

4.11 Noise

4.11.1 Impact Criteria and Methodology

Noise impacts related to the proposed project are primarily associated with dredging and excavation activities. Marin County does not have a noise ordinance that addresses noise from construction type projects, nor are there any numerical criteria for construction type activities in the noise element of the countywide plan. The land use compatibility criteria in the noise element of the Marin countywide plan does, however, provide a general basis for evaluating the significance of project-related noise impacts. The existing noise element of the countywide plan sets a CNEL of 60 dBA as the upper end of the normally acceptable range for noise-sensitive land uses (residential, educational, health care, and neighborhood park land uses). In addition, the countywide plan has general policies stating that measures should be taken to minimize excessive noise from construction-related activities and temporary land uses. There is also a policy of coordinating with other public agencies to address noise impacts from public agency activities. If a county permit is required for a proposed use or activity, the Community Development Agency can set time-of-day limits on construction activities. Noise impacts have been assessed using the existing elements and plans described above as well as from the guidelines of the CEQA checklist.

Because the land use compatibility guidelines in the countywide plan assume relatively continuous noise exposure, some interpretation is required to relate the CNEL criteria to temporary activities, especially when those activities are limited to daytime hours. For purposes of this document, an average daytime noise level of 70 dBA or higher would indicate a significant noise impact on sensitive land uses when the noise source would not operate at night. When both daytime and nighttime operation of a noise source is anticipated, then a CNEL level of 60 dBA or more would indicate a significant noise impact.

Noise impacts associated with dredging, site clearing, and excavating on land have been evaluated by modeling anticipated noise levels as a function of distance from the noise-generating equipment. Noise from tugboats hauling barges to and from the ocean disposal site have not been modeled because the tugboats would be too far from shore to have any meaningful noise impact on noise-sensitive land uses.

4.11.2 Riparian Alternative

Significant but Mitigable Impacts

Impact 4.11.1: Noise from Dredging

Noise levels from the hydraulic dredge equipment have been estimated using data from dredging operations at the Port of Oakland (Corps and Port of Oakland 1998). Dredging equipment that would be used in Bolinas Lagoon probably would be smaller and less noisy than the equipment used at the Port of Oakland. Nevertheless, the noise

levels monitored at the Port of Oakland have been used to provide a conservative analysis.

Figure 4.11-1 illustrates estimated noise levels produced by a cutter head (suction) dredging system. Assuming that dredging occurs on a 24-hour basis, noise levels could exceed a CNEL of 60 dBA for locations within 2,000 feet of the dredge. The eastern end of Bolinas and portions of the Seadrift development would be within 2,000 feet of dredging operations for the Bolinas Channel, Main Channel, and South Arm Channel. There also would be some dredging in the Kent Island area, within 2,000 feet of the Seadrift residential development and housing and businesses in downtown Bolinas.

Because noise levels from dredging operations in the southern part of Bolinas Lagoon might produce CNEL levels above 60 dBA in the Seadrift development and in portions of Bolinas, this impact is considered potentially significant.

Mitigation 4.11.1: Noise mitigation opportunities should be reasonably available by selecting quieter running equipment and by providing supplemental noise shielding around engines and pumps. Noise level reductions of 10 dBA or more (compared to noise levels illustrated in Figure 4.11-1) should be possible by selecting dredging equipment that produces noise levels below 80 dBA at 50 feet or by installing acoustical shielding panels around the sides of engine and pump equipment on the dredge. Noise level specifications could be included in the project bid requests, and noise level testing could be required to determine the necessity for supplemental noise shielding when the dredge operates close to residential areas. If quieter equipment and supplemental noise shielding do not suppress noise in residential areas, then dredging operations could be limited to daytime for work that occurs close to noise-sensitive areas. Implementing measures such as these should reduce dredging noise impacts to a less than significant level but would increase dredging time and cost significantly.

Establishing equipment specifications and noise testing requirements would rest with MCOSED and the Corps. Implementing noise complaint monitoring procedures and follow-up actions would be the responsibility of MCOSED but could include cooperative arrangements with other local agencies.

Impact 4.11.2: Noise From Vegetation Clearing Activity.

