

4.7.1 Introduction

This chapter describes the setting and potential impacts of noise associated with the implementation of the Proposed Program. This section begins with a brief discussion of noise terminology.

Overview of Noise Concepts and Terminology

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise can be defined as unwanted sound. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level is the most common descriptor used to characterize the loudness of an ambient sound level. The decibel (dB) scale is used to quantify sound intensity. Because sound pressure can vary enormously within the range of human hearing, a logarithmic scale is used to keep sound intensity numbers at a convenient and manageable level. The human ear is not equally sensitive to all frequencies in the entire spectrum, so noise measurements are weighted more heavily for frequencies to which humans are sensitive in a process called "A-weighting," written "dBA."

Different types of measurements are used to characterize the time-varying nature of sound. Below are brief definitions of these measurements and other terminology used in this chapter.

- **Sound** is a vibratory disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, can be detected by a receiving mechanism, such as the human ear or a microphone.
- **Noise** is sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Decibel (dB)** is a unitless measure of sound on a logarithmic scale, which indicates the squared ratio of sound pressure amplitude to a reference sound pressure amplitude. The reference pressure is 20 micro-pascals.
- **A-weighted decibel (dBA)** is an overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- **Maximum sound level (L_{max})** is the maximum sound level measured during the measurement period.
- **Minimum sound level (L_{min})** is the minimum sound level measured during the measurement period.

- 1 ■ **Equivalent sound level (L_{eq})** is the equivalent steady-state sound level that, in
- 2 a stated period of time, would contain the same acoustical energy as a time-
- 3 varying sound level during that same period of time.
- 4 ■ **Percentile-exceeded sound level (L_{xx})** is the sound level exceeded $x\%$ of a
- 5 specific time period. L_{10} is the sound level exceeded 10% of the time.
- 6 ■ **Day-night level (L_{dn})** is the energy average of the A-weighted sound levels
- 7 occurring during a 24-hour period, with 10 dB added to the A-weighted sound
- 8 levels during the period from 10:00 p.m. to 7:00 a.m.
- 9 ■ **Community noise equivalent level (CNEL)** is the energy average of the
- 10 A-weighted sound levels during a 24-hour period, with 5 dB added to the
- 11 A-weighted sound levels between 7:00 p.m. and 10:00 p.m. and 10 dB added to
- 12 the A-weighted sound levels between 10:00 p.m. and 7:00 a.m.

13 L_{dn} and CNEL values rarely differ by more than 1 dB. As a matter of practice, L_{dn} and CNEL

14 values are considered to be equivalent and are treated as such in this assessment. In

15 general, human sound perception is such that a change in sound level of 3 dB is just

16 noticeable, a change of 5 dB is clearly noticeable, and a change of 10 dB is perceived as

17 doubling or halving the sound level. Table 4.7-1 presents example noise levels for common

18 noise sources; the levels are measured adjacent to the source.

19 **TABLE 4.7-1. EXAMPLES OF COMMON NOISE LEVELS**

Source	Noise Level (dBA)
Weakest sound heard by average ear	0
Whisper	30
Normal conversation	60
Ringing telephone	80
Power lawnmower	90
Tractor	96
Hand drill	98
Bulldozer	105
Chain saw	110
Ambulance siren	120
Jet engine at takeoff	140
12-gauge shot gun blast	165

Source: National Institute of Safety and Health, 2009

20 **4.7.2 Regulatory Setting**

21 ***Federal***

22 No federal, plans, policies, regulations or ordinances related to noise are applicable to the

23 Proposed Program.

1 **State**

2 The State of California General Plan Guidelines published by the Governor's Office of
3 Planning and Research (2003) provides guidance for the acceptability of different land uses
4 within specific L_{dn} /CNEL contours to assist local agencies in their preparation of general
5 plan noise elements. This guidance is provided in Table 4.7-2. However, it is the
6 responsibility of each local agency, county, or municipality to incorporate these or other
7 noise standards.

