

3.11 Noise and Vibration

This section evaluates the potential impacts of the Proposed Action on noise and vibration. This evaluation includes an assessment of the direct, indirect, short-term, long-term, and cumulative effects of the Proposed Action on ambient noise. The evaluation is based on the noise technical report (PBS&J, 2007), which is included as Appendix E to this EIR/EIS.

3.11.1 Affected Environment

3.11.1.1 Environmental Setting

The section describes the existing noise conditions within the SV 100K study area.

Characteristics of Sound, Noise, and Vibration

Sound

Sound is created when vibrating objects produce pressure variations that move rapidly outward into the surrounding air. The main characteristics of these air pressure waves are amplitude, which we experience as a sound's "loudness," and frequency, which we experience as a sound's "pitch." The standard unit of sound amplitude is the decibel (dB); it is a measure of the physical magnitude of the pressure variations relative to the human threshold of perception. The human ear's sensitivity to sound amplitude is frequency-dependent; it is more sensitive to sound with a frequency at or near 1,000 cycles per second than to sound with much lower or higher frequencies.

Most "real world" sounds (e.g., a dog barking, a car passing, etc.) are complex mixtures of many different frequency components. When the average amplitude of such sounds is measured with a sound level meter, it is common for the instrument to apply different adjustment factors to each of the measured sound's frequency components. These factors account for the differences in perceived loudness of each of the sound's frequency components relative to those that the human ear is most sensitive to (i.e., those at or near 1,000 cycles per second). This practice is called "A-weighting." The unit of A-weighted sound amplitude is also the decibel. But in reporting measurements to which A-weighting has been applied, an "A" is appended to dB (i.e., dBA) to make this clear. Table 3.11-1 lists the A-weighted average sound levels commonly encountered in various environmental situations.

Table 3.11-1. Representative Environmental Sound Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Jet Fly over at 100 feet	—110—	Rock Band
Gas Lawnmower at 3 feet	—100—	
	—90—	Food Blender at 3 feet
Diesel Truck going 50 mph at 50 feet	—80—	Garbage Disposal at 3 feet
Noisy Urban Area during Daytime	—70—	Vacuum Cleaner at 10 feet
Gas Lawnmower at 100 feet	—60—	Normal Speech at 3 feet
Commercial Area		Large Business Office
Heavy Traffic at 300 feet	—50—	Dishwasher in Next Room
Quiet Urban Area during Daytime	—40—	Theater, Large Conference Room (background)
Quiet Urban Area during Nighttime	—30—	Library
Quiet Suburban Area during Nighttime	—20—	Bedroom at Night, Concert Hall (background)
Quiet Rural Area during Nighttime	—10—	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	—0—	Lowest Threshold of Human Hearing

Source: *Technical Noise Supplement*, California Department of Transportation, October 1998.

All quantitative descriptors used to measure environmental noise exposure recognize the strong correlation between the high acoustical energy content of a sound (i.e., its loudness and duration) and the disruptive effect it is likely to have as noise (Table 3.11-2). Because environmental noise fluctuates over time, most such descriptors average the sound level over the time of exposure, and some add “penalties” during the times of day when intrusive sounds would be more disruptive to listeners. The descriptors used in this analysis are defined as follows:

- **L_{eq}**, the equivalent energy noise level, is the constant noise level that would deliver the same acoustic energy to the ear as the actual time-varying noise over the same exposure time. L_{eq} would be the same regardless of the time of day during which the noise occurs.
- **L_{dn}**, the day-night average noise level, is a 24-hour average L_{eq} with a 10 dBA “penalty” added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for increased nighttime noise sensitivity. Because of this penalty, the L_{dn} would always be higher than its corresponding 24-hour L_{eq} (e.g., a constant 60 dBA noise over 24 hours would have a 60 dBA L_{eq}, but a 66.4 dBA L_{dn}).
- **CNEL**, the community noise equivalent level, is an L_{dn} with an additional 5 dBA “penalty” for the evening hours between 7:00 p.m. and 10:00 p.m.

Table 3.11-2. Factors that Affect Individual Judgment of a Sound’s “Noisiness”

Primary Acoustic Factors
Sound Level
Sound Frequency
Sound Duration
Secondary Acoustic Factors
Frequency Characteristics of the Sound
Fluctuations in Sound Level
Fluctuations in Sound Frequency
Rise-Time of the Sound (e.g., Is it “fast” like an automobile horn, or “slow” like an approaching train?)
Localization of Sound Source (Is it obvious where the sound is coming from, or not?)
Non-Acoustic Factors
Physiology of the Listener (Is the listener’s hearing ability acute, or not?)
Listener’s Adaptation from Past Experience (e.g., How long has the listener lived near the airport?)
Listener’s Activity During Exposure (Was the listener sleeping, working, etc.?)
Predictability of When the Sound Will Occur (e.g., Is it an expected noon-time whistle or a random car horn)
Listener’s Judgment of Personal Benefit from Activity Producing the Sound (e.g., Has the repair work being done on a street been long requested by local residents?)
Individual Differences and Personalities

Source: Adapted from *Handbook of Noise Control*, Cyril M. Harris, 1979.

Community noise exposures are most often represented by 24-hour descriptors, such as L_{dn} or CNEL. One-hour and shorter-period descriptors are useful for characterizing noise caused by short-term activities, such as the operation of construction equipment. Community noise environments are generally perceived as “quiet” when the L_{dn} /CNEL is below 45 dBA, “moderate” in the 45 to 60 dBA range, and “loud” above 60 dBA. Very noisy urban residential areas are usually around 70 dBA L_{dn} /CNEL. Along major roadways, noise levels are typically between 65 and 75 dBA L_{dn} /CNEL. Any noise intrusions that cause short-term interior levels to rise above 45 dBA at night can disrupt sleep. Eight-hour or longer exposures to noise levels greater than 85 dBA can cause permanent hearing damage.

Vibration

Vibrating objects in contact with the ground radiate energy through that medium; if a vibrating object is massive enough and/or close enough to the observer, its vibrations are perceptible. The way of measuring vibration magnitude in cases where vibration has the potential for causing structural damage, particularly from blasting and other construction activities, is referred to as peak particle velocity (PPV), which is defined as the maximum instantaneous peak velocity induced by the vibration. Groundborne vibration from blasting results when some of the explosive energy not used in breaking rock travels through the ground in all directions as wave motion. This wave motion travels mainly along the surface with its energy level rapidly decreasing with distance from the blast.

