water, but remain saturated long enough in the winter and spring to support hydrophytic vegetation. Due to hydrologic isolation from jurisdictional water of the U.S., it is considered unlikely ACOE would assert jurisdiction over the seasonal wetlands in these soil borrow areas.

Finally, there are some ditches and low areas supporting wetlands in the vicinity of the entrance to the power plant (west end of the proposed alignment) that appear to have been excavated during construction of roads, the power plant, and the substation. The proposed alignment is in upland grasslands and/or along the edge of a dirt road just north of the channelized tributary to White Slough and will not encroach into any of these ditches and low areas supporting wetlands.

No other areas were observed along the proposed alignment appearing to have any potential to fall under ACOE jurisdiction. Specifically, no vernal pools, seasonal wetlands, marshes, ponds, or lakes of any type were observed along the alignment. The minor roadside drainage ditches and agricultural tailwater return ponds in parcels along the proposed alignment do not meet the technical or regulatory criteria of jurisdictional Waters of the U.S. or wetlands.

**SPECIAL-STATUS SPECIES:** Special-status species are plants and animals that are legally protected under the state and/or federal Endangered Species Act or other

regulations. The Federal Endangered Species Act (FESA) of 1973 declares that all federal departments and agencies shall utilize their authority to conserve endangered and threatened plant and animal species. The California Endangered Species Act (CESA) of 1984 parallels the policies of FESA and pertains to native California species. Both FESA and CESA prohibit unauthorized “take” (i.e., killing) of listed species, with take broadly defined in both acts to include activities such as harassment, pursuit and possession.

Special-status wildlife species also includes species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat. The federal Migratory Bird Treaty Act and Fish and Game Code of California protect special-status bird species year-round, as well as their eggs and nests during the nesting season. Fish and Game Code of California also provides protection for mammals and fish.

Special-status plants include species which are designated rare, threatened, or endangered and candidate species for listing by the U.S. Fish and Wildlife Service (USFWS). Special-status plants also include species considered rare or endangered under the conditions of Section 15380 of the California Environmental Quality Act (CEQA) Guidelines, such as those plant species identified on Lists 1A, 1B and 2 in the Inventory of Rare and Endangered Vascular Plants of California by the California Native Plant Society (CNPS, 2001). Finally, sensitive plants may include other species that are considered sensitive or of special concern due to limited distribution or lack of adequate information to permit listing or rejection for state or federal status, such as those included on List 3 in the CNPS Inventory.

Table 3 provides a summary of the listing status and habitat requirements of special-status plant and wildlife species that have been documented in the greater project vicinity or for which there is potentially suitable habitat along the

**From:** Diane Moore <moorebio@softcom.net>  
**Subject:** **Re: Lathrop proposal**  
**Date:** April 28, 2010 11:15:02 AM PDT  
**To:** Vicki Jordan <vjordan@insite-env.com>  
 1 Attachment, 0.3 KB

yes - got them both

On Apr 28, 2010, at 11:09 AM, Vicki Jordan wrote:

All,

Did you get both emails with all attachments? Let me know if you did not. Trevor says he will need some text from you to indicate what you will be doing, so I will need something more than just a figure to put in the proposal, which I originally thought. So if you could send me a written proposal outlining what you would be doing with the proposed amount, I would be most appreciative.

Thanks,

Vicki



[vjordan.vcf \(0.3 KB\)](#)

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status <sup>1</sup>	State Status <sup>2</sup>	CNPS List <sup>3</sup>	Habitat	Likelihood of occurrence along the proposed alignment
<b>PLANTS</b>						
Rose-mallow	<i>Hibiscus lasiocarpus</i>	None	None	2	Freshwater marshes and swamps; blooms August-September.	Unlikely: there is no suitable marsh or swamp habitat for rose-mallow along the proposed alignment. The nearest occurrence of rose-mallow in the CNDDDB (2010) search area is approximately 1 mile west of the proposed alignment.
Delta tulle pea	<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	None	None	1B	Freshwater and brackish marshes, usually along the edges; blooms May-September.	Unlikely: there is no suitable marsh or swamp habitat for Delta tulle pea along the proposed alignment. The nearest occurrence of Delta tulle pea in the CNDDDB (2010) search area is approximately 3 miles northwest of the proposed alignment.
Legenere	<i>Legenere limosa</i>	None	None	1B	Vernal pools; blooms April – June.	Unlikely: there is no suitable vernal pool habitat for legenere along the proposed alignment. The nearest occurrence of legenere in the CNDDDB (2010) search area is approximately 8 miles north of the proposed alignment.
Mason's lilaepsis	<i>Lilaepsis masonii</i>	None	R	1B	Freshwater and brackish marshes, riparian scrub; blooms April - November.	Unlikely: there is no suitable marsh habitat for Mason's lilaepsis along the proposed alignment. The nearest occurrence of Mason's lilaepsis in the CNDDDB (2010) search area is approximately 6 miles northwest of the proposed alignment.
Delta mudwort	<i>Limosella subulata</i>	None	None	2	Marshes and swamps.	Unlikely: there is no suitable marsh or swamp habitat for Delta mudwort along the proposed alignment. The nearest occurrence of Delta mudwort in the CNDDDB (2010) search area is approximately 7 miles northwest of the proposed alignment.

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status <sup>1</sup>	State Status <sup>2</sup>	CNPS List <sup>3</sup>	Habitat	Likelihood of occurrence along the proposed alignment
Blue skullcap	<i>Scutellaria lateriflora</i>	None	None	2	Marshes and swamps.	Unlikely: there is no suitable marsh or swamp habitat for blue skullcap along the proposed alignment. The nearest occurrence of blue skullcap in the CNDDDB (2010) search area is approximately 7 miles west of the proposed alignment.
Suisun marsh aster	<i>Symphotrichum lentum</i>	None	None	1B	Marshes and swamps.	Unlikely: there is no suitable marsh or swamp habitat for Suisun marsh aster along the proposed alignment. The nearest occurrence of Suisun marsh aster in the CNDDDB (2010) search area is approximately 4 miles west of the proposed alignment.
<b>WILDLIFE</b>						
Burrowing owl	<i>Athene cunicularia</i>	None	SC	N/A	Open, dry grasslands, deserts and scrublands characterized by low-growing vegetation.	Low: there are very few ground squirrels and ground squirrel burrows along the proposed alignment. No burrowing owls or evidence of occupancy were found during the 2010 survey. The nearest occurrence of nesting burrowing owls in the CNDDDB (2010) search area is approximately 4 miles south of the proposed alignment.
Swainson's hawk	<i>Buteo swainsoni</i>	None	T	N/A	Nesting: large trees, usually within riparian corridors. Foraging: agricultural fields and annual grasslands.	Moderate: there are a few suitable nest trees along and near the proposed alignment. The open grassland, alfalfa, and other cropland near these trees provide high-quality Swainson's hawk foraging habitat and increases the suitability of the trees in the area being used for nesting. There are numerous occurrence of nesting Swainson's hawks in the CNDDDB (2010) search area, including one occurrence right along the proposed alignment on Kingdon Road.