8 **Local**

9 A general plan is a legal document required by state law which includes specific goals,
10 policies, standards, and/or implementation programs that constitute the formal policy of
11 the County or municipality for land use, development, and environmental quality. California
12 Government Code Section 65302(f) requires that cities and counties include a noise element
13 in their general plans. The purpose of the noise element is to provide a guide for
14 establishing a pattern of land uses that minimizes the exposure of community residents to
15 excessive noise.

16 The general plan noise standards may vary throughout the state, depending on local
17 conditions and adopted policies. As an example of such policies, Yuba County's General Plan
18 noise objectives and standards are described in Tables 4.7-3 and 4.7-4.

19 Table 4.7-3 depicts the noise objectives contained within the Noise Element of Yuba
20 County's General Plan. As shown, the ordinance provides recommended maximum ambient
21 noise levels for several land use categories, including recreational areas. Recommendations
22 are made for both day and night conditions.

23 Building upon the General Plan, the County adopted ordinance provisions to control
24 unnecessary, excessive and annoying noise and vibration. Chapter 8.29 of the County's
25 Ordinance Code describes noise policies. The ordinance provides definitions and thresholds
26 for noise, and describes special provisions and enforcement of violations. Table 4.7-4
27 illustrates the County's established baselines and thresholds for noise. In addition, the Yuba
28 County noise ordinance also contains specific regulations on machinery, equipment, fans,
29 and air conditioning noise:

30 **Section 8.20.260 Machinery, Equipment, Fans, and Air Conditioning**

31 *It shall be unlawful for any person to operate any machinery, equipment, pump,*
32 *fan, air conditioning apparatus, or similar mechanical device in any manner as*
33 *to create any noise which would cause the noise level at the property plane of*
34 *any property to exceed the ambient noise level by more than five (5) decibels.*
35 *(#1094)*

1 **TABLE 4.7-2. STATE LAND USE COMPATIBILITY STANDARDS FOR COMMUNITY NOISE ENVIRONMENT**

Land Use Category	Community Noise Exposure - L _{dn} or CNEL (db)						
	50	55	60	65	70	75	80
Residential – Low Density Single Family, Duplex, Mobile Homes	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential - Multi-Family	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Transient Lodging – Motels, Hotels	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Schools, Libraries, Churches, Hospitals, Nursing Homes	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Auditoriums, Concert Halls, Amphitheaters	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Sports Arenas, Outdoor Spectator Sports	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Playgrounds, Neighborhood Parks	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Golf Courses, Riding Stables, Water Recreation, Cemeteries	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Office Buildings, Business Commercial and Professional	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Industrial, Manufacturing, Utilities, Agriculture	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable

	Normally Acceptable	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
	Conditionally Acceptable	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
	Normally Unacceptable	New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
	Clearly Unacceptable	New construction or development generally should not be undertaken.

2 *Source: California Governor's Office of Planning and Research, 2003*

3

1 **TABLE 4.7-3. RECOMMENDED AMBIENT ALLOWABLE NOISE LEVEL OBJECTIVES**

Land Use Category	7 a.m. - 10 p.m. (day)	10 p.m.-7 a.m. (night)
Low-density residential	50	50
Multi-family residential	55	50
Schools	45	45
Retail/commercial	60	55
Passive recreation	45	45
Active recreation	70	70
Hospitals/mental health facilities	45	40
Agriculture	50	50
Neighborhood commercial	55	55
Professional office	55	55
Light manufacturing	70	65
Heavy manufacturing	75	70

2 *Source: Yuba County, 1994*3 **TABLE 4.7-4. YUBA COUNTY NOISE REGULATIONS**

Zone	Time Period	Ambient Level	Maximum Permissible Noise Levels (dBA)
Single-family residential	10 p.m. - 7 a.m.	45	55
	7 p.m. - 10 p.m.	50	60
	7 a.m.- 7 p.m.	55	65
Multi-family residential	10 p.m. - 7 a.m.	50	60
	7 a.m. - 10 p.m.	55	65
Commercial- Business and Professional	10 p.m. - 7 a.m.	55	65
	7 a.m.- 10 p.m.	60	70
General Industrial (M-1)	anytime	65	75
Extractive Industrial (M-2)	anytime	70	80

4 *Yuba County Ordinance 8.20.140 - Ambient Base Noise Level*5 **4.7.3 Environmental Setting**

6 This section discusses the existing noise conditions in the Program Area.

7 ***Noise Sensitive Land Uses***

8 Sensitive receptors in the Program Area include areas where people reside and/or
9 participate in recreational activities which can be disrupted by unwanted noise. Areas that
10 are adjacent to rivers and waterways where suction dredging activities take place may
11 contain potential sensitive receptors to noise generation.

