4.8 NOISE

The effects of noise are considered in two ways: how a proposed project may increase existing noise levels and affect surrounding land uses; and how a proposed land use may be affected by noise from existing and surrounding land uses. This section of the Program EIR addresses: the existing noise environment of the project area; federal, state, and local noise guidelines and policies; potential impacts resulting from implementing the proposed Master Plan; and potential noise impacts that would be encountered throughout the area.

4.8.1 Existing Conditions

Noise is generally defined as unwanted sound. Noise meters are instruments that detect small changes in atmospheric pressure. These meters cannot distinguish between that which is wanted (e.g., birds singing, waves on a beach, etc.) and that which is not (e.g., traffic or railroad noise). Thus, measurements of noise are more accurately described as measurements of sound pressure.

Noise sources and sound intensities can vary significantly over an urban area. Motor vehicles are usually the primary noise source in California cities. Variables that affect traffic noise include traffic volumes, proximity to the noise source, time of day, speed, pavement condition. Topography also plays a significant role in the perception of traffic related noise emissions. Road segments that are cut below or significantly elevated above the grade at which noise is measured will generally produce a quieter noise environment.

Sites that have abundant vegetation and an undulating profile (soft sites) will absorb sound pressure waves more fully than an area that is predominantly asphalt or concrete (hard site). Under normal conditions on hard sites, noise will attenuate (drop-off) at an approximate rate of 3.0 dBA (A-weighted decibel [dB]) per doubling of distance (DD) for a line source (i.e., traffic sources) and about 6.0 dBA/DD for a point (stationary) source. An excess ground attenuation value of 1.5 dBA/DD over standard conditions would be assumed for undeveloped areas.

The only way to ascertain the noise level at a given site is to actually measure it. Qualified persons, using laboratory-certified sound meters, conduct noise studies. Often noise studies gather measurements for several days, and this data is used to calculate the Day/Night Sound Level (Ldn) and/or the Community Noise Exposure Level (CNEL). These two metrics penalize night time noise to reflect normal sleep patterns. Having noise exposure information allows better site planning and architectural treatments (e.g., quiet windows) as needed.

4.8.1.1 Identified Sensitive Land Uses

Certain land uses are considered more sensitive to ambient noise levels than others, due to the amount of noise exposure and the types of activities involved. In general, noise-sensitive land uses include, but are not limited to, the following:

- Residential areas;
- Schools-preschool to secondary, college; specialized education and training;
- Health care services (hospital);
- Nursing and personal care;
- Churches;
- Public assembly and entertainment;
- Libraries and museums;
- Hotels and motels;

- Outdoor sports and recreation; and,
- Offices.

Existing noise sensitive uses within, adjacent to, and in the vicinity of NCP include residences, Dana Elementary School, Little Bits Preschool, Day Springs Preschool, Nipomo Library, and NCP itself.

4.8.1.2 Existing Noise Environment

Transportation Noise Sources

The level of traffic noise depends on the following three factors: (1) the volume of traffic, (2) the speed of the traffic, and (3) the number of trucks in the traffic flow. Generally, heavier traffic volumes, higher speeds, and the greater numbers of trucks increase the loudness of traffic noise. Any condition (such as a steep incline) that causes heavy laboring of motor vehicle engines will also increase the resultant traffic noise levels. Vehicle noise around the NCP is a combination of the noise produced by the engines, exhausts, and tires.

Higher levels of existing noise resulting from automobile and truck traffic characterize the perimeter portions of the NCP, especially adjacent to the West Tefft Street and Pomeroy Road corridors. Although higher levels of noise occur along the existing transportation corridors surrounding the NCP, noise levels rapidly attenuate as one moves towards the interior of the park because of the varying topography and in some locations the presence of dense thick wooded vegetation. A field investigation was conducted on November 23, 2010, and noise measurements were documented from approximately 3:30 p.m. to 5:45 p.m. to determine traffic related ambient noise levels around the perimeter and within the NCP (refer to Figure 4.8-1 and Table 4.8-1). Each of the short-term sites was measured for 15 minutes while vehicle volumes were classified. The hourly counts are then normalized from the data generated.

Generally speaking, the loudest traffic noise levels are associated with sites monitored adjacent to West Tefft Street and Pomeroy Road, which are the primary noise sources in the general area. There are a variety of commercial and retail areas to the north and east of the NCP (including US 101), which are additional noise generators in the immediate area. Most other areas surrounding the NCP are residential and do not have significant traffic volumes or excessive traffic noise levels.

