5.10 NOISE

This section addresses the potential noise impacts associated with the project, specifically the potential for the proposed project to expose people to noise levels that exceed applicable noise standards, or cause a substantial temporary increase in ambient noise levels within or around the project site during project construction and/or maintenance. Because the proposed project is a restoration project and would not result in substantial operational noise, this analysis focuses on short-term construction and infrequent maintenance noise impacts. Once the project is constructed and vegetation is established, site activities would be limited to intermittent maintenance activities and recreational trail access. The analysis is based largely on the Noise Technical Report, provided as Appendix I. Noise impacts related to protected animal species and their habitats are discussed in Section 5.6, Biological Resources.

5.10.1 EXISTING CONDITIONS

Regulatory Setting

A full description of the regulatory setting for this document can be found in Appendix E. The following laws, regulations, policies, and plans are applicable to this resource area:

- City of San Diego General Plan, Noise Element
- City of San Diego Municipal Code, Noise Ordinance
- City of Del Mar Noise Ordinance

Noise Regulations

Applicable plans and ordinances with respect to noise include the City’s General Plan, Noise Element (City 2015) and the City’s Municipal Code, Noise Ordinance (City 2010b). The City’s Noise Ordinance limits construction hours to 7 a.m. to 7 p.m. Monday through Saturday, and the construction noise level limit to not exceed an average sound level greater than 75 decibels (dB) during the 12-hour period from 7:00 a.m. to 7:00 p.m. at or beyond the property lines of any property zoned residential (City of San Diego 2010b).

The City of Del Mar’s noise ordinance also limits construction noise to 7 a.m. to 7 p.m. Monday through Friday and 7 a.m. to 9 p.m. on Saturday. It limits construction noise levels to an hourly average sound level not to exceed 75 A-weighted decibels (dBA) on property zoned or used for residential purposes (City of Del Mar 1997).

Noise Descriptors

Noise is generally defined as sound that is loud, unpleasant, unexpected, or undesired, and therefore may cause general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment. Sound levels are usually expressed in units of dB, measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale for quantifying the magnitude of earthquakes. Thus, a doubling of the energy of a
noise source, such as doubling of traffic volume, would increase the noise level by 3 dB; a halving of the energy would result in a 3-dB decrease.

**Human Perceptions of Noise**

The human ear is not equally sensitive to all frequencies within the sound spectrum; therefore, noise levels are factored more toward human sensitivity using the “A” weighting scale, expressed as dBA. Human perception of noise has no simple correlation with acoustical energy; the perception of noise is not linear in terms of acoustical energy. An average healthy ear can barely perceive a change of 3 dB, can readily perceive a 5 dB change, and an increase of 10 dB is perceived as twice as loud (Caltrans 2011b).

**Averaging Noise Levels**

In addition to noise levels at any given moment, the duration and averaging of noise over time is also important for the assessment of potential noise disturbance. Noise levels varying over time are averaged over a period of time, usually hour(s), expressed as dBA $L_{eq}$, which typically assumes a 1-hour average noise level. The maximum noise level ($L_{max}$) is the highest sound level occurring during a specific period. Time of day is also an important factor to consider when assessing potential community noise impacts, as noise levels that may be acceptable during the daytime hours may create disturbance during evening or nighttime hours, when people are typically at home and sleeping.

Noise levels attenuate with distance at a rate of 6 dBA per doubling of unobstructed distance between a point source (e.g., construction equipment) and receiver, and 3 dBA per doubling of distance from a line source (e.g., moving traffic). Intervening topography, structures, and sound-absorptive ground surface can further attenuate noise levels. An acoustically “soft” vegetated ground surface can further reduce noise levels by up to 1.5 dBA, and a large barrier between a noise source and a receiver can reduce noise levels from 5 to 10 dBA at that receiver.

**Existing Noise Conditions**

The existing noise environment is primarily influenced by noise from vehicle traffic on nearby roadways. The predominant source of traffic noise is from I-5, which is an 8-lane freeway located approximately 800 to 6,400 feet from the western and eastern boundaries of W-19 and approximately 900 to 2,725 feet from the western and eastern boundaries of the disposal site. The W-19 restoration and disposal sites are undeveloped and relatively flat, providing line-of-sight with I-5 traffic. Additional nearby roadways include El Camino Real, a four-lane arterial located adjacent to the W-19 southern and western boundaries and approximately 625 feet east of the disposal site, and Via de la Valle, a two-lane arterial located approximately 650 to 1,550 feet north of the W-19 northern boundary. In addition to vehicle traffic noise, other major noise sources include aircraft flyovers, active recreation events (i.e., Del Mar Racetrack and Fairgrounds; San Diego Polo Grounds), and intermittent noise from the surrounding residential and commercial areas.
The noise environment of the beach placement locations is influenced primarily by surf noise as ocean waves break on the beach, and also by noise from periodic train traffic along the railway, and traffic on local roadways, most specifically Camino Del Mar.

