

# 14 NOISE

## 14.1 INTRODUCTION

This chapter provides information relevant noise (and vibration) impacts under NEPA and CEQA in connection with the Proposed Action and alternatives. This chapter includes: introduction, environmental and regulatory setting, impact analysis methods and assumptions, significance criteria, environmental effects of the action and alternatives, and mitigation measures to address effects that are identified as significant.

### 14.1.1 Data Sources

Key sources of information used for this chapter include the following:

- ▲ FHWA roadway construction noise model user's guide (Federal Highway Administration [FHWA] 2006);
- ▲ *Yolo County 2030 Countywide General Plan* (Yolo County 2009);
- ▲ *City of Davis General Plan* (City of Davis 2007);
- ▲ *City of West Sacramento General Plan 2035 Policy Document* (City of West Sacramento 2016);
- ▲ *City of Winters General Plan* (City of Winters 1992);
- ▲ *City of Woodland General Plan* (City of Woodland 2017); and
- ▲ Yolo County and the Cities of Davis, West Sacramento, Winters, and Woodland Municipal Codes.

### 14.1.2 Definitions

Brief definitions of noise terminology used in this analysis are listed below.

*Sound* is a vibratory disturbance created by a vibrating object that, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism such as the human ear or a microphone.

*Noise* is sound that is loud, unpleasant, unexpected, or otherwise undesirable.

*Ambient noise* is the composite of noise from all sources near and far in a given environment exclusive of particular noise sources to be measured.

*Vibration* is the periodic oscillation of a medium or object with respect to a given reference point.

A *decibel (dB)* is a measure of sound on a logarithmic scale that indicates the squared ratio of sound pressure amplitude to a reference sound pressure amplitude. The reference pressure is 20 micro-Pascals.

*A-weighted decibel (dBA)* is the overall frequency-weighted sound level in dB that approximates the frequency response of the human ear.

The *day-night level ( $L_{dn}$ )* is the energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring during the period from 10 p.m. to 7 a.m.

The *community noise equivalent level (CNEL)* is the energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added to the A-weighted sound levels occurring during the period from 7 p.m. to 10 p.m., and 10 dB added for the period from 10 p.m. to 7 a.m.

*Maximum sound level* ( $L_{max}$ ) is the maximum sound level measured during a measurement period.

*Minimum sound level* ( $L_{min}$ ) is the minimum sound level measured during a measurement period.

*Equivalent sound level* ( $L_{eq}$ ) is the equivalent steady-state sound level that, in a stated period of time, would contain the same acoustical energy as the time-varying noise level during the same period (i.e., average noise level).

*Percentile-exceeded sound level* ( $L_x$ ) is the sound level exceeded “x” percent of a specific time period. For example,  $L_{10}$  is the sound level exceeded 10 percent of the time.

*Sensitive receptors* are land uses where people reside or locations where the presence of unwanted noise could adversely affect the use of the land. Noise-sensitive land uses are defined in the Yolo County General Plan as residentially designated land uses; hospitals, nursing/convalescent homes, and similar board and care facilities; hotels and lodging; schools and day care centers; and neighborhood parks (Yolo County 2009). Noise-sensitive land uses occur throughout the Plan Area.

In typical environments (i.e., outside a laboratory), changes in noise of 1–2 dBA are generally not perceptible to the human ear. However, it is widely accepted that people are able to begin to detect sound level increases of 3 dBA in typical acoustical environments. Further, a 5-dBA increase is generally perceived as a distinctly noticeable increase, and a 10-dB increase or decrease in sound level is perceived as a doubling or halving of sound level (California Department of Transportation [Caltrans] 2011:6).

## 14.2 AFFECTED ENVIRONMENT

### 14.2.1 Environmental Setting

The dominant sources of ambient noise in Yolo County and the cities are mobile, including automobile and truck traffic, aircraft, and train transportation. The predominant stationary sources of noise in the cities include residential subdivisions, commercial and industrial facilities, and construction activities. Stationary sources within the unincorporated county include farming and mining activities.

#### FREEWAYS AND ARTERIAL ROADWAYS

Ambient noise from freeways and roads can be significant contributors to the noise environment in the vicinity of these transportation facilities. The Plan Area contains three Interstate routes (I-5, I-80, and I-505). A segment of United States Highway (U.S.) 50 is located in West Sacramento and provides a connection from I-80 to downtown Sacramento. State highways in the County include freeways, expressways, and conventional highways, which are operated and maintained by Caltrans: State Route (SR) 16, SR 45, SR 84, SR 113 and SR 128. A map of transportation facilities in the Plan Area can be found in Chapter 13, *Transportation*, as shown in Exhibit 13-1.

In addition to the freeways and highways, a number of arterials and County roads are heavily traveled and generate relatively high noise levels along some or all of their length (Yolo County 2009).

#### AIRCRAFT

Aircraft operations in the vicinity of airports can be a significant source of noise. There are four airports located within Yolo County (Exhibit 13-1). The Yolo County Airport is located about six miles from Davis, Winters, and Woodland. The Watts-Woodland Airport is located approximately 5 miles west of Woodland. The University Airport is located two miles south of Davis. The Borges-Clarksburg Airport is located north of Clarksburg and is located on privately-owned property. In addition to these four airports, aircraft activity associated with the

Sacramento International Airport exposes some areas of Yolo County to noise. This airport is located in Sacramento County approximately one mile east of the Yolo County line (Yolo County 2009).

## RAILROADS

Three railroads travel through Yolo County (Exhibit 13-1). The Union Pacific Railroad (UPRR) maintains a rail line that runs through Yolo County from West Sacramento to Davis. Approximately 35 daily freight trains and 31 passenger trains pass along this line each day (Yolo County 2009; Amtrak 2015). The estimated combined railroad noise level at 100 feet from the railroad centerline is approximately 89 dBA  $L_{dn}$  (Yolo County 2009).

The California Northern rail line is a freight line that runs through Davis and Woodland, and along I-5 past Dunnigan. The rail line carries an average of two trains daily. The estimated railroad noise level at 100 feet from the railroad centerline is 45 dBA  $L_{dn}$  (Yolo County 2009).

The Sacramento River Train is operated by the Sierra Northern Railroad Company that runs freight trains and an entertainment passenger train from Woodland to West Sacramento on the Yolo Shortline Railroad. Typically, one round trip runs per day. The estimated railroad noise level at 100 feet from the railroad centerline is approximately 44 dBA  $L_{dn}$  (Yolo County 2009).

## POINT SOURCES

Point sources of noise in Yolo County include farming activities, mining activities, commercial/industrial facilities and plants, and construction sites (Yolo County 2009).

### 14.2.2 Regulatory Setting

## FEDERAL LAWS AND REGULATIONS

### Noise Control Act of 1972

The federal Noise Control Act of 1972 (Public Law 92-574) established a requirement that all federal agencies administer their programs to promote an environment free of noise that would jeopardize public health or welfare. The U.S. Environmental Protection Agency (EPA) was given the responsibility for:

- ▲ providing information to the public regarding identifiable effects of noise on public health and welfare,
- ▲ publishing information on the levels of environmental noise that will protect the public health and welfare with an adequate margin of safety,
- ▲ coordinating federal research and activities related to noise control, and
- ▲ establishing federal noise emission standards for selected products distributed in interstate commerce.

