4.9 NOISE

4.9 NOISE

INTRODUCTION

This section examines specific noise impacts related to implementation of the CCRMP and project alternatives. The main issues addressed in this section include:

- noise impacts associated with in-channel maintenance mining and reclamation;
- noise impacts associated with traffic;
- noise impacts associated with recreation; and
- cumulative noise effects.

SETTING

Environmental noise is typically measured in terms of A-weighted decibels (dBA).[1] Environmental noise fluctuates over time, and different types of noise descriptors are used to account for this variability. Typical noise descriptors include the energy-equivalent noise level (L_{eq}) and the day-night average noise level (CNEL).[2] The CNEL is commonly used in establishing noise exposure guidelines for specific land uses. Generally, a three-dBA increase in ambient noise levels represents the threshold at which most people can just detect a change in the noise environment; an increase of 10 dBA is perceived as a doubling of loudness. A more detailed discussion of environmental noise is contained in Appendix 7.2 of this EIR.

The following setting information is derived from several sources, including individual noise studies for the five mining permit applications received by the County, and the Noise Element of the Yolo County General Plan. Specific noise level data were obtained from noise measurements conducted as part of individual mining permit applications. Information on traffic noise levels was obtained from new traffic noise modeling which incorporates the latest traffic information from the traffic section of this EIR.

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[1] A decibel (dB) is a unit of sound energy intensity. Sound waves, traveling outward from a source, exert a sound pressure (commonly called "sound level") measured in dB. An A-weighted decibel (dBA) is a decibel corrected for the variation in frequency response of the typical human ear at commonly encountered noise levels.

[2] L_{eq}, the energy equivalent noise level (or "average" noise level), is the equivalent steady-state continuous noise level which, in a stated period of time, contains the same acoustic energy as the time-varying sound level actually measured during the same period. CNEL, the day-night average noise level, is a weighted 24-hour average noise level. With the CNEL descriptor, noise levels between 7:00 pm and 10:00 pm are adjusted upward by 5 dB and noise levels between 10:00 p.m. and 7:00 a.m. are adjusted upward by ten dBA to take into account the greater annoyance of nighttime noise as compared to daytime noise.

Existing Noise Environment

The major noise sources in the study area are associated with transportation (i.e., vehicles traveling on the local and regional roadway network). Other noise sources include agricultural, mining and aircraft activity.

Traffic Noise

The project area is served by regional freeways and highways in the state system (see Figure 4.8-1). Regional north-south access is provided by Interstates 5 and 505 (I-5 and I-505, respectively), both of which are conventional, four-lane divided freeways. State Route (SR) 16 also traverses the project area, running in a generally east-west direction; it is a standard two-lane highway. The local roadway system is comprised of rural, two-lane County roads, various public streets located mainly in the unincorporated towns of Esparto, Madison and Capay, and private access roads (paved and unpaved).

The loudest transportation facility in the vicinity of the planning area is I-505, which generates a CNEL of 70 to 71 dB at 100 feet (from centerline). State Route 16 generates a CNEL of 67 to 68 dB at 100 feet. The County roads which traverse the planning area generate CNEL levels of 62 dB or less at 100 feet. County roads currently used for hauling aggregate materials from existing mining operations (Roads 19, 20, and 89) generate the highest noise levels of all County roads. Existing traffic noise levels are summarized in Table 4.9-1.

Agriculture

The majority of the land in the vicinity of the planning area is used for agriculture. Noise sources associated with agricultural activities include field and crop maintenance, hauling, and crop dusting from small aircraft. The noise from these sources mostly occurs within the confines of the agricultural fields, and is seasonal. A characteristic of agricultural noise is short periods of noisy activities separated by long periods of little or no noise-producing activities.

Mining Operations and Hauling

Noise-generating activities associated with existing in-channel and off-channel maintenance mining operations are described below.

Excavation

This activity consists of extracting sand and gravel aggregate material and transporting it to a processing plant. Noise-generating equipment used in mining includes drag lines, scrapers, and sometimes dredges. Aggregate material is generally transported to the processing plant by the scrapers, but on-site haul trucks or conveyers are also used.