Vegetation would be cleared at the Pine Creek Gulch delta and on Kent Island. Under the Riparian Alternative, most of the riparian vegetation areas along Pine Gulch Creek would be left in place. Somewhat more significant quantities of vegetation would be removed at Kent Island, the western side of which is as close as 150 feet from the buildings and residences of downtown Bolinas, although most of the Kent Island activities would be at least 500 feet from the shore of the lagoon. Figure 4.11-2 illustrates typical noise levels from vegetation clearing under the Riparian Alternative. This figure presents noise levels from vegetation clearing and vegetation mulching or

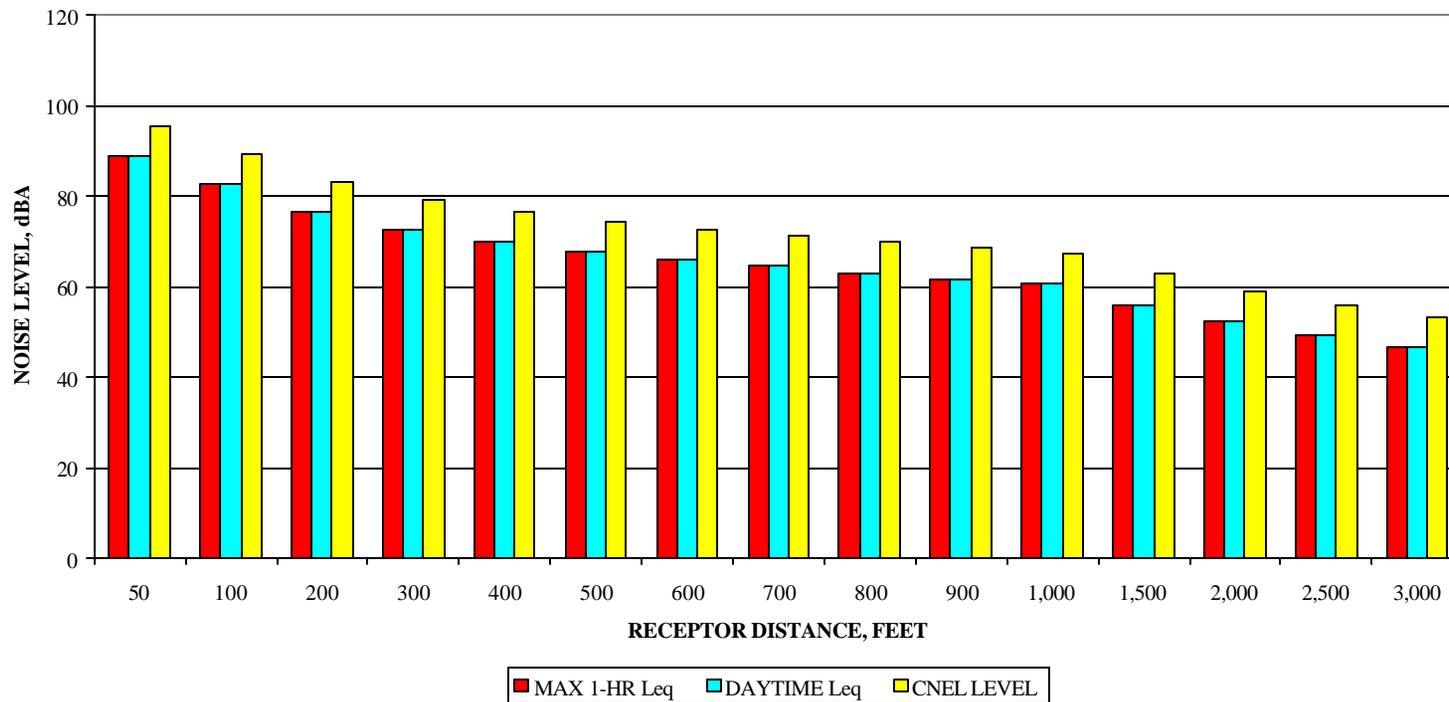


Figure 4.11-1 Suction Dredge Noise Impacts

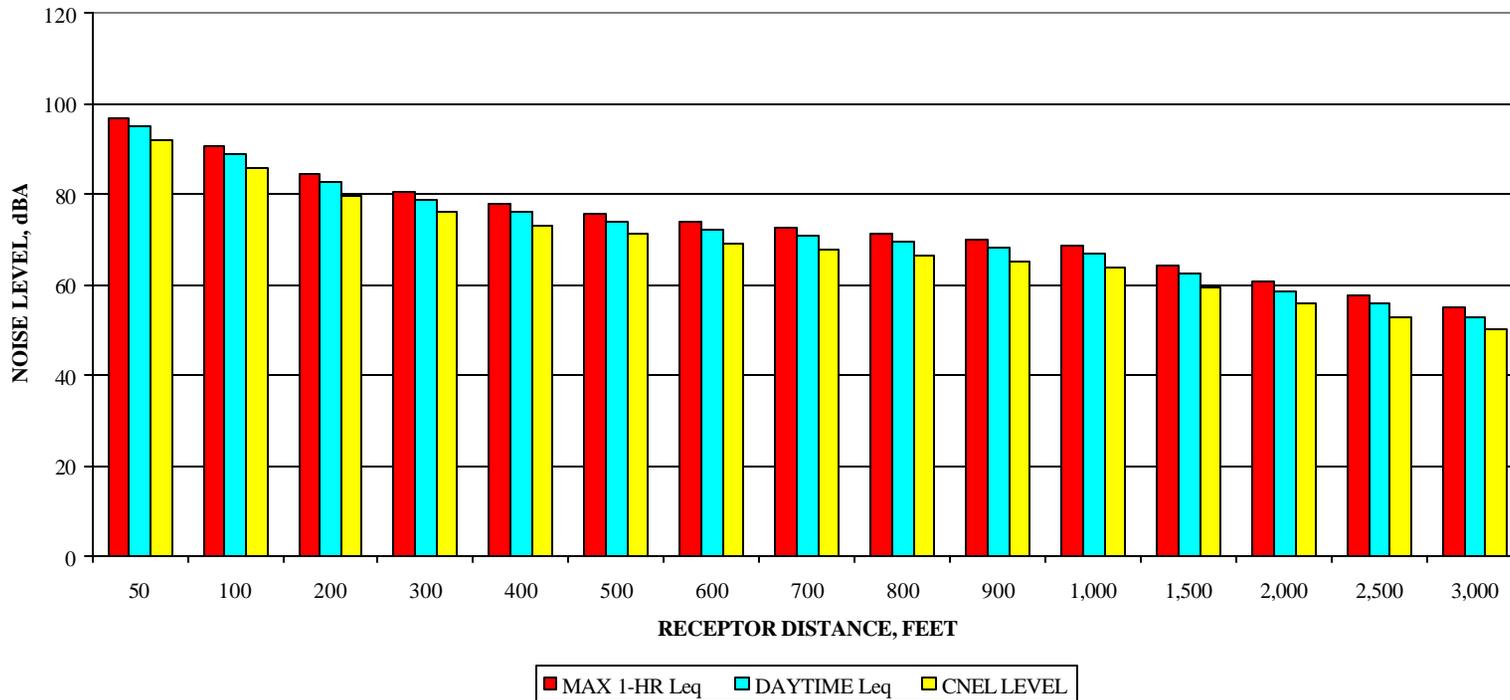


Figure 4.11-2 Vegetation Clearing Noise Impacts

chipping at Kent Island. Noise levels from vegetation clearing and mulching at the PGC Delta would be very similar. Noise levels would drop below the impact significance level of 70 dBA as an average daytime noise level at a distance of about 700 feet from the area of equipment operations. Few residential areas would be this close to the areas affected by vegetation clearing; consequently, this impact is considered less than significant.

Mitigation 4.11.2: In order to limit the impact on Bolinas of noise from vegetation clearing and mulching on Kent Island, such activities would be limited to daytime. Additionally the chipping equipment would be on the side of the island farthest from residences in Bolinas and Seadrift, in order to increase this distance from sensitive receptors. If at some point the chipping equipment were within 700 feet of noise-sensitive areas, the lead agencies would erect temporary noise shielding around the equipment. A three-sided configuration of noise shielding would probably be adequate, thus allowing access to the equipment while providing shielding in three directions.

Less Than Significant Impacts

Noise from Land-Based Excavation. Land-based excavation would occur at the Pine Creek Gulch Delta, various Highway 1 fill areas, and the Dipsea Road area under the Riparian Alternative. The most extensive excavation would occur at the PGC Delta. Figure 4.11-3 illustrates typical noise levels from land-based excavation at PGC Delta under the Riparian Alternative. Noise levels from excavation at the Highway 1 fill removal locations and at Dipsea Road would be similar. Noise levels would drop below the impact significance level of 70 dBA as an average daytime noise level at a distance of about 500 feet from the area of equipment operations. Few residential areas would be this close to the areas affected by vegetation clearing; consequently, this impact is considered less than significant.

4.11.3 Estuarine Alternative

The expected noise impacts from the Estuarine Alternative would be the same as those from the Riparian Alternative, although the construction period for PGC Delta would be longer as a result of the greater amount of vegetation and sediment to be removed.