TABLE 3

## SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status <sup>1</sup>	State Status <sup>2</sup>	CNPS List <sup>3</sup>	Habitat	Likelihood of occurrence along the proposed alignment
Tricolored blackbird	<i>Agelaius tricolor</i>	None	SC	N/A	Requires open water and protected nesting substrate, usually cattails and riparian scrub with surrounding foraging habitat.	Moderate: blackberry brambles and marsh vegetation associated with wetlands in the vicinity of the west end of the proposed alignment are suitable nesting habitat for this species. Grasslands along the proposed alignment are also suitable for foraging. There are two occurrences of nesting tricolored blackbirds in the CNDDDB (2010) search area, with the closest being approximately 8 miles northeast of the proposed alignment.
California black rail	<i>Laterallus jamaicensis coturniculus</i>	None	T	N/A	Salt marshes bordering larger bays.	Unlikely: there are no salt marshes along the proposed alignment. The nearest occurrence of California black rail in the CNDDDB (2010) search area is approximately 0.5 miles west of the west tip of the proposed alignment.
<b>Reptiles &amp; Amphibians</b>						
California tiger salamander	<i>Ambystoma californiense</i>	T	T	N/A	Seasonal water bodies without fish (i.e., vernal pools and stock ponds) near grassland/woodland habitats with summer refugia (i.e., burrows).	Unlikely: There is no suitable habitat along the proposed alignment for California tiger salamander. The only record of California tiger salamander documented in the CNDDDB (2010) within the 240+/- square-mile search area is an historical occurrence approximately 8 miles north of the proposed alignment in downtown Galt; this population is described as "extirpated" (i.e., no longer existent). The proposed alignment is not within designated critical habitat for California tiger salamander (USFWS, 2005a).

TABLE 3

## SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status <sup>1</sup>	State Status <sup>2</sup>	CNPS List <sup>3</sup>	Habitat	Likelihood of occurrence along the proposed alignment
Giant garter snake	<i>Thamnophis gigas</i>	T	T	N/A	Freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches.	Unlikely: while giant garter snake is known from Delta waterways just west of the west end of the proposed alignment, the upland habitats along the proposed alignment are unsuitable for this species. The closest occurrence of giant garter snake in the CNDDDB (2010) search area is approximately 1 mile northwest of the proposed alignment.
Foothill yellow-legged frog	<i>Rana boylei</i>	None	SC	N/A	Partly shaded, shallow streams with a rocky substrate in a variety of habitats.	Unlikely: there is no habitat for foothill yellow-legged frog along the proposed alignment. The nearest documented occurrence of this species is a 1958 record approximately 5 miles north of the proposed alignment (CNDDDB, 2010).
Western pond turtle	<i>Actinemys marmorata</i>	None	SC	N/A	Ponds, marshes, streams, and ditches with emergent aquatic vegetation and basking areas.	Unlikely: while western pond turtle is known from Delta waterways west of the west end of the proposed alignment, the upland habitats along the proposed alignment are unsuitable for this species. The closest occurrence of western pond turtle in the CNDDDB (2010) search area is approximately 1 mile west of the proposed alignment.
<b>Fish</b>						
Sacramento splittail	<i>Pogonichthys macrolepidotus</i>	None	SC	N/A	Lakes and rivers of the central valley.	Unlikely: there is no habitat for this species along the proposed alignment. The closest occurrence of Sacramento splittail is 3 miles north of the proposed alignment in the Mokelumne River (CNDDDB, 2010).

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status <sup>1</sup>	State Status <sup>2</sup>	CNPS List <sup>3</sup>	Habitat	Likelihood of occurrence along the proposed alignment
<b>Invertebrates</b>						
Vernal pool tadpole shrimp	<i>Lepidurus packardii</i>	E	None	N/A	Vernal pools	Unlikely: there are no vernal pools along the proposed alignment. The CNDDDB (2010) contains one record of vernal pool tadpole shrimp within the 240+/- square-mile search area, which is only generally mapped in the Lodi area. The proposed alignment is not within designated critical habitat for vernal pool species (USFWS 2005b).
Valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	T	None	N/A	Elderberry shrubs, usually in Central Valley riparian habitats	Unlikely: there are no blue elderberry shrubs along the proposed alignment. The nearest documented occurrence of valley elderberry longhorn beetle in the CNDDDB (2010) search area is approximately 10 miles northeast of the proposed alignment.

1 T = Threatened; E = Endangered.

2 T = Threatened; E = Endangered; SC= State of California Species of Special Concern.

3 CNPS List 1B includes species that are rare, threatened, or endangered in California and elsewhere; List 2 includes species that are rare, threatened, or endangered in California, but more common elsewhere.

proposed alignment. This table also includes an assessment of the likelihood of occurrence of each of these species along the proposed alignment. The evaluation of the potential for occurrence of each species is based on the distribution of regional occurrences (if any), habitat suitability, and field observations.

**SPECIAL-STATUS PLANTS:** Special-status plants identified in the CNDDDB (2010) query include rose-mallow (*Hibiscus lasiocarpus*), legenere (*Legenere limosa*), Delta tule pea (*Lathyrus jepsonii* var. *jepsonii*), Mason's lilaeopsis (*Lilaeopsis masonii*), delta mudwort (*Limosella subulata*), blue skullcap (*Scutellaria lateriflora*), and Suisun marsh aster (*Symphotrichum lentum*). All of the special-status plants found in the greater project vicinity generally occur in relatively undisturbed areas within vegetation communities such as vernal pools, marshes and swamps, and riparian scrub. None of these habitat types occur along the proposed alignment. Due to lack of suitable habitat, no special-status plant species are expected to occur along the proposed alignment.

**SPECIAL-STATUS WILDLIFE:** The potential for intensive use of habitats along the proposed alignment by special-status wildlife species is generally considered low. Sensitive wildlife species that have been recorded in greater project vicinity in the CNDDDB (2010) include Swainson's hawk, burrowing owl, tricolored blackbird (*Agelaius tricolor*), California black rail (*Laterallus jamaicensis coturniculus*), California tiger salamander (*Ambystoma californiense*), giant garter snake (*Thamnophis gigas*), foothill yellow-legged frog (*Rana boylei*), western pond turtle (*Actinemys marmorata*), Sacramento splittail (*Pogonichthys macrolepidotus*), vernal pool tadpole shrimp (*Lepidurus packardii*), and valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*).

While the proposed alignment and surrounding areas may have provided habitat for some of the special-status wildlife species listed in Table 3 at some time in the past, farming, development, and road and canal construction and maintenance along the proposed alignment and in surrounding parcels have

substantially modified natural habitats within the greater project vicinity. Of the wildlife species identified in the CNDDDB, Swainson's hawk, burrowing owl, and tricolored blackbird are the only species that have potential to occur along the proposed alignment on more than a transitory or very occasional basis. These species are discussed further below because they could be disturbed by construction if they nested along or near the proposed alignment during construction. Other special-status birds may fly over the area on occasion, but would not be expected to nest along the proposed alignment. There is no habitat along the proposed alignment for the remaining species in Table 3.

**SWAINSON'S HAWK:** The Swainson's hawk is a migratory hawk listed by the State of California as a Threatened species. The Migratory Bird Treaty Act and Fish and Game Code of California protect Swainson's hawks year-round, as well as their nests during the nesting season (March 1 through September 15). Swainson's hawk are found in the Central Valley primarily during their breeding season, a population is known to winter in the San Joaquin Valley.