Table 4.9-1: Existing Traffic Noise Exposure			
Roadway	**Segment**	**CNEL at 100 feet from centerline**	**Distance to CNEL 60 dB**
Road 14	5 to 505	58 dB	76 ft
	505 to Rd 89	51 dB	27 ft
	Road 89 to Road 85	51 dB	24 ft
Road 17	5 to 505	44 dB	8 ft
Road 19	Rd 94B to Rd 20	58 dB	79 ft
	Rd 20 to I-505	58 dB	76 ft
	I-505 to Rd 87	60 dB	104 ft
Road 20(KY Av)	Rd 97 to Rd 96	62 dB	138 ft
	Rd 96 to end	62 dB	128 ft
Route 16	Rd 98 to Rd 97	68 dB	333 ft
	Rd 97 to Rd 93	68 dB	318 ft
	Rd 93 to I-505	67 dB	306 ft
	I-505 to Rd 89	68 dB	358 ft
	Rd 89 to Rd 86A	67 dB	304 ft
	Rd 86A to Rd 85	66 dB	241 ft
Road 96	Rte 16 to Road 20	56 dB	55 ft
Road 94B	Rte 16 to Main St	52 dB	29 ft
	Main St to Rd 19	58 dB	69 ft
Solano Access	north of Rte 16	59 dB	93 ft
Road 89	Rte 16 to Cache Cr	60 dB	98 ft
Road 87	Rte 16 to Cache Cr	58 dB	69 ft
	Cache Cr to Rd 19	57 dB	66 ft
	Rd 19 to Rd 16	58 dB	73 ft
Road 85	Cache Cr. to Rd 16A	53 dB	33 ft
	Rd 16A to Rd 14	52 dB	28 ft
I-505	south of Rte 16	71 dB	559 ft
	Rte 16 to Rd 19	70 dB	497 ft
	north or Rd 19	70 dB	497 ft

Source: Charles M Salter Associates, Inc, 1996

Processing

The processing of aggregate material is typically done at a stationary processing plant on the site. Noise-producing activities include crushing, sorting and loading of aggregate materials. Noise generated during processing is considered fixed-source noise.

Hauling

Aggregate materials, once processed, are hauled from the processing plan to construction sites within and outside of Yolo County. Noise is generated on access roads, designated haul routes (County roads) and on SR 16 and I-505, as haul trucks travel to and from the plant sites.

Woodland-Watts Airport

This Woodland-Watts airport is located along Road 94B just north of Route 16. It is used primarily for general aviation. The CNEL 60 contours (year 2000) for the airport are primarily within airport property. There is a small area at the south end of the airport where the contours extend approximately 1,500 feet south of Route 16.

Ambient Noise Measurements

The noise studies for the mining permit applications contain data from noise measurement surveys.[3] The measurements indicate that existing ambient noise levels at locations far from mining sites and roads range from 40 to 50 dBA L_{eq}. Noise sources are distant traffic and aircraft.

Noise-Sensitive Receivers

Residences

Population centers in the planning area include the City of Woodland, and the communities of Madison, Esparto, and Capay. Residences are primarily located outside the planning area, but are in some cases within 1,500 feet of the channel (see Figure 4.9-1). Agricultural residences are found at very low densities (typically, one residence per agricultural parcel), and may be located close to a County road or toward the center of the parcel. The noise studies conducted for the proposed mining operations identify homes near the off-channel mining areas. Homes listed in Table 4.9-2 are located within 1,500 feet of the channel.

[3]Brown-Buntin Assoc., "Environmental Noise Studies for Teichert Aggregates: a.) Long-Term Woodland, 29 Nov. 1995; b.) Long-Term Esparto, 29 Nov. 1995; c.) Mast Site Excavation, 29 November 1995; d.) Esparto Operation, 15 Sept. 1993. These studies are on file and available for public review at the Yolo County Community Development Agency. Brown-Buntin Associates, "Environmental Noise Analysis Cache Creek Aggregates," 10 January 1996.

Table 4.9-2: Residences Near the Creek Channel		
Residence	**Proposed Mining Operation**	**Location**
Road 87 (Garcia)	Syar	240 ft. north of property line
Road 20	Solano	850 ft. north of mining boundary
15810 Road 95 (Muller)	Teichert-Woodland	Across Rd 95 north of Muller Parcel
6965 Road 94 B (Metzger)	Teichert Woodland	In between Muller and Haller Parcels
Woodland Stallion Station	Teichert-Woodland	Approx. 560 ft. north of Coors Parcel
17600 Road 94 B	Teichert-Woodland	Approx. 300 ft. south of Storz parcel
17636 Road 94 B	Teichert-Woodland	Approx. 600 ft. southeast of Storz parcel
Mast Residence	Teichert Esparto	Immediately north of Mast site
Road 19A Syar Residence	Teichert Esparto	Approximately 1100 ft. west of Reiff site.

Other Noise-Sensitive Receivers

Most other noise-sensitive receivers are located outside the planning area. The primary medical facility is the Woodland Memorial Hospital (Woodland, CA). Schools and day care centers are located in the City of Woodland and the communities of Esparto, Madison and Capay. These include Esparto High School on route 16 and the Madison Migrant Center Daycare on Route 16 near Road 89. Currently, there are no public recreational facilities located along Cache Creek. Existing recreational areas include: the Esparto Community Park, the Madison Community Park, and the Flier's Club (a private golf course and clubhouse). None of these facilities provides direct access to the creek or the adjoining environs.

