

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

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.

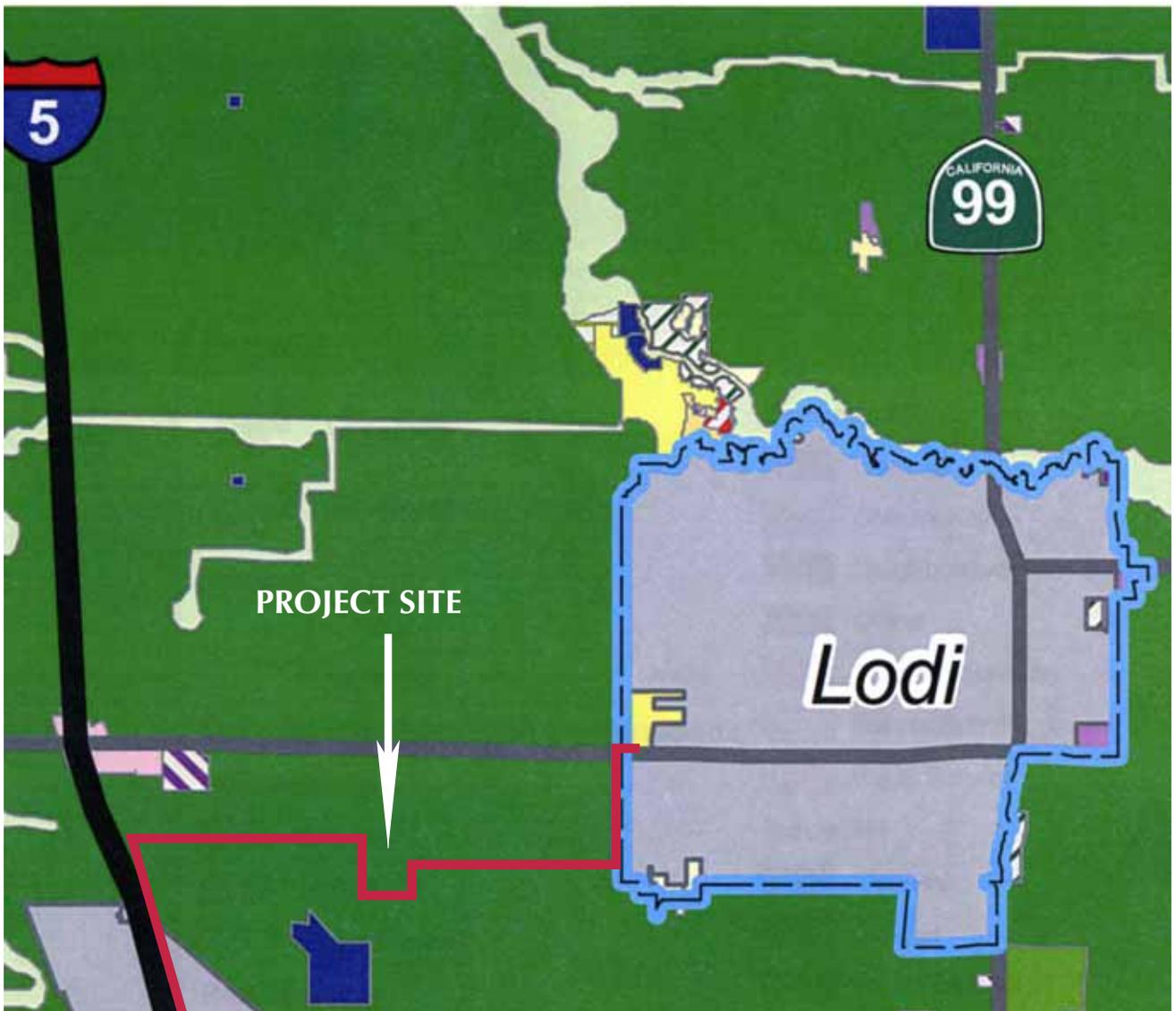
Adjacent to and west of the NCPA power plant site is a 230 kV electrical power line owned by PG&E. The 230 kV power lines are supported by four legged steel towers trending in a north-south direction.

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).