Existing Noise Environment

Land adjacent to San Vicente Reservoir and Dam is primarily undeveloped, with some existing industrial and residential uses to the south (along Vigilante Road and Moreno Avenue). The industrial land uses include quarry operations, which affect the existing noise environment in the vicinity. The closest residential unit to the SV 100K study area is near the existing Hanson Quarry downstream of the dam. Because of the presence of the quarry and associated operations, this area has a relatively high ambient noise environment. Further west of the industrial area, there are residential land uses along State Route 67 (SR-67). To the east of the dam, the area is primarily undeveloped with some scattered residential uses.

In the vicinity of the SV 100K study area, industrial operations and vehicular traffic are the primary sources of noise. Existing daytime noise levels were monitored at six locations at or near the study area and the surrounding vicinity (Figure 3.11-1). The monitoring locations represent the noise levels experienced within the SV 100K footprint downstream of the dam and at the existing sensitive land uses near, and along the primary access routes to, the dam construction zone. The sources responsible for the measured noise and measurement data at each location are presented in Table 3.11-3. Although motor vehicle traffic was found to have the primary influence on noise levels near roadways in the vicinity, noise from industrial operations was also a significant contributor to total noise levels for receptors along Vigilante Road.

Table 3.11-3. Daytime Noise Levels Measurements at Selected Locations On/Around the SV 100K Study Area

	Noise Measurement Location/Time	Noise Sources	Noise Level Statistics (dBA)		
			L _{eq}	L _{min}	L _{max}
#1	SV 100K site near San Vicente Dam, 100 feet from existing dam. Start time: 1:55 p.m.	Primary: Beeping from dam operations. Secondary: Aircraft overflights, construction noise.	44.6	35.5	69.4
#2	SV 100K site, parking lot near base of on-site southeast quarry option. Start time: 2:15 p.m.	Primary: Construction operations and vehicular traffic along access road. Secondary: Aircraft overflights, mechanical noise from adjacent buildings.	55.1	48.5	70.2
#3	12417 Vigilante Road, north side 8 feet from roadway edge. Start time: 3:00 p.m.	Primary: Vehicular traffic on Vigilante Road, industrial activities at adjacent Hanson Quarry. Secondary: Leaf blower operation (at residence).	66.9	51.5	77.8
#4	12345 Moreno Avenue, east side 5 feet from intersection of Moreno Avenue and Vigilante Road. Start time: 3:20 p.m.	Primary: Vehicular traffic on Vigilante Road and Moreno Avenue. Secondary: Industrial activities at nearby Hanson Quarry.	62.5	48.1	76.7
#5	Deer Hill Estates, 150 feet from east side of SR-67. Start time: 3:55 p.m.	Primary: Vehicular traffic on SR-67.	65.8	44.3	77.0
#6	Byron Road, 150 feet from west side of SR-67. Start time: 4:30 p.m.	Primary: Vehicular traffic on SR-67.	69.2	54.3	78.5

Notes: Measurements were made on October 4, 2006. Each measurement was 10 minutes in duration. L_{eq} is the average noise level over the measurement period; L_{min} is the minimum instantaneous noise level measured during the 10-minute period; L_{max} is the maximum instantaneous noise level measured during the 10-minute period.

Local roads would be used by trucks traveling to and from the SV 100K site during dam construction. Existing peak-hour traffic noise levels (in L_{eq}) at noise-sensitive land uses adjacent to these roads were estimated using the Federal Highway Administration’s (FHWA) Traffic Noise Model (TNM). This model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The existing peak-hour traffic noise levels were calculated using peak-hour traffic volumes provided by Linscott, Law & Greenspan Engineers (Appendix G to this EIR/EIS). The estimated existing peak-hour noise levels at the selected local noise-sensitive land uses are presented in Table 3.11-4. These estimated noise levels are consistently between the measured L_{min} and L_{max} in Table 3.11-3 for the selected locations.

Table 3.11-4. Calculated Existing Roadway Noise Levels at Selected Noise-Sensitive Locations

Receptor	Roadway Segment	Noise Sensitive Uses	Peak-hour L_{eq} (dBA) ⁽¹⁾
12417 Vigilante Road	Vigilante Road, Moreno Avenue to SR-67	Residential	63.9
12345 Moreno Avenue	Moreno Avenue, South of Vigilante Road	Residential	65.3
Deer Hill Estates	SR-67, North of Vigilante Road	Residential	68.5
Byron Road	SR-67, South of Vigilante Road	Residential	68.7

⁽¹⁾ Noise levels calculated using FHWA’s TNM. Noise levels calculated during the PM peak hour at the setback of the identified receptors.

Source: Based on traffic data from Linscott, Law, & Greenspan Engineers’ *Traffic Impact Analysis* (Appendix G).

Sensitive Noise Receptors

Sensitive noise receptors typically include residential development, schools, and hospitals. Under certain conditions, habitat areas can also be considered sensitive receptors, such as when noise levels exceed 60 dB in nesting areas for least Bell’s vireo (*Vireo bellii*) and California gnatcatcher (*Poliophtila californica californica*) during the respective breeding seasons for these species (refer to Section 3.6 [Biological Resources for the Proposed Action] of this EIR/EIS).

The dam construction zone is approximately 2,000 feet from the nearest residential receptor to the east of the dam, and approximately 4,000 feet from the nearest residential receptor to the south. The residential receptors to the south are approximately 1,500 feet from the locations of the southeast and southwest quarry options. In addition to these receptors, there are residential land uses located near roadways in the vicinity of the SV 100K study area, including along SR-67.

3.11.1.2 Regulatory Setting

The following discussion addresses federal and local regulations relevant to noise and vibration issues of the Proposed Action.

Federal

U.S. Office of Surface Mining Reclamation and Enforcement

The U.S. Office of Surface Mining Reclamation and Enforcement (OSM) has established guidelines related to blasting for surface mining activities. The OSM guidelines include requirements that the operator distribute a blasting schedule, post blasting signs, and control access within blasting area. OSM has established air blast and ground vibration limits at the location of any dwelling, public building, school, church, or community building outside the permit area. The standard PPV damage threshold for residential structures is 2.0 inches per second. This requirement is based on the findings and recommendations of several reports made by the former U.S. Bureau of Mines.

