2.10 Noise

This section evaluates existing conditions for the ambient noise environment and noise sensitive uses relative to the Project areas addressed in this SEIR, and the potential effects that implementation of the proposed Project may have on these conditions.

2.10.1 Existing Conditions

The General Plan Update PEIR included a discussion of existing conditions related to noise in Chapter 2.11.1 of the Noise chapter, including the Project areas covered by the proposed Project. The noise conditions described in the General Plan Update PEIR are the same as the conditions on the ground today. No changes to the existing conditions have been identified that would alter the conclusions in the EIR. All references used in the General Plan Update PEIR (Chapter 6) were reviewed to ensure they are still valid for purposes of this SEIR analysis. In addition, the existing conditions for noise within the Project area analyzed in this SEIR are the same as those provided in the General Plan Update PEIR, and are hereby incorporated by reference.

2.10.2 Regulatory Framework

Chapter 2.11.2 of the General Plan Update PEIR describes the Regulatory Framework related to noise and is hereby incorporated by reference. Applicable Federal regulations discussed include Federal Aviation Administration Standards, Federal Highway Administration Standards, Federal Railroad Administration Standards, Federal Transit Administration Standards, and the U.S Office of Surface Mining Reclamation and Enforcement. Applicable State regulations discussed include the California Noise Control Act of 1973, California Airport Noise Standards (CCR, Title 21, Section 5000 et. Seq.), Streets and Highways Code, California Vehicle Code (Section 27200-27207), California Harbors and Navigation Code, and the California Streets and Highway Code (Sections 215.5-216.5). Local Applicable regulations include the Airport Land Use Compatibility Plans; 2011General Plan, Noise Element; San Diego County Code of Regulatory Ordinances, Noise Ordinance; and the San Diego County Code of Regulatory Ordinances, Agricultural Enterprise and Consumer Information Ordinance.

The regulatory framework discussion in the General Plan Update PEIR as pertains to noise has not changed since adoption of the General Plan in August 2011. Therefore, the regulatory framework applies equally to the Project areas addressed in this SEIR, and is therefore not repeated here.

2.10.3 Analysis of Project Effects and Cumulative Impacts

The cumulative impact analysis study area for noise in the General Plan Update PEIR was identified as the areas surrounding noise-generating sources, such as roadways, agricultural or industrial uses because noise impacts are localized in nature (Chapter 2.11.4). As the proposed Project is applying 2011 General Plan principles to assign land use designations for the FCI lands throughout the unincorporated area, the cumulative study area for noise is the same as the

General Plan Update PEIR and is hereby incorporated by reference. In addition, Section 1.9 of this SEIR (Cumulative Project Assessment Overview), provides an update of new projects since adoption of the 2011 General Plan that are considered in the cumulative analysis in order to make the analysis complete.

2.10.3.1 *Excessive Noise Levels*

This section describes potential direct and cumulative impacts associated with excessive noise levels as pertains to the Project areas addressed in this SEIR.

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines and County of San Diego Guidelines for Determining Significance, Noise, the proposed Project would have a significant impact if it would result in the exposure of any existing or reasonably foreseeable future noise sensitive land uses to exterior or interior noise, including existing and planned Mobility Element roadways, railroads, and all other noise sources (with the exception of airports, which is discussed in Section 2.10.5), in excess of any of the following:

a. Exterior Locations:

   - Roadways and all other noise sources: 60 or 65 dBA[1] Community Noise Equivalent Level (CNEL) in the Noise Compatibility Guidelines or an increase of 10 dBA (CNEL) over pre-existing noise in areas where the ambient noise level is 49 dBA (CNEL) or less.
   - Railroads: 60 dBA (CNEL) or an increase of 10 dBA (CNEL) over pre-existing noise in areas where the ambient noise level is 49 dBA (CNEL) or less.

b. Interior Locations

   - 45 dBA (CNEL)

Impact Analysis

The General Plan Update PEIR evaluated impacts from the adoption of the goals and policies of the 2011 General Plan countywide, including FCI lands. In addition, the General Plan Update PEIR evaluated buildout of the land use designations applied throughout the unincorporated area with the exception of former FCI lands. The General Plan Update PEIR determined that buildout under the 2011 General Plan would result in potentially significant direct and cumulative impacts related to the exposure of sensitive land uses to excessive noise levels. The discussion of impacts can be found in Chapter 2.11 of the General Plan Update PEIR Noise and is hereby incorporated by reference. These impacts would be reduced to a less than significant level through the

[1] Some frequencies of noise are more noticeable than others. To compensate for this, different sound frequencies are weighted more heavily (A-weighted) so that the response of the average human ear is simulated.

implementation of a combination of federal, State and local regulations; existing County regulatory processes; the adopted 2011 General Plan goals and policies; and, specific mitigation measures/implementation programs identified in the General Plan Update PEIR.

Similar direct and cumulative impacts identified in the General Plan Update PEIR related to excessive noise levels would occur with future development of the proposed Project. Roadway systems are the predominant source of noise exposure in the County, followed by airport noise and rail operations. As such, future development under the proposed Project located near roadways or railroads would have the greatest potential to expose future noise sensitive land uses to excessive noise levels. Additionally, future development under the proposed Project that would increase traffic on roadways or railroads would have the potential to expose noise sensitive land uses near these noise sources to increased noise levels. The greatest increase in traffic associated with the proposed Project, and therefore increases noise levels, would be concentrated in the Community of Alpine on a portion of Alpine Boulevard, West Willows Road, and East Willows Road as described in Appendix D, Traffic Impact Assessment, of this SEIR. In order to provide a worst-case scenario, the increase in traffic along the identified deficient roadway segments in Alpine that would affect adjacent existing sensitive receptors are listed in Table 2.10-1, Forecast Project Impacts General Plan Update Amendment (FCI Lands). In addition, the proposed Project would result in the redesignation of former FCI lands that were not previously subject to noise compatibility criteria (i.e. forest land to village residential).

The areas in proximity to the roadways with increased traffic, and traffic-generated noise, as a result of the proposed Project could also experience a cumulative increase in noise levels resulting from traffic generated from regional development. As a result, the proposed Project would result in potentially significant direct and cumulative impacts from the exposure of land uses to noise levels in excess of noise compatibility guidelines. However, these potentially significant impacts resulting from implementation of the proposed Project would be reduced by the same regulations, implementation programs (2011 General Plan goals/policies), and mitigation measures from the General Plan Update PEIR and repeated in Section 2.10.4.1, below. As such, implementation of the proposed Project would result in less than significant direct and cumulative impacts related to excessive noise levels.