1 Given the extent of the Program Area, it is not plausible to identify the specific
2 characteristics of every location that may be affected by the Program; however, a brief
3 generalization of existing noise sensitive areas is provided below.

4 Recreational Camping and Activity Sites

5 Public parks and campgrounds, and a number of privately owned and operated
6 campgrounds, may be located adjacent to areas where Program activities could occur. There
7 is a wide range of facility types that may be used by suction dredge miners or located within
8 hearing distance of suction dredge activities.

9 One end of the spectrum for camp or recreation sites may include remote, undeveloped
10 areas where the only means of access is non-motorized. In these locations, motorized
11 activity of any type is minimal, as it is difficult to transport heavy equipment in these
12 conditions. Facilities such as showers/restrooms and designated camp lots in these types of
13 areas are generally non-existent. Often, one can go for long periods of time without seeing
14 many other individuals recreating in this type of setting. Ambient noise levels are
15 predominantly characterized by the sounds of the natural environment.

16 As the inverse, highly-developed campgrounds and recreation facilities are also located
17 within the Program Area. These types of areas may be fully accessible with areas for motor-
18 home type camping or include more sheltered cabin or dorm structures. In addition,
19 designated trails, boat or water equipment launching sites, restroom/shower areas, dining
20 facilities, and other amenities may be available. Crowded conditions may be commonplace
21 and may reach extreme conditions during peak seasons. In these areas, ambient noise is
22 influenced by human activities and may fluctuate seasonally.

23 The majority of recreation sites in the Program Area are comprised of components from
24 both the highly-developed and highly-undeveloped facility characteristics described above.
25 The level of accessibility and types of amenities provided often dictate ambient noise levels,
26 and characteristics (i.e., sources).

27 Residential Areas

28 Land uses surrounding the areas where Program activity could take place might include
29 adjacent residential neighborhoods and homes. Residents in less-developed areas are
30 potentially the most sensitive noise receptors within the Program Area, as noise from
31 adjacent waterway activities may be the only significant human activity noise sources
32 affecting these properties. Unlike recreational land uses, which are made up of transient
33 user groups, residences are permanent dwellings. Residents are thus unable or less able to
34 avoid noise from adjacent land uses.

35 The degree to which sound reaches residents from adjacent areas depends on the type of
36 activity being conducted, distance to residence, and the building materials of the home.
37 Though many counties and cities impose a minimum building setback from waterways to
38 protect life and property, residences may still be subject to loud or continuous noise from
39 area users.

1 Sensitivity

2 An individual's reaction to noise is determined by both the noise itself as well as the
3 environment in which the noise occurs. Individuals accustomed to noisy environments or
4 uses of such equipment are less likely to consider engine noise to be intrusive than those
5 who are not. Likewise, the use of suction dredging equipment in areas with low ambient
6 noise levels is more likely to be considered disruptive than usage in areas where noise
7 levels are normally high.

8 **Existing Conditions**

9 As previously mentioned, ambient noise near waterways and recreational areas vary
10 greatly due to local conditions. Many variables, including degree of development (rural vs.
11 urban), proximity and size of nearby transportation facilities (airports, highways,
12 roadways), and the size and characteristics of the waterway itself, can all contribute to the
13 ambient noise level of the area.

14 A monitoring study of river recreation areas for the El Dorado County River Management
15 Plan Update Draft EIR (1998) is useful in describing typical noise conditions near rivers. To
16 quantify typical noise levels along the South Fork of the American River, continuous hourly
17 noise level measurements were conducted at four sites along the river; near a resort, at a
18 boat launch area, across from a bed-and-breakfast facility, and at an adjacent residence. In
19 addition, short-term noise measurements of local water activities (kayaking, rafting) were
20 taken at a popular turnout.