### U.S. Environmental Protection Agency

In 1974, in response to the requirements of the federal Noise Control Act, EPA identified indoor and outdoor noise limits to protect public health and welfare (communication disruption, sleep disturbance, and hearing damage). Outdoor  $L_{dn}$  limits of 55 dB and indoor  $L_{dn}$  limits of 45 dB were identified as desirable to protect against speech interference and sleep disturbance for residential, educational, and healthcare areas. Sound-level criteria to protect against hearing damage in commercial and industrial areas included a 24-hour  $L_{eq}$  value of 70 dB (both outdoors and indoors).

The Noise Control Act also directed all federal agencies to comply with applicable federal, State, interstate, and local noise control regulations. Although EPA was given a major role in disseminating information to the public and coordinating federal agencies, each federal agency retains authority to adopt noise regulations

pertaining to agency programs. EPA can, however, require other federal agencies to justify their noise regulations in terms of Noise Control Act policy requirements. Key federal agencies that have adopted noise regulations and standards include:

- ▲ Housing and Urban Development (HUD): Noise standards for federally funded housing projects
- ▲ Federal Aviation Administration (FAA): Noise standards for aircraft noise
- ▲ Federal Highway Administration (FHWA): Noise standards for federally funded highway projects
- ▲ Federal Transit Administration (FTA): Noise standards for federally funded transit projects
- ▲ Federal Railroad Administration (FRA): Noise standards for federally funded rail projects

### Federal Highway Administration

The FHWA has developed methods for evaluating construction noise. FHWA methods are discussed in the document entitled “Roadway Noise Construction Model User’s Guide” (FHWA 2006). FHWA does not recommend specific noise level criteria for construction-type activities.

### Federal Transit Administration

The FTA has developed methods for evaluating construction noise. FTA methods are discussed in the document entitled “Transit Noise and Vibration Impact Assessment” (FTA 2006). The FTA Noise Impact Criteria categorizes noise sensitive land uses into the following:

- ▲ **Category 1:** Buildings or parks where quiet is an essential element of their purpose.
- ▲ **Category 2:** Residences and buildings where people normally sleep. This includes residences, hospitals, and hotels where nighttime sensitivity is assumed to be of utmost important.
- ▲ **Category 3:** Institutional land uses with primarily daytime and evening use. This category includes schools, libraries, churches, and active parks.

In addition, FTA recommends the following noise criteria for residential uses exposed to construction noise:

**Table 14-1 FTA Recommended Construction Noise Criteria for Residential Uses**

One-hour $L_{eq}$ (day)	One-hour $L_{eq}$ (night)	8-hour $L_{eq}$ (day)	8-hour $L_{eq}$ (night)	$L_{dn}$ (30-day average)
90	80	80	70	75

Note: All values are A-weighted decibels. Day: 7:00 a.m. to 10:00 p.m. Night: 10:00 to 7:00 a.m.

Source: FTA 2006

### Federal Railroad Administration

The FRA noise standards are the same as those specified by FTA.

## STATE LAWS AND REGULATIONS

California requires each local government to implement a noise element as part of its general plan. California Administrative Code, Title 4, has guidelines for evaluating the compatibility of various land uses as a function of community noise exposure.

### Title 24 of the California Code of Regulations

California’s noise insulation standards became effective in 1974. In 1988, the Building Standards Commission approved revisions to these standards (Title 24, Part 2, California Code of Regulations). The ruling established that interior noise levels attributable to exterior sources shall not exceed 45 dBA in any habitable room. The noise metric is measured in either CNEL and  $L_{dn}$ , consistent with the noise element of the local general plan. The commission also specifies that residential buildings or structures proposed to be located within exterior  $L_{dn}$  contours of 60 dBA or greater, generated by an existing or planned freeway,

expressway, parkway, major street, thoroughfare, rail line, rapid transit line, or industrial noise source, shall require an acoustical analysis showing that the building has been designed to limit intruding noise to an interior  $L_{dn}$  of 45 dBA.

### State Office of Noise Control Guidelines

The State Office of Noise Control has developed guidelines showing the compatibility of a range of noise levels for various land use categories. The noise standards are intended to provide guidelines for the development of noise elements. These basic guidelines may be tailored to reflect the existing noise and land use characteristics of a particular community. The Noise Compatibility Guidelines in Table 14-2 show the exterior noise standards recommended by the State for new development projects according to land use.

**Table 14-2 State Land Use Compatibility Standards for Community Noise Environment**

Land Use Category	Community Noise Exposure - $L_{dn}$ or CNEL (db)						
	50	55	60	65	70	75	80
Residential - Low-Density Single Family, Duplex, Mobile Homes	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Residential - Multi-Family	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Transient Lodging - Motels, Hotels	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Schools, Libraries, Churches, Hospitals, Nursing Homes	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Auditoriums, Concert Halls, Amphitheaters	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Sports Arenas, Outdoor Spectator Sports	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Playgrounds, Neighborhood Parks	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Golf Courses, Riding Stables, Water Recreation, Cemeteries	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Office Buildings, Business Commercial and Professional	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Industrial, Manufacturing, Utilities, Agriculture	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable

Normally Acceptable	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
Conditionally Acceptable	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
Normally Unacceptable	New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
Clearly Unacceptable	New construction or development generally should not be undertaken.

Source: California Governor's Office of Planning and Research 2003

## Traffic Noise Analysis Protocol

In May 2011, Caltrans adopted the Traffic Noise Analysis Protocol (Protocol) for New Highway Construction, Reconstruction, and Retrofit Barrier Projects pursuant to Title 23, Part 772 of the Code of Federal Regulations (23 CFR 772). The Protocol applies to any highway projects or multimodal project that: 1) require FHWA approval regardless of funding sources, or 2) is funded with federal-aid highway funds. Application of the Protocol and the procedures it provides ensures compliance with FHWA noise standards (Caltrans 2011).

## LOCAL LAWS AND REGULATIONS

### Yolo County General Plan

The Yolo County General Plan (2009) Health and Safety Element identifies noise sources such as roadways, rails, and airports within the County. The noise sub-element of the Health and Safety Element contains the following policies that may pertain to the Plan:

- ▲ **Policy HS-7.1:** Ensure that existing and planned land uses are compatible with the current and projected noise environment. However, urban development generally experiences greater ambient (background) noise than rural areas. Increased density, as supported by the County in this General Plan, generally results in even greater ambient noise levels. It is the County's intent to meet specified indoor noise thresholds, and to create peaceful backyard living spaces where possible, but particular ambient outdoor thresholds may not always be achievable. Where residential growth is allowed pursuant to this general plan, these greater noise levels are acknowledged and accepted
- ▲ **Policy HS-7.2:** Ensure the compatibility of permitted land use activities within the Primary Delta Zone with applicable noise policies of the Land Use and Resource Management Plan of the Delta Protection Commission.
- ▲ **Policy HS-7.3:** Protect important agricultural, commercial, industrial, and transportation uses from encroachment by land uses sensitive to noise and air quality impacts.
- ▲ **Policy HS-7.4:** For proposed new discretionary development, where it is not possible to reduce noise levels in outdoor activity areas to 60 dB CNEL or less using practical application of the best-available noise reduction measures, greater exterior noise levels may be allowed, provided that all available reasonable and feasible exterior noise level reduction measures have been implemented.
- ▲ **Policy HS-7.5:** Minimize the impact of noise from transportation sources including roads, rail lines, and airports on nearby sensitive land uses.
- ▲ **Policy HS-7.7:** Encourage railroad companies to adopt operational strategies that reduce the potential for noise and interrupted traffic flow.
- ▲ **Policy HS-7.8:** Encourage local businesses to reduce vehicle and equipment noise through fleet and equipment modernization or retrofits, use of alternative fuel vehicles and installation of mufflers or other noise reducing equipment.