2.10.3.2 *Excessive Groundborne Vibration*

This section describes potential direct and cumulative impacts associated with the excessive groundborne vibration as pertains to the Project areas addressed in this SEIR.

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines and County of San Diego Guidelines for Determining Significance, Noise, the proposed Project would have a significant impact if it would result in the exposure of vibration sensitive uses to ground-borne vibration and noise equal to or in excess of the levels shown in Table 2.10-2, Groundborne Vibration and Noise Standards, or if new sensitive land uses would be located in the vicinity of ground-borne

vibration inducing land uses such as railroads or mining operations. The groundborne vibration and noise standards identify the following three land use categories with increasing sensitivity to groundborne vibration and noise impacts:

a. Category 1: Buildings where low ambient vibration is essential for interior operations (research & manufacturing facilities with special vibration constraints)

b. Category 2: Residences and buildings where people normally sleep (hotels, hospitals, residences, & other sleeping facilities)

c. Category 3: Institutional land uses with primarily daytime use (schools, churches, libraries, other institutions, & quiet offices)

The proposed Project would result in a significant impact if frequent events would exceed 0.0018 in/sec root mean square (RMS) for Category 1 land uses, 0.004 in/sec RMS for Category 2, and 0.0056 in/sec RMS for Category 3. Occasional or infrequent events (fewer than 70 vibration events per day) would be considered a significant impact if they would exceed 0.0018 in/sec RMS for Category 1 land uses, 0.010 in/sec RMS for Category 2, and 0.014 in/sec RMS for Category 3.

Impact Analysis

The General Plan Update PEIR evaluated impacts from the adoption of the goals and policies of the 2011 General Plan countywide, including FCI lands. In addition, the General Plan Update PEIR evaluated buildout of the land use designations applied throughout the unincorporated area with the exception of former FCI lands. The General Plan Update PEIR determined that buildout under the 2011 General Plan would result in potentially significant direct and cumulative impacts related to excessive groundborne vibration. The discussion of impacts can be found in Chapter 2.11 Noise and is hereby incorporated by reference. These impacts would be reduced to a less than significant level through the implementation of a combination of federal, State and local regulations; existing County regulatory processes; the 2011 General Plan goals and policies; and, specific mitigation measures/ implementation programs identified in the General Plan Update PEIR.

Similar direct and cumulative impacts identified in the General Plan Update PEIR related to excessive groundborne vibration would occur with the proposed Project. The operation of heavy construction equipment, construction activities such as pile driving or blasting, mining/mineral extraction activities, and railroad operations are all typical sources of groundborne vibration. Sensitive receptors, including residences, in proximity of these groundborne vibration sources can experience vibrations in a manner ranging from no perceptible effects at the lowest levels, low rumbling sounds and perceptible vibrations at moderate levels, and slight damage at the highest levels. However, groundborne vibration diminishes in strength with distance from the vibration source and is typically attenuated over relatively short distances from the source.

Future development under the proposed Project in the buildout scenario would potentially result in development that would experience excessive groundborne vibration associated with construction projects, mining/mineral extraction or railroad activities. In addition to the groundborn vibration resulting from the proposed Project, sensitive groundborne vibration receptors could also experience cumulative groundborne vibration from construction projects, mining/miner extraction, and railroad activities within nearby incorporated cities and tribal lands. As a result, the proposed Project could result in potentially significance direct and cumulative impacts related to groundborne vibration sensitive land uses near construction projects, mining/mineral extraction, and railroad activities. These potentially significant impacts resulting from implementation of the proposed Project would be reduced by the same regulations, implementation programs (2011 General Plan goals/policies) and mitigation measures from the General Plan Update PEIR and repeated in Section 2.10.4.2, below. As such, implementation of the proposed Project would result in less than significant direct and cumulative impacts related to excessive groundborne vibration.

2.10.3.3 *Permanent Increase in Ambient Noise Levels*

This section describes potential direct and cumulative impacts associated with the permanent increase in ambient noise levels as pertains to the Project areas addressed in this SEIR.

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines and the County of San Diego Guidelines for Determining Significance, Noise, the proposed Project would have a significant impact if it would result in a substantial permanent increase in ambient noise which would exceed the sound level limits specified in San Diego County Code Section 36.404, Sound Level Limits, at the property line of the property on which the noise is produced or at any location on a property that is receiving the noise.

If the measured ambient level exceeds the applicable limit due to a specific noise violation source, the allowable one hour average sound level would be the one-hour average ambient sound level, plus three decibels. The ambient noise level shall be measured when the alleged noise violation source is not operating. The sound level limit at a location on a boundary between two zoning districts is the arithmetic mean of the respective limits for the two districts. The one-hour average sound level limit applicable to extractive industries, including borrow pits and mines, shall be 75 decibels at the property line regardless of the zone where the extractive industry is located. Proposed extractive facilities would be subject to the noise standards within the Noise Element at the proposed site and adjacent uses. Fixed-location public utility distribution or transmission facilities located on or adjacent to a property line shall be subject to the sound level limits identified in this section, measured at or beyond six feet from the boundary of the easement upon which the equipment is located; however, some uses are exempt from the Noise Ordinance. Exemptions are listed in Section 36.417 and apply to certain instances of emergency work, school activities, public events, emergency generators, agricultural operations,

and property maintenance. Additionally, existing extractive operations are not restricted by the zonal standards in Section 36.404 because of Section 36.404(e). Section 36.404 (e) of the Noise Ordinance defines the sound limit level at a location on a boundary between two zones as the arithmetic mean of the respective limits for the two zones. The one-hour average sound level limit applicable to extractive industries, including but not limited to borrow pits and mines, is defined as 75 decibels at the property line regardless of the zone in which the extractive industry is located.

Permanent traffic noise impacts would be significant if the proposed Project would raise the noise levels above the County of San Diego Guidelines for Determining Significance of 60 dBA (CNEL). In areas where the existing noise level without the project is above 60 dBA but below 65 dBA, the proposed Project would result in a significant impact if it would result in an increase of more than three decibels, in accordance with the Federal Transit Administration (FTA) noise impact criteria. Where the existing noise exposure is between 65 dBA and 70 dBA, a significant impact would occur if the proposed Project would exceed the existing noise level by more than one decibel. Where the existing noise exposure exceeds 70 dBA, any increase in the noise level would be considered significant.