Local

San Diego County General Plan

The Noise Element of the San Diego County General Plan acknowledges that “the most appropriate basic unit of measure for community noise” is the dBA, and that “the most appropriate unit of measure for the cumulative effects of community noise” is CNEL. The San Diego County Noise Element also contains Policy 4b that establishes the following requirements:

Because exterior community noise equivalent levels (CNEL) above 60 decibels and/or interior CNEL levels above 45 decibels may have an adverse effect on public health and welfare, it is the policy of the County of San Diego that:

1. Whenever it appears that new development will result in any (existing or future) noise sensitive land use being subjected to noise levels of CNEL equal to 60 decibels (A) or greater, an acoustical analysis shall be required.
2. If the acoustical study shows that noise levels at any noise sensitive land use will exceed CNEL equal to 60 decibels, modifications shall be made to the development which reduce the exterior noise level to less than CNEL of 60 decibels (A) and the interior noise level to less than CNEL of 45 decibels (A).

If modifications are not made to the development in accordance with paragraph 2 above, the development shall not be approved unless a finding is made that there are specifically identified overriding social or economic considerations which warrant approval of the development without such modification; provided, however, if the acoustical study shows that sound levels for any noise sensitive land use will exceed a CNEL equal to 75 decibels (A) even with such modifications, the development shall not be approved irrespective of such social or economic considerations.

San Diego County Municipal Code

San Diego County has adopted a Noise Ordinance (Chapter 4, Noise Abatement and Control, of the San Diego County Municipal Code), which identifies exterior noise standards, specific noise restrictions, exemptions, and variances for sources of noise within the county. The exterior noise standards established in the county’s Noise Ordinance are identified in Table 3.11-5, along with the exterior noise levels that are prohibited.

Table 3.11-5. San Diego County Noise Ordinance Exterior Noise Standards

Zone	Limit One-Hour dBA⁽¹⁾	Time Period
R-S, R-D, R-R, R-MH, A-70, A-72, S-80, S-81, S-87, S-88, S-90, S-92, R-V, and R-U Use Regulations with a density of less than 11 dwelling units per acre.	50 dBA 45 dBA	7:00 a.m. – 10:00 p.m. 10:00 p.m. – 7:00 a.m.
R-RO, R-C, R-M, C-30, S-86, RV AND R-U Use Regulations with a density of 11 or more dwelling units per acre.	55 dBA 50 dBA	7:00 a.m. – 10:00 p.m. 10:00 p.m. – 7:00 a.m.
S-94 and all other commercial zones.	60 dBA 55 dBA	7:00 a.m. – 10:00 p.m. 10:00 p.m. – 7:00 a.m.
M-50, M-52, M-54	70 dBA	Anytime
S-82, M-58, and all other industrial zones.	75 dBA	Anytime

⁽¹⁾ If the measured ambient level exceeds the applicable limit, the allowable one-hour average sound level shall be the ambient noise level.

Source: San Diego County Municipal Code.

Construction noise is also governed by the county’s Noise Ordinance. This ordinance restricts the allowable hours of construction to 7:00 a.m. through 7:00 p.m., Monday through Saturday, excluding legal holidays. Further, noise levels associated with construction activities at residential receptors within any 24-hour period are not to exceed 75 dB, averaged over an eight-hour period.

San Diego County Water Authority

The Water Authority has adopted blasting criteria to protect existing facilities and nearby structures based on the criteria developed by the former U.S. Bureau of Mines. The criteria set the maximum PPV as a function of frequency, ranging from 0.5 inches per second for frequencies between 2.5 and 10.0 Hertz (Hz), and 2.0 inches per second for a blasting frequency of 40 Hz. The Water Authority has also included requirements for construction blasting in their standard specifications, including the following:

- Blasting during construction shall only be conducted when other practicable excavation methods are not available.
- Providing advance written notification of the date and time of any blasting activities to all residents and businesses within 400 feet of the blast area.

- In the event that blasting is necessary, a Blast Plan shall be developed and approved by the local regulatory authority.

3.11.2 Project Design Features

General Conditions and Standard Specifications that will be included in the project construction documents to reduce noise and vibration impacts associated with construction of the Proposed Action are summarized in Section 1.9.5 (Introduction, Noise and Vibration) of this EIR/EIS. No specific project design features have been identified for this issue.

3.11.3 Direct and Indirect Effects

3.11.3.1 Thresholds of Significance

Thresholds used to evaluate potential noise and vibration impacts are based on applicable criteria in the State CEQA Guidelines (CCR §§15000-15387), Appendix G, and the County of San Diego noise standards and regulations. A significant noise and/or vibration impact would occur if the Proposed Action would:

1. Expose noise-sensitive land uses to construction noise levels exceeding 75 dB(A) L_{eq} during an 8-hour period between the hours of 7:00 a.m. and 7:00 p.m., Monday through Saturday; or to increases in ambient noise levels equal to or above 3 dB in areas where ambient noise levels already equal or exceed 75 dB(A) L_{eq} .
2. Expose sensitive receptors to construction noise between the hours of 7:00 p.m. and 7:00 a.m.
3. Expose off-site noise-sensitive receptors to a road noise level increase of more than 3 dB and either elevate noise levels above 60 dB CNEL or exceed a 3 dB increase above an already noisy condition.
4. Result in operational noise levels that exceed a one-hour average noise level of 50 dB(A) L_{eq} by day or 45 dB(A) L_{eq} at night at the property boundary.
5. Expose persons to or generate excessive vibrations that:
 - a. Result in peak particle velocities in excess of 2 inches per second at the nearest structure.
 - b. Result in a daily average particle velocity in excess of 0.5 inches per second at the nearest sensitive receptor.

3.11.3.2 Impact Analysis

Methodology

The analysis in this section focuses on the nature and magnitude of the change in the noise environment due to implementation of the Proposed Action. The primary sources of noise would be associated with construction activities, including construction vehicle trips to and from the SV 100K site. Construction activities associated with the Proposed Action would involve the use of heavy equipment during land clearing, demolition of structures, and construction phases of access roads, dams, and pipelines. Increased noise levels would also be associated with quarry and batch plant operations. Construction equipment would include cranes, bulldozers, compactors, graders, excavators, generators, compressors, and miscellaneous trucks and equipment. Construction activities would also involve the use of smaller power tools, generators, and other equipment that are sources of noise. During each stage of construction there would be a different mix of equipment operating, and noise levels would vary based on the amount of equipment in operation and the location of the activity. Construction noise levels are calculated using the FHWA's Roadway Construction Noise Model (RCNM).