21 As stated by El Dorado County, the South Fork of the American River is characterized as
22 being a medium- to low-density developed area. Land uses include a mix of commercial,
23 residential, industrial, agricultural, and recreational uses. Commercial rafting outfitters and
24 small businesses are scattered among private residences and small mining and rock
25 harvesting operations (El Dorado County, 1998). It is important to note that the report
26 focused primarily on non-motorized water recreation. Recorded engine noise was
27 associated with vehicle activity getting to and from the sites.

28 The noise survey indicated that typical hourly noise levels in the monitoring area was in the
29 range of 50-65 dB L_{eq} . According to the data, noise due to water flow was generally in the
30 range of 48-50 dB. While this is not meant to definitively characterize the entire Program
31 Area, it does provide a general baseline for ambient noise levels where suction dredging
32 would occur. (El Dorado County, 1998)

33 This information supports the noise thresholds identified in previous reports as discussed
34 in the Literature Review (CDFG, 2009). A 1979 report (Harris, 1979) provided a reference
35 for ambient noise levels associated with natural and wild land settings, which were cited as
36 varying from 25 dB (quiet wetlands) to 75 dB (developed recreation areas). The upper
37 threshold limit identified in the 1979 report is still plausible in recreation areas which
38 experience motorized activity (boats, all-terrain vehicles [ATVs], etc).

39 **4.7.4 Impact Analysis**

40 The methodology described below accounts for activities conducted in accordance with the
41 proposed regulations contained in Chapter 2. Additional or more extensive impacts related

to noise may result for those suction dredge activities requiring notification under Fish and Game Code section 1602. Notification is required for the following activities:

- Use of gas or electric powered winches for the movement of instream boulders or wood to facilitate suction dredge activities;
- Temporary or permanent flow diversions, impoundments, or dams constructed for the purposes of facilitating suction dredge activities;
- Suction dredging within lakes; and
- Use of a dredge with an intake nozzle greater than 4 inches in diameter.

A general description of how such activities requiring Fish and Game Code section 1602 notification would deviate from the impact findings are described at the end of the impact section below.

Findings of 1994 Environmental Impact Report

The 1994 EIR did not make specific findings in this environmental resource area. Instead, noise-related effects were generally discussed as a component of “*Impacts on Recreational Opportunities.*” Noise associated with suction dredge activities were generally found to detract from the enjoyment of other recreational users in the vicinity. Such conflicts between recreational users were cited as being outside of the jurisdiction of CDFG and were only discussed in the report for informational purposes. Furthermore, the report concluded that suction dredging is a legitimate recreational activity and is afforded equal rights to use public lands to participate in the activity, so long as it is done in a legal manner.

Methodology

To assess potential noise effects, activities associated with the Program that have a potential to generate noise have been identified as shown below.

Program Noise Sources

Noise associated with Program activities is primarily associated with the use of engines to power the dredge equipment. Noise levels generated by individual suction dredging operations would be dependent on the size and power of the engine and equipment being used. Little information is available on the noise emissions from suction dredge equipment; however the U.S. EPA (1971) identified the following noise levels associated with the operation of small horsepower engines:

TABLE 4.7-5. GENERAL NOISE LEVELS OF SMALL HP ENGINES

Engine HP	Decibel Level at 50 feet
20	76
15	75
10	73
8	72
6	71
5	70

U.S. EPA, 1971

1 When evaluating the noise effects of multiple sources, typically the loudest source
2 dominates. For two sources that are very close in noise level, they can combine to produce
3 a slightly higher noise level. However, for the purposes of this analysis, it is assumed that
4 the loudest noise source is generally what is heard and has the greatest impact on the noise
5 environment.

6 Other noise sources could include equipment use at encampments, such as electrical
7 generators. However, these noise emitting devices are not required to conduct suction
8 dredge activity. Instead, they are optional components of recreation and are common to
9 many other types of recreational activities. Therefore, the noise levels associated with the
10 use of such equipment were not quantified, but are anticipated to be similar to the noise
11 levels outlined above.

12 Due to the overall size of the Program Area and the diverse range of ambient noise levels,
13 potential noise effects are discussed qualitatively at a program level of detail.