**Noise-Sensitive Receptors**

The W-19 and disposal sites are surrounded by passive recreation (i.e., hiking trails) and by equestrian facilities (i.e., horse stables and training center) to the north and residential development to the north, east, and south. Some land uses are considered more sensitive to noise than others due to the types of persons or activities involved, such as sleeping, reading, talking, or convalescing. Noise-sensitive receptors are generally considered humans engaged in activities, or occupying land uses, that may be subject to the stress of substantial interference from noise. Typically, land uses associated with noise-sensitive human receptors can include residential dwellings, hotels/motels, hospitals, nursing homes, educational facilities, libraries, and passive recreational areas (e.g., nature trails).

Noise receptors at the beach placement sites include the residential developments located immediately adjacent to the back of the beach area along the placement site south of the river inlet. Residential developments are also located on the bluff tops at the back of the beach placement site to the north of the river. Beach recreationalists using the beaches in the vicinity would also be considered noise-sensitive receptors.

In addition to human receptors, protected animal species and their habitats, such as bird species protected under the Migratory Bird Treaty Act, may be considered noise-sensitive receptors especially during their breeding season. Noise impacts to wildlife are addressed in Section 5.6, Biological Resources.

**Noise Measurements and Observations**

To analyze the potential noise impacts of the proposed project, ambient noise level measurements and observations were performed at human noise-sensitive receptors. These receptors include residences, the CTC Trail in proximity to the W-19 area, the disposal site as shown in Figure 5.10-1, Noise Measurement Locations, and also at a residential beach location near the sand placement areas. Measured noise levels are summarized in Table 5.10-1. The Dust Devil Nature Trail was not selected for a measurement location as the portion of the trail near construction noise sources would be closed during active construction operations and thus would not expose users to increased noise levels.

As summarized in Table 5.10-1, measurements at the CTC Trail near the W-19 area ranged from 50.8 to 51.7 dBA $L_{eq}$, with the highest $L_{eq}$ at locations in proximity to nearby major roadways (El Camino Real). At the disposal site, measurements ranged from 50.7 to 59.0 dBA $L_{eq}$, with highest $L_{eq}$ at locations in proximity to nearby roadways (i.e., I-5 and El Camino Real). At nearby residences, measurements ranged from 41.1 to 67.9 dBA $L_{eq}$ with highest noise levels in proximity to nearby roadways (i.e., I-5, Via de la Valle, and El Camino Real). At residential areas near the beach placement sites, measurements ranged from 67.6 near the southern site to 55.9 dBA $L_{eq}$ near the northern site.
Table 5.10-1
Ambient Noise Measurement Data – Residences and Recreational Uses