Table 4.8-1. Short-term Transportation Noise Measurements

Location*	Period of Measurement	Noise Levels (dBA)	Traffic Volume	
		Leq	Number	Vehicles/Hour
1	3:30 – 4:45 pm	63.8	228	912
2	4:00 – 4:15 pm	64.5	240	960
3	4:30 – 4:45 pm	61.0	150	600
4	5:00 – 5:15 pm	57.1	118	472
5	5:15 – 5:30 pm	55.6	70	280
6	5:30 – 5:45 pm	63.0	195	780

*Refer to Figure 4.8-1

Figure 4.8-1. Traffic Noise Measurement Locations

Short and Long-term Ambient Noise

Within the park, noise is generated by park users, including voices, portable radios and music players, use of courts and ball fields, and internal traffic. Short-term noise measurements were conducted on March 16, 2010, at 16 locations within NCP (refer to Figure 4.8-2). At the time of the field study, documented noise sources included traffic, aircraft, human voices, and use of the tennis courts. Table 4.8-2 presents the results of the short-term monitoring. The average noise level ranged from approximately 36 to 51 Leq (average sound level).

Table 4.8-2. Short-term Noise Measurements

Site	Time	Elev (m)	LeqA*	Lmax*	Lmin*	Primary Noise Sources
ST1	2:00 p.m.	115	41.2	44	39.4	Distant traffic, wind, birds, human voices
ST2	2:10 p.m.	109	39.7	50	36.3	Distant traffic, wind, birds, human voices
ST3	2:20 p.m.	109	36.8	49.4	32.5	Distant traffic, wind, birds, human voices
ST4	2:35 p.m.	114	46.8	59	30.2	Traffic
ST5	3:00 p.m.	113	46.7	69.9	33.5	One aircraft, traffic
ST6	3:20 p.m.	115	44.9	54.7	34.2	Traffic
ST7	3:30 p.m.	114	43.9	65.5	34.9	One aircraft, traffic
ST8	3:37 p.m.	109	41.5	52.5	34.3	Gentle wind - sheltered area
ST9	3:45 p.m.	118	45.4	59.9	35.8	One aircraft
ST10	3:52 p.m.	119	53	61.4	40.6	Traffic
ST11	3:59 p.m.	119	51.1	63.8	45.6	Traffic - no baseball on large diamond
ST12	4:05 p.m.	109	50.3	61.5	42.6	Traffic, kids playing, two tennis games
ST13	4:08 p.m.	101	45.9	63.4	37.7	Traffic, kids playing, two tennis games, wind
ST14	4:3: p.m.	111	41.9	56.7	34.4	Wind, traffic
ST15	4:18 p.m.	118	40.7	51.4	34.7	Wind, distant traffic
ST16	4:25 p.m.	110	41.7	47.2	34.7	Wind, distant traffic

*All measurements A-weighted scale

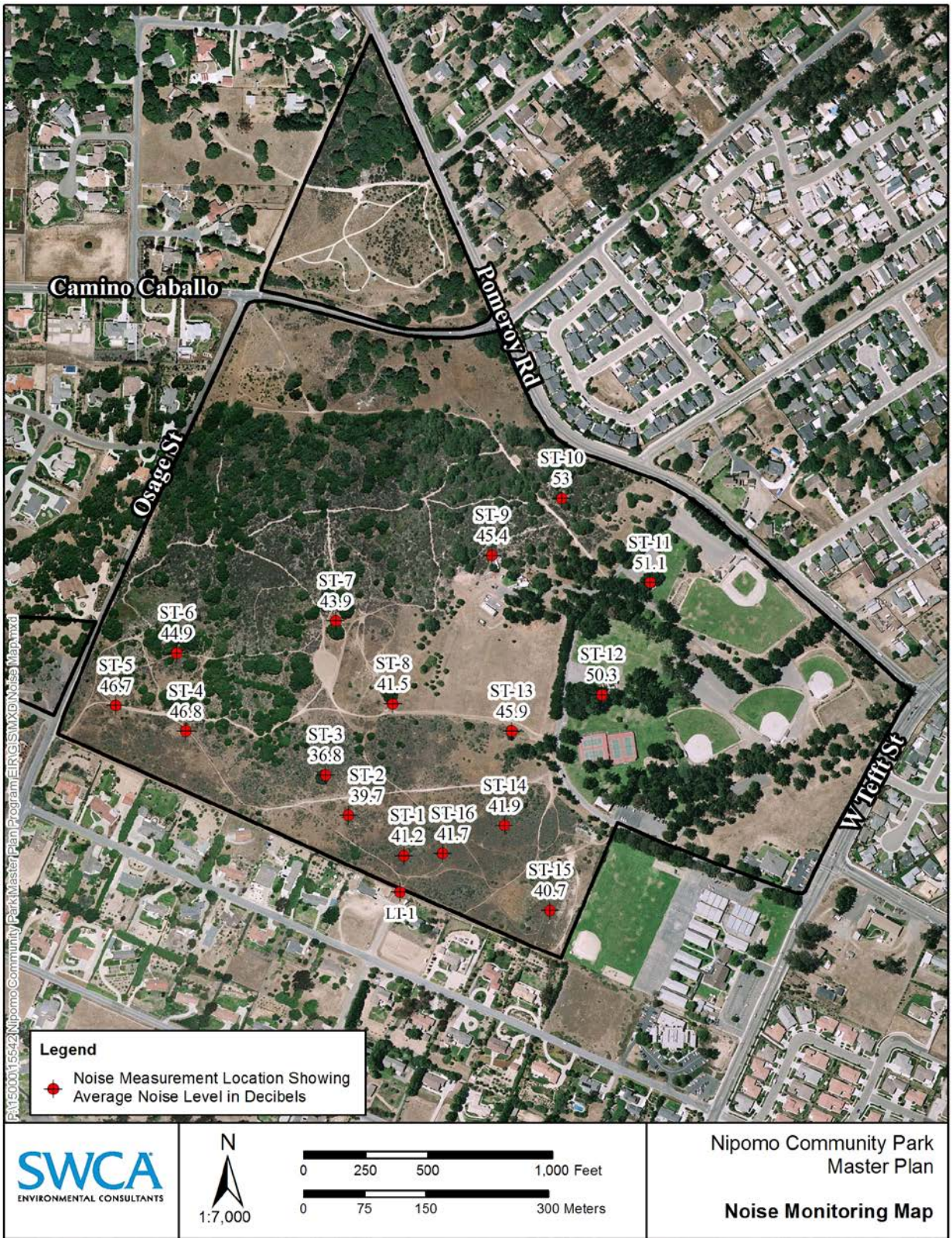
Long-term noise measurements were conducted in one location within the NCP on March 14 and 15, 2010 (refer to Figure 4.8-2). Noise levels were averaged over hourly increments, and peak hour, daytime, and nighttime averages are presented in Table 4.8-3.