The EPA has compiled data regarding the noise generating characteristics of typical construction activities. These data are presented in Table 3.11-6. These noise levels would diminish rapidly with distance from the construction site at a rate of approximately 6 dBA per doubling of distance. For example, a noise level of 86 dBA measured at 50 feet from the noise source to the receptor would reduce to 80 dBA at 100 feet and to 74 dBA at 200 feet. The closest residential receptor to both on-site quarry options downstream of the dam is approximately 1,500 feet to the south. This residence is also the closest noise-sensitive receptor to the Marina Quarry Option, and is located approximately 4,500 feet away. The closest residential receptor to the dam construction zone is approximately 2,000 feet to the east. However, because this area is located in a valley, which opens to the south, noise from the dam construction zone would be expected to result in higher noise levels to the south than in the other directions.

Sources of noise from operational activities associated with the Proposed Action include vehicle trips to/from the site and recreational motor boats on the enlarged reservoir. Future noise levels for the roadways that would be used by vehicles traveling to and from San Vicente Reservoir for recreation are calculated using FHWA's TNM and compared with standards of significance to determine whether substantial permanent increases in ambient noise levels would occur. Noise levels associated with on-site activities (e.g., motor boat use) are identified and compared with the applicable standards to determine whether substantial permanent increases in ambient noise levels would occur.

The County's Municipal Code provides standards for stationary and recreational noise sources that might affect nearby noise-sensitive land uses. The Municipal Code standards do not necessarily account for increases in ambient noise levels that could be substantial, but still below the applicable standards, or for noise increases to areas where the existing noise level is greater than the applicable standards. Therefore, this analysis uses the noise impact criterion of 3 dB.

Table 3.11-6. Noise Ranges of Typical Construction Equipment

Construction Equipment	Noise Levels in dBA L_{eq} at 50 feet
Front Loader	73–86
Trucks	82–95
Cranes (moveable)	75–88
Cranes (derrick)	86–89
Vibrator	68–82
Saws	72–82
Pneumatic Impact Equipment	83–88
Jackhammers	81–98
Pumps	68–72
Generators	71–83
Compressors	75–87
Concrete Mixers	75–88
Concrete Pumps	81–85
Back Hoe	73–95
Pile Driving (peaks)	95–107
Tractor	77–98
Scraper/Grader	80–93
Paver	85–88

Machinery equipped with noise control devices or other noise-reducing design features does not generate the same level of noise emissions as that shown in this table.

Source: *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*, U.S. EPA, December 1971

For projects proposed in areas that are currently at or in excess of the county’s exterior noise standards, a less-than-3 dB increase in noise levels due to the project would not be considered a significant impact. This is a City of San Diego Traffic Noise Significance Threshold, as presented in the City’s guidelines.

Analysis

Threshold 1: Expose noise-sensitive land uses to construction noise levels exceeding 75 dB(A) L_{eq} during an 8-hour period between the hours of 7:00 a.m. and 7:00 p.m., Monday through Saturday; or to increases in ambient noise levels equal to or above 3 dB in areas where ambient noise levels already equal or exceed 75 dB(A) L_{eq}

General Daytime Construction Activities

As shown in Table 3.11-7, construction would result in maximum instantaneous noise levels at the nearby sensitive receptors of 54.0 dBA L_{max} (at 1,500 feet) and 51.5 dBA L_{max} (at 2,000 feet). In addition, the highest average construction noise levels of 50.1 dBA L_{eq} at 1,500 feet and 47.6 dBA L_{eq} at 2,000 feet (from scraper equipment, Table 3.11-7) would be less than the existing daytime peak-hour roadway noise levels of 63.9 dBA and 65.3 dBA L_{eq} calculated for residents along Vigilante Road and Moreno Avenue, respectively (see Table 3.11-4). General daytime

construction activities associated with the Proposed Action would comply with the 75 dBA L_{eq} noise standard. Therefore, daytime construction noise impacts on nearby residents would be less than significant.

Table 3.11-7. Construction Noise Levels at Closest Residential Receptor

Construction Equipment	Noise Levels at 1,500 feet		Noise Levels at 2,000 feet	
	dBA L_{max}	dBA L_{eq}	dBA L_{max}	dBA L_{eq}
Backhoe	48.0	44.0	45.5	41.5
Blasting	64.5	44.5	62.0	42.0
Compactor (ground)	53.7	46.7	51.2	44.2
Compressor (air)	48.1	44.1	45.6	41.6
Concrete Batch Plant	53.5	45.2	51.0	42.7
Crane	51.0	43.0	48.5	40.6
Dozer	52.1	48.1	49.6	45.6
Dump Truck	46.9	42.9	44.4	40.4
Front End Loader	49.6	45.6	47.1	43.1
Generator	51.1	48.1	48.6	45.6
Scraper	54.0	50.1	51.5	47.6

Construction noise levels calculated using FHWA's RCNM. L_{eq} is the average noise level over the equipment operation time; L_{max} is the maximum instantaneous noise level measured during the equipment operation time. Actual noise levels in the construction site vicinity would most likely be lower than the calculated values due to attenuation by intervening topography.

Refer to Section 3.6.3.2 (Biological Resources, Impact Analysis, for the Proposed Action,) of this EIR/EIS for a discussion of construction noise impacts and mitigation for sensitive breeding bird species.

Blasting

Blasting of underlying rock structures would be required for the dam, the on-site quarry options, the new marina road, and the tunneling operations for pipelines. Noise associated with blasting would generally occur at infrequent intervals during the day. The noise levels resulting from daytime blasting activities could vary depending on the subsurface material, amount of charge, and the depth to charge. However, using the noise levels predicted for blasting from FHWA's RCNM, blasting activities could result in a maximum noise level of 64.5 dBA L_{eq} at the nearest residential receptor located approximately 1,500 feet south of the dam construction zone. This noise level would be below the 75 dBA L_{eq} daytime noise standard for construction activities. Therefore, noise impacts on nearby residents from daytime blasting activities would be less than significant.

The Proposed Action would not exceed the 75 dBA L_{eq} noise standard for daytime construction and blasting activities. Therefore, impacts of the Proposed Action would be less than significant.

Threshold 2: Expose sensitive receptors to construction noise between the hours of 7:00 p.m. and 7:00 a.m.

Construction of the dam would continue for 24 hours per day, 7 days per week for approximately 18 months. As shown in Table 3.11-7, the nearest residential receptors to the dam construction zone would be exposed to average noise levels as high as 50.1 dBA L_{eq} at 1,500 feet and 47.6 dBA L_{eq} at 2,000 feet, which would exceed the 45 dBA L_{eq} nighttime exterior noise standard for residential uses (Table 3.11-5). These residences may be partially shielded by intervening topography, thereby reducing the noise level they experience. However, this may not be enough to bring the noise levels to below the 45 dBA L_{eq} standard. Therefore, nighttime noise impacts on nearby residents from dam construction would be significant.