<table>
<thead>
<tr>
<th>Site ID</th>
<th>Housing Areas (HAs)</th>
<th>Location</th>
<th>Leq (dBA)</th>
<th>Lmax (dBA)</th>
<th>Lmin (dBA)</th>
<th>Noise Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Residential Areas</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ST-11</td>
<td>HA-1</td>
<td>At residences off Old El Camino Real, 750 feet south of W-19, 100 feet AMSL</td>
<td>53.2</td>
<td>57.8</td>
<td>47.4</td>
<td>Vehicle traffic on El Camino Real, aircraft flyovers, conversations, mechanical</td>
</tr>
<tr>
<td>ST-12</td>
<td>HA-2</td>
<td>At residences at end of Vista de la Patria, 1,400 feet north of W-19, 238 feet AMSL</td>
<td>41.1</td>
<td>53.7</td>
<td>37.2</td>
<td>Vehicle traffic on Via de la Valle, aircraft flyovers, conversations</td>
</tr>
<tr>
<td>ST-13</td>
<td>HA-3</td>
<td>At residences, 50 feet north of Via de la Valle, 825 feet north of W-19, 61 feet AMSL</td>
<td>67.9</td>
<td>75.8</td>
<td>53.2</td>
<td>Vehicle traffic on Via de la Valle, aircraft flyovers, conversations</td>
</tr>
<tr>
<td>ST-14</td>
<td>HA-5</td>
<td>At residences north of Landfair Road, 540 feet south of the disposal site, 300 feet AMSL</td>
<td>60.2</td>
<td>68.2</td>
<td>57.4</td>
<td>Vehicle traffic on I-5 dominant, El Camino Real visible in distance, aircraft flyover</td>
</tr>
<tr>
<td>ST-15</td>
<td>HA-4</td>
<td>At residences east of El Camino Real at Sea Country Lane, 200 feet east of proposed truck haul disposal route</td>
<td>69.6</td>
<td>79.4</td>
<td>52.3</td>
<td>Vehicle traffic on El Camino Real dominant, I-5 visible in distance (faintly audible), aircraft flyover</td>
</tr>
<tr>
<td>LT-1</td>
<td>HA-4</td>
<td>At the project staging area (San Dieguito River Park parking area), residences across EL Camino Real</td>
<td>64.2</td>
<td>86.4</td>
<td>37.8</td>
<td>Vehicle traffic on I-5 and El Camino Real, except during peak hour when I-5 is congested, occasional aircraft flyovers</td>
</tr>
<tr>
<td><strong>Recreational Uses</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ST-8</td>
<td>N/A (CTC Trail)</td>
<td>North of W-19 and river on CTC Trail, 475 feet west of El Camino Real</td>
<td>50.8</td>
<td>67.1</td>
<td>42.6</td>
<td>Vehicle traffic primarily on El Camino Real, less on Via de la Valle</td>
</tr>
<tr>
<td>ST-9</td>
<td>N/A (CTC Trail)</td>
<td>North of W-19 and river on CTC Trail, 263 feet west of El Camino Real</td>
<td>51.7</td>
<td>57.1</td>
<td>47.3</td>
<td>Vehicle traffic primarily on El Camino Real, less on Via de la Valle</td>
</tr>
<tr>
<td>ST-10</td>
<td>N/A (CTC Trail)</td>
<td>North of W-19 and river on CTC Trail, 510 feet west of El Camino Real</td>
<td>47.5</td>
<td>50.4</td>
<td>45.1</td>
<td>Vehicle traffic primarily on El Camino Real, less on Via de la Valle</td>
</tr>
<tr>
<td><strong>Beach Placement Sites</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B-1</td>
<td>N/A</td>
<td>At beach residence, near southern sand placement area at terminus of 29th Street</td>
<td>67.6</td>
<td>72.9</td>
<td>57.3</td>
<td>Surf noise dominant, vehicle traffic on local roadways, occasional aircraft flyovers</td>
</tr>
<tr>
<td>B-2</td>
<td>N/A</td>
<td>At bluff-top beach residence near northern sand placement area at beach, 78 feet AMSL</td>
<td>55.9</td>
<td>70.8</td>
<td>50.7</td>
<td>Surf noise dominant, vehicle traffic on local roadways, occasional aircraft flyovers</td>
</tr>
</tbody>
</table>

AMSL = above mean sea level; CTC Trail = Coast to Crest Trail; dBA = A-weighted decibels; Leq = equivalent noise level; Lmax = maximum noise level; Lmin = minimum noise level; N/A = not applicable
*Measurements at the beach were conducted separately from those at the restoration and disposal sites, and are referred to as ST-1 and ST-3 in the beach placement portion of the Noise Report. These sites are referred to as B-1 and B-2 in the EIR for clarity.
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5.10.2 IMPACT THRESHOLDS

A significant impact would occur if implementation of the proposed project would:

A. Result or create a significant increase (>10 dBA) in the existing ambient noise levels;
B. Result in exposure of people to noise levels which exceed the City's adopted noise ordinance;
C. Result in exposure of people to current or future transportation noise levels which exceed standards established in the Transportation Element of the General Plan or an adopted airport Comprehensive Land Use Plan; or
D. Result in temporary construction noise which exceeds 75 dB (A) $L_{eq}$ at a sensitive receptor.

The CEQA impact thresholds for noise are based on those recommended by the City of San Diego Development Services Department but are modified to take into account unique recreational uses within the San Dieguito River Park (City of San Diego 2011). This section addresses potential project-related construction noise impacts of the proposed project. However, because the project would not result in any permanent land use changes or new structures, it would not have any effect on future transportation noise levels that exceed standards established in the Transportation Element of the General Plan or an adopted Airport Comprehensive Land Use Plan, and impacts under Criterion C are not evaluated further.

Areas near the beach placement sites would be subject to the City of Del Mar Municipal Code, Chapter 9.20, Noise Regulations, which provides construction hours and noise level limits. Section 9.20.050 prohibits construction noise between the hours of 7 p.m. and 7 a.m. Monday through Friday, 7 p.m. and 9 a.m. on Saturday, and on Sundays and certain legal holidays. It limits construction noise levels to an hourly average sound level not to exceed 75 dBA on property zoned or used for residential purposes (City of Del Mar 1997).