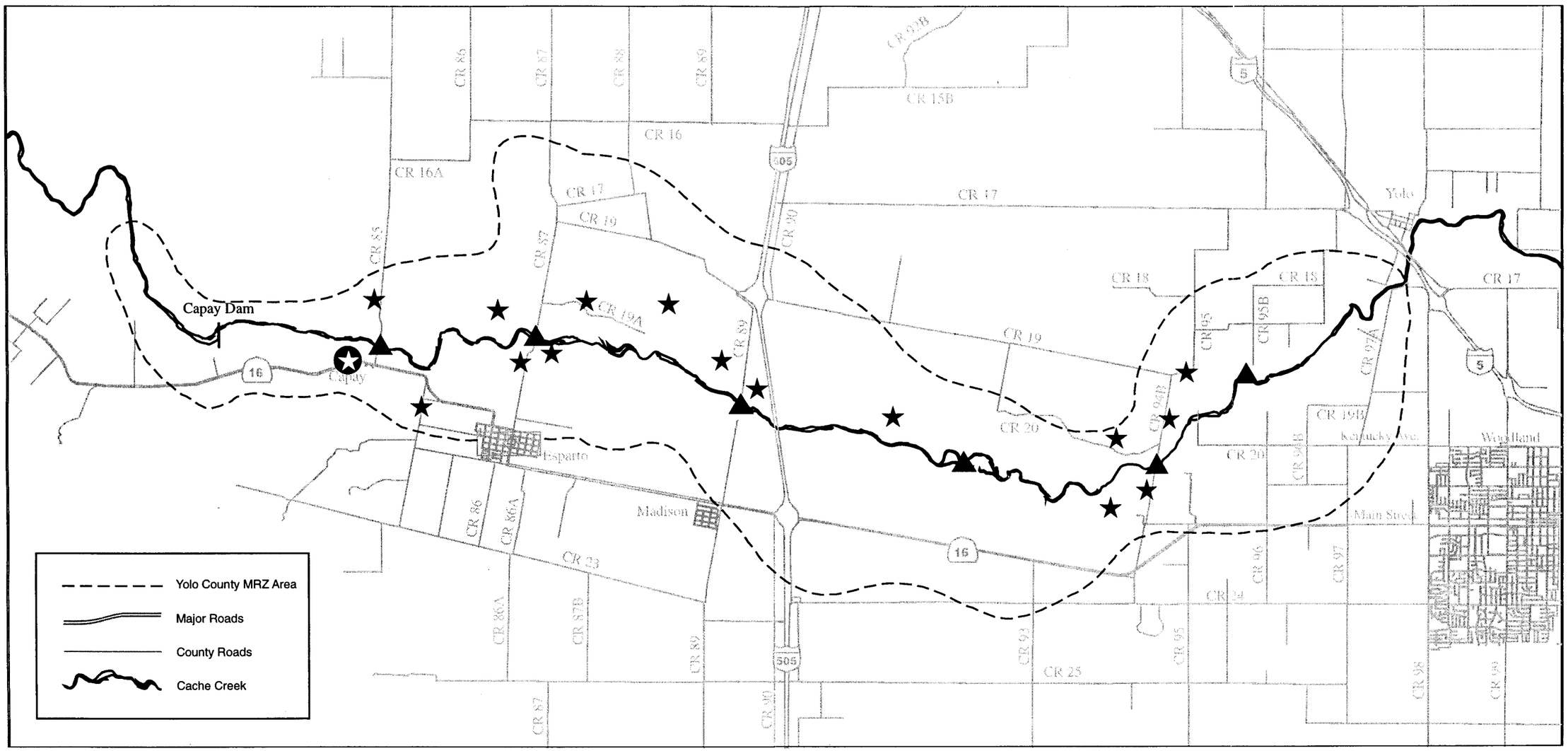


Figure 4.9-1 Noise Sensitive Receivers Near Cache Creek

SOURCE: AERIAL PHOTOS AND MINING PERMIT NOISE STUDIES

REGULATORY SETTING

Yolo County Code

Two existing regulations for this area contained in the Yolo County Code are Mining Ordinance of 1979, Section 10-3.509 and Yolo County Code, Reclamation Ordinance of 1979, Section 10-5.515. The noise standards in the two ordinances, which are identical, set forth the following prohibitions:

- Activities exceeding an exterior noise level equivalent (Leq) of 80 dB(A) between 6:00 a.m. and 6:00 p.m., and 65 dB(A) between 6:00 p.m. and 6:00 a.m., measured at the outermost boundaries of the permit area.

Yolo County General Plan

The Yolo County General Plan provides the following noise policies:

N1 Noise, Basic - Yolo County shall regulate, educate, and cooperate to reduce excessive noise levels within the environment and particularly those noise levels which impinge upon the home environment.

N2 Noise/Land Use - Yolo County shall regulate the location and operation of land uses to avoid or mitigate harmful or nuisance levels of noise.

N3 Noise, Prevent and Control - Noise shall be prevented, avoided, and suppressed by controlling noises at the source, providing barriers or buffers, by the implementation of a noise ordinance and by means of wise land use planning and implementation.

N4 Noise Ordinance - Yolo County shall adopt a comprehensive Noise Ordinance. (A noise ordinance has not been adopted by the County to date).

N5 Development Review - Yolo County shall review all new development and redevelopment in terms of the Standards of Noise Avoidance or Control.