The batch plant would need to operate during nighttime hours to supply the dam construction activities. In a worst-case scenario, batch plant operations would be located on the south side of the dam construction zone in the vicinity of the southeast or southwest on-site quarry options, and therefore, would be approximately 1,500 feet from the nearest residential receptors. As shown in Table 3.11-7, average noise levels from batch plant operations would be 45.2 dBA L_{eq} at the nearest residential receptor, which would be slightly above the 45 dBA L_{eq} nighttime noise standard for residential uses. Therefore, nighttime noise impacts on nearby residents from batch plant operations located near the southwest or southeast quarry options would be significant.

If the Marina Quarry Option were selected, batch plant operations would be located near the existing marina and approximately 4,500 feet away from the nearest sensitive receptor. Average noise levels from batch plant operations would be 35.7 dBA L_{eq} at the nearest residential receptor which would be substantially below the 45 dBA L_{eq} nighttime noise standard at this residential receptor. Therefore, nighttime noise impacts on nearby residents from batch plant operations located near the Marina Quarry Option would be less than significant.

Blasting may occur at night for tunneling operations for pipelines, and audible noise is expected from these activities. Average noise levels from nighttime blasting are expected to be 44.5 dBA L_{eq} at the nearest residential receptor located approximately 1,500 feet to the south of the dam (Table 3.11-7). This noise level would essentially equal the allowable nighttime noise standard of 45 dBA L_{eq} at nearby residential receptors. Therefore, nighttime noise impacts on nearby residents from blasting associated with tunneling operations would be significant.

Nighttime noise levels from dam construction activities would exceed the 45 dBA L_{eq} nighttime noise standard at nearby residential receptors. Therefore, impacts of the Proposed Action would be significant (Impact SV/NV 1).

Batch plant operations downstream of the existing dam would exceed the 45 dBA L_{eq} nighttime noise standard at nearby residential receptors. Therefore, impacts of the Proposed Action would be significant (Impact SV/NV 2).

Nighttime noise levels from batch plant operations near the Marina Quarry Option would not exceed the 45 dBA L_{eq} nighttime noise standard at nearby residential receptors. Therefore, impacts of the Proposed Action would be less than significant.

Nighttime blasting for tunneling operations would exceed the 45 dBA L_{eq} nighttime noise standard at nearby residential receptors. Therefore, impacts of the Proposed Action would be significant (**Impact SV/NV 3**).

Threshold 3: Expose off-site noise-sensitive receptors to a road noise level increase of more than 3 dB and either elevate noise levels above 60 dB CNEL or exceed a 3 dB increase above an already noisy condition

Construction-Related Roadway Noise Impacts

During the peak construction months in Year 2010, the Proposed Action is estimated to generate approximately 550 truck trips per day for the off-site quarry option, and up to 160 truck trips per day for the on-site quarry options. In addition to truck trips, the Proposed Action would generate a maximum of about 900 vehicle trips per day for construction crew vehicles. Calculated roadway noise level increases during construction in Year 2010 at selected locations are presented in Table 3.11-8. For the off-site quarry option, roadway noise levels along Vigilante Road and Moreno Avenue, which are the only access roads to the SV 100K site, would result in a noise level increase of up to 6.2 and 5.9 dBA, respectively, during the PM peak hour.

Table 3.11-8. Calculated Roadway Noise Levels at Selected Noise-Sensitive Locations⁽¹⁾

Receptor	Roadway Segment	Year 2010 w/o Proposed Action (dBA)	Year 2010 w/ Proposed Action (Off-site Quarry) (dBA)	Year 2010 w/ Proposed Action (On-site Quarry) (dBA)	Increase Year 2010 w/ Proposed Action (Off-site Quarry) (dBA)	Increase Year 2010 w/ Proposed Action (On-site Quarry) (dBA)	Significance Threshold (dB)
12417 Vigilante Road	Vigilante Road, Moreno Avenue to SR-67	64.1	70.3	67.8	6.2	3.7	3.0
12345 Moreno Avenue	Moreno Avenue, South of Vigilante Road	65.6	71.5	68.9	5.9	3.3	3.0
Deer Hill Estates	SR-67, North of Vigilante Road	68.8	69.6	69.2	0.8	0.4	3.0
Byron Road	SR-67, South of Vigilante Road	68.8	69.2	69.0	0.4	0.2	3.0

⁽¹⁾ Noise levels calculated using FWA's TNM. Noise levels calculated for the PM peak hour at the setback of the identified receptors. Based on traffic data from Linscott, Law, & Greenspan Engineers' *Traffic Impact Analysis* (Appendix G).

The PM peak hour represents the highest traffic volumes over a 24-hour period during the Year 2010 construction scenario (with and without the Proposed Action). This increase would be in addition to the already high noise environment along those roadways. Using a significance

threshold of an increase of 3 dB, noise level increases along the identified roadway segments from the off-site quarry option would exceed this criterion. Although less than the off-site quarry option, the Year 2010 maximum noise level increase for the on-site quarry options would also exceed the 3 dB significance threshold (Table 3.11-8). Therefore, roadway noise impacts on residents along Vigilante Road and Moreno Avenue due to construction-related traffic volumes would be significant.

While there would also be noise level increases to residents along SR-67 from construction-related traffic volumes, the noise level increases would not exceed the 3 dB significance threshold (Table 3.11-8). Therefore, roadway noise impacts on residents along SR-67 due to construction-related traffic volumes would be less than significant.

Operational (Recreational Trips) Roadway Noise Impacts

The Proposed Action would include a larger reservoir and an expanded/relocated marina corresponding to an increase in recreational users and visitor trips, compared to current conditions. During peak summer months, the maximum daily recreational trips could increase from an estimated 225 ADT for the existing marina to possibly up to 360 ADT for the new marina (Weber, 2007). As shown in Table 3.11-4, existing roadway noise levels at the nearest residential receptors, along Vigilante Road and Moreno Avenue, already exceed the 60 dB CNEL noise standard. Therefore, the 3 dB significance threshold is used to evaluate the increase in roadway noise levels from recreational traffic associated with the Proposed Action. An approximate doubling of traffic is required to increase roadway noise levels by 3 dB. Because the larger marina and reservoir would not result in a doubling of recreational trips, compared to current conditions, the significance threshold of 3 dB would not be exceeded at residential receptors along roadways in the vicinity. Therefore, traffic noise impacts on residents along vicinity roadways due to the increase in recreational trips associated with the expanded marina would be less than significant.