5.10.3 IMPACT ANALYSIS

Project-caused construction and maintenance noise would vary depending on activities and duration, and the type and usage of equipment. Noise impacts from construction/maintenance activities are based on the noise levels generated by the construction equipment, the timing and duration of the activities, proximity to sensitive receptors, and applicable noise regulations and standards. Construction equipment can be stationary (i.e., operating in one location, such as pumps, generators) or mobile (i.e., moving around the construction site such as excavators, bulldozers, graders, loaders, and trucks). Heavy construction equipment (e.g., for earth-moving activities) typically operates for short periods at full power followed by extended periods of operation at lower power, idling, or powered-off conditions. For typical construction projects, earth-moving activities typically generate the highest noise levels ranging up to 85 dBA $L_{max}$ at 50 feet (FTA 2006). However, typically, delays occur during construction activities (e.g., equipment repositioning and idling, worker breaks, safety measures) resulting in equipment operating at less than maximum load and duration. Therefore, maximum noise levels ($L_{max}$) over time (e.g., 1 hour) would equate to equivalent construction noise levels ($L_{eq}$) of approximately
80 dBA $L_{eq}$ at 50 feet. Both the City of San Diego and City of Del Mar use $L_{eq}$ for the construction noise level limit rather than the equivalent short-term, maximum noise levels ($L_{max}$).

**W-19 Restoration**

Active project construction activities in the W-19 restoration site would occur over approximately 2 years. Noise-generating activities would include removal of vegetation, excavation, grading, and hauling of vegetation and sediment off-road to the disposal site. Project construction activities would occur from 7 a.m. to 7 p.m. on weekdays, consistent with the City of San Diego’s construction noise ordinance (City of San Diego 2010b).

Project construction noise was predicted at representative nearby noise-sensitive receptors. A worst-case scenario for equipment usage was applied in Roadway Construction Noise Model to assess potential noise impacts associated with off-road equipment at the W-19 site. This equipment would include an excavator, scraper, grader, bulldozer, loaders, and two dump trucks, operating concurrently and in proximity to each other with an assumed load factor of 40 percent (to account for time when it is not functioning at full engine power due to worker breaks, change in construction activities, and maintenance) over a 1-hour period of operation. The anticipated construction equipment needed for project vegetation clearing and earthwork would generate noise levels as high as approximately 79 dBA $L_{eq}$ at 50 feet from the centroid of the construction activity. Construction noise modeling output data are provided in Appendix A of the Noise Technical Report.

**Traffic Noise**

Project construction would generate construction traffic from daily construction worker trips and truck delivery of construction equipment and supplies. Construction vehicles would access the project site using major roadways of I-5, Via de la Valle, Del Mar Heights Road, and El Camino Real, where construction trips would be a minor contribution to the average daily traffic (ADT) volumes of the roadways shown in the Traffic Study (Appendix L). Therefore, the increase in traffic volume on area roadways due to project construction-related traffic would result in a less than 1 dBA $L_{eq}$ increase in noise levels along adjacent roadways, which is a less than perceptible change in noise level. Therefore, this impact would be less than significant (Criterion A). Noise associated with transportation would not exceed standards established in the Transportation Element of the General Plan, and no impact would occur (Criterion C).

**Housing Areas**

As shown in Table 5.10-2, predicted construction noise levels at receptors ST-11 through ST-15 would be below the City’s construction noise level limit of 75 dBA $L_{eq}$ during the 12-hour period from 7 a.m. to 7 p.m. at or beyond the property lines of any property zoned residential, which indicates noise-sensitive receptors. Therefore, project construction noise would not exceed City noise standards at residences, and this impact would be less than significant (Criteria B and D).
Table 5.10-2 also shows that ambient noise levels at the closest representative residential receptors in proximity to W-19 (i.e., ST-11, ST-12, and ST-13) ranged from 51 to 68 dBA $L_{eq}$, with highest noise levels at ST-11 and ST-13 due to traffic noise on El Camino Real and Via de la Valle. **Predicted construction noise levels would not result in a substantial increase (i.e., $>10$ dBA $L_{eq}$) in existing ambient noise levels, and this impact would be less than significant for residential receptors in the vicinity of W-19 (Criterion A).**