N6 Basic Compatibility - Yolo County will review all new developments, public and private, for noise compatibility with surrounding uses to protect the occupants of nearby lands from undesirable noise levels and shall discourage new residential development in areas subject to legal, long term, excessive noise.

N7 Development Control/Noise - Yolo County shall review development plans for noise compatibility of the proposed use with the surrounding uses and planned uses, and shall incorporate noise reduction, avoidance, or mitigation techniques as necessary. In addition to other ordinances, standards, or devices, the following may be used to accomplish these policies:

Provide open space, berms or walls, or landscaped areas between occupied dwellings and noise generators.

Require specific plans, subdivision maps, or zoning standards to require deep lots in order to locate dwellings farthest from noise generators.

Require effective sound barriers for new residential developments adjacent to existing freeways and highways.

N8 Implementation - Yolo County shall achieve these policies by the application of available review, guidance, and regulatory devices including:

- Placing future development within areas of noise compatible land uses.
- Supporting efforts to reduce noise levels.
- Coordination with transportation agencies to reduce noise through design and location of new facilities.
- Application of design standards to avoid or mitigate noise problems, including structure design, materials, and location.

N9 Mitigation and Reduction - Yolo County will require mitigation to reduce noise to acceptable levels throughout the County and particularly within home environments. Reduction of noise shall be sought at the source, along its path, and/or at receiver points if such noise is determined to be excessive.

N10 County Noise Control - Yolo County shall develop a program to reduce or control noise generated from sources under the County's jurisdiction.

N11 Standards - Yolo County shall set and enforce measurable standards for noise reduction and control on construction projects, equipment purchase contracts let by the County, and as part of development review of private construction projects subject to review and approval by the County.

N12 Noise and Safety/Airports - Yolo County shall regulate and guide land use in the vicinity of airports to ensure the safety of surrounding persons and those in the aircraft. Plans and regulations to avoid conflicts, minimize safety hazards, and to minimize the level and effects of noise shall be applied.

N13 Coordination - Yolo County shall coordinate with other governmental agencies as well as the private sector in efforts to combat, alleviate, or mitigate excessive, hazardous, or annoying noise.

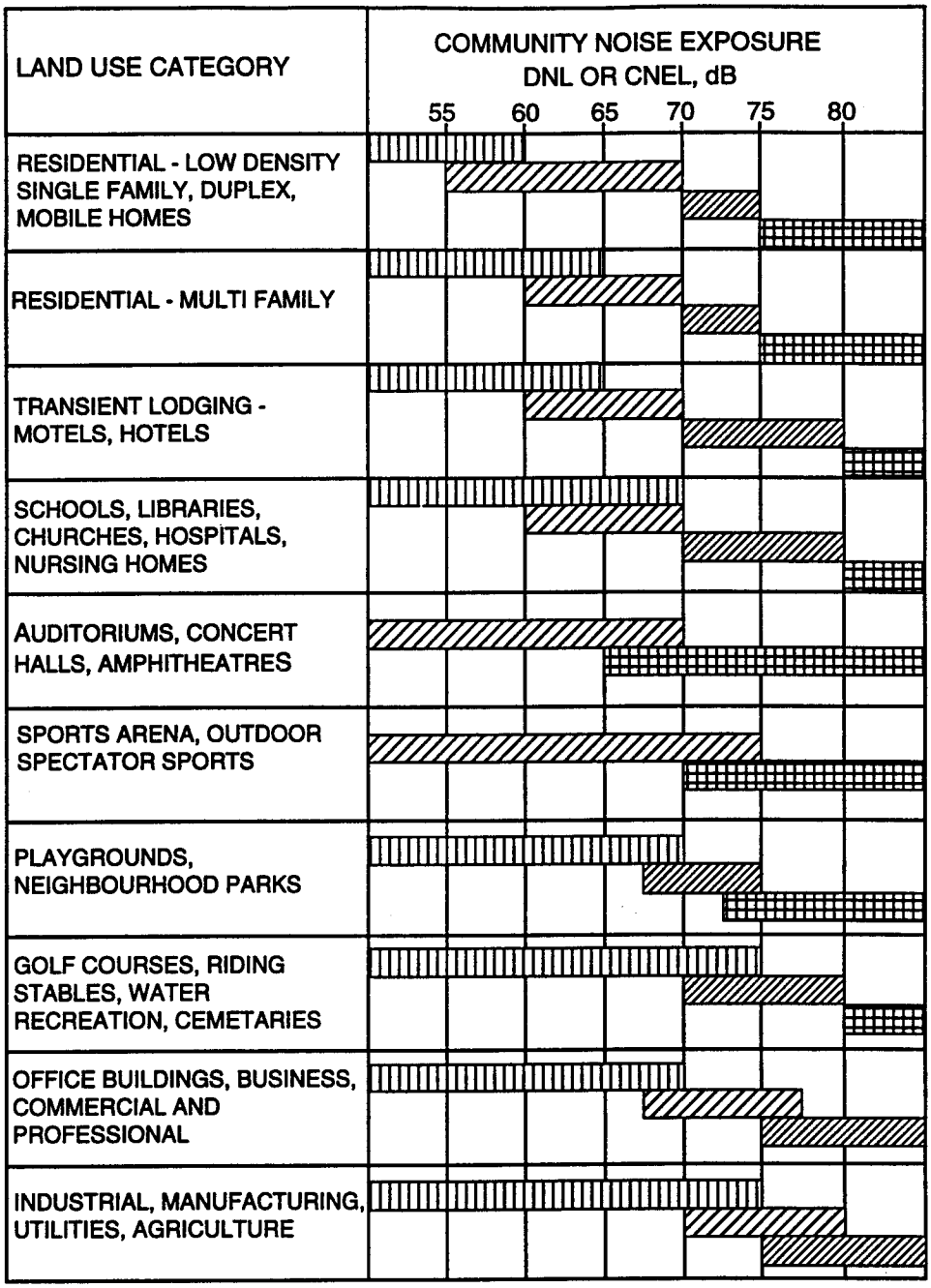
N14 Noise Insulation - Noise insulation standards shall be enforced by the Building Department.