Table 4.8-3. Long-term Noise Measurements

Time	March 14, 2010 dBA		March 15, 2010 dBA	
	a.m.	p.m.	a.m.	p.m.
12:00	40.9	52.7	37.5	40.0
1:00	39.1	64.9	37.4	63.5
2:00	37.4	53.6	36.7	45.7
3:00	36.6	46.7	42.1	49.0
4:00	37.4	55.8	46.0	64.4
5:00	40.8	51.7	52.4	61.5
6:00	43.6	44.4	52.9	46.3
7:00	43.9	46.4	50.3	51.3
8:00	47.0	45.5	47.2	45.1
9:00	50.3	44.0	41.6	42.9
10:00	47.8	41.8	40.1	64.9
11:00	47.5	38.7	45.9	61.4
Leq Measurements				
Morning Peak hour (7:00 a.m.-10:00 a.m.)	48		48	
Evening Peak Hour (4:00 p.m.-8:00 p.m.)		52		60
Daytime (7:00 a.m.-10:00p.m.)	55		57	
Nighttime (10:00 p.m.-7:00 a.m.)*		40		57

*not penalized.

Figure 4.8-2. Long-term Noise Monitoring Map



4.8.2 Regulatory Setting

Noise is regulated at the federal, state, and local levels through regulations, policies, and/or local ordinances. Local policies are commonly adaptations of federal and state guidelines based on prevailing local conditions or special requirements.

4.8.2.1 Federal Policies and Regulations

Congressional: The Federal Noise Control Act of 1972

This law states that controlling noise protects the health and welfare of the Nation's population. It recognizes that transportation vehicles, machinery, and appliances are noise sources, and responsibility for controlling these noise sources rests with state and local governments. Moreover, the federal government will coordinate and adopt standards for inter-state commerce projects (e.g., airports).

Federal Highway Administration: 23 CFR 772

Federal code provides uniform procedures to evaluate highway noise and implement abatement measures. Interpretation of what constitutes 'substantial noise' is left to the states.

4.8.2.2 State and Local Policies and Regulations

California Government Code

The State General Plan Guidelines requires that local governments identify major noise sources and areas containing noise-sensitive land uses. Noise must be quantified by preparing generalized noise exposure contours for current and projected conditions. Contours may be prepared in terms of either the CNEL or Ldn.

4.8.2.3 County of San Luis Obispo Noise Element

The Noise Element of the County General Plan provides a policy framework for addressing potential and existing noise impacts during the planning process. Its purpose is to minimize future and existing noise conflicts. Among the most significant polices found in the Noise Element are numerical noise standards that limit noise exposure within noise-sensitive land uses resulting from transportation sources. An increase in the ambient stationary noise level surrounding the project site would result from the addition of the new facility, which could potentially result in a stationary noise impact that would exceed the thresholds defined in the County Noise Element. Specific thresholds are discussed in the section below.

