## 13.1 Introduction

This chapter describes the existing noise setting in the vicinity of the Chiquita Canyon Landfill (CCL), the regulatory setting used as the basis for developing the applicable standards of significance, and the methodology used for determining the potential noise impacts due to implementation of the CCL Master Plan Revision (Proposed Project).

The purpose of this noise analysis is to evaluate the existing noise setting at the CCL property boundary near existing land uses adjoining the landfill and other noise-sensitive land uses in the vicinity of CCL, assess potential operation and construction noise impacts due to the Proposed Project, and identify the level of noise mitigation, if required.

## 13.2 Methodology

A site visit and detailed noise measurements were conducted to document existing sources of noise and background noise levels at neighboring lands in the vicinity of CCL (Figure 13-1). The noise level measurements included both long-term (24-hour) and short-term measurements.

To assess potential noise impacts resulting from the Proposed Project, construction and operation noise levels were evaluated.

### 13.2.1 Fundamentals of Acoustics

Acoustics is the study of sound, and noise is defined as unwanted sound. Airborne sound is a rapid fluctuation or oscillation of air pressure above and below atmospheric pressure, creating a sound wave. Acoustical terms used in this section are defined in Table 13-1.

Term	Definition				
Ambient sound level	The composite of sound from all sources near and far. The normal or existing level of environmental noise or sound at a given location. The ambient level is typically defined by the A-weighted equivalent sound pressure level (L <sub>eq</sub> ).				
Background sound level	The underlying ever-present lower level sound that remains in the absence of intrusive or intermittent sounds. Distant sources, such as traffic, typically make up the background. The background level is generally defined by the $L_{90}$ percentile noise level ( $L_n$ ).				
Intrusive	Sound that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, time of occurrence, tonal content, the prevailing ambient noise level, and the sensitivity of the receiver. The intrusive level is generally defined by the $L_{10}$ L <sub>n</sub> .				
Decibel (dB)	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter.				
A-weighted sound level (dBA)	The sound level in dBs as measured on a sound level meter using the A-weighted filter network. The A-weighted filter deemphasizes the very low- and very high-frequency components of the sound in a manner similar to the frequency response of the human ear and generally correlates well with subjective reactions to noise. All sound levels in this report are A-weighted.				
Equivalent sound level (L <sub>eq</sub> )	The average dBA, on an equal energy basis, during the measurement period.				

TABLE 13-1 Definitions of Acoustical Terms

Term	$\label{eq:Definition} \end{tabular}$ The L_dn is a 24-hour average L_eq where 10 dBA is added to nighttime levels between 10:00 p.m. and 7:00 a.m. For a continuous source that emits the same noise level over a 24-hour period, the L_dn will be 6.4 dBs greater than the L_eq. \\			
Day-night sound level (L <sub>dn</sub> )				
Percentile sound level (L <sub>n</sub> )	The sound level exceeded during n percent of the measurement period, where n is a number between 0 and 100 (for example, $L_{90}$ ).			

#### TABLE 13-1 Definitions of Acoustical Terms

Source: Beranek and Vér, 1992.

The most common metric for sound measurement is overall dBA, which has been adopted by regulatory bodies worldwide. The network measures sound in a similar fashion to the way in which a person perceives or hears sound. There is consensus that A-weighting is appropriate for estimation of the hazard of noise-induced hearing loss. With respect to other effects, such as annoyance, A-weighting is acceptable if there is largely middle and high frequency noise present, but if the noise is unusually high at low frequencies, or contains prominent low frequency tones, the A-weighting may not give a valid measure.

Typically A-weighted sound levels are measured or presented as equivalent sound pressure level ( $L_{eq}$ ), which is defined as the average noise level on an equal energy basis for a stated period of time, and is commonly used to measure steady-state sound or noise that is usually dominant. Statistical methods are used to capture the dynamics of a changing acoustical environment. Statistical measurements are typically denoted by  $L_{xx}$ , where xx represents the percentile of time the sound level is exceeded. The  $L_{90}$  is a measurement that represents the noise level that is exceeded during 90 percent of the measurement period. Similarly, the  $L_{10}$  represents the noise level exceeded for ten percent of the measurement period.