4.11.4 No Action Alternative

The No Action Alternative would not involve any lagoon dredging or land-based excavations. Existing management plans and policies would remain in place. The only noise-generating activities associated with the No Action Alternative would be a continuation of annual gravel removal by MCOSD along the lower end of Pine Gulch Creek. This program involves the removal of about 1,000 cubic yards of gravel each year. Equipment and truck noise associated with this program would continue, but the scale of activities would be much smaller than those associated with either the Riparian Alternative or the Estuarine Alternative.

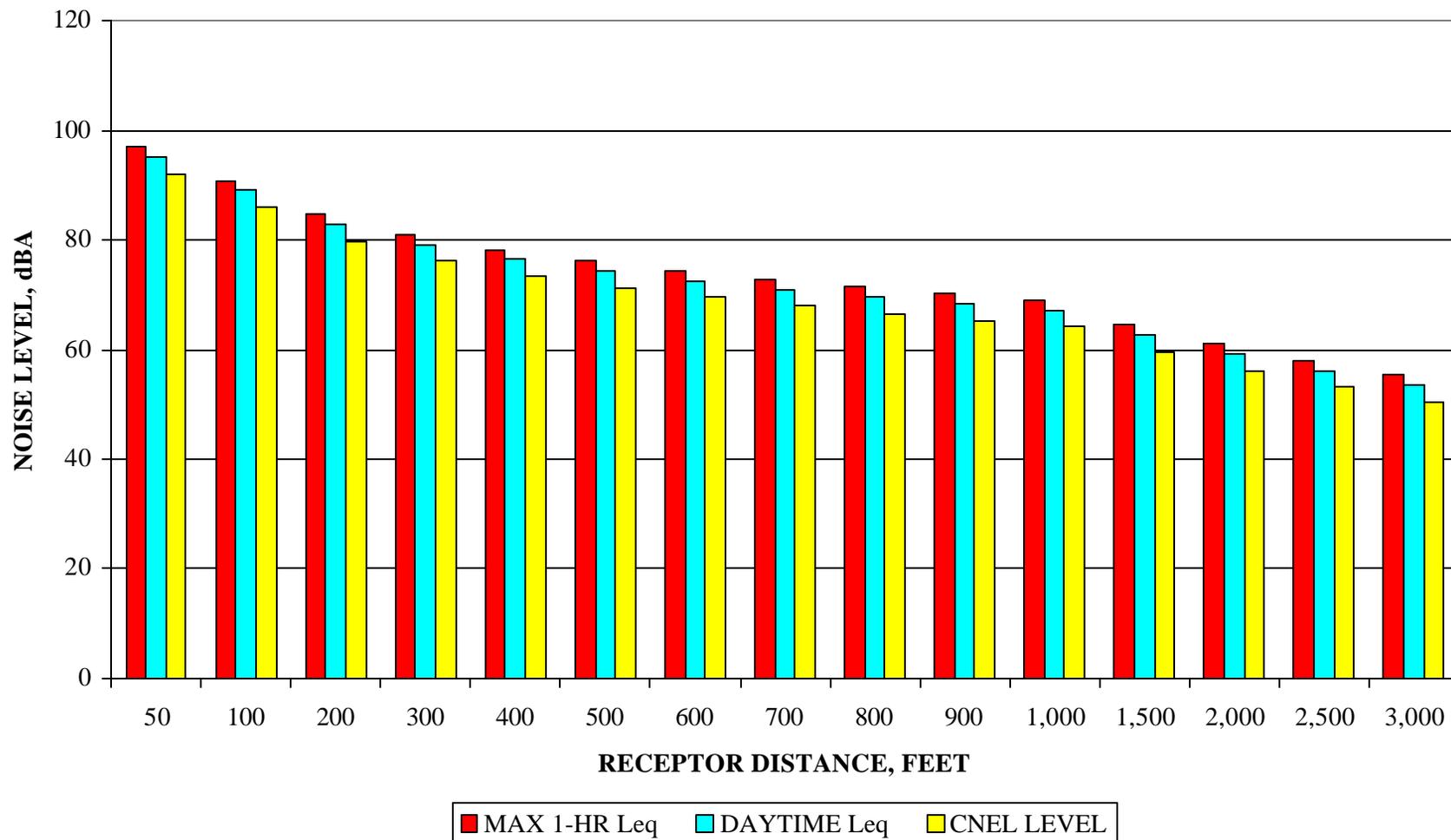


Figure 4.11-3 Upland Excavation Noise Impacts