### Table 5.10-2

**Project Construction Noise Assessment – Housing Areas**

<table>
<thead>
<tr>
<th>Receptor Location ID</th>
<th>Housing Area (HA)</th>
<th>Existing Ambient Level (dBA, $L_{eq}$)</th>
<th>Distance from Receptor to Construction Activity (feet)</th>
<th>Predicted Construction Noise at Receptors (dBA, $L_{eq}$)</th>
<th>Existing Ambient plus Construction Noise (dBA, $L_{eq}$)</th>
<th>Increase over Ambient due to Construction (dBA, $L_{eq}$)</th>
<th>&gt;10 dBA $L_{eq}$ Ambient Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Residences near W-19 Restoration Area</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ST-11</td>
<td>HA-1</td>
<td>53</td>
<td>1,875</td>
<td>53</td>
<td>56</td>
<td>3</td>
<td>No</td>
</tr>
<tr>
<td>ST-12</td>
<td>HA-2</td>
<td>51*</td>
<td>2,200</td>
<td>51</td>
<td>54</td>
<td>3</td>
<td>No</td>
</tr>
<tr>
<td>ST-13</td>
<td>HA-3</td>
<td>68</td>
<td>1,750</td>
<td>53</td>
<td>68</td>
<td>0</td>
<td>No</td>
</tr>
<tr>
<td><strong>Residences near Truck Haul Route</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ST-15</td>
<td>HA-4</td>
<td>70</td>
<td>200</td>
<td>63</td>
<td>71</td>
<td>1</td>
<td>No</td>
</tr>
<tr>
<td><strong>Residences near Disposal Site</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ST-14</td>
<td>HA-5</td>
<td>60</td>
<td>1,300</td>
<td>57</td>
<td>62</td>
<td>2</td>
<td>No</td>
</tr>
<tr>
<td>ST-15</td>
<td>HA-4</td>
<td>70</td>
<td>1,650</td>
<td>54</td>
<td>70</td>
<td>0</td>
<td>No</td>
</tr>
</tbody>
</table>

$\text{dBA} = \text{A-weighted decibels; } L_{eq} = \text{equivalent noise level}$

*The location of the ST-12 measurement of 41 dBA was determined to be substantially shielded from dominant noise sources, including traffic noise from I-5 and Via de la Valle (measurement was conducted at shielded north side of residential structure rather than the directly exposed south side of structure). Therefore, the reported noise level at ST-12 in Table 5.10-2 was adjusted by +10 dBA to 51 dBA $L_{eq}$ to account for the shielding effects.*


### Recreational Uses

Users of the CTC Trail are considered noise-sensitive receptors and could experience construction noise while on portions of the trail adjacent to the W-19 area. Predicted construction noise levels from the operation of heavy construction during excavating and grading would be approximately 79 dBA hourly $L_{eq}$ at 50 feet from the centroid of the grading activity. The W-19 grading boundary from the trail varies in distances of approximately 75 to 1,250 feet; therefore, the predicted grading noise level would attenuate with these distances to the trail ranging from approximately 73 to 47 dBA $L_{eq}$. Trail users would likely experience this varying range of grading noise levels as they hike along the trail, moving away from or toward project earth-moving activities. The worst-case noise exposure to hikers on the trail would be an approximately ¼-mile segment located 75 to 85 feet from the northernmost portion of the grading area, where grading activities would generate noise levels of approximately 73 dBA $L_{eq}$. **This impact would not exceed 75 dBA $L_{eq}$ and would be less than significant (Criteria B and D).**

As shown in Table 5.10-3, measurements ST-8 through ST-10 along the CTC Trail near El Camino Real ranged from 48 to 52 dBA $L_{eq}$ with noise levels decreasing farther away from El...
Camino Real and its vehicle traffic. Therefore, ambient noise levels are anticipated to be lower on the trail moving west away from El Camino Real. Table 5.10-3 also provides the predicted construction noise levels at ST-8 through ST-10, as compared to existing ambient noise levels. A substantial increase (>10 dBA L\text{eq}) in ambient noise levels would occur at ST-10 along the trail. As discussed above, trail users would be exposed to these levels for short periods of time when grading is occurring close to the project boundary and users are hiking within proximity to that activity (estimated duration on the order of minutes). **However, this projected increase in ambient noise levels would still represent a significant impact (Criterion A).**

### Table 5.10-3

Project Construction Noise Assessment – Coast to Crest Trail

<table>
<thead>
<tr>
<th>Receptor Location ID</th>
<th>Existing Ambient Level (dBA L\text{eq})</th>
<th>Distance from Receptor to Construction Activity (feet)</th>
<th>Predicted Construction Noise at Receptors (dBA L\text{eq})</th>
<th>Existing Ambient plus Construction Noise (dBA L\text{eq})</th>
<th>Increase over Ambient due to Construction (dBA L\text{eq})</th>
<th>&gt;10 dBA L\text{eq} Ambient Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST-8</td>
<td>51</td>
<td>822</td>
<td>61</td>
<td>61</td>
<td>10</td>
<td>No</td>
</tr>
<tr>
<td>ST-9</td>
<td>52</td>
<td>861</td>
<td>60</td>
<td>61</td>
<td>9</td>
<td>No</td>
</tr>
<tr>
<td>ST-10</td>
<td>48</td>
<td>827</td>
<td>61</td>
<td>61</td>
<td>13</td>
<td>Yes</td>
</tr>
</tbody>
</table>

dBA = A-weighted decibels; L\text{eq} = equivalent noise level;