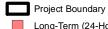
The effects of noise on people can be categorized in three ways:

- Subjective effects of annoyance, nuisance, dissatisfaction
- Interference with activities such as speech, sleep, learning
- Physiological effects such as startling and hearing loss

In most cases, environmental noise may produce effects in the first two categories only. However, workers in industrial plants may experience noise effects in the last category. No completely satisfactory way exists to measure the subjective effects of noise, or to measure the corresponding reactions of annoyance and dissatisfaction. This lack of a common standard is primarily due to the wide variation in individual thresholds of annoyance and habituation to noise. Thus, an important way of determining a person's subjective reaction to a new noise is by comparing it with the existing or "ambient" environment to which that person has adapted. In general, the more the level or the tonal (frequency) variations of a noise exceed the previously existing ambient noise level or tonal quality, the less acceptable the new noise will be, as judged by the exposed individual.



#### LEGEND



- Long-Term (24-Hour) Monitoring Site
- Short-Term Monitoring Site

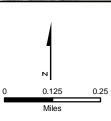


FIGURE 13-1 Noise Monitoring Locations *Chiquita Canyon Landfill* Master Plan Revision



Table 13-2 shows the relative A-weighted levels of common sounds measured in the environment and in industry for various sound levels.

#### **TABLE 13-2**

Typical Sound Levels Measured in the Environment and Industry
---

Noise Source at a Given Distance	dBA in dB	Qualitative Description
Carrier deck jet operation	140	
	130	Pain threshold
Jet takeoff (200 feet)	120	
Automobile horn (3 feet)	110	Maximum vocal effort
Jet takeoff (2,000 feet) Shout (0.5 foot)	100	
New York City subway station	90	Very annoying
Heavy truck (50 feet)		Hearing damage (8-hour, continuous exposure)
Pneumatic drill (50 feet)	80	Annoying
Freight train (50 feet) Freeway traffic (50 feet)	70 to 80	
	70	Intrusive
		Telephone use difficult
Air conditioning unit (20 feet)	60	
Light automobile traffic (50 feet)	50	Quiet
Living room Bedroom	40	
Library Soft whisper (5 feet)	30	Very quiet
Broadcasting studio	20	Recording studio
	10	Just audible

Notes:

Source: Adapted from Table E, New York Department of Environmental Conservation, 2001

dB = decibel

dBA = A-weighted sound level

As sound travels from the source to the receiver (propagates through the atmosphere), the sound level is reduced by a number of factors including:

- Geometric spreading (distance attenuation)
- Atmospheric absorption
- Ground absorption
- Shielding or barrier effects from barriers or terrain

Typically the greatest reductions are the result of geometric spreading or distance losses. Sounds from a localized source (approximating a "point" source) generally decreases at a rate of 6 dBA for each doubling of the distance (6 dBA/DD) where the starting distance is in the acoustical far field. (The far field generally starts beyond the largest dimension of the source. For most typical construction equipment, a far field reference distance of 50 feet is often used).

Changes in sound levels from similar broadband sources (i.e., traffic with traffic) are generally perceived as follows:

- A 3-dBA change is barely perceptible.
- A 5-dBA change is readily perceptible.
- A 10-dBA change is perceived as a doubling or halving of noise.

### 13.2.2 Construction Noise

There are four general construction activities associated with the Proposed Project: disposal module excavation and construction; entrance construction; entrance facility construction; and landfill closure. Construction of the new entrance is anticipated to follow the project approval (mid-2015) and occur over a period of approximately 9 months. Disposal module excavation and construction are anticipated to occur over a period of 6 to 9 months every 18 months to 5 years during the first 20 years of the Proposed Project.