### Yolo County Code

Title 6 of the Yolo County Code, "Sanitation and Health," Chapter 1, Section 6-1.403 prohibits owners from permitting their animals, except domestic cats, from habitually making loud noises, which constitutes a public nuisance. Title 8, "Land Development and Zoning," Chapter 2, Section 8-2.1602 describes the uses permitted within the M-1 and M-2 zoning areas provided the use is consistent with the intent of the zoning area and not objectionable by reason of adverse noise. Title 10, "Cache Creek Area Plan In-Channel Maintenance Mining Ordinance," Chapter 3, Section 10-3.411 establishes noise thresholds of an average  $L_{eq}$  of 80 dBA measured at the outermost boundaries of parcels being excavated. For parcels located near residences or other sensitive receptors, noise levels may not exceed an average  $L_{eq}$  of 60 dBA, except in cases of emergency.

## City of Davis General Plan

The City of Davis General Plan (2007) Community Safety Element identifies major noise sources in the area. These include roadway noise from I-80, SR 113, and arterial streets; railroad noise from Union Pacific and California Northern Railroad; airport noise from the University of California, Davis Airport; and stationary sources such as industrial and agricultural operations near sensitive receptors. The noise sub-element of the Community Safety Element contains the following policies that may be relevant to the Plan:

- ▲ **Policy NOISE 1.1:** Minimize vehicular and stationary noise sources, and noise emanating from temporary activities.
- ▲ **Policy NOISE 1.2:** Discourage the use of sound walls whenever alternative mitigation measures are feasible, while also facilitating the construction of sound walls where desired by the neighborhood and there is no other way to reduce noise to acceptable exterior levels shown in Table 19.
- ▲ **Policy NOISE 1.3:** Develop and implement procedures for the accurate measurement and prediction of noise levels in Davis.
- ▲ **Policy NOISE 1.4:** Take a proactive role in State law-making regarding noise regulation.

Tables 14-3 and 14-4 show the interior and exterior noise levels set forth in Chapter 21, “Noise,” of the City of Davis’s General Plan.

**Table 14-3 City of Davis Interior Noise Level Standards**

Land Use	Noise Level (L <sub>dn</sub> or CNEL dBA)
Residences, schools through grade 12, and churches	45
Offices	55

Source: City of Davis 2007

**Table 14-4 City of Davis Standards for Exterior Noise Exposure**

Land Use	Community Noise Exposure (L <sub>dn</sub> or CNEL, dBA)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential	Under 60	60-70*	70-75	Above 75
Transient Lodging-Motels, Hotels	Under 60	60-75	75-80	Above 80
Schools, Libraries, Churches, Hospitals, Nursing Homes	Under 60	60-70	70-80	Above 80
Auditoriums, Concert Halls, Amphitheaters	Under 50	50-70	N/A	Above 70
Sports Arenas, Outdoor Spectator Sports	N/A	Under 75	N/A	Above 75
Playgrounds, Neighborhood Parks	Under 70	N/A	70-75	Above 75
Golf Courses, Riding Stables, Water Recreation, Cemeteries	Under 70	N/A	70-80	Above 80
Office Buildings, Business Commercial and Professional	Under 65	65-75	Above 75	N/A
Industrial, Manufacturing, Utilities, Agriculture	Under 65	70-80	Above 80	N/A

Source: City of Davis 2007

## City of Davis Municipal Code

Section 24.02.030 of the City of Davis’s Municipal Code states that no person shall produce, suffer or allow to be produced in any location a noise level of more than 20 dBA above the limit, but not greater than 80 dBA, on Table 14-5 measured at the property plane.

**Table 14-5 City of Davis Maximum Noise Levels by Land Use**

Land Use	Time	Maximum Noise Levels (dBA)
Residential	9:00 a.m. to 7:00 a.m.	50
	7:00 a.m. to 9:00 p.m.	55
Commercial/Industrial/Corp Commercial	10:00 p.m. to 7:00 a.m.	55
	7:00 a.m. to 10:00 p.m.	60
High Noise Traffic Corridor	Anytime	65

Source: City of Davis 2007

### City of West Sacramento General Plan

The criteria for evaluating noise impacts in the City of West Sacramento are set forth in the Safety Element of the City of West Sacramento General Plan (2016). The City of West Sacramento General Plan contains the following goals and policies that relate to noise that may be applicable to the analysis of the HCP/NCCP:

**Goal S-7.** To protect city residents from the harmful effects of excessive noise and vibration.

- Policy S-7.7. Design Mitigation Measures.** The City shall require new development to use site planning and project design to mitigate noise impacts to achieve the standards of Tables S-7.1 (Table 14-6) and S-7.3 (Table 14-7). The use of noise barriers shall be used to achieve the noise standards only after all other practical design-related noise mitigation measures have been integrated into the project.

**Table 14-6 Noise Compatibility Standards**

	Land Use	Exterior Noise Level Standard for Outdoor Activity Areas <sup>a</sup>	Interior Noise Level Standard
	L <sub>dn</sub> /CNEL, dB	L <sub>dn</sub> /CNEL, dB	Leq, dB <sub>b</sub>
Residential (Low Density Residential, Duplex, Mobile Homes)	60c	45	N/A
Residential (Multi Family)	65d	45	N/A
Transient Lodging (Motels/Hotels)	65d	45	N/A
Mixed-Use Developments	70	45	N/A
Schools, Libraries, Churches, Hospitals, Nursing Homes, Museums	70	45	N/A
Theaters, Auditoriums	70	N/A	35
Playgrounds, Neighborhood Parks	70	N/A	N/A
Golf Courses, Riding Stables, Water Recreation, Cemeteries	75	N/A	N/A
Office Buildings, Business Commercial and Professional	70	N/A	45
Industrial, Manufacturing, Utilities, and Agriculture	75	N/A	45

a. Outdoor activity areas for residential developments are considered to be the back yard patios or decks of single-family residential units, and the patios or common areas where people generally congregate for multi-family development.

Outdoor activity areas for nonresidential developments are considered to be those common areas where people generally congregate, including outdoor seating areas.

Where the location of outdoor activity areas is unknown, the exterior noise standard shall be applied to the property line of the receiving land use.

b. As determined for a typical worst-case hour during periods of use.

c. Where it is not possible to reduce noise in outdoor activity areas to 60 dB, L<sub>dn</sub>/CNEL or less using a practical application of the best-available noise reduction measures, an exterior level of up to 65 dB, L<sub>dn</sub>/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

d. Where it is not possible to reduce noise in outdoor activity areas to 65 dB, L<sub>dn</sub>/CNEL or less using a practical application of the best-available noise reduction measures, an exterior level of up to 70 dB, L<sub>dn</sub>/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

Source: City of West Sacramento 2016



Where a proposed use is not specifically listed on this table, the use shall comply with the noise exposure standards for the nearest similar use as determined by the Community Development Department.