Swainson's hawks prefer nesting sites that provide sweeping views of nearby foraging grounds consisting of grasslands, irrigated pasture, hay, and wheat crops. Most Swainson's hawks are migratory, wintering in Mexico and breeding in California and elsewhere in the western United States. This raptor generally arrives in the Central Valley in mid-March, and begins courtship and nest construction immediately upon arrival at the breeding sites. The young fledge in early July, and most Swainson's hawks leave their breeding territories by late August.

The CNDDDB (2010) contains several records of nesting Swainson's hawk in the greater project vicinity; the nearest occurrence of nesting Swainson's hawks in the CNDDDB is right along the proposed alignment on Kingdon Road, 0.5+/- miles west of Ray Road.

During the March 19, 2010 survey, a few Swainson's hawks were observed soaring and perching on poles and trees near Interstate 5. There are a few suitable nest trees along and near the proposed alignment and there are some notable raptor stick nests in some large oaks and willows near Interstate 5. Open grassland, alfalfa, and other cropland near these trees provide high-quality Swainson's hawk foraging habitat and increases the suitability of the trees in the area being used for nesting.

**BURROWING OWL:** The Migratory Bird Treaty Act and Fish and Game Code of California protect burrowing owls year-round, as well as their nests during the nesting season (February 1 through August 31). Burrowing owls are a year-long resident in a variety of grasslands as well as scrub lands that have a low density of trees and shrubs with low growing vegetation; burrowing owls that nest in the Central Valley may winter elsewhere.

The primary habitat requirement of the burrowing owl is small mammal burrows for nesting. The owl usually nests in abandoned ground squirrel burrows, although they have been known to dig their own burrows in softer soils. In urban areas, burrowing owls often utilize artificial burrows including pipes, culverts, and piles of concrete pieces. This semi-colonial owl breeds from March through August, and is most active while hunting during dawn and dusk. The nearest occurrence of nesting burrowing owls in the CNDDDB (2010) search area is approximately 4 miles south of the proposed alignment.

No burrowing owls were observed along the proposed alignment during the 2009 and 2010 surveys. There are a few areas of open grassland and cropland near the proposed alignment that could be used by foraging burrowing owls. A few suitable ground squirrel burrows were also observed along ditches, banks of irrigation laterals, and in some of the parcels adjacent to the proposed alignment. However, none of these burrows had any evidence of burrowing owl occupancy (i.e. whitewash, feathers and/or pellets). Despite these negative findings, burrowing owls could nest along or near the proposed alignment in the future.

**TRICOLORED BLACKBIRD:** The tricolored blackbird is a State of California Species of Concern and is also protected by the federal Migratory Bird Treaty Act. Tricolors are colonial nesters requiring very dense stands of emergent wetland vegetation and/or dense thickets of wild rose or blackberries adjacent to open water for nesting. This species is endemic to California. There are two occurrences of nesting tricolored blackbirds in the CNDDDB (2010) search area, with the closest being approximately 8 miles northeast of the proposed alignment.

No tricolored blackbirds were observed nesting, foraging or perching along the proposed alignment during the 2009 or 2010 surveys. The patches of blackberry brambles and marsh vegetation associated with wetlands in the vicinity of the west end of the proposed alignment provides potentially suitable nesting habitat for tricolored blackbird; open grassland and cropland in and near the proposed alignment may be used for foraging.

## **Conclusions:**

- The proposed alignment follow roads for most of its' length. All of the lands along the alignment are highly disturbed. Most of the habitats along the proposed alignment are biologically unremarkable.
- Potentially jurisdictional waters of the U.S. along the proposed alignment include irrigation laterals and ditches and a relatively large ditch that is tributary to White Slough. There are also seasonal wetlands in soil borrow areas adjacent to Interstate 5 and some ditches and other low areas supporting wetlands near the power plant. Beyond these features, no vernal pools, stock ponds, streams, lakes, or other potentially jurisdictional waters of the U.S. or wetlands of any kind were observed along the proposed alignment, The minor roadside drainage ditches and agricultural tailwater return ponds in

parcels along the proposed alignment do not meet the technical or regulatory criteria of jurisdictional Waters of the U.S. or wetlands.

- Potentially jurisdictional waters of the U.S. and wetlands should be avoided to the maximum extent practicable through thoughtful project design. This could be readily accomplished through placing the transmission poles outside potentially jurisdictional areas.
- If transmission poles must be placed within a potentially jurisdictional water of the U.S. or wetland, a wetland delineation would need to be conducted and submitted to ACOE to determine the jurisdictional or non-jurisdictional status of mapped features.
- If transmission poles or fill of any type is to be placed within a jurisdictional water of the U.S., or wetland, permits and/or certification would be required from ACOE and the Regional Water Quality Control Board. If transmission poles or fill of any type is to be placed within the relatively large ditch that is tributary to White Slough, CDFG should be notified as they may require a 1602 permit for that work.
- Due to a lack of suitable habitat, it is unlikely that special-status plants would occur along the proposed alignment.
- With the exception of Swainson's hawk, burrowing owl, and tricolored blackbird, no sensitive wildlife species are expected to occur along or near the proposed alignment on more than a very occasional or transitory basis. As the project is limited to installation of poles and does not involve conversion of habitat to development, there will not be a loss of potential or actual habitat of these species.

- Pre-construction surveys for nesting Swainson's hawks along the proposed alignment should be conducted if construction commences between March 1 and September 15. The surveys should include all large trees visible from the proposed alignment. If active nests are found, a qualified biologist should determine the need (if any) for temporal restrictions on construction.
- Pre-construction surveys for burrowing owls along the proposed alignment should be conducted if construction commences between February 1 and August 31. The surveys should include the ruderal areas along the roads that the proposed alignment follows, and all areas of open grassland visible from the proposed alignment. If occupied burrows are found, a qualified biologist should determine the need (if any) for temporal restrictions on construction.
- Pre-construction surveys for tricolored blackbird should be conducted if construction commences between March 15 and August 1. The survey should include the blackberry brambles and marsh vegetation associated with wetlands in the vicinity of the west end of the proposed alignment. If active tricolored blackbird nests are found, a qualified biologist should determine the need (if any) for temporal restrictions on construction.
- Trees along the proposed alignment could be used by nesting raptors and other protected birds. Any trees that need to be removed or trimmed to facilitate the project should be felled or trimmed outside of the general bird nesting season (February 1 through August 31) or a nesting bird survey should be conducted immediately prior to tree removal. If active nests are found, tree felling should be delayed until the young have fledged.

Thank you, again, for asking Moore Biological Consultants to assist with the project. Please feel free to call me at (209) 745-1159 with any questions.

Sincerely,



Diane S. Moore, M.S.  
Principal Biologist

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Vineyard on the north side of Harney Lane, looking west; 12/15/09.



Wheat field on the north side of Harney Lane, looking west; 12/15/09.



Roadside ditch and vineyard on the north side of Harney Lane, looking west; 12/15/09.



Tailwater return pond along the north side of Harney Lane, looking east; 12/15/09.



Bare disced field on the east side of DeVries Road, looking south; 12/15/09.



Alfalfa field on the north side of Tredway Road, looking west; 12/15/09.



Olive orchard and farm road on the south side of Kingdon Road, looking west; 12/15/09.