N15 Noise/State Highways - Yolo County encourages continuation of the State Roadway Noise Abatement Program(s).

N16 Integrate With Other Elements - The Noise Element shall be integrated with Land Use, Safety, Open Space, Scenic Highways, Circulation, Conservation, and other elements of the General Plan as well as the Energy Plan.

The Yolo County General Plan does not have quantitative standards. The County recommends that the guidelines contained in the State of California's "Guidelines for the Preparation and Content of Noise Elements of the General Plan" be used (see Table 4.9-3).

Table 4.9-3: Land Use Compatibility For Community Noise Environments State of California, General Plan Guidelines



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 included in the design.

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 clearly should not be undertaken.

IMPACTS AND MITIGATION MEASURES

Standards of Significance

The project would have a significant effect on environmental noise if it would include:

- Activities exceeding an exterior noise level of 80 dBA between 6:00 a.m. and 6:00 p.m., measured at the property site boundary.

- Activities exceeding an interior noise level of 65 dBA between 6:00 p.m. and 6:00 p.m., measured at the property site boundary.

- Activities that would expose receptors in residential areas or other noise-sensitive land uses to long-term noise levels exceeding 60 dBA CNEL.

- Substantially raise ambient noise levels:

  0 to 3 dB L_{eq} increase -- not significant
  4 to 5 dB L_{eq} increase -- possibly significant
  6.0 dB L_{eq} or greater increase -- significant

- Create vibration or nuisance noise.

Impact 4.9-1
Exposure to Unacceptable Noise Levels from Channel Stabilization and Erosion Control

Draft CCRMP

The CCRMP would remove the current mining activities from the creek channel and introduce other less intensive operations such as erosion control, creek stabilization, and habitat restoration. The level of mining in the channel would be significantly reduced with the implementation of the CCRMP.

Noise sources for maintenance mining are similar to those for existing in-channel mining operations. Noise generating equipment used in improving the channel would primarily consist of scrapers (dredges and drag lines would not be used in the channel). Aggregate material would be transported to the processing plant by the scrapers or haul trucks. Under the CCRMP, noise in creek would be spread out over the entire 15-mile length of the planning area. Currently (1995 production) it is more concentrated in certain areas where in-channel mining is occurring. Table 4.9-4 shows noise levels for various phases of in-channel mining.

In-channel maintenance mining activities would generate noise levels of 66 to 85 dB at 50 feet from the source. This corresponds to an L_{eq} of 60 dB at distances of up to 889 feet

(see Table 4.9-4). Most existing residences (the nearest sensitive receptors) are beyond this distance from the channel and therefore would be exposed to an L_{eq} of 60 dB or less. Performance Standard 6.5-9 requires in-channel haul roads to be located along the toe of the steam bank. The terrain will provide some acoustic shielding of the trucks at adjacent residences and possibly recreation areas. The bank could provide between 10 and 15 dB of noise reduction.

The draft CCRMP contains the following policies that have bearing on noise:

6.5-1 All in-channel operations shall be limited to the hours of 8:00 a.m. to 5:00 p.m., Monday through Friday, unless emergency conditions require otherwise.

6.5-5 Noise levels shall not exceed an average noise level equivalent (Leq) of eighty (80) decibels (dBA) measured at the outermost boundaries of the property being excavated. However, noise levels may not exceed an average noise level equivalent (Leq) of sixty (60) decibels (dBA) for any nearby off-site residences or other noise-sensitive land uses, unless emergency conditions require otherwise.

Reclamation includes creek stabilization and habitat restoration. For creek stabilization projects (check-dams, sills and spur dikes), likely noise sources include trucks and concrete construction equipment. Noise sources from habitat restoration projects would be backhoes, haul trucks and pick-up trucks. Table 4.9-5 shows the noise level for some of the noisier types of equipment.