### Materials Disposal

#### Traffic Noise

Materials disposal would generate on-road construction traffic from daily construction worker trips and truck delivery of construction equipment and supplies. Construction vehicles would access the project site using major roadways of I-5, Via de la Valle, Del Mar Heights Road, and El Camino Real, where construction trips would be a minor contribution to the ADT volumes of the roadways shown in the Traffic Study (Appendix L). Therefore, the increase in traffic volume on area major roadways due to materials disposal-related traffic would result in a less than 1 dBA L\text{eq} increase in noise levels along adjacent roadways, which is a less than perceptible change in noise level. **Therefore, this impact would be less than significant (Criterion A). Noise associated with transportation would not exceed standards established in the Transportation Element of the General Plan, and no impact would occur (Criterion C).**

### Housing Areas

Truck hauling of excavated vegetation and soil from W-19 for placement at the disposal site would generate the most project construction traffic, although the haul route would not include public roads. The disposal site is located approximately 2,500 feet southeast of W-19 and west of El Camino Real (Figure 5.10-1), and off-road trucks would transport materials directly to the disposal site over approximately 70 weeks. Hauling trip estimates assume that material would not require travel on public roadways (i.e., along the proposed onsite haul route) and moving approximately 1,371,000 cy of material with a CAT 735 Articulated Truck with a hauling capacity of 25 cy per truck would require a total of 55,000 onsite hauling roundtrips (Appendix L). Vehicle travel on public roads associated with Hauling activities is estimated to require
approximately 269 daily one-way trips (Appendix L). Noise-sensitive receptors located in proximity to the haul route include residential uses (HA-4) east of El Camino Real, as shown in Figure 5.10-1.

Hauling noise would be localized to the proposed off-road haul route, and hauling would occur within the allowable hours of the City’s noise ordinance (7 a.m. and 7 p.m. Monday through Saturday). As shown in Table 5.10-2, predicted construction noise levels at the representative receptor of ST-15 at HA-4 would not result in a substantial increase in existing ambient noise levels (>10 dBA L_{eq}). Therefore, this impact would be less than significant (Criterion A).

Table 5.10-2 also shows that predicted construction noise levels resulting from construction activities at the disposal site at the closest representative residential uses of HA-4 and HA-5, which are considered noise-sensitive receptors, would be below the City’s construction noise level limit of 75 dBA L_{eq} during the 12-hour period from 7 a.m. to 7 p.m. at or beyond the property lines of any property zoned residential. Therefore, this impact would be less than significant (Criteria B and D).

**W-19 Inlet Maintenance**

**Material Removal**

The removal of sediment from the inlets and interior of the wetlands after substantial storm events would require similar construction methods and would utilize similar construction equipment as initial project construction. Maintenance work would include the use of construction equipment to perform excavation and grading. While the timeframe for construction activities and the total amount of construction equipment would be less than the initial lagoon restoration activities, the maintenance work would have the potential to create the same noise impact to recreational trail users along portions of the CTC Trail. As discussed for lagoon restoration, CTC Trail users would be exposed to a substantial increase in ambient noise levels for short periods of time when grading or excavating is occurring close to the project boundary and users are hiking within proximity to that activity. As identified for the lagoon restoration activities, this projected increase in ambient noise levels would represent a significant impact during intermittent inlet maintenance events (Criterion A).

**Beach Placement**

**On-Road Material Hauling**

The material removed during maintenance activities would be hauled via truck to the beach placement locations. As shown in Figure 3-10, trucks would travel offsite along El Camino Real north to Via de la Valle, west on Via de la Valle to Camino Del Mar, and then south along Camino Del Mar to beach access points either north of the river near Dog Beach or south of the river at the ends of 20th and/or 18th Streets. Once on the beach, trucks would deposit the material on the beach or in the nearshore. Residential receptors are located along portions of Via de la Valle and immediately adjacent to portions of Camino Del Mar. As detailed in Table 3-3, anticipated truck trips associated with maintenance activities would be approximately 625 round
trips over 13 working days for a 25-year storm and 2,500 round trips over 43 working days for a 50-year storm event. These daily haul trips (approximately 60 per day) would occur only between 7 a.m. and 7 p.m. Monday through Friday per both the Cities of San Diego and Del Mar noise ordinance requirements.

The increase in traffic volume on area roadways due to maintenance haul trips from the W-19 site to the beach placement sites would not cause substantial noise increases in the ambient noise environment and would not exceed the 12-hour 75 dBA $L_{eq}$ threshold of the City of San Diego or the 1-hour 75 dBA $L_{eq}$ threshold of the City of Del Mar. SANDAG reports that 2013 annual ADT volumes were 14,800 and 17,500 for the Camino Del Mar roadway segment between Via de la Valle and Jimmy Durante Boulevard and the Via de la Valle segment between Camino Del Mar and Jimmy Durante Boulevard, respectively (Appendix I). The additional daily volume of up to 60 dump truck round trips, even if represented as 327 PCEs, would result in less than a 3 percent increase for both of these roadway segments and, on the basis of this modest ADT increase, would be less than a 1 dBA increase in roadway traffic noise emission.