Construction equipment used for the construction activities will be typical earthmoving equipment (consistent with equipment used for landfill operations) and is anticipated to include scrapers, bulldozers, compactors, backhoe/loaders, graders, and trucks. The specific types and number of equipment operating at any particular location will be dependent on the type and size of the construction activities. Table 13-3 presents the sound levels for typical construction equipment.

		Equipment Type	Range in Noise Level at 50 feet (dBA)
nes		Front loaders	72–84
Engi	60	Backhoes	72–93
ion I	ovin	Tractors	77–96
usti	Ň	Scrapers	80–93
omk	Earth Moving	Graders	80–93
al C		Pavers	86–89
tern		Trucks	82–94
y In	s B	Concrete mixers	75–88
ed be	Materials Handling	Concrete pumps	81–84
ver	Materials Handling	Cranes, movable	75–88
t Po	-	Cranes, derrick	86–89
Equipment Powered by Internal Combustion Engines	ary	Pumps	68–72
uipn	Stationary	Generators	71–82
Eq	Sta	Compressors	74–87

**TABLE 13-3** 

Typical Equipment Noise Le	evels for Heavy Constru	ction Proiects
. , piedi Equipinent itoise Ec		enoniniojeeto

Source: Oregon Department of Transportation, 2011

## 13.2.3 Operation Noise

As a result of the Proposed Project, the maximum daily disposal tonnage would increase from 6,000 to 12,000 tons. The maximum weekly disposal tonnage would increase from 30,000 to 60,000 tons. The number of vehicles using the landfill on a peak weekday associated with these increased tonnage rates would roughly double.

The following considerations and assumptions regarding operation noise relative to the Proposed Project have been made:

- Detailed reference noise measurements of actual landfill operating activities were conducted on August 15, 2005. The noise measurements were taken approximately 250 to 300 feet from the normal landfill operation activities.
- 2. Noise levels for future operation activities would increase by 3 dBA (as a result of a doubling of sources, including doubling of traffic volume).
- 3. For a conservative assessment, it is assumed that the landfill active face is located at the extension area boundary nearest to the noise receiver.

- 4. If the operation activities are totally screened by large solid objects, such as buildings or topographical features, which act as effective acoustic screens, a 15 to 20 dBA reduction is applied to the calculated noise level.
- 5. For a conservative approach, atmospheric absorption is not accounted for in the analysis.
- 6. The operation noise level at the noise-sensitive receiver is compared with the noise limits of County of Los Angeles. If it exceeds the requirements, noise abatement measures will be recommended.

## 13.3 Regulatory Setting

## 13.3.1 Local Criteria

The Los Angeles County General Plan, adopted in 1980, with subsequent adoption dates, includes a Noise Element which adopts the State of California noise/land use compatibility guidelines for compatibility between different land uses and their noise environment. Noise elements assist in planning for future land uses including transportation, industrial, and noise-sensitive uses such as residential, and to assist in the land use compatibility evaluation. The General Plan is currently being revised, and the draft 2013 Noise Element (Los Angeles County, 2012) maintains the same general goal of ensuring land use compatibility between proximate land uses.

The Noise Control Ordinance of Los Angeles County (Title 12 Chapter 12.08) was adopted in 1978 and amended in 2001 to prohibit loud, unnecessary, and unusual noise that disturbs the peace and/or quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitivity residing in the area. The ordinance also provides sound limits for different land uses, which are assigned noise zones and corresponding noise limits, as shown in Table 13-4.