14 ***Criteria for Determining Significance***

- 15 ■ For the purposes of this analysis, the Proposed Program would result in a
16 significant impact if it would: expose persons to or generate noise levels in
17 excess of standards established in the local general plan or noise ordinance, or
18 applicable standards of other agencies; or
- 19 ■ Result in a substantial temporary or periodic increase in ambient noise levels in
20 the project vicinity above levels existing without the project.

21 Other noise impacts were eliminated from further consideration in the Initial Study and are
22 not discussed further here.

23 **4.7.5 Environmental Impacts**

24 ***Impact NZ-1: Exposure of the Public to Noise Levels in Excess of City or County*** 25 ***Standards (Significant and Unavoidable)***

26 Suction dredging activities typically require the use of noise-generating equipment. The
27 level of noise emissions is related to the size, type, and number of equipment being used,
28 though the potential for exceeding noise standards depends on the local ordinances
29 applicable to the particular site. The smallest engine shown in Table 4.7-5 (5 HP), generate
30 70 db at 50 feet, which would be in excess of many local noise standards, which typically
31 have limits ranging between 60-70 db. That said, numerous other activities may occur in
32 similar settings which also use powered-equipment (i.e. use of a motor boat, ATVs, etc.) and
33 have potential to violate these standards. Even equipment regularly used in residential
34 areas, (eg. ringing telephones and lawn mowers) violates these standards.

35 Suction dredging activities have potential to generate noise in excess of local noise
36 standards, which would be a significant impact. However, the Program does not authorize
37 permittees to use their equipment in a manner which violates any existing laws, including
38 the creation of noise in excess of existing standards. As such, all recreationists using noise-
39 generating equipment, including suction dredge miners, are equally required to abide by

1 local noise ordinances. Violations can be reported at any time to the local authorities who
 2 have the jurisdiction to enforce applicable regulations as appropriate.

3 Even though local noise standards are outside of the scope of the Program to enforce, the
 4 impact cannot be discounted. Therefore, this impact is considered to be significant and
 5 unavoidable.

6 **Impact NZ-2: Result in a Temporary Increase in Noise Above Ambient Levels (Less than**
 7 **Significant)**

8 As previously noted, gasoline-powered engines are a primary component of suction dredge
 9 equipment. The operation of such noise-generating equipment in the existing environments
 10 of the surrounding recreational areas could result in a perceptible increase in noise.
 11 Although noise generated from these engines does not differ from those used in motorized
 12 boats or other motorized recreational equipment, the manner in which it is operated may
 13 distinguish suction dredging from other activities. As described in Chapter 3, suction
 14 dredge activities are generally stationary and equipment is often operated for extended
 15 periods throughout the day (just over 5 hours per day on average for both California
 16 resident and non-California resident permit holders [Suction Dredger Survey results,
 17 Appendix F]).

18 The extent to which the noise from suction dredging is perceptible is variable based on the
 19 ambient noise environment, which is affected by the other uses in the vicinity and the noise
 20 generated by the river itself. As previously shown in Table 4.7-5, noise levels of small
 21 horsepower engines are typically within the range of 70 dBA at close proximity (50 ft).
 22 Table 4.7-6 below further illustrates the estimated noise level associated with a 5 and 20 HP
 23 engine and distance from the source. Smaller engines generate somewhat lower noise
 24 levels (see Table 4.7-5).

25 **TABLE 4.7-6. ESTIMATED NOISE LEVELS AND DISTANCE USING A 5 AND 20 HP ENGINE**

Distance between Source and Receiver (ft)	Estimated Sound Level, Leq (dBA) with 5 HP Engine	Estimated Sound Level, Leq (dBA) with 20 HP Engine
50	70.0	76.0
100	68.3	74.3
200	64.9	70.9
300	61.6	67.6
400	58.2	64.2
500	54.8	60.8
600	51.5	57.5
700	48.1	54.1
800	44.7	50.7
900	41.4	47.4
1,000	38.0	44.0

26 *U.S. EPA, 1971*

27 Given that the general baseline of noise associated with water flow is within the range of
 28 48-50 dB L_{eq} (El Dorado County, 1998), at close range and without any other noise

1 contributors, suction dredge activities would be highly evident above the river noise. That
 2 said, the degree to which noise from suction dredging operations are perceptible is highly
 3 dependent on the existing ambient noise levels.