4.8.3 Thresholds of Significance

In accordance with Appendix G of the CEQA *Guidelines*, the County thresholds state that noise impacts would be considered significant if the proposed project would:

1. Expose people to noise levels that exceed the County Noise Element thresholds (see Tables 4.8-4, 4.8-5, and 4.8-6 below);

2. Generate increases in the ambient noise levels for adjoining areas; or

3. Expose people to severe noise or vibration.

Transportation Noise Sources

Policy 3.3.2 of the Noise Element states that "new development of noise-sensitive land uses shall not be permitted in areas exposed to existing or projected future levels of noise from transportation noise sources which exceed 60 dB Ldn or CNEL for outdoor activity areas and 45 Ldn or CNEL for interior spaces unless the project includes effective mitigation measures to reduce noise in outdoor activity areas and interior spaces to or below the levels for the given land use" (refer to Tables 4.8-4 and 4.8-5).

Policy 3.3.3 of the Noise Element states that "noise created by new transportation noise sources, including roadway improvement project, shall be mitigated so as not to exceed the levels specified in [Table 4.8-4] within the outdoor activity areas and interior spaces of existing noise sensitive land uses."

Table 4.8-4. Maximum Allowable Noise Exposure Transportation Noise Sources

Land Use	Outdoor Activity Areas[1] Ldn/CNEL, dB	Interior Spaces	
		Ldn/CNEL, dB	L_{EQ}, dB[2]
Residential (Except Temporary)	60[3]	45	–
Bed and Breakfast, Hotels, Motels	60[3]	45	–
Hospitals, Nursing and Personal Care	60[3]	45	–
Public Assembly and Entertainment	–	–	35
Offices	60[3]	–	45
Churches, Meeting Halls	–	–	45
Schools, Libraries, Museums	–	–	45
Outdoor Sports and Recreation	70	–	–

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

[2] As determined for a typical worst-case hour during periods of use.

[3] For other than residential uses, where an outdoor activity area is not proposed, the standard shall not apply. Where it is not possible to reduce noise in outdoor activity areas to 60 dB Ldn/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB Ldn/CNEL may be allowed.

Source: Noise Element, County of San Luis Obispo, General Plan

Table 4.8-5. Land Use Compatibility for New Development near Transportation Sources

Land Use	Exterior Noise Exposure Threshold Ldn or CNEL, dB					
	55	60	65	70	75	80
Residential, Public Assembly, Entertainment						
Bed and Breakfast, Hotel, Motel						
Schools, Libraries, Museums, Hospitals						
Outdoor Sports and Recreation						
Offices						

	Acceptable, no mitigation required
	Conditionally Acceptable, mitigation required
	Unacceptable, mitigation may not be feasible

Source: Noise Element, County of San Luis Obispo, General Plan

Stationary Noise Sources

Policy 3.3.4 of the Noise Element states that "new development of noise-sensitive land uses shall not be permitted where the noise level due to existing stationary noise sources would exceed the noise level standards included in the Noise Element unless effective noise mitigation measures have been incorporated into the design of the development to reduce noise exposure to or below the levels specified." The hourly daytime stationary noise standard for a residential development is 50 dBA, while the maximum is 70 dBA. The hourly nighttime stationary noise standard for a residential development is 45 dBA, while the maximum is 60 dBA (refer to Table 4.8-6).

Policy 3.3.5 of the Noise Element states that "new proposed stationary noise sources or existing stationary noise sources that undergo modifications that may increase noise levels shall be mitigated as follows and shall be the responsibility of the developer of the stationary noise source. Policy 3.3.5 can be found in its entirety on page 3-3 of the County Noise Element, applicable standards from Policy 3.3.5 are provided below as follows:

b. Noise levels shall be reduced to or below the noise level standards in [Table 4.8-6] where the stationary noise source will expose an existing noise-sensitive land use (which is listed in the Land Use Element as an allowable use within its existing land use category) to noise levels that exceed the standards in [Table 4.8-6].

c. Noise levels shall be reduced to or below the noise level standards in [Table 4.8-6] where the stationary noise source will expose vacant land in the Agriculture, Rural Lands, Residential Rural, Residential Suburban, Residential Single Family, Residential Multi-Family, Recreation, Office and Professional, and Commercial Retail land use categories to noise levels that exceed the standards in [Table 4.8-6] (note: This policy may be waived when the Director of Planning and Building determines that such vacant land is not likely to be developed with a noise sensitive land-use).

Table 4.8-6. Maximum Allowable Noise Exposure-Stationary Noise Sources[1]

Level	Daytime (7 am – 9 pm)	Nighttime (9 pm – 7 am)
Hourly Leq, dbA[2]	50	45
Maximum Level, dbA[2]	70	60
Maximum Level, Impulsive Noise, dbA[3]	65	60

[1] As determined at the property line of the of the receiving land use.

[2] Sound level measurements shall be made with slow meter response.

[3] Sound level measurements shall be made with fast meter response.