Ruderal grassland between Thornton Road and Interstate 5, looking south; 12/15/09.



Fenceline between disked field and soil borrow area adjacent to I-5, looking southeast; 12/17/09.



Dirt road between two ditches, just south of the power plant, looking west; 12/17/09.

APPENDIX C  
ARCHAEOLOGICAL INVENTORY SURVEY

## ARCHAEOLOGICAL INVENTORY SURVEY

**Lodi EUD Power Line Project,  
c. Seven-mile linear corridor,  
San Joaquin County, California.**

Prepared for

**Insite Environmental, Inc.**

6653 Embarcadero, Suite Q  
Stockton, California 95219

Author

**Sean Michael Jensen, M.A.**

**Keywords** *for Information Center Use:*

Archaeological Inventory Survey, c. seven-mile linear corridor, San Joaquin County, CEQA, USGS Lodi South and Terminous, Ca. 7.5' Quads., No Historic Resources.

February 14, 2010

## **INTRODUCTION**

### **Project Background**

This report details the results of an archaeological inventory survey for the proposed Lodi EUD Transmission Line Project involving a linear corridor of c. 20' in width and extending approximately seven miles in length, near Lodi, San Joaquin County, California. The proposed Power line route extends from the existing Northern California Power Agency facilities west of Interstate 5, easterly to the east side of Interstate 5, and then proceeding north along the eastern margin of Interstate 5 to Kingdon Road. From this point, the route extends easterly along the south side of Kingdon Road to Neeley Road. The route then proceeds south along the west side of Neeley Road to Tredway Road. From this point, the route proceeds easterly along the north side of Tredway Road to DeVries Road. The alignment then proceeds north along the west side of DeVries Road to Harney Lane. The proposed alignment then proceeds easterly along the north side of Harney Lane for approximately 2 miles to the west side of the City of Lodi's corporate boundary. From this point, the route proceeds due north for one mile to a point just south of Kettleman Lane (State Route 12). Finally, the route proceeds due east for approximately 1/4-mile to the future West Side Substation. Proposed action involves placement of a 60 kv power line along the length of the study/impact corridor.

Since the proposed project will involve physical disturbance to ground surface and sub-surface components, the potential exists to impact any cultural resources that may be located within the Area of Potential Effect (APE). In this case, the APE would consist of the approximate seven-mile linear corridor. Evaluation of the project's potential to impact significant cultural resources must be undertaken in conformity with San Joaquin County rules and regulations, and in compliance with requirements of the California Environmental Quality Act of 1970, Public Resources Code, Section 21000, et seq. (CEQA), and The California CEQA Environmental Quality Act Guidelines, California Administrative Code, Section 15000 et seq. (Guidelines as amended).

### **Scope of Work**

At the most general level, compliance with CEQA requires completion of projects in conformity with standards contained in Section 15064.5 of the CEQA Guidelines. Based on this and other relevant Sections of the Guidelines, the following specific tasks were considered an adequate and appropriate Scope of Work for the present project:

- Conduct a records search at the Central California Information Center of the California Historical Resources Information System at CSU-Stanislaus and consult with affected Native American representatives and the Native American Heritage Commission. Collectively, the goals of the records search and consultation are to determine (a) the extent and distribution of previous archaeological surveys, (b) the locations of known archaeological sites and any previously recorded archaeological districts, and (c) the relationships among known sites and environmental variables. This step is also designed to ensure that during pedestrian field survey, all cultural resources considered significant

or potentially significant per CEQA are discovered, correctly identified, and properly interpreted.

- Conduct a pedestrian field survey of the project area. Based on generally uniform terrain and archaeological sensitivity within the project area, complete-coverage, intensive-level coverage was considered appropriate. The purpose of the pedestrian survey is to ensure that any previously recorded sites that may have been identified during the records search and consultation are re-located and significance evaluations updated on the basis of existing field conditions vis-à-vis site integrity. For any previously undocumented sites discovered that retain sufficient integrity to be considered significant historical or unique archaeological resources, the field survey would involve formally recording these on State DPR-523 forms. For both previously identified and newly identified sites located within the APE, the level of field work would be sufficient to recommend measures to avoid, minimize or mitigate potential adverse effects of the proposed project to any cultural resources determined significant or potentially significant.
- Upon completion of the records search and pedestrian survey, prepare an Archaeological Survey Report that identifies project effects and recommends appropriate mitigation measures for sites found significant or potentially significant under CEQA and whose significant qualities would be impacted by the project.

The remainder of the present document constitutes the final report for this project, detailing the results of the records search, consultation and pedestrian survey and providing recommendations for treatment of significant or unique resources that could be impacted. All field survey procedures followed guidelines provided by the State Historic Preservation Office (Sacramento) and conform to accepted professional standards.

## Location and Cultural Context

The Lodi EUD Power Line Project consists of a linear power line corridor of c. 20' in width and extending approximately seven miles in length. The west end of the corridor originates at the existing Northern California Power Agency facilities west of Interstate 5, and proceeds easterly for approximately 7 miles to the City of Lodi's future West Side Substation.

Lands affected are located within a portion of Sections 13, 14, 23 & 24 of Township 3 North, Range 5 East, and portions of Sections 15, 16, 17 & 18 of Township 3 North, Range 6 East (MDM), as shown on the USGS Terminous and Lodi South, California, 7.5' series quads (see attached *Project Location Map*).

Much of this portion of the county has been subjected to historic ranching and farming, while the project area today consists of existing road rights-of-way flanked by agricultural and residential parcels. The western terminus of the corridor is situated adjacent to the City of Lodi's White Slough Water Pollution Control Plant. No natural sources of surface water are located within the study corridor.

Overall, but notwithstanding impacts to ground surface and subsurface components resulting from historic through contemporary agricultural/ranching and residential activities within and near the power line corridor, the project area appeared to be situated within lands of low to moderate archaeological sensitivity with respect to both prehistoric and historic-period sites and features.

**Prehistory:** The San Joaquin Valley area generally has a long and complex cultural history with distinct regional patterns that extends back more than 11,000 years. The first generally agreed-upon evidence for the presence of prehistoric peoples in the area is represented by the distinctive fluted spear points (e.g. Heizer 1938), some resembling Clovis Points, found on the margins of extinct lakes in the San Joaquin Valley. The Clovis points are found on the same surface with the bones of extinct animals such as mammoths, sloths, and camels. Based on evidence from elsewhere, the ancient hunters who used these spear points existed during a narrow time range between about 10,900 BP and 11,200 BP (Moratto 1984/2004).

The next cultural period represented, the Western Pluvial Lakes Tradition and thought by most to be subsequent to the Clovis period, is another widespread complex that is characterized by stemmed spear points. This poorly defined early cultural tradition is regionally known from a small number of sites in the Central Coast Range, San Joaquin Valley lake margins, and Sierra Nevada foothills. The cultural tradition is dated to between about 8,000 and 10,000 years ago and its practitioners may be the precursors to the subsequent cultural pattern (Wallace 1978c).