4 As the distance between the receptor and the engine source becomes greater, the estimated
 5 sound level observed from the dredging equipment decreases. As a conservative example,
 6 the estimated sound level from a 20 HP engine at a distance of 100 ft is approximately 74
 7 dBA, which generally decreases by 10 dBA for every additional 300 ft. Therefore, in highly
 8 developed recreation areas where ambient noise levels can reach 75 dB (Harris, 1979),
 9 noise associated with the use of a 20 HP engine would not be highly noticeable beyond 100
 10 ft of the suction dredge activity. This relationship is illustrated in the Figure 4.7-1, below.

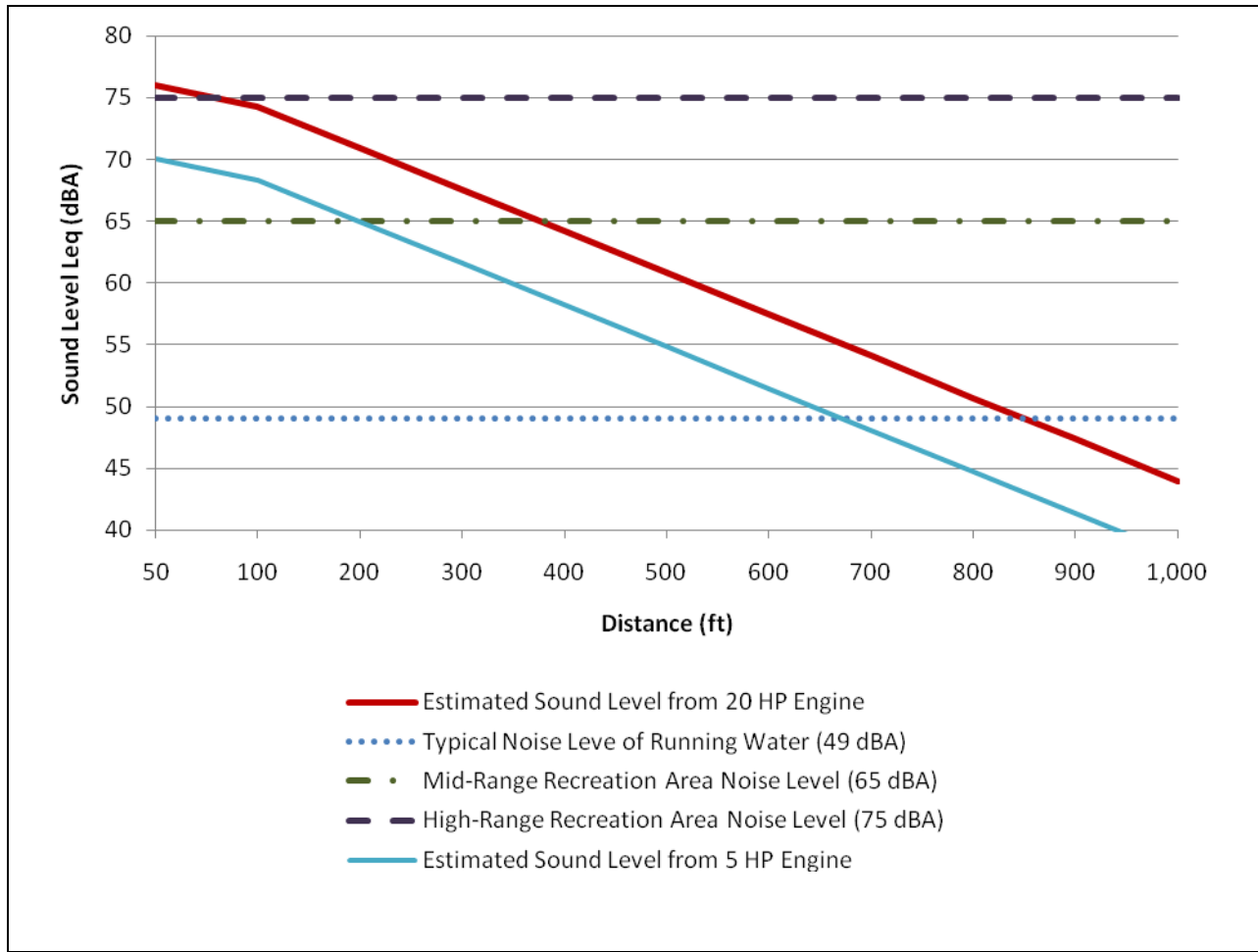


FIGURE 4.7-1. RELATIONSHIP BETWEEN NOISE LEVELS, DISTANCE, AND AMBIENT NOISE

11 Based on the assumption that typical ambient noise levels in recreation areas where suction
 12 dredging would occur are in the range of 50-65 dB Leq (El Dorado County, 1998), noise
 13 associated with suction dredge equipment would remain within 3 dBA (just perceptible)
 14 within 300-700 ft of the activity location. Beyond 700 ft of the source, suction dredging
 15 noise would not be highly evident.

1 Therefore, engine noise is expected to be most apparent within 700 ft of suction dredging
2 locations, and although temporary, this stationary source of noise may affect sensitive
3 receptors. Receptors, both permanent (residents) and temporary (recreationists), are
4 anticipated to experience varying levels of sensitivity towards the activity, partially guided
5 by the relative increase in ambient noise level and/or duration of exposure. Sensitivity may
6 be attributable to their personal views of the activity, their goals for recreation, and the
7 importance that is attached to the existing ambience. For example, other Program
8 participants may not notice one another while recreating in the same river location, though
9 a hiker seeking a quiet nature experience may find the noise of an engine out in the distance
10 (beyond 1,000 ft) extremely disruptive.

11 Another potential source of noise generation associated with suction dredge activities is the
12 use of generators for power at remote camp locations. However, this type of equipment is
13 commonly used by campers in general, and noise generated specifically from suction dredge
14 miners would not be substantially different or greater than that generated by other
15 campers.

16 In summary, suction dredging would cause temporary increases in noise above ambient