Additionally, if assessed as a dump truck passing by a receiver at an average occurrence frequency of up to 12 per hour, with the dump truck exhibiting 76.5 dBA $L_{max}$ at a distance of 50 feet (FHWA 2006) and taking 1 minute to complete the pass-by, the estimated hourly noise level would be less than 75 dBA $L_{eq}$ at a distance of 50 feet for an average of up to 12 trips per hour (i.e., 60 trips varyingly spread over an 10-hour daytime work shift).

Thus, construction-related traffic would not be substantial and would not result in a significant increase in noise levels along adjacent roadways or in exceedance of applicable noise standards. Impacts would be less than significant (Criteria A, B, and D). Noise associated with transportation would not exceed standards established in the Transportation Element of the General Plan, and no impact would occur (Criterion C).

### Beach Placement

Once the material is delivered by truck to the beach placement area, bulldozers would spread the sand and this construction equipment noise would be audible to nearby receptors. The beach placement site to the south of the river inlet would be immediately adjacent to the residential properties located along the back of the beach area at a generally similar elevation (represented by measurement location B-1 in Figure 5.10-1). The placement area north of the river inlet would be somewhat buffered from sensitive receptors due to the high bluffs at the back of the beach; however, residential property boundaries are located in proximity to the placement site (represented by measurement location B-2). Beach placement activities are anticipated to occur during the weekday daytime hours of 7 a.m. to 7 p.m., consistent with the noise ordinances of the City of Del Mar. Over a period of 1 hour, the equipment would be anticipated to operate at an assumed load factor of 40 percent (to account for worker breaks, change in construction activities, and maintenance). Table 5.10-4 shows the modeled noise levels from the beach placement construction activities at the receptor locations.
Table 5.10-4
Beach Placement Construction Noise Assessment

<table>
<thead>
<tr>
<th>Receptor Location ID</th>
<th>Existing Daytime Ambient Level (dBA, L_{eq})</th>
<th>Distance from Receptor to Construction Activity (feet)</th>
<th>Predicted Construction Noise (dBA, L_{eq})</th>
<th>Existing Ambient plus Predicted Construction Noise (dBA, L_{eq})</th>
<th>Ambient Increase due to Construction Noise (dBA, L_{eq})</th>
<th>Greater than 10 dBA L_{eq} ambient increment?</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-1</td>
<td>68</td>
<td>30</td>
<td>81</td>
<td>81</td>
<td>13</td>
<td>Yes</td>
</tr>
<tr>
<td>B-2</td>
<td>56</td>
<td>170</td>
<td>63</td>
<td>64</td>
<td>8</td>
<td>No</td>
</tr>
</tbody>
</table>

As shown in Table 5.10-4, predicted average hourly construction noise level due to beach placement activity at representative residential receptors located along the bluffs at the northern sand placement sites represented by receptor location B2 would be below the City of Del Mar limit of 75 dBA hourly L_{eq} and would not cause more than a 10 dBA increase in the existing ambient noise level. This short-term noise increase would likely be audible at residences near or represented by the B-2 location; however, beach placement activity noise would not exceed City of Del Mar noise standards at residences, nor cause an ambient noise increase greater than 10 dBA at residential receptors along the northern sand placement site represented by receptor location B-2. Therefore, this impact would be less than significant (Criteria A, B, and D).

Table 5.10-4 shows that predicted average hourly construction noise levels would exceed 75 dBA hourly L_{eq} and result in a substantial temporary ambient increase exceeding 10 dBA at B-1. This projected exceedance of the City of Del Mar noise standard and temporary increase in ambient noise levels due to beach placement would represent a significant impact to residential receptors at the southern sand placement site represented by receptor location B-1 during maintenance (Criteria A, B, and D).

5.10.4 Significance of Impacts

Table 5.10-5 summarizes the impact conclusions identified in the Impact Analysis for each threshold of significance. A significant impact related to the increase in existing ambient noise levels on the CTC Trail during both lagoon restoration and maintenance would occur.