**Table 14-7 Noise Level Standards from Stationary Sources**

Noise Level Descriptor	Daytime (7:00 A.M. to 10:00 P.M.)	Night-time (10:00 P.M. to 7:00 A.M.)
Hourly $L_{eq}$ , dB	55	45
Maximum level, dB	70	65

Noise levels are measured at the property line of the noise-sensitive use.

Source: City of West Sacramento 2016

## City of West Sacramento Municipal Code

The City of West Sacramento's noise level performance standards are contained in Section 17.32.030 of the City's municipal code. These performance standards are found in Table II-4 and Table II-6, and are identical to noise standards established in the General Plan Health and Safety Element (Table 14-8, respectively).

**Table 14-8 City of West Sacramento Maximum Allowable Noise Exposure for Transportation Noise Sources (Table II-6 of the City of West Sacramento General Plan)**

Land Uses	Outdoor Activity Areas $L_{dn}$ /CNEL, dBA	Interior Spaces	
		$L_{dn}$ /CNEL, dBA	$L_{eq}$ , dBA
Residential	60	45	-
Transient Lodging	60	45	-
Hospitals, nursing homes	60	45	-
Theatres, auditoriums, music halls	-	-	35
Churches, meeting halls	60	-	40
Office Buildings	-	-	45
Schools libraries, museums	-	-	45
Playgrounds, neighborhood parks	70	-	45

**Note:**

- Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use.
- As determined for a typical worst-case hour during period of use.
- Where it is not possible to reduce noise in outdoor activity areas to 60 dB  $L_{dn}$ /CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB  $L_{dn}$ /CNEL may be allowed, provided that practical exterior noise level reduction measures have been implemented and that interior noise levels are in compliance with this table. An exterior noise level of 70 dB  $L_{dn}$ /CNEL shall be allowed in the Triangle Specific Plan area and the Washington Specific Plan Area.

Source: City of West Sacramento 2004

## City of Winters General Plan

The City of Winters General Plan (1994) Health and Safety Element contains the following goals and policies that may be relevant to the Plan.

- ▲ **Policy VII.E.1:** The City shall evaluate the compatibility of various land uses with nearby noise sources.
- ▲ **Policy VII.E.2:** The City shall require new residential development to comply with applicable provisions of the California State Noise Insulation Standards and the Uniform Building Code, and updates thereof.

- ▲ **Policy VII.E.3:**  $L_{dn}$  values above 45 dBA due to exterior noise sources shall be prohibited inside habitable rooms of all new dwellings.
- ▲ **Policy VII.E.4:** Non-transportation noise sources which are potentially intrusive shall be evaluated in terms of the noise level limits in Tables II-4 (Table 14-9) and II-5 (Table 14-10).
- ▲ **Policy VII.E.5:** The City shall require preparation of a noise study for all residential projects proposed in areas where  $L_{dn}$  levels exceed 60 dBA according to the contour locations [identified in the general plan].
- ▲ **Policy VII.E.6:** Any project that would cause existing traffic-related noise levels in existing residential area to increase more than 3 dBA shall be required to evaluate the feasibility of noise mitigation measures.
- ▲ **Policy VII.E.7:** The City may also require preparation of a noise study when  $L_{dn}$  standards are met or inapplicable, but 1) a potentially intrusive noise source is proposed near a noise sensitive area, or 2) a noise sensitive land use is proposed near a potentially intrusive noise source.
- ▲ **Policy VII.E.8:** Required noise studies shall be the responsibility of the project applicant, and shall be consistent with the State guidelines for noise study reports.
- ▲ **Policy VII.E.9:** The City shall encourage county, State, and federal agencies to actively enforce regulations dealing with noise.
- ▲ **Policy VII.E.10:** Vehicles and other equipment operated by or on behalf of the City shall comply with all applicable noise performance standards. Noise emission shall be a consideration in the purchase of any new equipment or vehicles.
- ▲ **Policy VII.E.12:** Deviations from City noise standards may be approved only in extreme and/or unusual circumstances. Deviations from the California State Noise Insulation Standards shall not be permitted.

### City of Winters Municipal Code

The City of Winters Municipal Code section 8.20 contains limits for interior and exterior noise. These limits are described in Tables 14-9 and 14-10 below, respectively.

**Table 14-9 City of Winters Interior Noise Level Standards**

Type of Zone	Time Interval	Allowable Interior Noise Level (dBA)
Any Residential Zone	7:00 a.m. to 7:00 p.m.	45
	7:00 p.m. to 10:00 p.m.	45
	10:00 p.m. to 7:00 a.m.	35

Source: City of Winters 1994

**Table 14-10 City of Winters Exterior Noise Level Standards**

Type of Zone	Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)
Rural (OS)	50	40
Residential	50	45
Parks and Recreation (P-R)	50	45
Commercial (C-1, C-2, NC, CH, CS)	63	45
Manufacturing/industrial (M-1, M-2, PI)	73	70

Source: City of Winters 1994

Construction noise is exempt in the City of Winters between the weekday hours of 7:00 a.m. and 7:00 p.m.

### City of Woodland General Plan

The City of Woodland’s General Plan has policies to protect noise-sensitive uses from excessive noise. Noise level performance standards are described in Table 14-11. The following goals and policies may be relevant to the Plan.

**Goal 8.G Noise:** Strive to achieve an acceptable noise environment for the environmental, health, and safety needs of Woodland residents and workers.

- ▲ **Policy 8.G.2:** Land Use Noise Compatibility Standards. Use the Land Use Noise Compatibility Standards, shown in Table 8-5, as review criteria for new land uses. For proposed new discretionary development, where it is not possible to reduce noise levels to the “normally acceptable” range using practical application of the best-available noise reduction measures, greater exterior noise levels may be allowed, provided that all available reasonable and feasible exterior noise level reduction measures have been implemented.
- ▲ **Policy 8.G.3:** Noise Exposure from Transportation Sources. Require noise-reducing mitigation to meet the maximum allowable outdoor and indoor noise exposure standards from transportation sources in Table 8-6 [Table 14-11]. Noise mitigation measures that may be approved to achieve these noise level targets include but are not limited to the following:

  - Construct facades with sound insulation to achieve acceptable interior noise;
  - Use sound-rated windows for primary sleeping and activity areas;
  - Use sound-rated doors for all exterior entries at primary sleeping and activity areas;
  - Use setbacks and/or sound barriers where applicable, feasible, and reasonable;
  - Use acoustic baffling of vents for chimneys, attic and gable ends;
  - Install a mechanical ventilation system that provides fresh air under closed window conditions; and
  - Maximize site design so that buildings shelter outdoor areas.
- ▲ **Policy 8.G.10:** Right-to-Farm Ordinance. Support the City and County’s right-to-farm ordinances, especially as they relate to noise emanating from agricultural operations adjacent to urban uses, by requiring notification of the potential impacts to adjacent property owners, purchasers, residents, and users.

**Table 14-11 City of Woodland Noise Level Performance Standards (Table 8-6 of the City of Woodland General Plan)**

New Projects Affected by or Including Non-transportation Sources*		
Noise Level Descriptor	Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)
Hourly L <sub>eq</sub> , dB	60	45
Maximum Level, dB	75	65

Each of the noise levels specified above shall be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings). These standards apply to the noise sources themselves; noise caused by motor vehicles traveling to and from the site is exempt from this standard.