Impact Analysis

The General Plan Update PEIR evaluated impacts from the adoption of the goals and policies of the 2011 General Plan countywide, including FCI lands. In addition, the General Plan Update PEIR evaluated buildout of the land use designations applied throughout the unincorporated area with the exception of former FCI lands. The General Plan Update PEIR determined that buildout under the 2011 General Plan would result in potentially significant direct and cumulative impacts related to permanent increases in ambient noise levels. The discussion of impacts can be found in Chapter 2.11 Noise and is hereby incorporated by reference. These impacts would be reduced through the implementation of a combination of federal, State and local regulations; existing County regulatory processes; the 2011 General Plan goals and policies; and, specific mitigation measures/ implementation programs identified in the General Plan Update PEIR; however, even with these programs in place, the impacts would not be reduced to below a level of significance because future development would permanently increase ambient noise along roadways and permanent noise increases would remain significant and unavoidable.

Similar direct and cumulative impacts identified in the General Plan Update PEIR related to permanent increases in ambient noise levels would occur with the proposed Project. A permanent increase in ambient noise levels in the vicinity of sensitive noise receptors could occur as a result of the traffic-related noise. Future development under the proposed Project in the buildout scenario would increase the amount of traffic on County roadways that would result in a permanent increase in ambient noise along these roadways. Therefore, the proposed Project would result in a potentially significant direct impact as result of a permanent increase in ambient noise levels from traffic-related noise.

In addition to the permanent increase in ambient noise resulting from traffic generated by the proposed Project, other development within the County, nearby incorporated cities, and tribal lands would also increase the amount of traffic on these roadways. Therefore, the proposed Project would result in a cumulatively considerable contribution to a potentially significant cumulative impact from a permanent increase in ambient noise levels along County roadways. These potentially significant impacts resulting from implementation of the proposed Project would be reduced by the same regulations, implementation programs (2011 General Plan goals/policies) and mitigation measures from the General Plan Update PEIR and repeated in Section 2.10.4.3, below; however, even with these programs in place, the impacts would not be reduced to below a level of significance due to the infeasibility of mitigation measures as discussed in Section 2.10.4.3, below. As such, implementation of the proposed Project would result in significant and unavoidable direct and cumulative impacts related to permanent increases in ambient noise levels.

2.10.3.4 *Temporary Increase in Ambient Noise Levels*

This section describes potential direct and cumulative impacts with the temporary increase in ambient noise levels as pertains to the Project areas addressed in this SEIR.

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines and the County of San Diego Guidelines for Determining Significance, Noise, the proposed Project would have a significant impact if it would result in a substantial temporary or periodic increase in ambient noise levels during construction which, together with noise from all sources, would exceed the standards listed in San Diego County Code Sections 36.408 and 36.409, Construction Equipment. Sections 36.408 and 36.409 state that, except for emergency work, it shall be unlawful for any person to operate or cause to be operated, construction equipment:

a. Between the hours of 7:00 p.m. and 7:00 a.m.

b. On a Sunday or a holiday. For the purposes of this section a holiday means January 1st, the last Monday in May, July 4th, the first Monday in September, December 25th and any day appointed by the President as a special national holiday or the Governor of the State as a special State holiday. A person may, however, operate construction equipment on a Sunday or holiday between the hours of 10:00 a.m. and 5:00 p.m. at the person's residence or for the purpose of constructing a residence for himself or herself, provided that the operation of construction equipment is not carried out for financial consideration or other consideration of any kind and does not violate the limitations in Sections 36.409 and 36.410**.**

c. That exceeds an average sound level of 75 decibels for an eight hour period, between 7:00 a.m. and 7:00 p.m., when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received.

The County Noise Ordinance also includes standards for other sources of temporary and nuisance noise. Section 36.410, Sound Level Limitations on Impulsive Noise, states that except for emergency work, no person shall produce or cause to be produced an impulsive noise that exceeds the following standards when measured at the boundary line of or on any occupied property for 25 percent of the minutes in the measurement period:

- 82 dBA at an occupied residential, village zoning, or civic use, or 85 dBA at an occupied agricultural, commercial, or industrial use; or
- 85 dBA at an occupied residential, village zoning, or civic use, or 90 dBA at an occupied agricultural, commercial, or industrial use for a public road project.

The minimum measurement period for any measurements conducted under this section shall be one hour. During the measurement period a measurement shall be conducted every minute from a fixed location on an occupied property. The measurements shall measure the maximum sound level during each minute of the measurement period. If the sound level caused by construction equipment or the producer of the impulsive noise exceeds the maximum sound level for any portion of any minute it will deemed that the maximum sound level was exceeded during that minute.

Section 36.413, Multiple Family Dwelling Units, states that, notwithstanding any other provisions of the Noise Ordinance, it shall be unlawful for any person to create, maintain or cause to be maintained any sound within the interior of any multiple family dwelling unit which causes the noises level to exceed 45 dBA between 10:00 p.m. and 7:00 a.m. and 55 dBA between 7:00 a.m. and 10:00 p.m. Additionally, it shall be unlawful for any person to generate an interior noise level to exceed 40 dBA for one minute in one hour or 35 dBA for five minutes in one hour between the hours of 10:00 p.m. and 7:00 a.m., or to exceed 50 dBA for one minute in one hour or 35 dBA for five minutes in one hour between the hours of 7:00 a.m. and 10:00 p.m.

Section 36.414, General Noise Regulations of the County of San Diego Noise Ordinance includes additional noise standards for disturbing, excessive or offensive noise. Generally, this section states that it shall be unlawful for any person to make, continue, or cause to be made or continued, any disturbing, excessive or offensive noise which causes discomfort or annoyance to reasonable persons of normal sensitivity residing in the area.

Section 36.416, Noise from Off-Road Recreational Vehicles, states that no person shall operate or allow the operation of an off-road recreational vehicle on private property that produces a noise when measured at the boundary line of or on any occupied property that at any time exceeds the following maximum sound levels: 82 decibels between the hours of 7:00 a.m. and 7:00 p.m., 77 decibels between the hours of 7:00 p.m. and 10:00 p.m., and 55 decibels between the hours of 10:00 p.m. and 7:00 a.m.