Reclamation activities such as channel stabilization and habitat restoration would happen throughout most of the creek. Noise levels from reclamation and creek stabilization would be comparable to noise from in-channel mining. Therefore, noise levels at residences would not be expected to exceed an L_{eq} of 60 dB. Proposed recreational uses would be located in closer proximity to the creek and be exposed to higher noise levels.

All proposed in-channel maintenance mining and reclamation projects would be required to comply with performance standards as set forth above, which would reduce the potential impact of these activities to a less-than-significant level.

Table 4.9-4: Noise Levels from Maintenance Mining

Activity	Noise Source	L_{eq} at 50 ft	Dist. to L_{eq} = 60 dB
Gravel Extraction	Scrapers[1]	67	250
Processing	Plant[1] (screens, conveyors, loading	85	889
Hauling	Truck Movement[2]	66	199

Sources: 1: "Environmental Noise Analysis, Teichert Aggregates, Long-Term Woodland Operation," Brown-Buntin, 29 November 1995;
2: FHWA-RD-77-108 (assumes 56 trucks per hour)

Table 4.9-5: Noise from Creek Stabilization and Habitat Restoration	
Equipment	**Typical Sound Level at 50 feet (in dBA)**
Dump truck	88
Portable air compressor	81
Concrete mixer (truck)	85
Scraper	88
Dozer	87
Paver	89
Generator	76
Rock drill	98
Pump	76
Pneumatic tools	85
Backhoe	85

Source: U.S. Environmental Protection Agency, Background Document for Proposed Portable Air Compressor Noise Emission Regulations, October 1974, p. 2-3.

Alternative 1a: No Project (Existing Conditions)

Under Alternative 1a, the CCRMP would not be adopted and surface mining would continue, based on 1995 actual production levels for each producer. All regulations in place as of December 1, 1995, are assumed to be in effect. Levels of mining would occur at 2.5 million tons annually.

Under this alternative, existing in-channel mining and subsequent reclamation is assumed. Existing in-channel mining has not generated persistent or on-going noise-related complaints. Therefore, noise under this alternative would be considered a less-than-significant impact.

Alternative 1b: No Project (Existing Permits and Regulatory Condition)

Under Alternative 1b, the CCRMP would not be adopted and surface mining would be allowed to proceed based on currently approved maximum annual allocations. All regulations in place as of December 1, 1995 are assumed to be in effect. Under this alternative, existing in-channel mining and subsequent reclamation is assumed. Existing

in-channel mining has not generated persistent or on-going noise-related complaints. Therefore, noise under this alternative would be considered a less-than-significant impact.

Alternative 2: No Mining (Alternative Site)

Under Alternative 2, the CCRMP would not be adopted and all existing permits to mine and/or operate plants would be voided. This alternative would result in a substantial decrease in mining and haul noise. At alternative sites, increased noise levels from mining could occur but their evaluation is beyond the scope of this project. Noise from mining under Alternative 2 would be a less than significant impact.

Alternative 3: Channel Bank Widening (Implement Streamway Influence Boundary)

Under this alternative, the CCRMP would establish a wider channel boundary similar to the streamway influence boundary which describes the historical width of the creek. Commercial mining within the creek would be prohibited and natural forces would be allowed to affect the creek without active management. Since the CCRMP would be adopted for this alternative, the noise standards promulgated in the CCRMP would be in effect to mitigate any noise impact. Consequently, noise from mining in Alternative 3 would be a less than significant impact.

Mitigation Measure 4.9-1a (CCRMP, A-1a, A-1b, A-2, A-3)

None required.

Impact 4.9-2
Exposure to Unacceptable Increases in Traffic Noise

Draft CCRMP

Implementation of the CCRMP in and of itself would generate less traffic on local roads than is currently generated by in-channel activities. Although there would be traffic from in-channel maintenance mining activities and recreational use, the vast majority of increased traffic would be due to off-channel mining. Table 4.9-6 shows existing and future traffic noise levels with and without the project. Along all roads, the project would not increase the cumulative-without-project noise levels. Therefore, traffic increases due to the CCRMP would be a less-than-significant impact.

Alternative 1a: No Project (Existing Conditions);
Alternative 1b: No Project (Existing Permits and Regulatory Condition);
Alternative 2: No Mining (Alternative Site); and
Alternative 3: Channel Bank Widening (Implement Streamway Influence Boundary).

Traffic noise due to each alternative would not increase noise with respect to the cumulative-plus-no-project scenario (see Table 4.9-7). Therefore, traffic noise for all alternatives would be an insignificant impact.

Mitigation Measure 4.9-2a (CCRMP, A-1a, A-1b, A-2, A-3)

None required.

Impact 4.9-3
Exposure to Noise from Future Passive Use of Open Space Areas along the Creek

Draft CCRMP

The CCRMP recommends that the County pursue an integrated system of trails in recreational areas along Cache Creek similar to efforts occurring along the San Joaquin and American Rivers, although to a less intensive scale of development. The CCRMP currently identifies six zones, or nodes, as primary recreation areas. Four of the nodes occur in proximity to bridges along existing roadways (see Figure 4.9-1) while the other two are further away from roadways. The sites are located at regular intervals of approximately two miles in order to function as trail heads or staging areas for a system of bicycle, pedestrian or horse paths.