Source: City of Woodland 2017

**Table 14-12 City of Woodland Maximum Allowable Noise Exposure from Transportation Noise Sources (Table 8-2 of the City of Woodland General Plan)**

Land Uses	Outdoor Activity Areas L <sub>dn</sub> /CNEL, dBA	Interior Spaces	
		L <sub>dn</sub> /CNEL, dBA	L <sub>eq</sub> , dBA
Residential	60	45	-
Transient Lodging	60	45	-
Hospitals, nursing homes	60	45	-
Theatres, auditoriums, music halls	-	-	35
Churches, meeting halls	60	-	40
Office Buildings	-	-	45
Schools libraries, museums	-	-	45
Playgrounds, neighborhood parks	70	-	-

**Note:**

1. Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use. For residential uses with front yards facing the identified noise source, an exterior noise level criterion of 65 dB L<sub>dn</sub> shall be applied at the building façade, in addition to a 60 dB L<sub>dn</sub> criterion at the outdoor activity area.
2. As determined for a typical worst-case hour during period of use.
3. Where it is not possible to reduce noise in outdoor activity areas to 60 dB L<sub>dn</sub>/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB L<sub>dn</sub>/CNEL may be allowed, provided that practical exterior noise level reduction measures have been implemented and that interior noise levels are in compliance with this table.

Source: City of Woodland 1996

**City of Woodland Municipal Code**

Section 15-26, "Noise Ordinance," of the City of Woodland Municipal Code identified noises that may annoy, disturb, injure, or endanger the comfort, repose, health, peace, or safety of others, and indicates hours wherein such noises must be prohibited. These include, but are not limited to, motor noises, yelling and shouting, blowers, power tools, and pets. The Code also contains Construction Noise Guidelines which establishes acceptable hours for construction activity to be performed. Construction is allowable Monday through Saturday between the hours of 7:00 a.m. and 6:00 p.m. and on Sunday between the hours of 9:00 a.m. and 6:00 p.m.

**14.3 ENVIRONMENTAL CONSEQUENCES****14.3.1 Methodology and Significance Criteria****METHODS AND ASSUMPTIONS**

Evaluation of the potential effects that may result from each alternative is based on a review of the anticipated changes in land cover/land use as described in the Yolo HCP/NCCP; review of the Yolo County General Plan, and the planning documents from the cities of Davis, West Sacramento, Winters, and Woodland; and the assumption that activities under each alternative would comply with the applicable local, State, and federal regulations and general plan policies.

The assessment of potential effects on noise in the Plan Area is based on the anticipated changes in land cover and land uses over a 50-year study period, corresponding to the permit term under the Proposed Action Alternative.

As described in Section 3.3, the issuance of ITPs by the Wildlife Agencies for take of 12 covered species associated with five categories of covered activities—together with subsequent adoption and implementation

of the Plan by the Applicants consistent with the Permits—is the Proposed Action considered in this EIS/EIR. Issuance of permits by the Wildlife Agencies only provides compliance with the FESA and NCCPA.

All covered activities are subject to the approval authority of one or more of the Applicants with jurisdiction over such projects, and HCP/NCCP approval and permit issuance for take of covered species does not confer or imply approval from any entity other than the U.S. Fish and Wildlife Service (USFWS) or California Department of Fish and Wildlife (CDFW) to implement the covered activities. Rather, as part of the standard approval process, individual projects will be considered for further environmental analysis and generally will receive separate, project-level environmental analysis review under CEQA and, in some cases, NEPA for those projects involving federal Agencies.

Anticipated changes in land cover/land use for each alternative are described in Chapter 2, Proposed Action and Alternatives. See Chapter 3, *Approach to the Analysis*, for a description of the methodology used across all resource chapters for the analysis of cumulative effects.

As described in Chapter 2, *Proposed Action and Alternatives*, the Conservancy has proposed a number of changes to the HCP/NCCP since the release of the Draft on June 1, 2017. These changes are described and Characterized in Section 2.3.2, *Alternative B – Proposed Action Alternative (Permit Issuance/Plan Implementation)*, of Chapter 2.

These proposed changes fall into several categories;

- ▲ Copy edits such as correction of spelling errors,
- ▲ Minor text clarifications and corrections such as providing or correcting cross references to other parts of the document,
- ▲ Minor numeric corrections, such as small adjustments to acreages of particular land cover types,
- ▲ Providing updated information since publication of the Draft HCP/NCCP such as including information from the City of Woodland General Plan Update 2035, which was adopted after the Draft HCP/NCCP was published,
- ▲ Clarifications or enhancements to particular plan elements such as new or updated Avoidance and Minimization Measures (AMMs),
- ▲ Increased details on plan implementation such as providing additional information on the content of the Implementation Handbook, and
- ▲ Changes in assumptions regarding costs and funding to reflect updated information.

These proposed changes have been analyzed to determine whether they would result in any changes to the impact analysis or conclusions reached in the Draft EIS/EIR. This analysis is provided in Section 24.2, *Evaluation of Proposed Modifications to the Draft HCP/NCCP*. The analysis substantiates that the proposed changes to the HCP/NCCP do not alter the analysis or impact conclusions provided in the Draft EIS/EIR for noise. Therefore, no changes to the analysis provided below are merited.

## SIGNIFICANCE CRITERIA

Effects would be significant if an alternative would result in the following:

- ▲ exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- ▲ exposure of persons to or generate excessive groundborne vibration or groundborne noise levels;

- ▲ a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- ▲ a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- ▲ for a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project to excessive noise levels; or
- ▲ for a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.

## 14.3.2 Effects of Proposed Action and Alternatives

### ALTERNATIVE A—NO ACTION ALTERNATIVE (NO PERMIT/NO PLAN IMPLEMENTATION)

As described previously in Chapter 2, *Proposed Action and Alternatives*, under the No Action Alternative (Alternative A), take associated with development would occur over the 50-year study period consistent with the local general plans and other applicable planning documents (e.g., community plans, specific plans, recreation plans). As also described in Chapter 2, for purposes of this analysis, development and related activities (e.g., operations and maintenance) under the No Action Alternative are considered using the same organizational categories identified in the Yolo HCP/NCCP; urban projects and activities; rural projects and activities, which includes rural public services, infrastructure, and utilities, agricultural economic development, and open space; and public and private operations and maintenance. Under the No Action Alternative, the Plan would not be approved and implemented and no Endangered Species Act authorizations would be issued by the USFWS or CDFW related to the Plan. Endangered species permitting and mitigation would continue on an individual project-by-project basis.

Urban projects and activities would be concentrated within the cities of Davis, West Sacramento, Winters, and Woodland. Rural projects and activities would primarily occur within and around the existing communities within the unincorporated county (i.e., Clarksburg, Dunnigan, Esparto, Elkhorn, Knights Landing, and Madison). Activities associated with the rural public services, infrastructure, and utilities, and agricultural economic development and open space categories would occur in various locations in the unincorporated county. Public and private operations and maintenance activities would occur both in Yolo County and the cities.

Urban and rural projects under the No Action Alternative could generate sufficient noise to result in violations of noise standards; however, projects and activities would be subject to various noise related laws and regulations including the provisions of the Noise Control Act and the standards established by FHWA, FTA, and FRA, as discussed above in Section 14.2.2, *Regulatory Setting*. These activities would also be subject to the applicable general plan policies that target excessive noise generation.