Impact Analysis

The General Plan Update PEIR evaluated impacts from the adoption of the goals and policies of the 2011 General Plan countywide, including FCI lands. In addition, the General Plan Update PEIR evaluated buildout of the land use designations applied throughout the unincorporated area with the exception of former FCI lands. The General Plan Update PEIR determined that buildout under the 2011 General Plan would result in potentially significant direct and less than significant cumulative impacts from the temporary increase in ambient noise levels. The discussion of impacts can be found in Chapter 2.11 Noise and is hereby incorporated by reference. The potentially significant direct impact would be reduced to a less than significant level through the implementation of a combination of federal, State and local regulations; existing County regulatory processes; the 2011 General Plan goals and policies; and, specific mitigation measures/implementation programs identified in the General Plan Update PEIR.

Similar direct and cumulative identified in the General Plan Update PEIR impacts related to temporary increase in ambient noise levels would occur with the proposed Project. Temporary increases in ambient noise are typically generated by construction of buildings and infrastructure. The noise level increase and duration of temporary noise are depend on project-specific factors such as the type of construction equipment being used, the distance to sensitive noise receptors, and the local topography. Future development under the proposed Project in the buildout scenario would result in temporary increases in ambient noise levels due to construction of new land uses and infrastructure in the areas included in the proposed Project. Additionally, temporary nuisance noise could also occur in areas of concentrated development. The proposed Project would increase the development density near Alpine, which would result in a temporary increase in nuisance noise in these areas. As a result, the proposed Project could result in potentially significant direct impacts related to a temporary increase in ambient noise levels as a result of construction and nuisance noise. The potentially significant direct impact resulting from implementation of the proposed Project would be reduced by the same regulations, implementation programs (2011 General Plan goals/policies) and mitigation measures from the General Plan Update PEIR and repeated in Section 2.10.4.4, below. As such, implementation of the proposed Project would result in less than significant direct and cumulative impacts related to temporary increases in ambient noise levels.

2.10.3.5 *Excessive Noise Exposure from a Public or Private Airport*

This section describes potential direct and cumulative impacts excessive noise exposure from a public or private airport as pertains to the Project areas addressed in this SEIR.

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines and the California Airport Land Use Planning Handbook, the proposed Project would have a significant impact if it would expose people residing or working in the Project area to excessive noise levels from a public airport. The level

of noise acceptable to new development in the vicinity of proposed new airports, active military airports being converted to civilian use, and existing civilian airports is established as an annual CNEL of 60 dBA.

Impact Analysis

The General Plan Update PEIR evaluated impacts from the adoption of the goals and policies of the 2011 General Plan countywide, including FCI lands. In addition, the General Plan Update PEIR evaluated buildout of the land use designations applied throughout the unincorporated area with the exception of former FCI lands. The General Plan Update PEIR determined that buildout under the 2011 General Plan would result in potentially significant direct and cumulative impacts from the excessive noise exposure from a public or private airport. The discussion of impacts can be found in Chapter 2.11 Noise and is hereby incorporated by reference. These impacts would be reduced to a less than significant impact through the implementation of a combination of federal, State and local regulations; existing County regulatory processes; the adopted 2011 General Plan goals and policies; and, specific mitigation measures/ implementation programs identified in the General Plan Update PEIR.

Similar direct and cumulative impacts identified in the General Plan Update PEIR related to excessive noise exposure from a public or private airport would occur with the proposed Project. Future development under the proposed Project in the buildout scenario would result in excessive noise exposure from a public or private airport due to construction of new land uses and infrastructure in areas subject to public or private airport noise exposure. Additionally, the proposed Project could expose noise sensitive land uses to excessive noise from construction and operation of cumulative regional land use projects in combination with noise from a public or private airport. As a result, the proposed Project could result in potentially significant direct and cumulative impacts related to an excessive noise exposure from a public or private airport due to the location of potential development under the proposed Project. These potentially significant impacts resulting from implementation of the proposed Project would be reduced to a less than significant level by the same regulations, implementation programs (2011 General Plan goals/policies) and mitigation measures from the General Plan Update PEIR and repeated in Section 2.10.4.5, below. As such, implementation of the proposed Project would result in less than significant direct and cumulative impacts related to excessive noise exposure from a public or private airport.

2.10.4 Mitigation for Noise

2.10.4.1 *Excessive Noise Levels*

Direct and cumulative impacts associated with excessive noise levels would be reduced to a less than significant level with implementation of the same applicable 2011 General Plan policies and mitigation measures as identified in the General Plan Update PEIR, and repeated below.

2011 General Plan Policies

Policy LU-2.8: Mitigation of Development Impacts. Require measures that minimize significant impacts to surrounding areas from uses or operations that cause excessive noise, vibrations, dust, odor, aesthetic impairment and/or are detrimental to human health and safety.

Policy M-1.3: Treatment of High-Volume Roadways. To avoid bisecting communities or town centers, consider narrower rights-of-way, flexibility in design standards, and lower design speeds in areas planned for substantial development. Reduce noise, air, and visual impacts of new freeways, regional arterials, and Mobility Element roads, through landscaping, design, and/or careful location of facilities.

Policy M-2.4: Roadway Noise Buffers. Incorporate buffers or other noise reduction measures consistent with standards established in the Noise Element into the siting and design of roads located next to sensitive noise-receptors to minimize adverse impacts from traffic noise. Consider reduction measures such as alternative road design, reduced speeds, alternative paving, and setbacks or buffers, prior to berms and walls.

Policy N-1.4: **Adjacent Jurisdiction Noise Standards.** Incorporate the noise standards of an adjacent jurisdiction into the evaluation of a proposed project when it has the potential to impact the noise environment of that jurisdiction.

Policy N-1.5: **Regional Noise Impacts.** Work with local and regional transit agencies and/or other jurisdictions, as appropriate, to provide services or facilities to minimize regional traffic noise and other sources of noise in the County.

Policy N-2.1: **Development Impacts to Noise Sensitive Land Uses.** Require an acoustical study to identify inappropriate noise levels where development may directly result in any existing or future noise sensitive land uses being subject to noise levels equal to or greater than 60 CNEL and require mitigation for sensitive uses in compliance with the noise standards listed in Table N-2 in the Noise Element.