Noise Zone	Designated Noise Zone Land Use (Receptor Property)	Time Interval	Noise Level Limit (L <sub>50</sub> , 30 minutes in any hour dBA)
	E	xterior	
I	Noise-Sensitive Area	Anytime	45
		10:00 p.m. to 7:00 a.m. (nighttime)	45
II	Residential Properties	al Properties 7:00 a.m. to 10:00 p.m. (daytime)	50
III		10:00 p.m. to 7:00 a.m. (nighttime)	55
	Commercial Properties	7:00 a.m. to 10:00 p.m. (daytime)	60
IV	Industrial Properties	Anytime	70

#### TABLE 13-4

#### Noise Zone Designations and Noise Level Limits

Source: County of Los Angeles, 1978a

Adjustments to these levels are provided in the event the existing levels exceeded these criteria or the sounds are of shorter duration as follows:

- +5 dBA for 15 minutes in any hour (L<sub>25</sub>)
- +10 dBA for 5 minutes in any hour (L<sub>8.3</sub>)
- +15 dBA for 1 minute in any hours (L<sub>1.7</sub>)
- +20 dBA at any time
- If the existing statistical levels exceeds the standard, then the existing level becomes the standard

When the noise source originates on an industrial property and is impacting another noise zone, the applicable exterior noise level is the daytime exterior noise level for the subject receptor property.

The ordinance also includes construction noise restrictions, as presented in Table 13-5. As shown in the table, the maximum noise level limits from mobile construction equipment between the hours of 7:00 a.m. and 8:00 p.m. are 85 dBA at semi-residential and commercial areas. For stationary equipment, the maximum noise level limits are 15 dBA lower than for mobile equipment. Construction activities which result in a noise disturbance at residential or commercial properties are prohibited between the hours of 7:00 p.m. and 7:00 a.m. or at any time on Sundays or holidays.

#### TABLE 13-5 Construction Noise Limits

	Noise Limits (dBA)				
Time	Single-Family Residential	Multi-Family Residential	Semi-Residential/ Commercial		
Mobile Equipment (intermit	tent, short-term oper	ations less than 10 da	nys)		
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	75	80	85		
Daily, 8:00 p.m. to 7:00 a.m., and all day Sunday and legal holidays	60	65	70		
Stationary Equipme	ent (activities lasting 1	0 or more days)			
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	60	65	70		
Daily, 8:00 p.m. to 7:00 a.m., and all day Sunday and legal holidays	50	55	60		

Source: County of Los Angeles, 1978b

# 13.4 Project Setting

The following sections describe the existing noise environment in the Proposed Project area.

### 13.4.1 Existing Operation

Conditional Use Permit (CUP) No. 89-081(5) allows the landfill to operate 24 hours per day, except from 5:00 p.m. Saturday through 4:00 a.m. Monday. Access to the landfill by both commercial and general public vehicles is allowed during all hours the landfill is operating. However, CCL generally limits access to the working area by general public vehicles to daylight hours. CUP No. 89-081(5) allows CCL to operate on up to four Sundays during quarterly Val Verde cleanup days. Landfill maintenance activities may occur 24 hours per day, 7 days per week.

CCL currently operates according to the following schedule.

Commercial Customers					
Monday	4:30 a.m. to 5:00 p.m.				
Tuesday through Friday	3:00 a.m. to 5:00 p.m.				
Saturday	4:30 a.m. to 3:00 p.m.				
General Public Customers					
Monday through Friday	7:00 a.m. to 5:00 p.m.				
Saturday	6:00 a.m. to 2:00 p.m.				

CCL may occasionally extend Saturday operating hours to 5:00 p.m. to support community cleanup activities or the special needs of its commercial customers. Additionally, CCL frequently operates during nighttime hours

to accommodate special projects that require disposal during off-traffic hours. For example, in 2012, CCL operated 24 hours per day 184 times.

CUP No. 89-081(5) allows composting activities to occur 24 hours per day, 7 days per week.

The Proposed Project includes continued operation of the landfill and ancillary activities during times consistent with the current CUP.

The open operating face of the landfill is generally limited to about 1 acre in size.

### 13.4.2 Existing Equipment

Equipment used at the landfill includes bulldozers, landfill compactors, scrapers, a motor grader, backhoe/ loader, and water trucks and is typical of earthmoving construction equipment. The specific equipment used at CCL varies based on task and workload. All landfill equipment is maintained on a regular basis to remain in good working order. Equipment is routinely inspected and maintained on an as-needed basis and as recommended by the manufacturer.