General urban and rural development activities under the No Action Alternative could result in an increase of unacceptable ambient noise levels from the introduction of new mobile sources. Buildout under the applicable general plans could result in traffic-related noise on highways and roadways throughout various parts of the County that could increase permanent ambient noise levels of 5 dBA or more. However, activities under the No Action Alternative would be implemented according to the provisions of the Yolo County General Plan and applicable City general plans transportation-related noise standards (County of Yolo 2009). Projects would undergo environmental review on a project-by-project basis, and projects found to exceed the applicable noise standards for sensitive land uses (e.g., residential development) would incorporate feasible mitigation measures to reduce traffic-related ambient noise effects.

Urban projects and activities would occur within the planning areas of the cities of Davis, West Sacramento, Winters, and Woodland, each of which has an adopted general plan containing goals and policies that address noise. Construction-related activities would occur with the implementation of urban development covered under the No Action Alternative. Heavy duty equipment (e.g., backhoes, dozers, graders), with varying levels of noise generation, would be used for construction activities. Although noise typically diminishes by 6 dBA for each doubling of distance from this type of source, construction activities may be performed at a distance wherein noise levels exceed applicable thresholds of significance. Adverse effects related to construction-generated noise could be reduced through restricting the hours allowed for construction to occur. Projects would comply with local ordinances that target construction-related noise; however, implementation of urban projects and activities could introduce substantial temporary noise in the Plan Area. Further, build-out of urban projects would produce new point sources of noise (e.g., subdivisions) that could result in an increase in permanent ambient noise in the Plan Area.

Rural projects and activities would be focused in Dunnigan, Esparto, Knights Landing, Madison, Elkhorn, and around highway interchanges. In each of these locations, projects and activities would be required under environmental review to comply with all applicable noise-related ordinances of the County Code and the policies of the General Plan. Maximum noise levels from construction activities due to build-out under the No Action Alternative could result in a substantial periodic increase in ambient noise levels. The County General Plan instructs the County to adopt a comprehensive Noise Ordinance that specifically addresses construction noise. Noise ordinances typically restrict construction activities to certain timeframes during the week. However, construction noise would still result in effects on nearby sensitive receptors.

Activities covered in the agricultural economic development category under the No Action Alternative could introduce new stationary agricultural-industrial and agricultural-commercial uses (e.g., grain operations, feed stores, and wineries). In accordance with the applicable planning documents, agricultural activities would increase over the course of the next 50 years; therefore, increases in permanent ambient noise levels from farming noise sources could occur. Yolo County and the four cities have right-to-farm ordinances that protect farming as an industry from encroachment by incompatible uses. Also, based on general plan policies in all five jurisdictions, this analysis assumes that zoning would occur consistent with the applicable planning documents, which would avoid placing significant new noise sensitive land uses in proximity of existing or planned commercial, industrial, or agricultural uses containing substantial mobile and point sources of noise.

Under the No Action Alternative, it is assumed that there would be a continuation of existing conditions in the expanded Plan Area along the south side of Putah Creek in Solano County. The land is primarily used for agriculture and this land use would continue, thus not resulting in changes to the ambient noise levels in or around the expanded Plan Area.

The construction phase for projects and activities under the No Action Alternative could expose sensitive receptors to levels of groundborne vibration. Construction-related pile-driving, operation of heavy-duty equipment, and potentially blasting would likely occur from implementation of development related activities. Further, urban buildout could include the construction and operation of new transit systems (e.g., trains, trolleys) that could expose people to adverse levels of operational groundborne vibration. Such projects would be subject to environmental review, and effects related to excessive groundborne vibration would be reduced if feasible.

As discussed in Section 14.2.1, *Environmental Setting*, Yolo County contains four airports: the Yolo County Airport, the Watts-Woodland Airport, the University Airport, and the Borges-Clarksburg Airport. Additionally, the Sacramento International Airport in adjacent Sacramento County is located 1 mile from the Plan Area boundary, and also produces sources of noise for the Plan Area. Implementation of the development related activities under the No Action Alternative could expose workers or residents to noise related to air traffic.

As the development and other activities described above are implemented as part of the No Action Alternative, impacts to threatened and endangered species and other biological resources would occur, requiring mitigation. Mitigation measures are likely to include on-site areas of preservation within a specific project site, and smaller, non-contiguous areas of preservation lands throughout Yolo County, or nearby sites

outside the county with authorization from the permitting agencies. Generally, these required mitigation actions under the No Action Alternative would either retain lands in their existing condition (i.e., preserve habitat), or convert lands to a more natural state (i.e., habitat restoration or creation). Retaining lands in their existing condition would not substantially alter noise generation, or introduce new sensitive receptors. Habitat restoration activities and installation of preserve infrastructure (e.g., fences, gates) would have the potential to generate noise through the use of various pieces of mobile and stationary construction equipment. However, noise generation would be temporary and relatively minor, and protected mitigation lands would typically be established in open space areas with few, if any, sensitive receptors in the vicinity.

### **Cumulative Effects**

Expansion of development in urban and rural areas (e.g., Davis, West Sacramento, Winters, Woodland) over the past century has resulted in an increase in the amount of agricultural and natural landscapes converted to residential, commercial, and other uses. This past development has altered the character of sound in the Plan Area such that human-related sources of noise have been introduced and have replaced natural sources. Development in the Plan Area has resulted in the addition of mobile (e.g., automobiles, airplanes) and point sources (e.g., mining operations, agriculture) of noise. Overall, development will produce sources of noise not previously found in the Plan Area. This could result in a cumulatively considerable contribution to existing ambient noise conditions.

Additional foreseeable future projects and activities in the Plan Area beyond those discussed in Chapter 2, *Proposed Action and Alternatives*, under the No Action Alternative would likely include activities such as solar and wind energy development, Caltrans infrastructure projects, and additional flood control activities. These additional development activities would have similar impacts on the noise environment as projects under the No Action Alternative.

These additional foreseeable projects and activities and those included under the No Action Alternative would be implemented under the same existing federal, State, and local policies and regulations as described in Section 14.2.2, *Regulatory Setting*. These regulations are expected to result in reduced noise impacts as compared to past development. Although impacts may be less than those from past development, when combined with additional development projects within the County, activities under the No Action Alternative could make a cumulatively considerable contribution to a significant cumulative impact related to noise impacts within the Plan Area.

### **ALTERNATIVE B—PROPOSED ACTION ALTERNATIVE (PERMIT ISSUANCE/PLAN IMPLEMENTATION)**

The Proposed Action Alternative (Alternative B) incorporates the same development-related activities identified for the No Action Alternative (urban projects and activities, rural projects and activities, and public and private operations and maintenance), with the HCP/NCCP providing a mechanism for the Wildlife Agencies to provide incidental take authorization for these lawfully undertaken covered activities. Noise impacts as a result of these activities would be the same as described under the No Action Alternative; therefore, effects associated with such activities are not discussed further in the impact discussion below. Further, while lands in the expanded Plan Area may be added to the reserve system, because no other activities related to the HCP/NCCP would occur in this corridor, the potential effect in this area would not differ from reserves established in the Plan Area.