Policy N-2.2: **Balconies and Patios.** Assure that in developments where the exterior noise level on patios or balconies for multi-family residences or mixed-use developments exceed 65 CNEL, a solid noise barrier is incorporated into the building design of the balconies and patios while still maintaining the openness of the patio or balcony.

Policy N-4.1: **Traffic Noise.** Require that projects proposing General Plan amendments that increase the average daily traffic beyond what is anticipated in this General Plan do not increase cumulative traffic noise to off-site noise sensitive land uses beyond acceptable levels.

Policy N-4.2: Traffic Calming. Include traffic calming design, traffic control measures, and low-noise pavement surfaces that minimize motor vehicle traffic noise in development that may impact noise sensitive land uses.

Policy N-4.3: **Jurisdictional Coordination.** Coordinate with California Department of Transportation (Caltrans), the City of San Diego, and other adjacent jurisdictions, as appropriate, for early review of proposed new and expanded State freeways, highways, and road improvement projects within or affecting the unincorporated County to: 1) locate facilities where the impacts to noise sensitive land uses would be minimized; and, 2) develop and include noise abatement measures in the projects to minimize and/or avoid the impacts to noise sensitive land uses.

Policy N-4.5: **Roadway Location.** Locate new or expanded roads designated in the Mobility Element in areas where the impact to noise sensitive land uses would be minimized.

Policy N-4.7: **Railway Jurisdictional Coordination.** Work with the San Diego Association of Governments (SANDAG), Caltrans, Metropolitan Transit System (MTS), California High-Speed Rail Authority, and passenger and freight train operators as appropriate to install noise attenuation features to minimize impacts to adjacent residential or other noise sensitive uses from railroad operations.

Policy N-4.8: **Train Horn Noise.** Establish train horn "quiet zones" with new rail projects consistent with federal regulations, where applicable. Promote community programs for existing at-grade crossings by working with rail operators.

These policies require preparation of an acoustical study where development has the potential to directly result in noise sensitive land uses being subject to excessive noise levels. They require a solid noise barrier to be incorporated into development design when the exterior noise level on patios or balconies would be excessive. These policies ensure that increases in average daily traffic do not substantially increase cumulative traffic noise to noise sensitive land uses and, require inclusion of traffic calming design features that minimizes traffic noise. These polices promote the location of new or expanded roads where the impact to noise sensitive land uses would be minimized, and require coordination with other agencies to minimize impacts to noise sensitive land uses from railroad operations. These policies promote establishment of train horn "quiet zones," and require measures that minimize significant impacts to surrounding areas from uses or operations that cause excessive noise. Lastly, these policies incorporate buffers or other noise reduction measures into the siting and design of roads located next to sensitive noise receptors. Adherence to these policies will reduce exposure of noise sensitive land uses to exterior and interior noise impacts.

Mitigation Measures

Noi-1.1 Require an acoustical analysis whenever a new development may result in any existing or future noise sensitive land uses being subject to on-site noise levels of 60 dBA (CNEL) or greater, or other land uses that may result in noise levels exceeding the "Acceptable" standard in the Noise Compatibility Guidelines (Table N-1 in the Noise Element).

Noi-1.2 Revise the Guidelines for Determining Significance for new developments where the exterior noise level on patios or balconies for multi-family residences or mixed-use development exceeds 65 dBA (CNEL), a solid noise barrier is incorporated into the building design of balconies and patios for units that exceed 65 dBA (CNEL) while still maintaining the openness of the patio or balcony.

Noi-1.3 Require an acoustical study for projects proposing amendments to the County General Plan Land Use Element and/or Mobility Element that propose a significant increase to the average daily traffic due to trips associated with the project beyond those anticipated in the General Plan.

Noi-1.4 Edit the Guidelines for Determining Significance standard mitigation and project design considerations to promote traffic calming design, traffic control measures, and low-noise pavement surfaces that minimize motor vehicle traffic noise.

Noi-1.5 Coordinate with Caltrans and SANDAG as appropriate to identify and analyze appropriate route alternatives that may minimize noise impacts to noise sensitive land uses within the unincorporated areas of San Diego County.

Noi-1.6 Coordinate with SANDAG, MTS, California High-Speed Rail Authority as appropriate, and passenger and freight train operators to install noise attenuation features to minimize impacts to adjacent residential or other noise sensitive land uses.

Noi-1.7 Work with project applicants during the scoping phase of proposed projects to take into consideration impacts resulting from on-site noise generation to noise sensitive land uses located outside the County's jurisdictional authority. The County will notify and coordinate with the appropriate jurisdiction(s) to determine appropriate project design techniques and/or mitigation.

Noi-1.8 Implement and/or establish procedures (or cooperative agreements) with Caltrans, the City of San Diego, and other jurisdictions as appropriate to ensure that a public participation process or forum is available for the affected community to participate and discuss issues regarding transportation generated noise impacts for new or expanded roadway projects that may affect noise sensitive land uses within the unincorporated areas of San Diego County.

Noi-1.9 Coordinate with Caltrans and the Planning and Development Services Landscape Architect, and receive input from community representatives as appropriate (e.g., Planning or Sponsor Group) to determine the appropriate noise mitigation measure (planted berms, noise attenuation barriers or a combination of the two) to be required as a part of the proposals for roadway improvement projects and ensure that the County's Five Year Capital Improvement Program and Preliminary Engineering Reports address noise impacts and appropriate

mitigation measures for road improvement projects within or affecting the unincorporated area of the County.

Noi-1.1 will determine whether significant impacts may occur and incorporate attenuation measures within the project to meet the compatibility guidelines. Noi-1.2 will alleviate excessive noise level impacts on residents while meeting compatibility guidelines. Noi-1.3 will identify unanticipated noise level increases for sensitive land uses and allow appropriate project revisions or mitigation to be identified. Noi-1.4 will minimize potential noise impacts on noise-sensitive land uses. Noi-1.5 may minimize noise impacts to noise sensitive land uses within the unincorporated areas of San Diego County. Noi-1.6 will minimize impacts to adjacent residential or other noise sensitive land uses. Noi-1.7 will prevent cumulatively considerable noise impacts to surrounding jurisdictions. Noi-1.8 encourages a public participation process for the affected community to participate and discuss issues regarding transportation generated noise impacts for new or expanded roadway projects that may affect noise sensitive land uses within the unincorporated areas of San Diego County. Noi-1.9 requires coordination to determine the appropriate noise mitigation measures (planted berms, noise attenuation barriers or a combination of the two) to be required as a part of the proposals for roadway improvement projects. It also requires that the County's Five Year Capital Improvement Program and Preliminary Engineering Reports address noise impacts and include appropriate mitigation measures for road improvement projects within or affecting the unincorporated area of the County.