### 13.4.3 Surrounding Existing Land Use

Much of the area surrounding CCL consists of undeveloped open space as a result of steep topography, which serves to isolate or insulate CCL from its more distant neighbors. Surrounding land uses include mostly open space lands to the north; rural residential development is located to the west and northwest along Chiquito Canyon Road and in the Val Verde area. Relatively new suburban residential areas are located to the northeast; these residences are separated from CCL by the Commerce Center commercial area. The closest noise-sensitive area is the rural residential community of Val Verde, which, at its closest point, is approximately 500 feet as the crow flies from the property boundary and approximately 0.50 miles from existing landfill activities. The Val Verde community is separated from the landfill by a significant ridgeline, which blocks the line of sight and serves as a very effective noise barrier. This feature will not change as a result of the Proposed Project. Noise generated at CCL was not noticeable in Val Verde when background noise level measurements were conducted for the project in September 2005.

Industrial/commercial uses are located to the northeast, east, and southeast. The United States Postal Service has a General Mail Facility adjacent to the eastern edge of the landfill property boundary. The property immediately west and south of the landfill is owned by the Newhall Land and Farming Company (NLF) and is currently either vacant or used for agricultural activities. Oil extraction fields and associated storage areas are located less than 1 mile from the landfill to the west and south. Valencia Travel Village, a short- and long-term recreational vehicle resort, is located approximately 1 mile east of the landfill on the south side of State Route 126 (SR-126).

### 13.4.4 Measured Existing Noise Levels

Background noise level measurements were conducted at four locations in the vicinity of CCL. Long-term noise level measurements were conducted at two property line locations on September 15 and 16, 2005. Land uses in the vicinity of CCL have not changed since the measurements were collected, nor has the mix of equipment used at CCL changed significantly. No additional residential or commercial developments near CCL have been constructed, and no new potentially sensitive noise receptors have been identified.

Short-term noise level measurements were conducted at two offsite locations, one in the residential area of Val Verde approximately 0.5 miles from the existing landfill activities and the other west of the landfill entrance on Wolcott Way north of SR-126 (the site of the proposed new entrance). Figure 13-1 depicts the short- and long-term noise monitoring locations. The noise monitoring locations were selected based on their being representative of adjoining land uses potentially affected by Proposed Project implementation, described as follows:

• Site 1 – A short-term location, in the community of Val Verde, closest to the landfill, directly across the street from 28959 Windsor Road, at the intersection of Windsor Road and Hunstock Street

- Site 2 A short-term location, at the proposed new entrance to the landfill on Wolcott Way, at the intersection of Wolcott Way and Franklin Parkway
- Site 3 A long-term location, in the vicinity of the existing post office building and near the Proposed Project extension area (east)
- Site 4 A long-term location, at the property line west of the landfill (west)

Appendix I-1 includes photographs of the noise monitors as they were set up at each monitoring location. Long-term measurement equipment consisted of two Larson Davis (LD) Model 820 sound level meters, and short-term measurements were collected with LD Model 824. A LD CAL-200 acoustical calibrator was used for calibration of the microphones to ensure the accuracy of the measurements. All the equipment complies with the requirements of American National Standards Institute and the International Electrotechnical Commission for precision (Type 1) sound level measurement instrumentation.

Weather conditions during the measurements consisted of clear skies with calm to slightly breezy wind conditions, and temperatures were between 75 degrees Fahrenheit (°F) in the morning to 80°F in the afternoon.

Table 13-6 summarizes the short-term noise measurement results. Long-term measurement results are summarized in Table 13-7. The detailed noise measurement data are attached to this report in Appendix I-2.