About 8,000 years ago, many California cultures shifted the main focus of their subsistence strategies from hunting to seed gathering as evidenced by the increase in food-grinding implements found in archeological sites dating to this period. This cultural pattern is best known for southern California, where it has been termed the Milling Stone Horizon (Wallace, 1954, 1978a). However, subsequent research suggests that the horizon may be more widespread than originally described and likely extended throughout the Valley (Moratto 1984/2004); radiocarbon dates suggest a maximum age range between about 8,000 and 2,000 BP, but with most clustering between about 6,000 to 4,000 BP.

Cultural patterns as reflected in the archeological record, particularly specialized subsistence practices, became codified within the last 3,000 years. The archeological record becomes more complex, as specialized adaptations to locally available resources were developed and populations expanded. Many sites dated to this time period contain mortars and pestles and/or are associated with bedrock mortars implying the intense exploitation of the acorn. The range of subsistence resources utilized along with regional exchange systems expanded significantly. Along the coast and in the Central Valley, archeological evidence of social stratification and craft specialization is indicated by well-made artifacts such as charmstones and beads, often found as mortuary items. Ethnographic lifeways serve as good analogs for this period.

**Ethnography:** The project area is located within territory claimed by the Penutian-speaking Northern Valley Yokuts (Wallace 1978b; Figure 1) at the time of initial European-American entry into this region (*circa*. A.D. 1800). The Yokuts occupied a fairly extensive area, extending from the crest of the Coast "Diablo" Range easterly into the foothills of the Sierra Nevada, north to the American River, and south to the upper San Joaquin River.

The basic social unit for the Yokuts was the family, although the village may also be considered a social, a political and economic unit. Villages were often located on elevated features (natural levees, knolls, ridges) adjoining streams, and were inhabited mainly in the winter as it was necessary to seasonally relocate, sometimes to hills and higher elevation zones, to establish temporary camps during food gathering seasons (i.e., spring, summer and fall). Villages typically consisted of a scattering of small structures, numbering from four or five to several dozen in larger villages, each house containing a single family of from three to seven people. Larger villages, with from twelve to fifteen or more houses, might also contain an earth lodge.

As with most California Indian groups, economic life for the Yokuts revolved around hunting, fishing and the collecting of plant foods, with deer, acorns, and aquatic resources representing primary staples. The collection and processing of these various food resources was accomplished with the use of a wide variety of wooden, bone and stone artifacts. The Yokuts were very sophisticated in terms of their knowledge of the uses of local animals and plants, and of the availability of raw material sources that could be used in manufacturing an immense array of primary and secondary tools and implements. However, only fragmentary evidence of their material culture remains, due in part to perishability, and in part to the impacts to archaeological sites resulting from later (historic) land uses.

**Historic Context:** Historically, the interior of California was initially visited by Anglo-American fur trappers, Russian scientists, and Spanish-Mexican expeditions during the early part of the 19<sup>th</sup> Century. These early explorations were followed by a rapid escalation of European-American activities, which culminated in the massive influx fostered by the discovery of gold at Coloma in 1848.

Early Spanish expeditions arrived from Bay Area missions as early as 1804, penetrating the northwestern San Joaquin Valley (Cook, 1976). By the mid-1820s, hundreds of fur trappers were annually traversing the Valley on behalf of the Hudson's Bay Company (Maloney, 1945). By the late 1830s and early 1840s, several small permanent European-American settlements had emerged in the Central Valley and adjacent foothill lands, including Ranchos in the interior Coast Range, and of course the settlement at New Helvetia (Sutter's Fort) at the confluence of the Sacramento and American Rivers (Sacramento).

With the discovery of gold in the Sierra Nevada, large numbers of European-Americans, Hispanics, and Chinese arrived in and traveled through the Valley. The Valley's east-side mining communities' demands for hard commodities led quickly to the expansion of ranching and agriculture throughout the Great Central Valley and the interior valleys of the Coast Range. Stable, larger populations arose and permanent communities slowly emerged in the Central Valley, particularly along major transportation corridors. Of particular importance in this regard was the transformation brought about by the railroad. The Southern Pacific, Central Pacific and Atcheson Topeka and Santa Fe Railroads and a host of smaller interurban lines to the north and east around the cities of Sacramento, Stockton and Modesto began intensive projects in the late 1860s. By the turn of the century, nearly 3,000 miles of lines connected the cities of Modesto and Stockton with points south and north. Many of the valley's cities, including many in San Joaquin and adjacent Counties,

were laid out as isolated railroad towns in the 1870s and 1880s by the Southern and Central Pacific, which not only built and settled, but continued to nurture the infant cities until settlement could be independently sustained.

## RECORDS SEARCH

Several sources of information were considered relevant to evaluating the types of archaeological and historical sites and site distribution that might be encountered within the project area. The information evaluated prior to conducting pedestrian field survey includes data maintained by the Central California Information Center at CSU-Stanislaus, consultation with Yokuts tribal representatives, the Native American Heritage Commission, and review of available published and unpublished documents relevant to regional prehistory, ethnography, and early historic developments (discussed above).

### Central California Information Center (CSU-Stanislaus)

Prior to conducting the pedestrian field survey, the official San Joaquin County archaeological records maintained by the Central California Information Center were examined for any existing recorded prehistoric or historic sites (CCIC File # 7599L, dated January 27, 2010). These records document the following existing conditions for the project area:

**Previous Archaeological Survey:** Approximately five miles of the seven mile APE has been subjected to previous archaeological survey as a result of twelve previous investigations:

	Report #	Author/Date
1)	735	Cupples, 1977
2)	850	Wohlgemuth, 1990
3)	4508	Jones & Stokes, 2001
4)	5498	Leach-Palm, et al., 2004
5)	5501	Rosenthal, et al., 2004
6)	5503	Leach-Palm, et al., 2004
7)	5572	Busby, 2004
8)	6097	Jones & Matzen, 2006
9)	6185	Bonner, 2006
10)	6687	PMC, 2006
11)	6770	Lawson and Helton, 2008
12)	7085	Aspen Environmental Group, 2008

**Documented Cultural Resources:** No prehistoric sites have been recorded within or adjacent to the Area of Potential Effect (APE). One historic-era site has been identified, but not formally recorded, within the APE. The Western Pacific Railroad alignment (CA-SJO-292-H) trends generally northwest-southeast, and bisects the APE at Harney Lane.

## Other Sources

In addition to examining the official records of San Joaquin County as maintained by the Central California Information Center, the following were also reviewed by the Information Center, or separately:

- The National Register of Historic Places (1986, Supplements).
- The California Inventory of Historic Resources (State of California 1976).
- The California Historical Landmarks (State of California 1996).
- The California Points of Historical Interest (May 1992 and updates).
- The Directory of Properties in the Historic Property Data File (OHP listing 9/17/2009) and the Archaeological Determinations of Eligibility (OHP listing 9/17/2009).
- GLO Plat Maps and other historic maps referenced by the Information Center in the attached CCIC File # 7453L.
- The Native American Heritage Commission (NAHC) re. Sacred Land Listings.
- Katherine Erolinda Perez, North Valley Yokuts Tribe, Linden, California.
- Randy Yonemura, Sacramento, California.
- Buena Vista Rancheria, Sacramento, California.
- Silvia Burley, California Valley Miwok Tribe, Stockton, California.
- Debra Grimes, California Valley Miwok Tribe, West Point, California.
- Briana Creekmore, California Valley Miwok Tribe, Wilseyville, California.
- Matthew Franklin, Ione Band of Miwok Indians, Ione, California.
- Billie Blue, Ione Band of Miwok Indians, Galt, California.
- Mary Daniels-Tarango, Wilton Rancheria, Sacramento, California.
- Leland Daniels, Wilton Rancheria, Sacramento, California.