2.10.4.2 *Excessive Groundborne Vibration*

Direct and cumulative impacts associated with excessive groundborne vibration would be reduced to a less than significant level with implementation of the same applicable General Plan policies and mitigation measures as identified in the General Plan Update PEIR, and repeated below.

2011 General Plan Policies

Policy N-3.1: Groundborne Vibration. Use the Federal Transit Administration and Federal Railroad Administration guidelines, where appropriate, to limit the extent of exposure that sensitive uses may have to groundborne vibration from trains, construction equipment, and other sources.

Policy N-4.7: Railway Jurisdictional Coordination. Work with the San Diego Association of Governments (SANDAG), Caltrans, Metropolitan Transit System (MTS), California High-Speed Rail Authority, and passenger and freight train operators as appropriate to install noise attenuation features to minimize impacts to adjacent residential or other noise sensitive uses from railroad operations.

Policy N-5.2: Noise-Generating Industrial Facilities. Locate noise-generating industrial facilities at the maximum practical distance from residential zones. Use setbacks between noise

generating equipment and noise sensitive uses and limit the operation of noise generating activities to daytime hours as appropriate where such activities may affect residential uses.

Policy N-6.3: High-Noise Equipment. Require development to limit the frequency of use of motorized landscaping equipment, parking lot sweepers, and other high-noise equipment if their activity will result in noise that affects residential zones.

Policy N-6.4: Hours of Construction. Require development to limit the hours of operation as appropriate for non-emergency construction and maintenance, trash collection, and parking lot sweeper activity near noise sensitive land uses.

These policies require the use of Federal Transit Administration and Federal Railroad Administration guidelines to limit the exposure of sensitive uses from potential sources generating groundborne vibrations. , The policies require the County to work with SANDAG, Metropolitan Transit Services and passenger and freight rail operators to minimize impacts to residential and other sensitive land uses, and require the location of industrial facilities in areas that minimize impacts to sensitive land uses. The policies require development to limit the frequency of use of high-noise equipment, and require development to limit the hours of operation as appropriate for non-emergency noise-producing activities such as: construction, maintenance, trash collection, and parking lot sweeper activity. Adherence to these policies will reduce exposure of vibration sensitive land uses to sources of groundborne vibration.

Mitigation Measures

Mitigation measure Noi-1.7 as described above is applicable to this issue and is incorporated here by reference. In addition, the following measures would further reduce impacts associated with excessive groundborne vibration.

Noi-2.1 For Land Use Designations defined in Table 2.11-14, a ground-borne vibration technical study shall be required for proposed land uses within the following distances from the Sprinter Rail Line right-of-way and the property line: 600 feet of a Category 1 Land Use, 200 feet of a Category 2 Land Use, and 120 feet of a Category 3 Land Use. If necessary, mitigation shall be required for land uses in compliance with the standards listed in Tables 2 and 3 of the County of San Diego Guidelines for Determining Significance - Noise.

Noi-2.2 Revise the County CEQA determinations of significance to reflect limits in the Noise Compatibility Guidelines and Noise Standards [Policy N-3.1]. Periodically review the Guidelines for Determining Significance to incorporate standards for minimizing effects of groundborne vibration during project operation or construction.

Noi-2.3 Review project applications for industrial facilities to ensure they are located in areas that would minimize impacts to noise-sensitive land uses. Revise CEQA

Guidelines for Determining Significance to incorporate appropriate noise attenuation measures for minimizing industrial-related noise.

Noi-2.4 Require an acoustical study whenever a proposed extractive land use facility may result in a significant noise impact to existing noise sensitive land uses, or when a proposed noise sensitive land use may be significantly affected by an existing extractive land use facility. The results of the acoustical study may require a "buffer zone" to be identified on all Major Use Permit applications for extractive facilities whenever a potential for a noise impact to noise sensitive land uses may occur.

Noi-1.7 will prevent cumulatively considerable noise and vibration impacts to surrounding jurisdictions. Noi-2.1 ensures that if significant impacts are determined based on the technical study, mitigation measures or design features will be required as part of the project. Noi-2.2 minimizes the effects of groundborne vibration during project operation or construction. Noi-2.3 will prevent direct and cumulative groundborne vibration impacts to sensitive land use types. Noi-2.4 determines whether or not potential vibration impacts would require a "buffer zone" or other mitigating features to ensure that impacts are not significant.

2.10.4.3 *Permanent Increase in Ambient Noise Levels*

Direct and cumulative impacts associated the permanent increase in ambient noise levels would be reduced with implementation of the same applicable 2011 General Plan policies and mitigation measures as identified in the General Plan Update PEIR, and repeated below; however, not to a level below a level of significance. The County determined that implementation of the additional measures listed below would be infeasible for the following reasons:

Infeasible Mitigation Measures

The following measure was considered in attempting to reduce impacts associated with permanent increases in ambient noise levels to below a level of significance; however, the County has determined that this measure would be infeasible, as described below. Therefore, this mitigation measure would not be implemented.

- Prohibit new roadways or roadway improvements that would result in a significant increase in the ambient noise level. The measure would prohibit the construction of many roadway projects proposed in the Circulation Element because they would result in increases in ambient noise. This measure is infeasible because it would restrict future development in areas identified for increased growth under the 2011 General Plan because new roadways to serve this growth would not be constructed. Additionally, this mitigation measure would conflict with the project objective to provide and support a multi-modal transportation network that enhances connectivity

and supports community development patterns because it would prohibit the development of new roadways.

Because the measures listed above have been found to be infeasible, impacts would remain significant and unavoidable.

2011 General Plan Policies

The following policies would reduce impacts associated with permanent increases in ambient noise level, but not to below a significant level.

Policy LU-2.8: Mitigation of Development Impacts. Require measures that minimize significant impacts to surrounding areas from uses or operations that cause excessive noise, vibrations, dust, odor, aesthetic impairment and/or are detrimental to human health and safety.