During the peak construction months in Year 2010, construction traffic from the Proposed Action would increase roadway noise levels at residential properties along Vigilante Road and Moreno Avenue such that the 3 dB significance threshold would be exceeded. Therefore, impacts of the Proposed Action would be significant (Impact SV/NV 4).

During the peak construction months in Year 2010, construction traffic from the Proposed Action would increase roadway noise levels at residential properties along SR-67, but not above the 3 dB significance threshold. Therefore, impacts of the Proposed Action would be less than significant.

The expected increase in recreational traffic volumes along vicinity roadways to access the new marina would not generate noise levels at nearby residential receptors above the 3 dB significance threshold. Therefore, impacts of the Proposed Action would be less than significant.

Threshold 4: Result in operational noise levels that exceed a one-hour average noise level of 50 dB(A) L_{eq} by day or 45 dB(A) L_{eq} at night at the property boundary

Because there are no residents near the shoreline of the reservoir, any increase in the number of recreational motorboats using the larger reservoir water surface area, compared to current conditions, would not exceed the 50 dBA L_{eq} (daytime) and the 45 dBA L_{eq} (nighttime) noise standards for residential uses. Therefore, there would be no noise impacts on nearby residents from an increased number of motorboats using the expanded reservoir.

Figure 2.2-78 shows that the inundation level in the Kimball Valley arm of the expanded reservoir would not extend into, or even up to, private properties beyond City of San Diego lands. Nevertheless, the Water Authority and City of San Diego have agreed to evaluate measures to discourage direct public access into the Kimball Valley arm of the reservoir and onto private properties in Kimball Valley, including but not limited to, signage, a tamper-proof buoy line (floating barricade) at the mouth of Kimball Valley Creek, etc. ~~City of San Diego has agreed to place a buoy line (floating barricade) at the mouth of Kimball Valley Creek to prevent boat access into this area.~~ This measure would avoid potential nuisance noise impacts near private properties in Kimball Valley caused by use of recreational motorboats. Therefore, there would be no nuisance noise impacts on residents along the Kimball Valley arm of the expanded San Vicente Reservoir from recreational motorboats.

The expected increase in the use of motorboats on the expanded reservoir would not generate noise levels at nearby residential receptors above the 50 dBA L_{eq} daytime noise standard. Therefore, impacts of the Proposed Action would be less than significant.

Threshold 5a: Expose persons to or generate excessive vibrations that result in peak particle velocities in excess of 2 inches per second at the nearest structure

Blasting would generate temporary vibrations in the vicinity of the dam construction zone, on-site quarry options, and new marina road construction areas. As mentioned, the closest sensitive receptor is a residence located approximately 1,500 feet south of the dam construction zone. Because vibration diminishes quickly with distance, residents at 1,500 feet would not be expected to experience vibration levels over the damage criteria established for blasting. As with noise from blasting, vibration levels can vary for blasting activities depending on the subsurface material, amount of charge, and depth to charge. Calculations conducted for the ESP EIR/EIS indicated that vibration levels from blasting would have a PPV of approximately 40 inches per second near the blasting site, and would be reduced to below 0.5 inch per second at a distance of approximately 80 feet from the blasting site. The damage threshold for structures is 2.0 inches per second. Because there are no structures within 80 feet of the on-site quarry options, blasting would not exceed the damage thresholds at any structure. Therefore, vibration impacts at nearby structures due to blasting activities associated with construction of the Proposed Action would be less than significant.

The Proposed Action would not generate vibration from blasting that would exceed the PPV damage threshold of 2.0 inches per second at any structure. Therefore, impacts of the Proposed Action would be less than significant.

Threshold 5b: Expose persons to or generate excessive vibrations that result in a daily average particle velocity in excess of 0.5 inches per second at the nearest sensitive receptor

As discussed above under Threshold 5a, calculations completed for the ESP EIR/EIS indicated that vibration from blasting would be attenuated to levels below 0.5 inch per second at a distance of approximately 80 feet. The nearest residential receptor is approximately 1,500 feet from the dam construction zone, so no receptors are close enough to experience excessive vibration. Therefore, vibration impacts at nearby structures due to blasting activities associated with construction of the Proposed Action would be less than significant.

The Proposed Action would not generate vibration from blasting that would exceed the daily average particle velocity threshold of 0.5 inch per second at the nearest sensitive receptors. Therefore, impacts of the Proposed Action would be less than significant.

3.11.3.3 Mitigation Measures

To reduce the noise impacts from dam construction activities associated with blasting and tunneling operations downstream of San Vicente Dam (**Impact SV/NV 1, Impact SV/NV 3**), the placement of noise attenuation barriers along the southerly and easterly limits of the construction zone was examined. However, given the height of standard truck exhaust stacks and the height of stationary equipment associated with possible quarry operations, it is speculative that barriers could feasibly be constructed at the height necessary to attenuate nighttime construction noise levels at the residences located south of the dam construction zone to below the 45 dBA L_{eq} exterior noise standard for residential uses (Table 3.11-5). While the barriers may reduce the nighttime noise levels, there are no feasible mitigation measures available to reduce these impacts to a level considered less than significant. Therefore, the impacts of the Proposed Action would be significant and unmitigable.

To mitigate significant impacts associated with nighttime noise levels from batch plant operations south of the dam (**Impact SV/NV 2**), the Water Authority will implement the following mitigation measure:

SV/NV 2-1 If feasible, the batch plant operations will be located at the on-site Marina Quarry Option. If the batch plant operations cannot be located at the on-site Marina Quarry Option, then the significant nighttime noise impacts from batch plant operations south of the dam would be unmitigable because there are no other feasible mitigation measures available to reduce these impacts to less than significant levels.

The significant impacts from increased noise levels along Vigilante Road and Moreno Avenue due to construction traffic (**Impact SV/NV 4**) cannot be reduced by any measure other than reducing construction-related vehicle trips below the estimated traffic volumes associated with the on-site quarry options. This is not considered practicable due to the 24-hour construction process for RCC placement. There are no feasible mitigation measures available to reduce these

impacts to a level considered less than significant. Therefore, the impacts of the Proposed Action would be significant and unmitigable.

3.11.3.4 Residual Impacts after Mitigation

No residual nighttime noise impacts associated with the batch plant operations (*Impact SV/NV 2*) would remain if Mitigation Measure SV/NV 2-1 is feasible and is implemented. If the batch plant operations cannot be located at the on-site Marina Quarry Option, then the significant nighttime noise impacts from batch plant operations south of the dam would be unmitigable. In addition, the significant nighttime noise impacts associated with dam construction activities and blasting for tunneling operations south of the dam (*Impact SV/NV 1*, *Impact SV/NV 3*), and impacts due to noise level increases along Vigilante Road and Moreno Avenue from construction traffic (*Impact SV/NV 4*), would be unmitigable. These significant impacts would cease upon the completion of construction. A Statement of Overriding Considerations would be required for the Proposed Action.