## PEDESTRIAN FIELD SURVEY

**Survey Coverage:** All of the project area was subjected to pedestrian survey, accomplished by walking two transects along both sides of the proposed 20' wide power line corridor. In searching for cultural resources, the surveyor took into account the results of background research and was alert for any unusual contours, soil changes, distinctive vegetation patterns, exotic materials, artifacts, feature or feature remnants and other possible markers of cultural sites.

**Field Work:** Archaeological field survey was undertaken by Sean Michael Jensen on February 5 & 6, 2010. No special problems were encountered and all survey objectives were satisfactorily achieved.

## PROJECT FINDINGS

As noted in previous discussion, disturbance to the ground surface and subsurface components has been moderate to substantial throughout the project area. Most of the power line corridor is located within/adjacent to existing paved road rights-of-way. Additionally, farming and residential developments have resulted in ground disturbance along the study

corridor. Finally, Interstate 5, the White Slough Water Pollution Control Plant and the Northern California Power Agency facility have all resulted in substantial disturbance to the APE and immediately adjacent lands.

## Prehistoric Resources

No evidence of **prehistoric** use or presence was observed during the pedestrian survey – no artifacts, flakes, and no elevated spots or other soil characteristics suggesting a possible village encampment were observed. The degree of prior disturbance to which all of the project area has been subjected partially explains the absence of prehistoric cultural material along the study corridor, combined with the absence of a permanent surface water source within the immediate vicinity.

As part of the process of identifying prehistoric cultural resources and in conjunction with the **Records Search** and background data review, Native American consultation was undertaken for this project, as noted above under **Other Sources**. As noted therein, the Native American Heritage Commission (NAHC) was requested to supply any information they had concerning Sacred Land listings for the project area, with negative results (see attached NAHC response). The contact list from the NAHC included individuals, groups and tribes, as follows:

- Katherine Erolinda Perez, North Valley Yokuts Tribe, Linden, California.
- Randy Yonemura, Sacramento, California.
- Buena Vista Rancheria, Sacramento, California.
- Silvia Burley, California Valley Miwok Tribe, Stockton, California.
- Debra Grimes, California Valley Miwok Tribe, West Point, California.
- Briana Creekmore, California Valley Miwok Tribe, Wilseyville, California.
- Matthew Franklin, Ione Band of Miwok Indians, Ione, California.
- Billie Blue, Ione Band of Miwok Indians, Galt, California.
- Mary Daniels-Tarango, Wilton Rancheria, Sacramento, California.
- Leland Daniels, Wilton Rancheria, Sacramento, California.

All of the listed parties were requested, via letter, to supply any specific information they might have concerning prehistoric sites, traditional use areas or other concerns they might have for lands within or near the project area.

To date, one response has been received. On January 29, Ms. Billie Blue, representing the Ione Band of Miwok Indians, responded via email. Ms. Blue indicated that the Ione Band did not have any information or comments at this time.

## Historical Resources

As noted in the Records Search section, above, one historic-era site, the Western Pacific Railroad (CA-SJO-292-H) trends generally northwest-southeast, and bisects Harney Lane. However, pole placement for the proposed power line will not encroach within the existing railroad right-of-way. Consequently, no historic-era sites are located within the APE.

## SUMMARY and RECOMMENDATIONS

This report details the results of an archaeological inventory survey for the proposed Lodi EUD Power Line Project involving a linear pipeline corridor of c. 20' in width and extending approximately seven miles in length.

Components of the present archaeological survey include a complete records search and evaluation of studies undertaken and sites recorded within the project area and vicinity, consultation with the Native American Heritage Commission (NAHC) and Tribal representatives on the NAHC contact list, and a complete-coverage, intensive-level pedestrian survey of the APE.

The records at the Central California Information Center at CSU-Stanislaus document that twelve archaeological studies have been conducted within or adjacent to the APE, and that no prehistoric sites have been documented within, adjacent or nearby the study corridor. One historic-era site, the Western Pacific Railroad (CA-SJO-292-H), trends generally northwest-southeast, and bisects Harney Lane. However, pole placement for the proposed power line will not encroach within the existing railroad right-of-way. Consequently, no historic-era sites are located within the APE.

Based on absence of significant cultural resource or unique archaeological resources within the project area/APE, archaeological clearance is recommended for the Lodi EUD Power Line Project, although the following general provisions are recommended:

- 1) **Consultation in the event of inadvertent discovery of human remains:** Evidence of human burial or scattered human remains related to prehistoric occupation of the area could be inadvertently encountered during trenching, pipe laying, or other actions involving disturbance to the ground surface and subsurface components. In the event of such an inadvertent discovery, the County Coroner would have to be informed and consulted, per State law.
- 2) **Consultation in the event of inadvertent discovery of cultural material:** The present evaluation and recommendations are based on the findings of an inventory-level surface survey only. There is always the possibility that important unidentified cultural materials could be encountered on or below the surface during the course of future development or construction activities. This possibility is particularly relevant considering the constraints generally to archaeological field survey, and particularly where past road construction and farming activities have either completely (in the case of roadways) or partially (in the case of agricultural fields) obscured ground surface visibility, as in the present case. In the event of an inadvertent discovery of previously unidentified cultural material, archaeological consultation should be sought immediately.