Source: Noise Element, County of San Luis Obispo, General Plan

4.8.4 Impact Assessment and Methodology

The noise investigation was conducted using a Bruel and Kjaer (B & K) Model 2231 precision integrating sound level meter. The meter internally computes a new Leq from the sound pressure level and updates the digital display once each second. The meter was calibrated externally at the beginning of each period of measurement using a B & K Model 4230 acoustic calibrator. In combination, these instruments yield sound level measurements accurate to within 0.1 dB. All models fulfill standards of relevant sections of IEC (International Electrotechnical Commission) 651 and ANSI (American National Standard) S1.4.1971 for Type 1 (precision) integrating sound level meters. All noise readings were conducted in the A-weighted decibel range. The A-weighting correlates well with how humans hear sounds, de-emphasizing very high and low frequencies.

4.8.4.1 Transportation Noise Assessment

The procedure for assessing vehicular traffic noise impacts included measuring the peak-hour noise levels at select locations around the NCP while counting the traffic generating the noise during the period of measurement. The measured peak-hour noise levels are then adjusted logarithmically to determine the “future” noise levels by using the estimated traffic volume predictions for various road segments. Logarithms are used because they produce linear correlations, which can then be used to more readily evaluate future noise levels. Generally speaking, doubling the traffic volume will produce a 3-dB increase in the ambient noise environment.

From a practical standpoint, the peak-hour Leq noise level is essentially equivalent to the Ldn noise level (generally yielding results within 1-2 dBA of each other). The Ldn is the standard measure used for evaluating community noise impacts in the County Noise Element. For most

situations involving vehicular traffic noise, the peak-hour Leq can be used as the Ldn level in situations where there is little nighttime traffic or significant heavy truck volumes. Peak hour Leq was the methodology used in evaluation of traffic noise impacts for the proposed project. Noise measurements were taken for 15-minute durations at each location. Further analysis is based on the Leq.

General guidelines for determining community noise impacts typically include:

- A 3-dB change is barely perceptible, and is the minimum most people will notice in most environments.
- A 5-dB change is a readily perceptible increase or decrease in sound level.
- A 10-dB increase in sound level is perceived as an approximate doubling of the loudness of the sound and represents a substantial change in loudness.

4.8.4.2 Stationary Noise Assessment

The procedure used to assess noise resulting from this project focused on measuring noise levels at similar events and facilities such as soccer games at multi-use sports fields and skate parks to estimate noise levels that could be expected by these types of uses at the NCP. Ambient pre-project noise levels were measured at select locations to determine if recreational development would result in a stationary noise impact. The expected noise levels were compared to published threshold values in the County's Noise Element to determine if a significant change in the noise environment would occur and if an exceedance of the threshold value would be expected. The one-hour Leq threshold outlined in the Noise Element is 50 dBA at the property line of the nearest sensitive receptor location, with a maximum noise level of 70 dBA allowed for short periods of time so long as the hourly average is maintained at 50 dBA Leq.

4.8.5 Project-specific Impacts and Mitigation Measures

4.8.5.1 Exposure to Noise Levels Exceeding County Thresholds

Transportation-related Noise Generated by NCP Uses

To determine the traffic noise level increase due to project generated trips, the *Traffic Impact Analysis* (March 2010) was used in order to determine build-out traffic conditions, and build-out conditions including the uses proposed in the Master Plan. Expected transportation-related noise increases resulting from implementation of the NCP Master Plan are presented in Table 4.8-7. All estimated noise increases have been rounded to one decimal place.

Table 4.8-7. Estimated Traffic Noise Level Increase (Existing Plus Project)

Location[1]	Existing ADT	Existing Plus Project ADT	ADT Increase (%)	Estimated Noise Level Increase (dBA) Leq
1 – Pomeroy / Juniper	8,500	8,702	2.4	0.1
2 – West Tefft / Pomeroy	13,100	13,410	2.4	0.1
3 – Orchard	5,900	6,114	3.6	0.1
4 – Mesa	2,900	2,922	0.8	0.0
5 – Osage	1,200	1,222	1.8	0.1
6 – Pomeroy/Camino	6,500	6,664	2.5	0.1

[1] Refer to Figure 4.8-1 for noise measurement locations.

As seen in Table 4.8-7, due to the relatively low number of expected additional trips (compared to existing conditions), estimated noise level increases due to project generated traffic are expected to be negligible (0.0 to 0.1-dB increase). Under controlled conditions in an acoustics laboratory, the trained healthy human ear is able to discern changes in sound levels of 1 dBA when exposed to steady single-frequency (pure tone) signals in the mid-frequency range. Outside such controlled conditions, the trained ear can detect changes of 2 dBA in normal environmental noise. It is widely accepted that the average healthy ear, however, can barely perceive noise level changes of 3 dBA (Caltrans Technical Noise Supplement 2009). Since the expected noise level increase would be less than 1 dBA, traffic noise impacts are not expected to occur due to traffic generated by proposed NCP uses.