Policy M-1.3: Treatment of High-Volume Roadways. To avoid bisecting communities or town centers, consider narrower rights-of-way, flexibility in design standards, and lower design speeds in areas planned for substantial development. Reduce noise, air, and visual impacts of new freeways, regional arterials, and Mobility Element roads, through landscaping, design, and/or careful location of facilities.

Policy M-2.4: Roadway Noise Buffers. Incorporate buffers or other noise reduction measures consistent with standards established in the Noise Element into the siting and design of roads located next to sensitive noise-receptors to minimize adverse impacts from traffic noise. Consider reduction measures such as alternative road design, reduced speeds, alternative paving, and setbacks or buffers, prior to berms and walls.

Policy N-1.5: Regional Noise Impacts. Work with local and regional transit agencies and/or other jurisdictions, as appropriate, to provide services or facilities to minimize regional traffic noise and other sources of noise in the County.

Policy N-4.1: Traffic Noise. Require that projects proposing General Plan amendments that increase the average daily traffic beyond what is anticipated in this General Plan do not increase cumulative traffic noise to off-site noise sensitive land uses beyond acceptable levels.

Policy N-4.2: Traffic Calming. Include traffic calming design, traffic control measures, and low-noise pavement surfaces that minimize motor vehicle traffic noise in development that may impact noise sensitive land uses.

Policy N-4.6: Road Improvement Projects. For County road improvement projects, evaluate the proposed project against ambient noise levels to determine whether the project would increase ambient noise levels by more than three decibels. If so, apply the limits in the noise standards listed in Table N-2 for noise sensitive land uses that may be affected by the increased noise levels. For federally funded roadway construction projects, use the limits in the applicable Federal Highway Administration Standards.

Policy N-5.1: Truck Access. Design development so that automobile and truck access to industrial and commercial properties abutting residential properties is located at the maximum practical distance from residential zones.

Policy N-5.2: Noise-Generating Industrial Facilities. Locate noise-generating industrial facilities at the maximum practical distance from residential zones. Use setbacks between noise generating equipment and noise sensitive uses and limit the operation of noise generating activities to daytime hours as appropriate where such activities may affect residential uses.

These policies reduce the potential for increases in average daily traffic to increase cumulative traffic noise to noise-sensitive land uses. The policies apply traffic calming design, traffic control measures, and low-noise pavement surfaces that minimize motor vehicle traffic noise. They also require proposed projects to be evaluated against ambient noise levels to determine whether the project would increase ambient noise levels by more than three decibels. The policies require development to be designed so that automobile and truck access to industrial and commercial properties abutting residential properties is located at the maximum practical distance from residential zones, and encourage noise-generating industrial facilities to be located at the maximum practical distance from residential zones. The policies require measures that minimize significant impacts to surrounding areas from uses or operations that cause excessive noise; and require plans for high-volume roadways to consider noise-sensitive receptors in location and design. Adherence to these policies will further reduce impacts associated with permanent increases in ambient noise levels.

Mitigation Measures

Mitigation measures Noi-1.3, Noi-1.4, Noi-1.5, Noi-1.8, Noi-2.3, and Noi-2.4 as described above are applicable to this issue and are incorporated here by reference. In addition, the following measures would further reduce impacts associated with permanent increases in ambient noise levels, although not to below a significant level.

Noi-3.1 Ensure that for new County road improvement projects either the County's Noise Standards are used to evaluate noise impacts or the project does not exceed 3 decibels over existing noise levels [Policy N-4.6]

Noi-3.2 Work with the project applicant during the review of either the building permit or discretionary action (whichever is applicable) to determine appropriate noise reduction site design techniques that include:

- Orientation of loading/unloading docks away from noise sensitive land uses
- Setbacks or buffers to separate noise generating activities from noise sensitive land uses
- Design on-site ingress and egress access away from noise sensitive land uses [Policy N-5.1]

Noi-1.3 will prevent unanticipated noise level increases for sensitive land uses. Noi-1.4 will help minimize potential noise impacts on sensitive land uses. Noi-1.5 may minimize noise impacts to noise sensitive land uses within the unincorporated areas of San Diego County.

Noi-1.8 encourages a public participation process for the affected community to participate and discuss issues regarding transportation generated noise impacts for new or expanded roadway projects that may affect noise sensitive land uses within the unincorporated areas of San Diego County. Noi-2.3 will reduce direct and cumulative increases in ambient noise levels. Noi-2.4 determines whether or not potential vibration impacts would require a "buffer zone" or other mitigating features to reduce the impacts of increased noise levels on sensitive receptors. Noi-3.1 will help to minimize and direct and cumulative noise level increases associated with County road improvements. Noi-3.2 will ensure that appropriate noise reduction site design techniques are employed.

2.10.4.4 *Temporary Increase in Ambient Noise Levels*

Direct impacts associated with the temporary increase in ambient noise levels would be reduced to a less than significant level with implementation of the same applicable General Plan policies and mitigation measures as identified in the General Plan Update PEIR, and repeated below.

2011 General Plan Policies

Policy N-6.1: Noise Regulations. Develop and regularly update codes and ordinances as necessary to regulate impacts from point, intermittent, and other disruptive noise sources.

Policy N-6.2: Recurring Intermittent Noise. Minimize impacts from noise in areas where recurring intermittent noise may not exceed the noise standards listed in Table N-2, but can have other adverse effects.

Policy N-6.3: High-Noise Equipment. Require development to limit the frequency of use of motorized landscaping equipment, parking lot sweepers, and other high-noise equipment if their activity will result in noise that affects residential zones.

Policy N-6.4: Hours of Construction. Require development to limit the hours of operation as appropriate for non-emergency construction and maintenance, trash collection, and parking lot sweeper activity near noise sensitive land uses.

Policy N-6.5: Special Events. Schedule special events sponsored by the County that may generate excessive noise levels to daytime hours when feasible.

Policy N-6.6: Code Enforcement. Provide sufficient resources within the County for effective enforcement of County codes and ordinances.

Adherence to these policies will reduce impacts related to temporary or periodic increases in ambient noise levels by enacting ordinances to regulate impacts from noise and enforce noise regulations to ensure no violations of noise standards occur.

Mitigation Measures

Noi-4.1 Periodically review and revise the Noise Ordinance and Section 6300 of the Zoning Ordinance as necessary to ensure appropriate restrictions for intermittent, short-term, or other nuisance noise sources.