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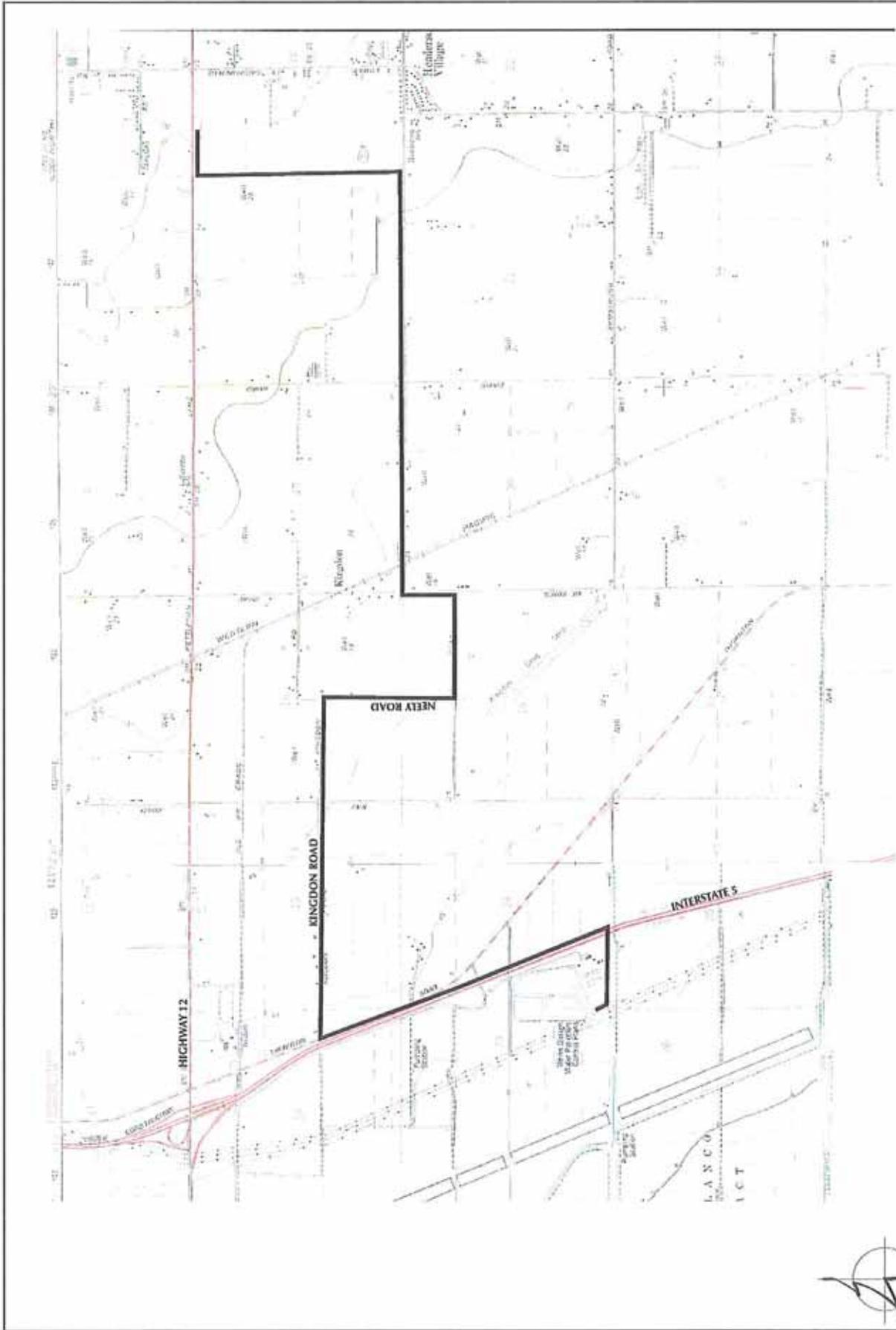
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## **ARCHAEOLOGICAL INVENTORY SURVEY**

**Lodi EUD Power Line Project,  
c. Seven-mile linear corridor,  
San Joaquin County, California.**

### **ATTACHMENTS**

- **Project Location Map**
- **Copy of Records Search #7599L**
- **Letter to the Native American Heritage Commission**
- **Response from the Native American Heritage Commission**
- **Letters to Listed Native American Individuals/Groups/Tribes**
- **Response from Billie Blue**



SOURCE: USGS TERMINOUS AND LODI SOUTH  
 NORTH QUADRANGLE 7.5 MINUTE SERIES

Figure 2-2  
 VICINITY/USGS MAP



**INSITE ENVIRONMENTAL, INC.**



## CENTRAL CALIFORNIA INFORMATION CENTER

*California Historical Resources Information System*  
Department of Anthropology – California State University, Stanislaus  
One University Circle, Turlock, California 95382  
(209) 667-3307 - FAX (209) 667-3324

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*Alpine, Calaveras, Mariposa, Merced, San Joaquin, Stanislaus & Tuolumne Counties*

**Date:** 1/27/2010

**CCIC File #:** 7599L

**Project:** Lodi EUD Pipeline,  
ca. 10 miles

Sean Jensen  
Genesis Society  
7953 Molokai Drive  
Paradise, CA 95969

Dear Mr. Jensen:

We have conducted a records search as per your request for the above-referenced project area located on the Lodi South and Terminous USGS 7.5-minute quadrangle maps in San Joaquin County.

Search of our files includes review of our maps for the specific project area and the area immediately adjacent (as specified by the client), and review of the National Register of Historic Places, the California Register of Historical Resources, the *California Inventory of Historic Resources* (1976), the *California Historical Landmarks* (1996), and the *California Points of Historical Interest* listing (May 1992 and updates), the Directory of Properties in the Historic Property Data File (HPDF) and the Archaeological Determinations of Eligibility (Office of Historic Preservation current computer lists dated 09-17-2009), the CALTRANS State and Local Bridge Survey (1989 and updates), the *Survey of Surveys* (1989), GLO Plats, and other pertinent historic data available at the CCIC for each specific county.

The following details the results of the records search (copies of records, historic maps, and titles pages of reports attached):

**Prehistoric or historic resources within the project area:**

- (1) None formally reported to the Information Center.
- (2) The project intersects an unrecorded portion of the Western Pacific Railroad, recorded elsewhere in San Joaquin County as P-39-000098/CA-SJO-292H.

(3) The HPDF (917-09:5) references on property on Harney Lane in Lodi (may be outside your project area, see the attached information).

(4) The following GLO Plats reference historic information on or near the project area:

<b>Township</b>	<b>Range</b>	<b>Sheet #</b>	<b>Dates</b>
T3N	R5E	41-201	1853-1868
T3N	R6E	41-202	1853-1865

(5) Map Number One in *History of San Joaquin County, California with Illustrations* (1879; 1968 reprint) references historic features and ranch within and adjacent to the project area.

(6) The 1910 edition of the Castle 1:31680-scale map references historic features within and adjacent to the project area.

(7) The 1952 edition of the 'Terminus 7.5' and the 1953 edition of the Lodi South 7.5' also reference historic roads and other features on and adjacent to the project.

**Prehistoric or historic resources adjacent to the project area:**

(1) None other than the extension of P-39-000098 outside the project area.

(2) Please refer to the historic maps referenced above for possible historical resources adjacent to the project area.

**Resources known to have value to local cultural groups:** None have been formally reported to the CCIC.

**Previous investigations within the project area:** Nine investigations, referenced as follows:

<b>CCIC Report #</b>	<b>Author/Date</b>
SJ-00735	Cupples (1977)
00850	Wohlgemuth (1990)
05498	Leach-Palm et al. (2004)
05501	Rosenthal and Meyer (2004)
05503	Leach-Palm et al. (2004)
06185	Bonner (2006)
06687	Pacific Mutual Consultants (2006)
06770	Lawson (2008)
07085	Goerdts (2008)

**Previous investigations adjacent to project area:** Three investigations, referenced as follows:

<b>CCIC Report #</b>	<b>Author/Date</b>
SJ-04508	Jones & Stokes (2001)
05572	Busby (2004)
06097	Jones and Matzen (2006)

**Comments:** In accordance with Federal and State law, if any historical resources are found during project-related activities, work is to stop and the lead agency and a qualified professional are to be consulted to determine the importance and appropriate treatment of the find.

We understand that you will be conducting an archaeological study of the proposed project that is the subject of this records search. We look forward to receiving one copy of your report of findings which should include two copies each of site records for all historical resources.

We thank you for contacting this office regarding historical resource preservation. Please let us know when we can be of further service. Please sign and return the attached **Access Agreement**. Billing is attached, payable within 60 days of receipt of the invoice.