Based on the traffic and noise analysis summarize above, potential noise impacts related to transportation noise generated by the project would be *less than significant (Class III)* and no mitigation is necessary.

Transportation-related Noise Affecting NCP Uses

The NCP is considered a noise sensitive use, including the library and outdoor recreation areas. As shown in Table 4.8-1, Short-term Transportation Noise Measurements, the existing average noise measurements at the perimeter of the NCP ranges from 55.6 dB on Osage Road to 64.5 dB near West Tefft Street and Pomeroy Road.

Based on the Traffic Impact Analysis, additional trips would be generated on adjacent roadways under build-out conditions, with the exception of Pomeroy/Juniper (modeling notes a decrease in trips at this location under buildout conditions). As seen in Table 4.8-8, this would result in a minimal increase in noise levels in the area. The location with the highest percentage of average daily trip increase is near West Tefft Street and Pomeroy Road. Upon community build-out, traffic noise at this location would increase by 1.9 dB, resulting in an approximately 66.5-dB noise level (including the uses proposed at NCP).

Table 4.8-8. Estimated Traffic Noise Level Increase (Existing Plus Build-out)

Location[1]	Existing ADT	Baseline Build-out ADT	ADT Increase (%)	Estimated Noise Level Increase (dBA) Leq	Estimated Noise Level (without project)	Estimated Noise Level (Build-out Plus Project)
1 – Pomeroy/Juniper	8,500	8,400	0	0.1	63.8	63.9
2 – West Tefft/Pomeroy	13,100	19,200	47	1.9	66.4	66.5
5 – Osage	1,200	1,300	8.3	0.3	55.9	56
6 – Pomeroy/Camino	6,500	6,700	3.1	0.12	63.1	63.1

[1] Refer to Figure 4.8-1 for noise measurement locations.

The Nipomo Library is located approximately 110 feet from the West Tefft Street roadway. The topography between the library and the road is nearly level and hardscaped (existing parking area). Generally, for this use, noise levels ranging from 60 to 70 dB is considered conditionally acceptable. The library faces West Tefft Street, and there are no outdoor use areas (aside from the parking area) between the building and the roadway. The proposed expansion would be located on the western side of the library, opposite the roadway. Standard building practices would attenuate noise by 15 dB, and the existing library building would further attenuate noise. The threshold of significance of interior noise is 45 dB; therefore, noise mitigation is recommended for both the existing building and southern and northern aspects of the proposed expansion, including replacement of windows.

The acceptable noise level for outdoor recreation ranges from 50 to 70 dB; therefore, all other NCP uses would not be adversely affected by transportation-related noise.

Upon implementation of noise mitigation, this impact would be *less than significant (Class II)*.

N Impact 1 **The Nipomo Library and proposed expansion of the library would be adversely affected by transportation-related noise exceeding the County Noise Element interior noise threshold of 45 decibels.**

N/mm-1 *Prior to expansion of the Nipomo Library, the proposed plans shall include the following or similar acoustical design measures to attenuate interior noise by 7 decibels, resulting in a measured interior noise level of 45 decibels or less:*

a. Air conditioning or a mechanical ventilation system.

b. Windows and sliding doors mounted in low air infiltration rate frames (0.5 cfm or less, per American National Standards Institute (ANSI) specifications).

c. Solid core exterior doors with perimeter weather stripping and threshold seals.

d. Exterior walls consist of stucco or brick veneer. Wood siding with a 0.5-inch minimum thickness fiberboard (soundboard) underlayer may also be used.

e. Use of dual paned or soundproof glass for windows facing West Tefft Street (or similar measure).

f. Roof or attic vents facing the south, north, and east shall be baffled.

Residual Impacts

Although transportation-related noise would increase over time, incorporation of structural and design features into proposed plans would maintain acceptable noise levels within the library building. Application of current and potentially future technologies and advances in noise attenuation would reduce potential noise impacts to a *less than significant level* (Class II).

Stationary Noise

The primary sources of stationary noise would be use of the multi-use sports fields (soccer) and the skate park. To help assess expected stationary noise levels resulting from development due to the project, similar noise sources and events were monitored. Noise was measured on November 19, 2010, at the Damon Garcia Sports Complex (San Luis Obispo, California), during a youth soccer tournament, and at the Templeton Skate Park (Templeton, California) on November 21, 2010 (refers to Appendix F).

The measurement set conducted at Damon Garcia consisted of a multi-game youth soccer tournament. Three games were being played at the same time; measurement Location 3 was the combination of all three games being played at once. There was no amplified sound at any of the games; most of the noise measured from the games resulted from the crowd cheering during exciting plays. Very little noise is actually generated by participants or action on the field. Table 4.8-9 presents the results of the monitoring conducted during the soccer event.