PROJECT SITE



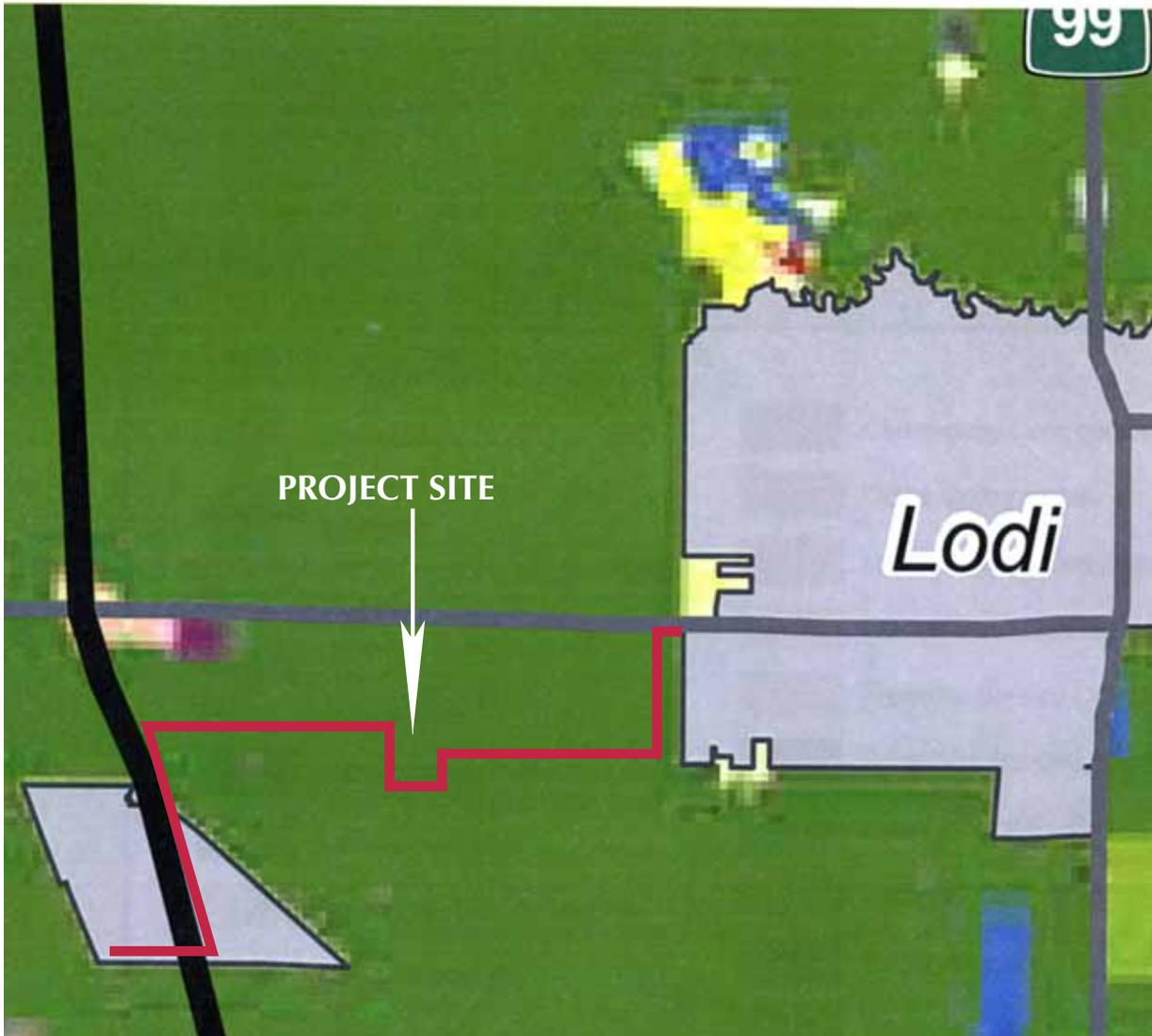
Lodi



NORTH SOURCE: COUNTY OF SAN JOAQUIN GIS SERVICES

INSITE ENVIRONMENTAL, INC.

Figure 13-1
COUNTY GENERAL
PLAN MAP



PROJECT SITE

Lodi

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Legend

- | | | | |
|---------------------------|---------------------------------|--|----------------------------|
| | City Limits | | Community Commercial |
| | Interstate | | Office Commercial |
| | Highway | | Neighborhood Commercial |
| Zoning | | | Crossroads Commercial |
| Zoning Designation | | | 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

INSITE ENVIRONMENTAL, INC.

Figure 13-2
COUNTY ZONING MAP

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

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 ¹ | Maximum Non- Residential Intensity ² | Required Open Land ³ | Prohibited Uses ⁴ | Other Development Conditions ⁵ |
| 1 | None | None | All unused | <ul style="list-style-type: none"> • All structures except ones with location set by aeronautical function • Assemblages of people • Public & quasi-public services • Objects exceeding FAR Part 77 height limits • Storage of hazardous materials • Chemicals and allied products & storage • Petroleum refining & storage • Electrical & natural gas generation & switching • Oil & gas extraction • Natural gas & petroleum pipelines⁶ • Dumps or landfills, other than those consisting entirely of earth & rock • Hazards to flight | <ul style="list-style-type: none"> • Aviation easement dedication |
| 2 | 1 d.u. per 10 acres | 50 persons per acre | 30% | <ul style="list-style-type: none"> • Residential, except for very low residential • Manufacturing and industrial uses • Chemicals and allied products & storage • Petroleum refining & storage • Rubber & plastics • Passenger terminals & stations • Radio, TV & telephone centers • Electrical & natural gas generation & switching • Oil & gas extraction • Natural gas & petroleum pipelines⁶ • Petroleum truck terminals • Businesses & personal services • Hotels, motels, restaurants • Public & quasi-public services • Children's schools, day care centers, libraries • Hospitals, nursing homes • Places of worship • Schools • Recreational uses, athletic fields, playgrounds, & riding stables • Theaters, auditoriums, & stadiums • Dumps or landfills, other than those consisting entirely of earth & rock • Waterways that create a bird hazard • Hazards to flight | <ul style="list-style-type: none"> • Aviation easement dedication • Locate structures maximum distance from extended runway centerline • Minimum NLR of 45 dB residences (including mobile homes) and office buildings • ALUC review required for objects > 35 feet tall |
| 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"> • Children's schools, day care centers, libraries • Hospitals, nursing homes • Buildings with >3 aboveground habitable floors • Highly noise-sensitive outdoor nonresidential | <ul style="list-style-type: none"> • Minimum NLR of 25 dB in residences (including |