There is potential for increased noise from unauthorized use (off road vehicles, hunting, etc.) of channel if it becomes more accessible or attractive to people and if commercial mining is no longer a presence. Most noisy types of recreation uses and other inappropriate uses would be prohibited by the following CCRMP Performance Standards:

5.5-1 Only those uses that are river dependent, such as fishing, canoeing, and nature observation shall be located on the creek. More active uses, including parking, restrooms, and picnic areas should be located in areas located away from sensitive habitat, preferably on land that has been reclaimed from sand and gravel mining.

Table 4.9-6: Existing and Future Traffic Noise With and Without Project						
Roadway	Segment	CNEL in dB at 100 feet from Centerline (change in CNEL with respect to existing)				
		Existing	Cumulative Without Project		Cumulative With Project	
Road 14	5 to 505	58	64	(+6)	64	(+6)
	505 to Rd 89	51	62	(+11)	62	(+11)
	Road 89 to Road 85	51	61	(+10)	61	(+10)
Road 17	5 to 505	44	45	(+1)	45	(+1)
Road 19	Rd 94B to Rd 20	58	62	(+4)	62	(+4)
	Rd 20 to I-505	58	61	(+3)	61	(+3)
	I-505 to Rd 87	60	65	(+5)	65	(+5)
Road 20(KY Av)	Rd 97 to Rd 96	62	66	(+4)	66	(+4)
	Rd 96 to end	62	63	(+1)	63	(+1)
Route 16	Rd 98 to Rd 97	68	71	(+3)	71	(+3)
	Rd 97 to Rd 93	68	71	(+3)	71	(+3)
	Rd 93 to I-505	67	70	(+3)	70	(+3)
	I-505 to Rd 89	68	71	(+3)	71	(+3)
	Rd 89 to Rd 86A	67	70	(+3)	70	(+3)
	Rd 86A to Rd 85	66	69	(+3)	69	(+3)
Road 96	Rte 16 to Road 20	56	59	(+3)	59	(+3)
Road 94B	Rte 16 to Main St	52	56	(+4)	56	(+4)
	Main St to Rd 19	58	60	(+2)	60	(+2)
Solano Access	north of Rte 16	60	62	(+2)	62	(+2)
Road 89	Rte 16 to Cache Cr	60	65	(+5)	65	(+5)
Road 87	Rte 16 to Cache Cr	58	60	(+2)	60	(+2)
	Cache Cr to Rd 19	57	59	(+2)	59	(+2)
	Rd 19 to Rd 16	58	60	(+2)	60	(+2)
Road 85	Cache Cr. to Rd 16A	53	59	(+6)	59	(+6)
	Rd 16A to Rd 14	52	62	(+10)	62	(+10)
I-505	south of Rte 16	71	73	(+2)	73	(+2)
	Rte 16 to Rd 19	70	73	(+3)	73	(+3)
	north or Rd 19	70	73	(+3)	73	(+3)

Table 4.9-7: Comparison of Traffic Noise Exposure for Alternatives							
Roadway	CNEL in dB at 100 feet from centerline						
	Existing	Cumulative No Project	OCMP	Alt 1a	Alt 1b	Alt 2	Alt 3
Road 14, west of I-505	51	62	62	55	61	55	55
			(0)	(-7)	(-1)	(-7)	(-7)
Road 19, west of I-505	60	65	65	64	65	63	63
			(0)	(-1)	(0)	(-2)	(-2)
Route 16, east of I-505	67	70	70	70	70	70	70
			(0)	(0)	(0)	(0)	(0)
Road 89, north of SR 16	60	65	65	63	64	61	65
			(0)	(-2)	(-1)	(-4)	(0)
Road 85, north of Road 16A	52	62	62	55	61	55	56
			(0)	(-7)	(-1)	(-7)	(-6)

Source: Charles M Salter Associates, Inc, 1996

Note: Number in parentheses is change in CNEL with respect to Cumulative-No-Project condition

5.5-2 Recreational uses shall be clustered at locations along the creek, in order to limit public access, minimize habitat disturbance, and provide efficient and cost-effective management by the County.

5.5-3 Physically control access with gates and collect user fees to support operations and deter inappropriate activities. Limited public access will also reduce impacts to sensitive habitat and adjoining private uses. Additional options include permits, volunteer docents to patrol the site, and escorted tours.

5.5-6 Large-scale, high-intensity recreational uses, such as amusement parks, off-road vehicle parks, or uses involving motorized watercraft, are not compatible with land uses along Cache Creek.

5.5-7 The recreational use of off-road vehicles and all-terrain vehicles within the channel shall be prohibited.

5.5-8 The hunting and/or discharge of firearms along Cache Creek shall be prohibited.