3.11.4 Cumulative Effects

3.11.4.1 Other CIP Projects

The Slaughterhouse Terminal Reservoir would be located over one mile northwest of the on-site Marina Quarry Option for the Proposed Action, and almost two miles from the dam construction zone. Due to the intervening topography and distance between this CIP project and the Proposed Action, there are no noise-sensitive land uses that would be exposed to combined noise levels assuming concurrent construction of these projects. Furthermore, the PEIR for the Regional Water Facilities Master Plan concluded that the construction-related noise and blasting impacts associated with this CIP project would be mitigated via implementation of the Water Authority's General Conditions and Standard Specifications, Section 01560, Temporary Controls, and Section 02229, Blasting (refer to Sections 1.9.5 [Introduction, Noise and Vibration] and 1.9.6 [Introduction, Public Safety and Hazardous Materials] of this EIR/EIS). In addition, construction-related traffic for this CIP project would not contribute to cumulatively significant roadway noise levels at residences along SR-67 because the 3 dB significance threshold would not be exceeded (Table 3.11-8). From a long-term operational standpoint, noise from equipment or machinery operation at Slaughterhouse Terminal Reservoir would be mitigated via a combination of using low noise output equipment or machinery, and noise attenuation barriers to achieve the necessary noise limits established in the local regulations for noise sensitive locations. The above conclusions regarding cumulative noise and vibration impacts for the Slaughterhouse Terminal Reservoir project are incorporated into the cumulative noise analyses in Section 3.11.4.3 below.

3.11.4.2 ESP Projects

The construction activities at the San Vicente Pipeline tunnel portal and the operation of pumps at the San Vicente Pump Station Facility would not generate short-term or long-term noise

impacts due to the absence of nearby noise-sensitive receptors. This is the same conclusion for construction and operational noise impacts associated with the Proposed Action in the vicinity of the dam construction zone (refer to Thresholds 1, 2 and 4 in Section 3.11.3.2 above). However, construction-related traffic for the San Vicente Pipeline project would contribute to cumulatively significant roadway noise levels at residences along vicinity roadways. The above conclusions regarding cumulative noise and vibration impacts for the listed ESP projects are incorporated into the cumulative noise analyses in Section 3.11.4.3 below.

3.11.4.3 Other Planned Projects with CIP and ESP Projects

This section evaluates the cumulative noise and vibration impacts of the Proposed Action when considered in conjunction with the other planned cumulative projects listed in Table 3.2-1 (Section 3.2 [Cumulative Projects for the Proposed Action] of this EIR/EIS), and incorporates the cumulative noise impacts associated with the CIP and ESP projects described in the above sections. The following cumulative noise analysis addresses each of the five significance thresholds listed in Section 3.11.3 above.

Cumulative Threshold 1: Expose noise-sensitive land uses to construction noise levels exceeding 75 dB(A) L_{eq} during an 8-hour period between the hours of 7:00 a.m. and 7:00 p.m., Monday through Saturday; or to increases in ambient noise levels equal to or above 3 dB in areas where ambient noise levels already equal or exceed 75 dB(A) L_{eq}

As discussed in Section 3.11.3.2 above, daytime construction and blasting activities associated with the Proposed Action would result in maximum noise levels of 54.0 dBA L_{max} and 64.5 dBA L_{max} , respectively, at the nearest residential receptor located approximately 1,500 feet south of the dam construction zone. The cumulative projects nearest to this residence are the Enniss Sand Mine Permit Extension, located directly adjacent to the residence, and Lakeside Ranch Subdivision, located approximately 1,250 feet to the east (refer to Projects 1 and 9 on Figure 3.2-1 [Cumulative Projects for the Proposed Action] of this EIR/EIS). Noise levels from operations at Enniss Sand Mine may exceed the 75 dBA L_{eq} daytime noise standard for construction activities at this residence. As such, the combined noise levels at this residence from the operation of Enniss Sand Mine and the San Vicente Pump Station (ESP), and from construction of the Slaughterhouse Terminal Reservoir (CIP), the San Vicente Pipeline (ESP), the Lakeside Ranch Subdivision and the Proposed Action, including blasting activities, may be cumulatively significant. However, because the Proposed Action's contribution to this impact would be 10 dBA below the 75 dBA L_{eq} threshold, this contribution would not be cumulatively considerable. Therefore, cumulative noise impacts at the nearest residential receptor due to construction of the Proposed Action would be less than significant.

Cumulative Threshold 2: Expose sensitive receptors to construction noise between the hours of 7:00 p.m. and 7:00 a.m.

As discussed in Section 3.11.3.2 above, nighttime construction activities, batch plant operations, and blasting for tunneling operations south of the dam would result in average noise levels between 45 and 50.1 dBA L_{eq} at the nearest noise-sensitive residential receptor (approximately

1,500 feet south of the dam construction zone), which would equal or exceed the 45 dBA L_{eq} nighttime exterior noise standard for residential uses (Table 3.11-5). This significant direct noise impact is based on a “worst-case” scenario that assumes these activities would be located on the south side of the dam construction zone. None of the cumulative projects listed in Table 3.2-1, nor the operation of the San Vicente Pump Station (ESP), nor construction of the Slaughterhouse Terminal Reservoir (CIP) or the San Vicente Pipeline (ESP), would generate nighttime noise levels that would be detectable at this residence due to large distances (i.e., these projects are located further to the north of the dam construction zone) and intervening topography separating these projects from the noise-sensitive residential receptor (which is located south of the Vigilante Road/Moreno Avenue intersection). Nevertheless, because the Proposed Action’s significant direct nighttime noise impact at the nearest noise-sensitive residential receptor would be unmitigable for the reasons stated in Section 3.11.3.3 above, it would contribute to a cumulatively considerable noise impact. Therefore, cumulative noise impacts at the nearest residential receptor due to nighttime construction activities associated with the Proposed Action would be significant (**Impacts SV/NV 1C, SV/NV 2C, and SV/NV 3C**).