TABLE 13-1
LAND USE CRITERIA FOR COMPATIBILITY ZONES

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

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

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

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.

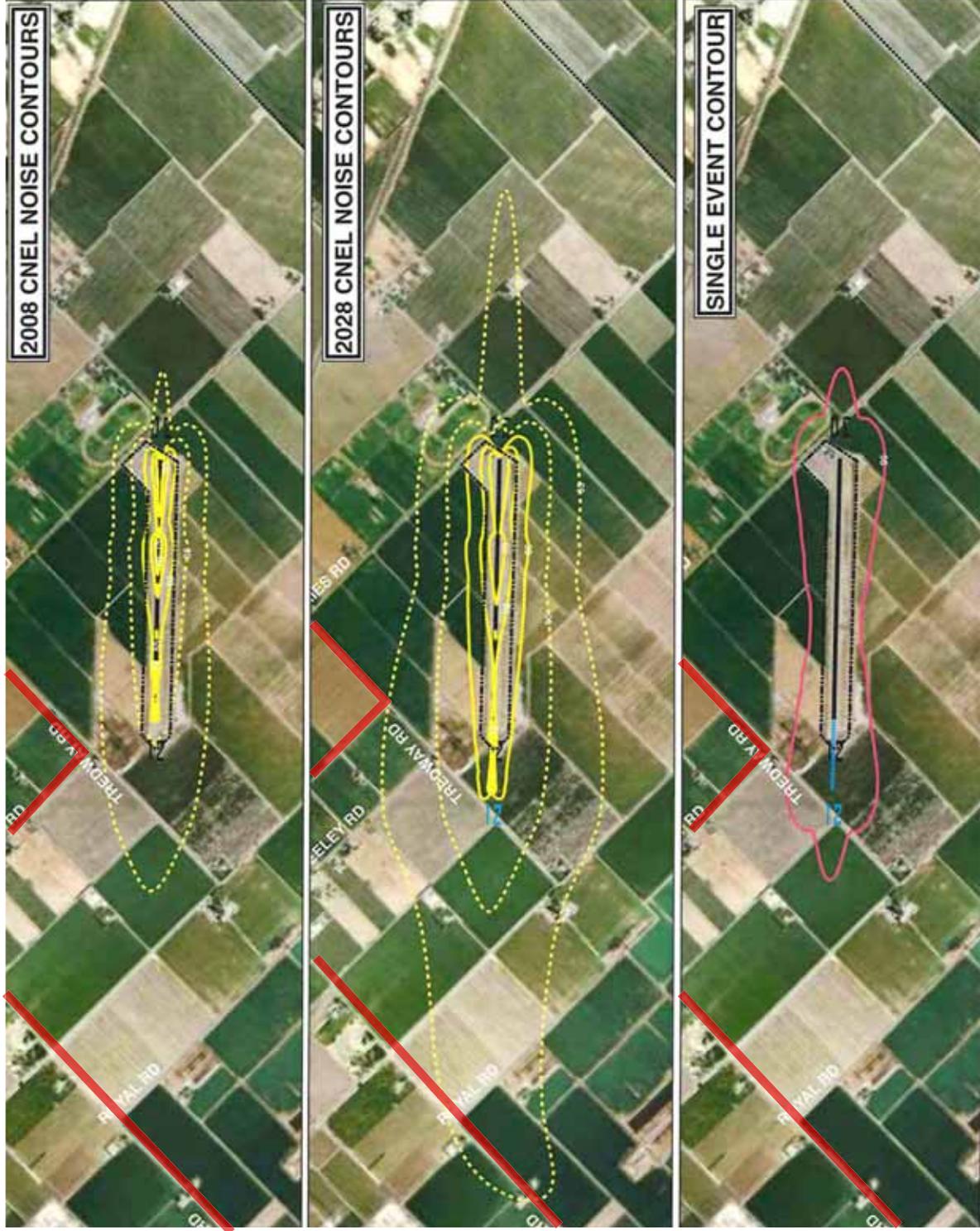


Figure 14-1
KINGDON AIRPORT NOISE
EXPOSURE CONTOURS

SOURCE: SAN JOAQUIN GIS SYSTEM

INSITE ENVIRONMENTAL, INC.

REGULATORY SETTING

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

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

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

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

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