For recreational/leisure activities that could occur along the creek such as fishing or swimming, people would be the major noise sources. Noise from an individual speaking at a normal level could reach 65 dB at three feet. In a raised voice, the sound level could reach 75 dB at three feet. Performance Standard 5.5-4, set forth below, would also require minimum setbacks from private dwellings, to prevent noise incompatibility:

5.5-4 Recreational facilities shall be located a minimum of one-hundred and fifty (150) feet from private dwellings, with a landscaped buffer provided to reduce noise and maintain privacy.

The level of a normal and raised voice would be 31 and 41 dB, respectively at the 150 foot setback. The existing ambient noise level is as low as 40 dB. Since the sound of voices

would be 31 to 41 dB, they would tend to blend into the background. However, human voices can be understood even at low levels. If the residence were away from the roads, the noise from the voices would be audible. If residences are near the road, the voices would only be audible during lulls in traffic. Therefore, noise from individual voices would not be a significant impact.

If a centralized recreational use is proposed, such as a beach with sports activities, larger groups of people could generate higher noise levels and have the potential to cause annoyance. Noise from centralized recreation areas is a potentially significant impact.

Alternative 1a: No Project (Existing Conditions)

Under this alternative, the CCRMP would not be adopted. Consequently, there would be no recreation uses proposed along the creek. Noise impacts under Alternative 1a would be less-than-significant.

Alternative 1b: No Project (Existing Permits and Regulatory Condition)

Under this alternative, the CCRMP would not be adopted. Therefore, no recreational uses would be proposed. Impacts under Alternative 1b would be less-than-significant.

Alternative 2: No Mining (Alternative Site)

Under this alternative, the CCRMP would not be adopted and therefore no recreational uses would be proposed. Noise from recreational uses under this alternative would be a less than significant impact.

Alternative 3: Channel Bank Widening (Implement Streamway Influenced Boundary)

Under this alternative, the CCRMP would be adopted and recreational uses would be proposed. Since the channel would be widened, there is a potential for the recreational uses to impact new sensitive receptors. Noise from individual people would be a less than significant impact.

Mitigation Measure 4.9-3a (CCRMP)

The following shall be added to the CCRMP as a new performance standard:

5.5-9 Noise analyses shall be conducted for proposed recreational uses where medium to large groups would congregate in common use areas. The study shall identify likely sources of noise and ways to reduce levels to minimize annoyance at adjacent properties.

Mitigation Measure 4.9-3b (A-1a, A-1b, A-2, A-3)

None required.

Implementation of Mitigation Measure 4.9-3a would reduce this impact to a less-than-significant level under the CCRMP. No mitigation would be required for Alternatives 1a, 1b, 2 and 3.

Impact 4.9-4
Exposure to Cumulative Noise Impacts

Draft CCRMP

Cumulative noise would potentially affect proposed recreational uses inside the creek channel and existing noise-sensitive receivers (e.g., residential) adjacent to the channel. Under the CCRMP, there would be future channel stabilization and erosion control projects. There would also be future recreational uses that would generate noise. However, the major noise effect of the CCRMP would be to remove in-channel mining operations. This will result in a cumulative reduction of noise generated in the creek channel. Future increases in traffic noise would be primarily due to off-channel mining and cumulative growth in the area, not the implementation of the CCRMP. Cumulative noise impacts associated with the CCRMP would generate a less-than-significant impact.

Alternative 1a: No Project (Existing Conditions)

Under Alternative 1a, the CCRMP would not be adopted and surface mining would continue based on 1995 actual production levels for each producer. There would be no new in-channel recreational uses. Existing in-channel mining has not generated persistent or on-going noise-related complaints. Therefore, cumulative noise impacts associated with this alternative would be less-than-significant.

Alternative 1b: No Project (Existing Permits and Regulatory Condition)

Under Alternative 1b, the CCRMP would not be adopted and surface mining would be allowed to proceed based on currently approved maximum annual allocations. Under this alternative existing in-channel mining and subsequent reclamation is assumed. There would be no new in-channel recreational uses. Existing in-channel mining does not generate persistent or on-going noise-related complaints. Therefore, cumulative noise under this alternative would generate a less-than-significant impact.

Alternative 2: No Mining (Alternative Site)

Under Alternative 2, the CCRMP would not be adopted and all existing permits to mine and/or operate plants would be voided. This alternative results in a substantial decrease in mining and haul noise. An analysis of impacts at alternative sites is beyond the scope of this project. Consequently, cumulative noise under Alternative 2 would generate a less-than-significant impact.

Alternative 3: Channel Bank Widening (Implement Streamway Influence Boundary)

Under this alternative, the CCRMP would establish a wider channel boundary similar to the streamway influence boundary which describes the historical width of the Creek. Since the CCRMP would be adopted for this alternative, the noise standards promulgated in the CCRMP would be in effect to mitigate any noise impact. Traffic noise increases would be due to off-channel mining and cumulative growth, not the implementation of the CCRMP. Cumulative noise impacts under this alternative are less than significant.

Mitigation Measure 4.9-4 (CCRMP, A-1a, A-1b, A-2, A-3)

None required.