Where the Proposed Action Alternative differs from the No Action Alternative is the implementation of the Yolo HCP/HCCP, including its conservation strategy and neighboring landowner protection program, as well as the required use of Avoidance and Minimization Measures (AMMs) during implementation of covered activities. Components of the conservation strategy include but are not limited to habitat assessment surveys and population surveys; habitat management; restoration, enhancement, and creation of habitats; conversion of agricultural lands to create habitat; construction of facilities necessary for management and maintenance; and monitoring; and control of invasive nonnative species. The following impact discussion focuses on these elements of the HCP/NCCP that differ from the No Action Alternative. However, the primary result of the neighboring landowner protection program, from a noise perspective, would be the general



preservation of existing conditions on lands adjacent to reserve system lands. The voluntary neighboring landowner protection program is described in more detail in Chapter 2, *Proposed Action and Alternatives*. Because the program does not change noise conditions, it would not have an effect on noise, and is not evaluated further in the impact discussion below.

All covered activities implemented under the Proposed Action Alternative, including both take associated with development as well as conservation actions, would be subject to AMMs required by the HCP/NCCP that would reduce noise effects. The AMMs that would reduce the likelihood of noise effects are shown in Table 14-13 and are discussed in detail in Appendix C.

**Table 14-13 Yolo HCP/NCCP Avoidance and Minimization Measures Applicable to Noise**

General Project Design
AMM1, Establish Buffers
AMM2, Design Developments to Minimize Indirect Effects at Urban-Habitat Interfaces
General Construction and Operations and Maintenance
AMM3, Confine and Delineate Work Area
AMM8, Avoid and Minimize Effects of Construction Staging Areas and Temporary Work Areas

**Effect NOISE-1: Expose people to excessive groundborne vibration or noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.**

Under the Proposed Action Alternative, implementation of the conservation strategy would include management activities that entail the construction, maintenance, repair, replacement, and use of facilities required to manage the reserve system, including maintenance sheds, shade structures, roads, culverts, fences, gates, wells, stock tanks, and stock ponds. Although facilities existing at the time of land acquisition will be used whenever feasible, new facilities may be constructed. These activities may occur in the vicinity of sensitive receptors, such as residential subdivisions and parks. Any noise or groundborne vibration generated from the construction and ongoing maintenance of reserve system-related structures would be minimal and not be expected to exceed local standards. Further, with regards to reserve system activities performed on unincorporated lands, the County has not adopted a comprehensive construction noise or groundborne vibration ordinance. At present, the County has adopted noise standards for off-channel mining for the Lower Cache Creek; however, reserve system activities would not include mining and; therefore, would not be subject to such standards.

Implementation of the Proposed Action Alternative would differ from the No Action Alternative in that the resulting reserve system under the Proposed Action Alternative would be a consolidated, contiguous system. The preserves formed under the No Action Alternative would occur on a project-by-project basis, which would result in more discrete reserves. Under the No Action Alternative, it is also more likely that preserves would be included within project sites, resulting in more preserves in proximity to development and preserve activities be conducted being conducted closer to sensitive receptors. Although the construction- and operation-related activities related to reserve system implementation and maintenance would be similar under the two alternatives, the consolidated reserve system under the Proposed Action Alternative would result in fewer vehicle miles traveled (VMT) throughout the Plan Area. A reduction in reserve system-related VMT from these activities would subsequently reduce noise generated from mobile source emissions, which could lower levels of mobile-source ambient noise in the Plan Area.

Additionally, as discussed above, covered actions which require ground disturbance and the potential to generate adverse levels of noise implemented as part of the conservation strategy under the Proposed Action Alternative would be subject to AMMs as required by the Yolo HCP/NCCP. For of these AMMs, as identified in Table 14-3, would result in reductions in potential noise effects to sensitive land uses and receptors by either placing noise generating activities farther from potential sensitive receptors, or reducing the noise generating potential of preserve activities.

Although implementation of the Proposed Action Alternative, compared to the No Action Alternative, could potentially result in benefits associated with the noise reductions and placing noise generating activities further from sensitive receptors, these benefits are relatively minor and overall noise effects would remain similar to the No Action Alternative. Effects associated with exposing persons to levels of noise that exceed local standards as a result of implementation of the Proposed Action Alternative would not be appreciably different from those under the No Action Alternative.

**NEPA Level of Significance:** As compared to the No Action Alternative, this impact is **less than significant**.

**CEQA Level of Significance:** As compared to Existing Conditions, this impact is **less than significant**.

Potential effects from establishment and management of a reserve system under the Proposed Action Alternative relative to an existing conditions baseline would result in increased levels of ambient noise associated with reserve establishment and maintenance. However, the implementation of AMM's and the minor nature of the increase in mobile source noise emissions would not result in substantial adverse effects to levels of ambient noise.

*No mitigation is required.*

**Effect NOISE-2: Create a substantial permanent increase in ambient noise levels in the project vicinity as compared to without the project.**

Under the Proposed Action Alternative, a reserve system would be established and would require the use of various types of motorized equipment for reserve establishment and maintenance. Permanent ambient noise generated from the use of heavy duty equipment (e.g., graders, dozers) for establishment and maintenance of the reserve system would be similar for both the Proposed Action Alternative and the No Action Alternative. However, any increases in ambient noise from these activities would be temporary, occur over short periods (hours or days), and would not generate significant increases in noise levels. The reserve system under the Proposed Action Alternative would be more consolidated and contiguous than under the No Action Alternative; therefore, maintenance- and recreational-related VMT would be lower under the Proposed Action Alternative as compared to the No Action Alternative, thus, reducing noise generated from mobile source emissions. Maintenance of the discrete reserve system established under the No Action Alternative could entail trips of greater distance because they would generally be smaller and more fragmented across the Plan Area and, thus, more VMT would be generated. The more consolidated nature of the reserve system under the Proposed Action Alternative could improve accessibility and reduce the travel distance required for maintenance and recreational activities. Mobile sources comprise the dominant source of ambient noise in the Plan Area; therefore, a reduction in vehicular trips could reduce levels of ambient noise associated with automobiles and trucks. However, trip generation from preserve/reserve system establishment and maintenance under both alternatives is minor and neither would result in significant increase in ambient noise relative to existing conditions.

Although implementation of the Proposed Action Alternative relative to the No Action Alternative could potentially result in benefits associated with the noise reduction from mobile source emissions, due to the relatively minor nature of these benefits, noise effects would remain similar to the No Action Alternative.

**NEPA Level of Significance:** As compared to the No Action Alternative, this impact is **less than significant**.

**CEQA Level of Significance:** As compared to Existing Conditions, this impact is **less than significant**.

Potential effects from establishment and management of a reserve system under the Proposed Action Alternative relative to an existing conditions baseline would result in increased levels of ambient noise associated with reserve establishment and maintenance. However, the minor nature of the increase in noise emissions would not result in substantial adverse effects to levels of permanent ambient noise.

*No mitigation is required.*

**Effect NOISE-3: Create a substantial temporary increase in ambient noise levels in the project vicinity as compared to without the project.**

For the same reasons described above under Effect NOISE-2 indicating why the Proposed Action Alternative would not result in a substantial permanent increase in ambient noise levels, it would also not result in a substantial temporary increase in ambient noise levels. Activities associated with preserve system establishment and maintenance are of a relatively small scale and do not require large numbers of noise generating equipment, and therefore do not generate substantial noise on either a temporary or permanent basis. The Proposed Action Alternative would result in reduced generation of temporary increases in ambient noise levels relative to the No Action Alternative for the same reasons described above for Effect Noise-2. The differences between the two alternatives would remain minor.