17 levels. The degree of increase would be highly dependent upon the ambient noise
18 environment and distance from the suction dredging activity. It is likely that in certain
19 instances, this increase would have the potential to adversely affect receptors, particularly
20 those sensitive to increases in noise (e.g., residents, those seeking a quiet nature
21 experience). However, this impact is not considered substantial overall due to the relatively
22 small number of instances where these impacts are anticipated to occur, given the relatively
23 small number of dredgers statewide, and the numerous other sources of noise that can be
24 found in the riverine environment. This impact is therefore considered to be less than
25 significant.

26 ***Activities Requiring Fish and Game Code Section 1602 Notification***

27 Activities requiring notification under Fish and Game Code section 1602 are likely to result
28 in additional noise disturbances associated with the larger engine sizes used to power
29 dredges equipped with nozzle sizes greater than 4 inches. However, the discussion above
30 for Impact NZ-2 includes analysis of engines sizes up to 20 HP, which likely encompasses
31 the entire range of engine sizes used to power the vast majority of dredge operations,
32 including those requiring 1602 notification. As described in the impact section above, such
33 effects are considered to be less than significant and no further discussion is required for
34 operations using engines powered up to 20 HP. However, noise effects associated with the
35 proposed use of engines above 20 HP may contribute to additional adverse effects. The
36 extent to which they could be significant would need to be evaluated in a CEQA analysis.

37 Similarly, the use of engines associated with winching equipment could introduce additional
38 noise emissions beyond the scope of the analysis provided in this SEIR. Even if the proposed
39 activity employs engines with no greater than 20 HP, the use of multiple engines may
40 increase noise emissions at the dredging location. Furthermore, dredging in lakes could
41 result in greater effects on sensitive receptors as such areas generally exhibit lower ambient
42 noise levels, whereby engine noise would be more readily apparent and disruptive.
43 Therefore, such activities requiring notification under Fish and Game Code section 1602

1 may contribute to additional adverse effects. The extent to which they could be significant
2 would need to be evaluated in a CEQA analysis.