Table 4.8-9. Noise Measurements Damon Garcia Sports Complex

Location	Distance from Center of Field (feet)	Noise Level (dBA)	
		Leq	Max
1	25	66.5	76.6
2	50	59.1	75.1
3	100	54.0	73.1
4	10	66.4	79.1

The skaters primarily generate the skate park noise when they are actively skating within the confines of the concrete at the facility. The noise environment around the park is subject to multiple impulsive types of episodes when the skaters fall off their boards and the boards bang around on the concrete. When the skaters are on their boards and skating through the facility,

the sound of the skate wheels and trucks are quite noticeable in close proximity to the park. Table 4.8-10 presents the results of the monitoring conducted at the skate park.

Table 4.8-10. Noise Measurements Templeton Skate Park

Location	Distance from Center of Park (feet)	Noise Level (dBA)	
		Leq	Max
1	25	73.5	82.9
2	50	68.4	79.6
3	100	62.2	74.4

The project area is a mix of hardscaped surfaces, undeveloped fields, commercial/retail uses, and residential development. The topography surrounding the NCP is characterized as "hard," which means that it would tend to be more reflective than absorptive of sound pressure waves. Hard sites generally do not have absorptive ground surfaces such as soft dirt, grass, or bushes and trees to attenuate noise levels.

Existing vegetation at the NCP consists of annual grassland, scattered herbaceous vegetation, and small clumps of brush and oak woodland habitat. The existing project site would be characterized as a "soft site," meaning that excess attenuation of sound pressure levels would be observed due to the ground cover and vegetation. After project development, more of the site would be hardscaped, decreasing natural noise attenuation capabilities. When added to the natural geometric spreading of sound pressure waves, this would result in an overall noise drop-off rate of approximately 6.0 dBA/DD for a stationary source.

Assuming a conservative drop-off rate of 6 dBA/DD, a safe-distance offset could be estimated in order to determine the distance between uses to comply with the noise thresholds identified in the Noise Element. For a hypothetical non-amplified multi-game soccer event, the nearest field would need to be no closer than 200 feet from the sensitive receptor (i.e., residence property line) to meet County exterior noise thresholds. The edge of the sports fields would be 200 feet from the property line of adjacent residences; therefore, use of the fields would not exceed daytime noise exterior thresholds (50 dBA).

For a skate park, the active skating area should be no closer than 400 feet from the nearest receptor location to meet County exterior noise thresholds. This evaluation is based on average conditions, with no loud music playing, and assumes only the sounds from voices and skateboards. As proposed, the skate park would be located within 200 feet of the existing library and proposed library expansion, and approximately 380 feet from Dana Elementary School. A residential development is located approximately 120 to the west across West Tefft Street.

Based on traffic noise measurements, the existing transportation noise level is 64.5 dBA, and is expected to increase by 2 dB under build-out conditions (including the project). At a distance of 100 feet, the noise generated by the skate park would be 62.2 dB. The combined noise level is anticipated to increase by 1 dB, for a noise level of approximately 67.5 dB. As noted above, transportation noise mitigation is recommended for the existing library and

proposed expansion. Due to existing and expected traffic noise (regardless of the project), noise levels at the property line of residences across West Tefft Street exceed identified noise thresholds. Use of the skate park would add 1 dB to the existing (and future estimated) ambient noise level.

Noting that traffic levels fluctuate during the day, there would be periods when noise generated by the skate park exceeds noise generated by traffic on West Tefft Street, which would adversely affect residential land uses. Mitigation is recommended, including measures such as incorporating an in-ground design and a noise barrier or berm between the skate park and noise sensitive uses. Construction of a barrier within 25 feet of the edge of the skate park will reduce the noise level by approximately 5 to 10 dB; which would result in a noise level of approximately 63 to 68 dB at the barrier, and approximately 52 to 57 dB at a distance of 100 feet from the source. Based on this analysis, the project would not generate noise levels significantly exceeding ambient noise levels.

The park and associated uses are closed between the hours of 10:00 pm and 6:00 am. In addition, a park ranger will be present onsite during daytime hours and a park host will be present onsite during nighttime hours. In the event of excessive noise, the public has the opportunity to contact the ranger, park host, and/or County Parks. Pursuant to County policy, the County would review the complaints and implement remediation. Potential remediation options include implementation of a park monitor program, including the presence of volunteers or paid staff during key operations of the skate park and pool facilities to restrict playing of loud music and use of loud voices. A fence and locked gate, or similar measures, around the skate park and pool will be constructed to prevent nighttime use.

Additional sources of noise within NCP include the use of maintenance equipment, such as turf mowers, and amplified noise (i.e., loud speakers, microphones, and music). Existing policies in place to control and monitor amplified noise would apply to future uses within the park. The County reserves the right to revoke amplified sound permits at any time if the noise level is excessive. In addition, noise generated by loudspeakers and microphones shall be directed towards the interior of the park, away from surrounding residential areas.

Based on implementation of identified mitigation measures, the noise impact would be *less than significant* (Class II).