Sincerely,



E. A. Greathouse, Coordinator  
Central California Information Center  
California Historical Resources Information System

# GENESIS SOCIETY

*a Corporation Sole*

7053 MOLOKAI DRIVE  
PARADISE, CALIFORNIA 95969  
(530) 680-6170 VOX  
(530) 876-8650 FAX  
seanjensen@comcast.net

January 26, 2010

## **Native American Heritage Commission**

*Attn.: Ms. Debbie Treadway*  
915 Capitol Mall, Room 364  
Sacramento, California 95814

***Subject: Lodi EUD Pipeline Project, San Joaquin County, California.***

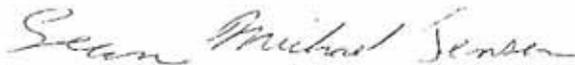
Dear Debbie:

We have been requested to conduct the archaeological survey, for the above-cited project, and are requesting any information you may have concerning archaeological sites or traditional use areas for this area. Any information you might supply will be used to supplement the archaeological and historical study being prepared for this project.

*Project Name:* Lodi EUD Pipeline Project, c. 10-miles  
*County:* San Joaquin  
*Maps:* USGS Lodi South and Terminous, 7.5'  
*Location:* Portion of Sections 13, 14, 23 & 24 of T3N, R5E, and Portion of Sections 9, 10, 15, 16, 17, 18, 19 & 20 of T3N, R6E.

Thanks in advance for your assistance.

Regards,



**Sean Michael Jensen, Administrator**

*Genesis Society*  
*a Corporation Sole*

STATE OF CALIFORNIA

Arnold Schwarzenegger, Governor

**NATIVE AMERICAN HERITAGE COMMISSION**

915 CAPITOL MALL, ROOM 364  
SACRAMENTO, CA 95814  
(916) 653-6251  
Fax (916) 657-5300  
Web Site [www.nahc.ca.gov](http://www.nahc.ca.gov)  
e-mail: [ca\\_nahc@pacbell.net](mailto:ca_nahc@pacbell.net)



January 27, 2010

Sean Michael Jensen  
Genesis  
7053 Molokai Drive  
Paradise, CA 95969

Sent by Fax: 530-876-8650  
Number of Pages: 2

Re: Proposed Lodi EUD Pipeline Project, San Joaquin County

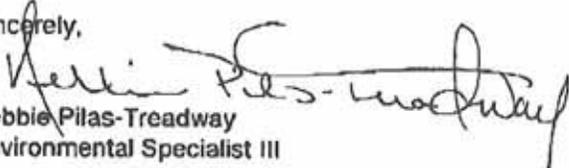
Dear Mr. Jensen:

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 653-4038.

Sincerely,

  
Debbie Pilas-Treadway  
Environmental Specialist III

**Native American Contacts**  
**San Joaquin County**  
 January 27, 2010

Katherine Erolinda Perez  
 PO Box 717  
 Linden, CA 95236  
 (209) 887-3415

Ohlone/Costanoan  
 Northern Valley Yokuts  
 Bay Miwok

California Valley Miwok Tribe *AKA-Sheep Ranch*  
 Briana Creekmore, Cultural Preservation Committee  
 PO Box 84  
 Willseyville, CA 95257  
 209-298--7158

Miwok

Randy Yonemura  
 4305 - 39th Avenue  
 Sacramento, CA 95824  
 honortraditions@mail.com  
 (916) 421-1600

Miwok

Ione Band of Miwok Indians  
 Matthew Franklin, Chairperson  
 PO Box 1190  
 Ione, CA 95640  
 matt@ionemiwok.org  
 (209) 274-6753  
 (209) 274-6636 Fax

Miwok

Buena Vista Rancheria  
 Rhonda Morningstar Pope, Chairperson  
 PO Box 162283  
 Sacramento, CA 95816  
 rhonda@buenavistatribe.com  
 916 491-0011  
 916 491-0012 - fax

Me-Wuk / Miwok

Ione Band of Miwok Indians Cultural Committee  
 Ms Billie Blue, Chairperson  
 604 Pringle Ave, #42  
 Galt, CA 95632  
 bebluesky@softcom.net  
 (209) 756-7112

Miwok

California Valley Miwok Tribe  
 Silvia Burley  
 1163 E. March Lane, Ste D, PMB#812  
 Stockton, CA 95210  
 office@cvmnt.net  
 209-487-9519  
 209-487-8579

Miwok

North Valley Yokuts Tribe  
 Katherine Erolinda Perez  
 PO Box 717  
 Linden, CA 95236  
 (209) 887-3415

Ohlone/Costanoan  
 Northern Valley Yokuts  
 Bay Miwok

California Valley Miwok Tribe  
 Debra Grimes, Cultural Preservation Specialist  
 PO Box 1015  
 West Point, CA 95255  
 d.grimes@californiavalleymiwoktribe-nsn.gov  
 209-293-4135  
 209-770-4137 - cell

Miwok

Wilton Rancheria  
 Mary Daniels-Tarango, Chairperson  
 7916 Farnell Way  
 Sacramento, CA 95823  
 (916) 427-2909 Home

Miwok

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Lodi EUD Pipeline project, San Joaquin County

**Native American Contacts**  
San Joaquin County  
January 27, 2010

Wilton Rancheria  
Leland Daniels, Cultural Resources Rep  
7531 Maple Leaf Lane           Miwok  
Sacramento , CA 95828  
(916) 689-7330

*This list is current only as of the date of this document.*

*Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.*

*This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Lodi EUD Pipeline project, San Joaquin County*

# GENESIS SOCIETY

*a Corporation Sole*

7053 MOLOKAI DRIVE  
PARADISE, CALIFORNIA 95969  
(530) 680-6170 VOX  
(530) 876-8650 FAX  
seanjensen@comcast.net

January 28, 2010

## **Native American Individuals, Groups and Tribes**

***Subject: Lodi EUD Transmission Line Project, San Joaquin County, California.***

Dear Interested Native Americans:

Enclosed is a USGS topo-based map showing the location for a proposed transmission line project involving a linear corridor extending approximately 10 miles in length, in San Joaquin County, California.

We have been requested to conduct the archaeological survey, and are requesting any information you may have concerning archaeological sites or traditional use areas for this area. Any information you might supply will be used to supplement the archaeological and historical study being prepared for this project.

*Project Name:* Lodi EUD Pipeline Project, c. 10-miles  
*County:* San Joaquin  
*Maps:* USGS Lodi South and Terminous, 7.5'  
*Location:* Portion of Sections 13, 14, 23 & 24 of T3N, R5E, and Portion of Sections 9, 10, 15, 16, 17, 18, 19 & 20 of T3N, R6E.

Thanks for your help. Please call with any questions.

Regards,



**Sean Michael Jensen, Administrator**

*Genesis Society  
a Corporation Sole*

SmartZone Communications Center Collaboration Suite

seanjensen@comcast.net

---

Lodi EUD Transmission ,San Joaquin Co.

January 29, 2010 10:46:28 PM PST

From: bebluesky@softcom.net

To: seanjensen@comcast.net

Dear Mr.Jensen,

Received your letter today on the purposed transmission Lodi EUD 10 mile Pipeline Project,c. San Joaquin, County.

We have no questions at this time.

Thank You,

Ione Band of Miwok Indians, Amador County

Billie E. Blue

Cultural Heritage Committee Chairperson

P.O. Box 699

9252 Bush Street

Plymouth, Ca. 95669

Tel 209-245-5800

Fax 209-245-3112

[culturalheritage@ionemiwok.org](mailto:culturalheritage@ionemiwok.org)

[www.ionemiwok.org](http://www.ionemiwok.org)