Junnary	Measurement	Duration	Se Levels			Ln			
Location	Start Time	(mins)	$L_{eq}$	L <sub>min</sub>	L <sub>max</sub>	L <sub>8</sub>	L <sub>25</sub>	L <sub>50</sub>	L <sub>90</sub>
Site 1	2:25 p.m.	15	52	42	76	54	51	48	45
Site 2	2:55 p.m.	15	57	47	72	59	56	52	46

#### TABLE 13-6 Summary of Short-Term Background Noise Levels

L<sub>8</sub> = 8 percent exceeded sound level

L<sub>25</sub> = 25 percent exceeded sound level

L<sub>90</sub> = 90 percent exceeded sound level

L<sub>max</sub> = maximum sound level

L<sub>min</sub> = minimum sound level

#### **TABLE 13-7**

#### Summary of Long-Term Background Noise Levels

	L <sub>eq</sub>	L <sub>eq</sub> L <sub>min</sub>				
Site 3						
Daytime	42 – 56	35 – 40	51 – 74			
Nighttime	42 – 46	34 - 41	52 - 64			
Site 4						
Daytime	37 – 57	31 – 51	47 – 70			
Nighttime	37 – 53	32 – 45	46 - 61			

Notes:

Daytime has been classified as between the hours of 7:00 a.m. to 10:00 p.m.

Nighttime has been classified as between the hours of 11:00 p.m. to 6:00 a.m.

### 13.4.5 Landfill Operation Reference Source Measurements

Noise-generating operational activities at CCL include truck unloading activities, the operation of heavy equipment in the disposal area, such as bulldozers and compactors), and customer traffic entering and leaving

the site. Mobile noise generators at the landfill include water trucks, scrapers, and portable lights. During normal operation, machinery, vehicle engines, tires, back-up signals, solid waste disposal, and soil moving activities generate noises.

In order to measure the noise level of these activities, a reference source measurement was performed near the active face of the landfill operation on August 15, 2005. The purpose of this measurement was to determine the level of noise generated by the active landfill operations. The measurement was taken at a distance of approximately 250 to 300 feet of the normal landfill operation. The average level ( $L_{eq}$ ) was approximately 69 dBA. The minimum ( $L_{min}$ ) noise level was approximately 61 dBA. The maximum ( $L_{max}$  – representative of the loudest 1-second period) was approximately 80 dBA.

## 13.5 Potential Impacts

Noise effects of the Proposed Project during construction and operational phases were evaluated to determine the potential impacts and need for mitigation.

### 13.5.1 Standards of Significance

Based on *California Environmental Quality Act (CEQA) Guidelines*, a project would normally have a significant effect on the environment if it conflicts with the adopted environmental plans and goals of the community in which it is located, substantially increases the ambient noise levels for adjoining areas, or exposes people to severe noise levels.

The following criteria have been established to quantify the significance of an adverse effect for evaluation pursuant to *CEQA Guidelines*. A project would normally result in a significant impact if the Proposed Project would result in:

- Exposure of persons to or generation of noise levels in excess of standards established by County of Los Angeles
- Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels
- A substantial permanent increase in ambient noise levels in the vicinity of CCL above levels existing without the Proposed Project
- A substantial temporary or periodic increase in ambient noise levels in the vicinity of CCL above noise levels existing without the Proposed Project

For the purpose of this noise evaluation, a substantial increase in ambient noise levels has been defined as a 5 dBA increase in L<sub>dn</sub> or L<sub>eq</sub> or more, which would be readily perceptible to a person with normal hearing.

### 13.5.2 Proposed Project

#### 13.5.2.1 Construction

Construction activities would result in a temporary direct increase in ambient noise levels around the construction area. The actual increase in offsite sound levels would depend on the construction activity occurring, the location of that activity, and the number and mix of construction vehicles and equipment in use and will vary over time. Construction activities are anticipated to occur during the day when ambient levels are typically higher and residences are less sensitive to noise.

At its closest point, the landfill construction activities are approximately 1,200 feet from the closest residential area (represented by Site 1, Val Verde). Assuming an average construction equipment sound level of 85 dBA at 50 feet, consistent with Table 13-3, and up to 44 pieces of equipment operating simultaneously, the predicted residential sound level is 54 to 59 dBA (evaluated using a 20- and 15-dBA barrier reduction for the intervening mountain ridgeline). Such levels comply with the Los Angeles County daytime sound requirements of 60 dBA for construction activities lasting 10 or more days. When construction operations are occurring in more distant areas, equipment is dispersed beyond 1,200 feet or less equipment is in use, the predicted sound levels will decrease.