**NEPA Level of Significance:** As compared to the No Action Alternative, this impact is **less than significant**.

**CEQA Level of Significance:** As compared to Existing Conditions, this impact is **less than significant**.

*No mitigation is required.*

**Effect NOISE-4: Expose people to excessive noise associated with air travel.**

As discussed in Section 14.2.1, *Environmental Setting*, the Plan Area contains four airports: Yolo County Airport, Watts-Woodland Airport, University Airport, and Borges-Clarksburg Airport. Additionally, the Sacramento International Airport in adjacent Sacramento County is located 1 mile from the Plan Area border, and also produces sources of noise for the Plan Area. Implementation of the Proposed Action Alternative would entail the same development related activities as the No Action Alternative; however, the conservation strategy contained in the Proposed Action Alternative would expand on existing conservation areas to produce a more consolidated and connected reserve system as compared to the No Action Alternative. As discussed in Section 2.3.2, *Alternative B-Proposed Action Alternative*, a total of 33,362 acres would be included in the reserve system. It is likely at least some element of the reserve system would be located within 2 miles of a private or public airstrip. Although some recreational activity could be allowed under the conservation strategy, the reserve system would typically be unoccupied and would not have structures or uses that would support human habitation or a long-term human presence. Therefore, implementation of the Proposed Action Alternative would not expose people living or working near the vicinity of a private or public airstrip to excessive noise associated with air travel as compared to the No Action Alternative. This same conclusion applies to the No Action Alternative.

**NEPA Level of Significance:** As compared to the No Action Alternative, this impact is **less than significant**.

**CEQA Level of Significance:** As compared to Existing Conditions, this impact is **less than significant**.

*No mitigation is required.*

**Cumulative Effects**

The existing cumulative condition in the Plan Area resulting from past and present project is described above for the No Action Alternative and remains the same for the Proposed Action Alternative.

Establishment and management of a reserve system as part of the implementation of the conservation strategy would add relatively minor amounts of noise, typically in locations distant from potential sensitive receptors. Also, implementation of the AMMs listed in Table 14-13 above, and discussed in detail in Appendix C, would further reduce the potential effects from noise during reserve establishment and maintenance activities. The potential noise impact reduction benefits of the Proposed Action Alternative compared to the No Action Alternative, described above in the discussions of Effects NOISE-1, NOISE-2, and NOISE-3 would be minor, thus, contributions to cumulative effects under the Proposed Action Alternative would remain similar to the No Action Alternative.

Implementation of the conservation strategy under the Proposed Action Alternative would not make a cumulatively considerable contribution to a significant cumulative impact related to noise.

**NEPA Level of Significance:** As compared to the No Action Alternative, this impact is **less than significant**.

**CEQA Level of Significance:** As compared to Existing Conditions, this impact is **less than significant**.

## **ALTERNATIVE C-REDUCED TAKE ALTERNATIVE**

The Reduced Take Alternative (Alternative C) would include the same categories of development related activities as the Proposed Action Alternative (Alternative B); however, under the Reduced Take Alternative, there are eight areas designated for development under the Proposed Action Alternative in which activities that would result in take of covered species would not be permitted. See Chapter 2, Section 2.3.3, *Alternative C-Reduced Take Alternative* for more information on this alternative.

Effects to noise as a result of implementation of the Reduced Take Alternative would be similar to those discussed above for the No Action and Proposed Action alternatives; however, activities that could result in take (e.g., development) would be reduced by approximately 1,335 acres within the Plan Area. If the prohibition on take of covered species under the Reduced Take Alternative resulted in less overall take development in the Plan Area, noise effects from development related activities could be slightly less under the Reduced Take Alternative. However, the prohibition on take under the Reduced Take Alternative could result in the development planned for these locations being diverted to another part of the Plan Area. If any of the new location were farther from development centers, this could result in more frequent and longer vehicle trips and an increase in noise effects. Therefore, noise associated with this alternative would be similar to noise associated with the No Action Alternative.

The Reduced Take Alternative includes implementation of the Yolo HCP/NCCP and associated conservation strategy and AMMs for development related activities. This would further reduce any potential for some noise effects when compared to the No Action Alternative as discussed for the Proposed Action Alternative above.

Overall, under the Reduced Take Alternative, Effect NOISE-1, NOISE-2, NOISE-3, and NOISE-4 would not be appreciably different from what is described for the Proposed Action Alternative.

**NEPA Level of Significance:** As compared to the No Action Alternative, this impact is similar and is **less than significant**.

**CEQA Level of Significance:** As compared to the Proposed Action Alternative, this impact is similar and is **less than significant**.

*No mitigation is required.*

## **Cumulative Effects**

The existing cumulative condition in the Plan Area resulting from past and present projects is described above for the No Action Alternative and remains the same for the Reduced Take Alternative. The individual effects on noise in the Plan Area from the Reduced Take Alternative, and therefore, contributions to cumulative effects, would be similar to those under the Proposed Action Alternative and No Action Alternative.

**NEPA Level of Significance:** As compared to the No Action Alternative, this impact is similar and is **less than significant**.

**CEQA Level of Significance:** As compared to the Proposed Action Alternative, this impact is similar and is **less than significant**.

## ALTERNATIVE D-REDUCED DEVELOPMENT ALTERNATIVE

The Reduced Development Alternative (Alternative D) would include the same categories of development related activities as the Proposed Action Alternative (Alternative B), but under the Reduced Development Alternative, development within a portion of the west side of the Dunnigan area, and the Elkhorn Specific Plan Area, would not be covered activities under the HCP/NCCP. Any development that resulted in take of listed species in these locations would be required to obtain FESA and CESA authorization on a project by project basis (See Chapter 2, Section 2.3.4, *Alternative D-Reduced Development Alternative* for more information on this alternative).

Effects related to noise as a result of implementation of the Reduced Development Alternative would be similar to those discussed under the No Action Alternative and the Proposed Action Alternative. If the inability to obtain coverage using the Plan in the two identified areas under the Reduced Development Alternative resulted in less overall development in the Plan Area, noise effects from take associated with development could be slightly less under the Reduced Development Alternative. However, the limitation on use of the Plan under the Reduced Development Alternative could result in the development planned for these locations being diverted to another part of the Plan Area. If any of the new location were farther from development centers, this could result in more frequent and longer vehicle trips and thus an increase in noise effects. It should be noted that if the two identified areas were developed in the future, effects on noise would be the same as those for the Proposed Action Alternative, although AMMs included in the Plan would not be applied to these locations.

Overall, under the Reduced Development Alternative, Effect NOISE-1, NOISE-2, NOISE-3, and NOISE-4 would not be appreciably different from what is described for the Proposed Action Alternative and the No Action Alternative.

**NEPA Level of Significance:** As compared to the No Action Alternative, this impact is similar and is **less than significant**.

**CEQA Level of Significance:** As compared to the Proposed Action Alternative, this impact is similar and is **less than significant**.

*No mitigation is required.*

### Cumulative Effects

The existing cumulative condition in the Plan Area resulting from past and present projects is described above for the No Action Alternative and remains the same for the Reduced Development Alternative. The individual effects on noise in the Plan Area from the Reduced Development Alternative, and therefore, contributions to cumulative effects, would be similar to those under the Proposed Action Alternative and No Action Alternative.

**NEPA Level of Significance:** As compared to the No Action Alternative, this impact is similar and is **less than significant**.

**CEQA Level of Significance:** As compared to the Proposed Action Alternative, this impact is similar and is **less than significant**.

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