5.10.5 Mitigation Measures

A significant noise impact could occur from the operation of construction equipment in proximity to recreational users on the CTC Trail. As described above, construction would only result in a significant increase in ambient noise levels for trail users if the construction equipment and trail users were adjacent to each other. A number of physical noise barriers, such as noise walls, were considered as mitigation for this impact. However, the continually moving nature of construction equipment during restoration and trail users would make noise walls less effective. In addition, trail users would be subjected to substantially higher noise levels than existing conditions for very short durations (approximately 5 minutes), and alternate trails would remain available for use during these periods. For these reasons, the use of noise walls or other physical
Table 5.10-5
Summary of Noise Impact Conclusions

<table>
<thead>
<tr>
<th>Threshold</th>
<th>W-19 Restoration</th>
<th>Materials Disposal</th>
<th>W-19 Inlet Maintenance</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Result or create a significant increase (&gt;10 dBA) in the existing ambient noise levels.</td>
<td>Significant at CTC Trail</td>
<td>Less than Significant</td>
<td>Significant at residential receptors at southern sand placement site</td>
</tr>
<tr>
<td>B. Result in exposure of people to noise levels which exceed the City's adopted noise ordinance.</td>
<td>Less than Significant</td>
<td>Less than Significant</td>
<td>Significant at residential receptors at southern sand placement site</td>
</tr>
<tr>
<td>C. Result in exposure of people to current or future transportation noise levels which exceed standards established in the Transportation Element of the General Plan or an adopted airport Comprehensive Land Use Plan.</td>
<td>No Impact</td>
<td>No Impact</td>
<td>No Impact</td>
</tr>
<tr>
<td>D. Result in temporary construction noise which exceeds 75 dB (A) $L_{eq}$ at a sensitive receptor.</td>
<td>Less than Significant</td>
<td>Less than Significant</td>
<td>Significant at residential receptors at southern sand placement site</td>
</tr>
</tbody>
</table>

barriers to reduce noise levels at sensitive receptors would not be considered a feasible noise minimization measure. Implementation of Mitigation Measure Noise-1 would reduce this impact to a less than significant level.

**Noise-1**

Prior to commencement of construction, public notices regarding the potential for temporarily increased noise levels shall be posted along the trail and in parking areas. These notices shall include a schedule of anticipated elevated noise levels and a description of alternate trails available for use.

A significant temporary increase in existing ambient noise levels measured at B-1, representing residences adjacent to the southern beach placement site, could occur from the placement of material on the beach during maintenance activities. As described for the noise impact associated with the CTC Trail, a number of physical noise barriers, such as noise walls or barriers, were considered as mitigation for this impact. However, the continually moving nature of construction equipment during material placement would require that the barriers be mobile and moved frequently to keep pace with the active construction area. The elevated location of the residential properties would make the barriers less effective. In addition, the barriers would have the potential to cause additional access restrictions for beach users. These challenges reduce or eliminate the value of this mitigation measure. For these reasons, the use of noise walls or other physical barriers along the beach placement sites to reduce noise levels at sensitive receptors would not be considered a feasible noise minimization measure. Implementation of Mitigation Measures Noise-2, 3, and 4 would not reduce the noise impact at local residential receptors to below a level of significance. The noise impact due to material placement on the beach would remain significant and unavoidable.
Noise-2

During maintenance requiring beach placement, the construction contractor will establish a telephone hot-line for use by the public to report any perceived substantial adverse noise conditions associated with the construction of the project. If the telephone is not staffed 24 hours per day, the contractor will include an automatic answering feature, with date and time stamp recording, to answer calls when the phone is unattended. This hot-line telephone number will be posted at the project site during construction in a manner visible to passersby. This telephone number will be maintained until the beach placement activities have concluded.

Noise-3

Throughout the beach placement activities, the contractor will document, investigate, evaluate, and attempt to resolve construction-related noise complaints. The contractor or its authorized agent will:

- Use a Noise Complaint Resolution Form to document and respond to each noise complaint;
- Contact the person(s) making the noise complaint within 24 hours;
- Conduct an investigation to attempt to determine the source of noise related to the complaint; and
- Take reasonable measures to reduce the noise at its source.

Noise-4

The contractor will implement the following typical field techniques and equipment selection for reducing noise from construction activities, with the purpose of reducing aggregate construction noise levels at nearby noise-sensitive receptors:

- To the extent practical and unless safety provisions require otherwise, adjust all audible back-up alarms downward in sound level, reflecting vicinities that have expected lower background level, while still maintaining adequate signal-to-noise ratio for alarm effectiveness. Consider signal persons, strobe lights, or alternative safety equipment and/or processes as allowed, for reducing reliance on high-amplitude sonic alarms.
- At a minimum, equipment and vehicles used at the construction site will have intake and exhaust mufflers as factory installed or aftermarket as recommended by the manufacturers thereof, to help meet relevant noise limitations. Consider equipment acoustical upgrades, such as higher performing internal combustion engine exhaust mufflers and air filter/intakes, and engine hood/shroud/casing acoustical linings.
- Minimize equipment and vehicle engine idling time, as this will reduce the accumulation of sound energy over a typical hour of construction activity.
• Schedule intensive beach placement activity close to potentially impacted residential receivers when property owner/occupants may be temporarily away from the receptor locations (e.g., at work during usual business hours).