Cumulative Threshold 3: Expose off-site noise-sensitive receptors to a road noise level increase of more than 3 dB and either elevate noise levels above 60 dB CNEL or exceed a 3 dB increase above an already noisy condition

The Proposed Action would cause significant and unmitigable noise increases along Vigilante Road and Moreno Avenue due to construction traffic. In addition to the CIP and ESP projects listed above, the planned cumulative projects listed in Table 3.2-1 that have the potential to contribute to cumulative construction-related traffic noise impacts on Vigilante Road and Moreno Avenue include: Lakeside Ranch Subdivision, Mobile Mini, Inc. Site Plan Modification, Enniss Sand Mine Permit Extension, and Tentative Map 5101 (Industrial Subdivision). In terms of operational impacts, the Proposed Action would not generate long-term traffic noise levels along these and other vicinity roadways that would exceed applicable noise standards. Even under a “worst-case” scenario, which assumes that the long-term traffic volumes from all of the CSP and ESP projects listed above and the other planned cumulative projects listed in Table 3.2-1 were to combine with those of the Proposed Action, which is highly unlikely, the minimal contribution of recreational trips associated with the Proposed Action would not be cumulatively considerable. Therefore, the cumulative noise impacts on residents along vicinity roadways due to the Proposed Action, when combined with traffic noise levels from the CIP and ESP projects listed above, and other planned cumulative projects listed in Table 3.2-1, would be significant during construction (**Impact SV/NV 4C**), but less than significant during operations.

Cumulative Threshold 4: Result in operational noise levels that exceed a one-hour average noise level of 50 dB(A) L_{eq} by day or 45 dB(A) L_{eq} at night at the property boundary

The Proposed Action would not generate long-term noise levels from boats operating at the reservoir that would exceed the 3 dB significance threshold. None of the industrial, commercial, or institutional cumulative projects (refer to Projects 8 through 21 in Table 3.2-1) would be close enough to the proposed marina and reservoir to result in cumulative noise impacts on nearby noise-sensitive receptors due to long-term operations (i.e., use of recreational motorboats).

Therefore, cumulative noise impacts due to operation of the Proposed Action (i.e., noise from use of recreational motorboats at the expanded reservoir), when combined with long-term traffic and operational noise levels from the CIP, ESP, and other planned cumulative projects listed in Table 3.2-1, would be less than significant.

Cumulative Threshold 5: Expose persons to or generate excessive vibrations that (a) result in peak particle velocities in excess of 2 inches per second at the nearest structure; and (b) result in a daily average particle velocity in excess of 0.5 inches per second at the nearest sensitive receptor

The residential receptor located approximately 1,500 feet south of the dam construction zone would not be expected to experience cumulative vibration levels exceeding the damage criteria established for blasting because vibration levels associated with the Proposed Action are calculated to be below 0.5 inch/second at 80 feet from the blasting site. This is a reasonable assumption for vibration levels associated with blasting activities that may occur at the Enniss Sand Mine and Lakeside Ranch construction sites. Even if it were assumed that blasting activities from the Enniss Sand Mine, Lakeside Ranch construction, and Proposed Action could occur simultaneously, which is a highly unlikely event, it is improbable that the combined vibration levels would exceed 2.0 inches/second at the residential receptor located approximately 1,500 feet south of the dam construction zone. Therefore, cumulative vibration impacts due to blasting activities associated with construction of the Proposed Action, when combined with the highly unlikely simultaneous blasting operations at the Slaughterhouse Terminal Reservoir (CIP), San Vicente Pipeline (ESP), Enniss Sand Mine and Lakeside Ranch Subdivision construction projects, would be less than significant.

The Proposed Action would not exceed construction noise standards during daytime activities. Therefore, cumulative daytime construction noise impacts due to the Proposed Action, when combined with the short-term (construction-related) noise impacts associated with the Slaughterhouse Terminal Reservoir (CIP), San Vicente Pipeline (ESP), San Vicente Pump Station (ESP) and other planned cumulative projects listed in Table 3.2-1, would be less than significant.

*Although none of the CIP and ESP projects listed above, nor any of the other planned cumulative projects listed in Table 3.2-1, would contribute to cumulative nighttime noise and vibration impacts at the nearest noise-sensitive residential receptor from the dam construction zone, the Proposed Action's direct nighttime construction noise impact at this residence would be significant and unmitigable. Therefore, the nighttime construction noise levels associated with the Proposed Action would result in a significant cumulative impact at the nearest noise-sensitive residential receptors (**Impacts SV/NV 1C, SV/NV 2C, and SV/NV 3C**). These significant unmitigable noise impacts would be unmitigable for the reasons stated in Section 3.11.3.3 above. No feasible measures are available to mitigate these cumulative nighttime construction noise impacts of the Proposed Action. However, these significant cumulative impacts would cease upon completion of construction. A Statement of Overriding Considerations would be necessary for approval of the Proposed Action.*

The Proposed Action would result in significant cumulative noise impacts on off-site residents due to increased noise levels from construction traffic along Vigilante Road and Moreno Avenue (Impact SV/NV 4C). This significant unmitigable noise impact would be unmitigable for the reasons stated in Section 3.11.3.3 above. Therefore, cumulative traffic noise impacts due to construction of the Proposed Action, when combined with the construction-related traffic noise impacts associated with the Slaughterhouse Terminal Reservoir (CIP), San Vicente Pipeline (ESP) and other planned cumulative projects listed in Table 3.2-1, would be significant for the duration of construction. No feasible measures are available to mitigate the cumulative construction traffic noise impacts of the Proposed Action. However, these significant cumulative impacts would cease upon completion of construction. A Statement of Overriding Considerations would be necessary for approval of the Proposed Action.

The Proposed Action would not exceed applicable noise standards and significance thresholds for operations (i.e., roadway noise from long-term recreational trips and noise from use of recreational motorboats at the expanded reservoir). Therefore, cumulative operational noise impacts due to the Proposed Action, when combined with the long-term (operational) noise impacts associated with the Slaughterhouse Terminal Reservoir (CIP), San Vicente Pipeline (ESP), San Vicente Pump Station (ESP) and other planned cumulative projects listed in Table 3.2-1, would be less than significant.

The Proposed Action would not generate vibration levels from blasting that would exceed the damage threshold at the nearest residential structure. Therefore, cumulative vibration impacts due to the Proposed Action, when combined with the short-term (construction-related) vibration impacts associated with the Slaughterhouse Terminal Reservoir (CIP), San Vicente Pipeline (ESP), San Vicente Pump Station (ESP) and other planned cumulative projects listed in Table 3.2-1, would be less than significant.

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Legend

Noise Measuring Location



Not to Scale

SOURCE: PBS&J, 2006

NOISE MEASUREMENTS LOCATIONS FOR THE SV 100K STUDY AREA

FIGURE 3.11-1