N Impact 2 **Use of the proposed skate park and other activities would generate stationary noise levels exceeding County Noise Element thresholds of significant for noise-sensitive land uses.**

N/mm-2 *Prior to construction of the skate park, the design plans shall incorporate the following noise reduction measures:*

a. In-ground concrete design to minimize noise generation during use.

b. Earthen berm between the skate park and the noise sensitive land uses.

c. Fence and lock-able gate surrounding the skate park facility.

N/mm-3 *During operation of the park, events and activities shall only be permitted during operating hours (6:00 a.m. to 10:00 p.m.). Mowing, use of equipment, and other maintenance activities shall be limited to daytime*

hours, unless an emergency situation exists. Noise generated by loudspeakers and microphones shall be directed towards the interior of the park, away from surrounding residential areas.

N/mm-4 *In the event substantiated noise complaints are received by the County, and the presence of the onsite ranger and/or park host is not sufficient to address received complaints, County Parks shall develop a park monitor program. The program may include volunteers or paid staff and shall provide for presence during key operations of the skate park to restrict playing of loud music and the use of loud voices. The monitor may be present during operating hours in the summer, and on weekends and afternoons during the winter. To prevent use of the skate park and pool during nighttime hours when the park is closed (10:00 p.m. to 6:00 a.m.), County Parks shall install a fence and locked gate around the skate park or community pool.*

Residual Impact

Operation of new uses within NCP would increase the noise levels both within and surrounding the park. Implementation of recommended mitigation would reduce anticipated noise levels to a level below identified County thresholds; however, persons within and adjacent to NCP may experience noise levels above current levels during higher levels of use (i.e. sports field tournaments, summertime use of skate park). In the event excessive noise affects adjacent land uses, and complaints are received by the County, remediation may include a monitoring program to further address noise issues. Implementation of these measures would reduce impacts associated with noise generated by the proposed uses to a *less than significant level* (Class II).

4.8.5.2 Increase in Ambient Noise Levels

As noted above, implementation of the project would result in a maximum 2-dB increase in the ambient noise level, due to transportation-related noise and activities within recreational areas, including the sports fields and skate park.

Ambient noise levels in the vicinity of the proposed sports fields ranges from approximately 40 to 64 dB throughout the day (7:00 am to 7:00 pm). During use of the sports fields, the ambient noise level within 100 feet of the fields would be 54 dB; the noise level is estimated to attenuate to 49 dB at 200 feet from the fields, and to 44 dB at 400 feet from the fields. The ridge of oak woodland is approximately 400 to 500 feet from the edge of the proposed fields. Based on ambient noise measurements, the existing ambient noise level ranges from 43 to 46 dB throughout the oak woodland area. While the ambient noise level would increase in this immediate area, other open space areas within the park and offsite residential areas would not experience a substantial increase in ambient noise levels. Therefore, this impact is considered *less than significant (Class III)*.

4.8.5.3 Exposure to Excessive Noise or Vibration

Construction of the project would include the use of heavy equipment within NCP and on adjacent roadways during construction of road improvements. All construction activity would occur during daytime hours, and no activities are anticipated to result in excessive ground borne vibrations or noise levels.

4.8.6 Cumulative Impacts

There are no proposed or recently approved projects in the immediate area that would generate a significant level of stationary noise (including the proposed Master Plan); therefore, cumulative noise impacts related to stationary noise would be less than significant. To determine the cumulative traffic noise level increase, the *Traffic Impact Analysis* (March 2010) was used in order to determine build-out traffic conditions. Expected cumulative transportation-related noise increases are presented in Table 4.8-11. All estimated noise increases have been rounded to one decimal place.

Due to the relatively low number of expected additional trips (compared to build-out conditions) estimated noise level increases due to project generated traffic are expected to be negligible (0.0 to 0.1-dB increase). Since the expected noise level increase would be less than 1 dBA, traffic noise impacts are not expected to occur due to traffic generated by traffic buildout and proposed NCP uses.

Table 4.8-11. Estimated Traffic Noise Level Increase (Build-out Plus Project)

Location[1]	Baseline Build-out ADT	Build-out Plus Project ADT	ADT Increase (%)	Estimated Noise Level Increase (dBA) Leq
1 – Pomeroy / Juniper	8,400	8,602	2.4	0.1
2 – West Tefft / Pomeroy	19,200	19,510	1.6	0.1
3 – Orchard	9,350	9,564	2.3	0.1
4 – Mesa	3,100	3,122	0.7	0.0
5 – Osage	1,300	1,322	1.7	0.1
6 – Pomeroy/Camino	6,700	6,764	1.0	0.0

[1] Refer to Figure 4.8-1 for noise measurement locations

Based on the traffic and noise analysis summarize above, potential cumulative noise impacts related to transportation noise generated by the project would be *less than significant* (Class III) and no mitigation is necessary.