#### 13.5.2.2 Operation

The Proposed Project would extend the waste footprint by 143 acres toward the south and east within the property line of the landfill. At its closest point, the landfill operations are approximately 1,200 feet from the closest residential area (represented by Site 1, Val Verde). When the methodology of Section 13.2.3 is applied, the expected average sound level is 40 to 45 dBA (evaluated using a 20 and 15 dBA barrier reduction for the intervening mountain ridgeline). Such levels comply with the Los Angeles County requirements of 50 dBA for sounds emanating from an industrial source and received by residential properties and are less than the measured existing levels. When landfill operations are occurring in more distant areas, the predicted sound levels will decrease.

In addition, truck and other vehicular traffic to and from the landfill will use SR-126. CCL-generated traffic is, and will continue to be, a small percentage of total vehicle volume on SR-126; therefore, the traffic generated by the Proposed Project would result in negligible changes to traffic noise levels along SR-126.

## 13.6 Mitigation

## 13.6.1 Construction

The Proposed Project will be constructed in manner to ensure the applicable County of Los Angeles noise requirements are satisfied. Therefore, no noise mitigation is required for construction activities associated with the Proposed Project.

## 13.6.2 Operation

The Proposed Project will be operated in a manner to ensure the County of Los Angeles noise requirements are satisfied. Therefore, no noise mitigation is required for operation of the Proposed Project.

## 13.7 Significance After Mitigation

The Proposed Project impacts associated with noise would be less than significant without mitigation.

## 13.8 Cumulative Impacts

The cumulative impact analysis considers the combined noise impacts of the Proposed Project with the nearby related projects identified in Chapter 3.0, General Setting and Resource Area Analysis. Most notable on this list, based on proximity to the Proposed Project, are the Newhall Ranch developments, located immediately south, east, and west of the Proposed Project and the California Department of Transportation (Caltrans) SR-126/ Commerce Center Drive Interchange Improvements Project (SR-126 Improvements Project), located approximately 1 mile east of the Project. Construction and occupancy of all four of the Newhall Ranch developments will occur roughly between 2014 and 2033 (NLF, pers. comm., 2014). The first, Mission Village, is located southeast of the landfill. Construction of the SR-126 Improvements Project began in late 2012 and is estimated to be completed in late 2015/early 2016.

The estimated construction noise level for the Proposed Project will be below the statutory requirement of Noise Control Ordinance of Los Angeles County. During the construction phase, the maximum noise level is estimated to be 59 dBA at the nearest residential property. Construction of the Newhall Ranch project, south of SR-126, is not expected to influence the sound levels at the nearest homes in Val Verde or those located northeast of the landfill because of large distances (over 1 mile) and shielding provided by intervening topography. Therefore, the cumulative construction noise from simultaneous construction of the Proposed Project in combination with Newhall Ranch would result in noise levels consistent with the County's requirement. Therefore, the Proposed Project would result in no significant cumulative impact during construction.

The operational noise from the Proposed Project at all the noise-sensitive areas will comply with the Noise Control Ordinance of Los Angeles County. CCL-generated traffic is, and will continue to be, a small percentage of total vehicle volume on SR-126; therefore, the traffic generated by the Proposed Project would result in negligible changes to traffic noise levels in the area. The SR-126 Improvements Project may result in traffic

noise level conditions that exceed their noise abatement guidelines (generally 66 dBA in residential areas). If this occurs, Caltrans would require the evaluation and likely construction of sound walls to reduce traffic noise in dense residential areas, as a part of the SR-126 Improvements Project, where such measures are needed and feasible to construct. Therefore, the cumulative impact that will result from the combination of the Proposed Project's incremental impact and the effects of other projects is not significant.