Noi-4.2 Augment staff and equipment as appropriate to facilitate enforcement of the Noise Ordinance.

Noi-4.1 will ensure that mechanisms are in place to enforce limits on temporary noise impacts. Noi-4.2 will ensure that temporary noise impacts can be regulated immediately when identified.

2.10.4.5 *Excessive Noise Exposure from a Public or Private Airport*

Direct and cumulative impacts associated with excessive noise exposure from a public or private airport would be reduced to a less than significant level with implementation of the same applicable 2011 General Plan policies and mitigation measures as identified in the General Plan Update PEIR, and repeated below.

2011 General Plan Policies

Policy N-4.9: **Airport Compatibility.** Assure the noise compatibility of any development projects that may be affected by noise from public or private airports and helipads during project review by coordinating, as appropriate, with appropriate agencies such as the San Diego County Regional Airport Authority (SDCRAA) and the Federal Aviation Administration (FAA).

Policy S-15.1: **Land Use Compatibility.** Require land uses surrounding airports to be compatible with the operation of each airport.

Policy S-15.2: **Airport Operational Plans.** Require operational plans for new public/private airports and heliports, as well as future operational changes to existing airports, to be compatible with existing and planned land uses that surround the airport facility.

Policy S-15.4: **Private Airstrip and Heliport Location.** Locate private airstrips and heliports outside of safety zones and flight paths for existing airports where they are compatible with surrounding established and planned land uses, and in a manner to avoid impacting public roadways and facilities.

These policies assure the noise compatibility of development that would have the potential to be affected by noise from public or private airports and helipads during project review, require land uses surrounding airports to be compatible with airport operations, require operational plans for new and existing airports to be compatible with land uses that surround the airport facility, ensure that private airstrips and heliports are located outside of the safety zones and flight paths of existing airports, and require land uses surrounding airports to be compatible with airport operations. Adherence to these policies will reduce excessive noise impacts to people in the project area from public and private airports.

Mitigation Measures

Noi-5.1 Use the applicable Airport Land Use Compatibility Plan's (ALUCP) as guidance/reference during development review of projects that are planned within an Airport Influence Area (AIA). Any projects that are within the AIA shall be submitted to the San Diego County Regional Airport Authority (SDCRAA) for review.

Noi-5.2 Evaluate noise exposure impacts related to a private airport or heliport use or consistency with the FAA standards.

Noi-5.3 Consult with the FAA standards and the County Noise Ordinance as a guide for assessing noise impacts from private airports and helipads.

Noi-5.1 will help ensure that incompatible land uses are not developed in areas of excessive noise exposure from airports. Noi-5.2 will minimize potential noise exposure associated with private airports. Noi-5.3 will minimize potential noise exposure associated with private airports and helipads.

TABLE 2.10-1.
FORECAST PROJECT IMPACTS:
GENERAL PLAN AMENDMENT (FCI LANDS)

Roadway	Segment Limits	Sensitive Receptors
Alpine Boulevard	Tavern Rd to Boulders Rd	Julian Charter School
		Alpine Community Center
		Alpine Elementary School
		Alpine Anglican Church
		Alpine Community Day School
Alpine Boulevard	Boulders Rd to Alpine Special Treatment Center	Alpine Special Treatment Center
Alpine Boulevard	Alpine Special Treatment Center to W. Victoria Dr.	Alpine County Library
Alpine Boulevard	W. Victoria Dr. to Louise Dr.	Quest Academy
Alpine Boulevard	Louise Dr. to Viejas View Pl	—
Alpine Boulevard	Viejas View Pl to West Willows Rd	—
Alpine Boulevard	West Willows Rd to East Willows Rd	—
South Grade Road	Eltinge Dr. to Olive View Rd	—
Tavern Road	Victoria Park Terrace to Alpine Boulevard	Ayers Lodge
Tavern Road	Arnold Way to Huey Ln/White Oak Dr.	Joan MacQueen Middle School
		Alpine Lutheran Church
		The Church of Jesus Christ of Latter Day Saints
Viejas Casino Rd.	West Willows Rd. to East Willows Rd	—
West Willows Road	Alpine Blvd to Otto Ave	—
Willows Road	Otto Ave to Viejas Casino Rd	—
Willows Road	Viejas Casino Rd. to I-8 on ramp	—

-- No sensitive receptors identified.

TABLE 2.10-2.
GROUND-BORNE VIBRATION AND NOISE STANDARDS[1]

Land Use Category[2]	Definition	Ground-Borne Vibration Impact Levels (inches per second RMS)		Ground-Borne Noise Impact Levels (dB re 20 micro Pascals)	
		Frequent Events[3]	Occasional or Infrequent Events[4]	Frequent Events[3]	Occasional or Infrequent Events[4]
Category 1	Buildings where low ambient vibration is essential for interior operations (research & manufacturing facilities with special vibration constraints).	0.0018[5]	0.0018[5]	Not Applicable	Not Applicable
Category 2[6]	Residences and buildings where people normally sleep (hotels, hospitals, residences, & other sleeping facilities).	0.0040	0.010	35 dBA	43 dBA
Category 3[6]	Institutional land uses with primarily daytime use (schools, churches, libraries, other institutions, & quiet offices).	0.0056	0.014	40 dBA	48 dBA

RMS = root mean squared

[1] Vibration-sensitive equipment is not sensitive to ground-borne noise.

[2] There are some buildings, such as concert halls, TV and recording studios, and theaters that can be very sensitive to vibration and noise but do not fit into any of the three categories. Refer to Table 3 in the County of San Diego Guidelines for Determining Significance, Noise for acceptable levels of ground-borne vibration and noise for these various types of special uses.

[3] "Frequent Events" is defined as more than 70 vibration events per day. Most rapid transit projects fall into this category.

[4] "Occasional or Infrequent Events" are defined as fewer than 70 vibration events per day. This combined category includes most commuter rail systems.

[5] This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration sensitive manufacturing or research will require detailed evaluation to define acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the HVAC systems and stiffened floors.

[6] For Categories 2 and 3 with occupied facilities, isolated events such as blasting are significant when the peak particle velocity (PPV) exceeds one inch per second. Non-transportation vibration sources such as impact pile drivers or hydraulic breakers are significant when their PPV exceeds 0.1 inch per second.

Source: County of San Diego, Planning & Development Services, 2009c.

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