

## 12. NOISE

### 12.1 Introduction

Because sound is a fundamental component of daily life, noise-monitoring surveys were conducted in and around the communities of Iliamna, Newhalen, Pedro Bay, and Nondalton (Figure 1-4 in Chapter 1, Table 12-1 below) to describe baseline noise levels and to characterize the existing noise environment.

All noise measurements were taken in accordance with guidelines from the American National Standards Institute (ANSI). Noise levels are stated in terms of decibels on the A scale (dBA). Examples of familiar sounds are shown in Table 12-2.

### 12.2 Results

While some sounds (e.g., floatplane takeoffs) registered very high on the dBA scale, these were only of short duration. A more useful measurement averages all sounds over a given period, e.g., an hour; therefore, the results below are reported in average hourly noise levels.

Overall, average noise levels in the four communities ranged from below 30 dBA to 63 dBA. Average noise levels on Newhalen River Road north of the Iliamna Airport ranged from 34 to 54 dBA, with noise near the airport ranging from 37 to 61 dBA. The average noise levels at the Iliamna post office, near the community medical center, ranged from 27 to 60 dBA. Noise levels near the Iliamna general store and along the shore of Iliamna Lake ranged from 32 to 62 dBA, with the highest averaged noise levels measured near the general store.

Noise levels in Newhalen ranged from 33 to 63 dBA, with the highest levels near the school. In Pedro Bay, noise levels ranged between 32 and 49 dBA. Measured wintertime noise levels in Nondalton ranged from below 30 to 51 dBA.

Overall, the measured noise levels in all four communities, and along the connecting roadways, were very similar to each other and to noise data taken in other parts of Alaska. Noise levels are in the range expected for rural areas with low population. Major noise sources included floatplanes, fixed-wing aircraft, helicopters, vehicle traffic including snow machines during winter and ATVs during summer, general construction and maintenance equipment, residential and community activities, birds, and wind. Some of the highest noise levels measured were the separate, short-term reference measurements of takeoffs by floatplanes, which ranged from 90 to over 100 dBA (classified as very loud to uncomfortably loud) along the waterfront in Iliamna.



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**TABLE 12-1**  
**Sound Survey Locations, Number of Sites, and Survey Dates**

<b>Location</b>	<b>No. of Sites</b>	<b>Dates</b>
Newhalen River Road	2	Winter: March 7, 2005 Summer: August 8 & 9, 2005
Iliamna Airport	1	Winter: March 7 & 8, 2005 Summer: August 9 & 10, 2005
Iliamna	3	Winter: March 8 – 10, 2005 Summer: August 8 & 10, 2005
Between Iliamna and Newhalen	1	Winter: March 7 & 8, 2005 Summer: August 9 & 10, 2005
Newhalen	2	Winter: March 8 & 9, 2010 Summer: August 9 & 10, 2005
Pedro Bay	4	Winter: March 8, 2005 Summer: August 11, 2005
Nondalton <sup>a</sup>	2	Winter: February 22 & 23, 2007

Note:

a. Wintertime survey only

**TABLE 12-2**  
**Typical Noise Sources and Equivalent dBA**

<b>Noise Source</b>	<b>Sound Level (dBA)</b>	<b>Subjective Impression</b>
Recording studio	20	Just audible to very quiet
Soft whisper, library	30	Very quiet
Bedroom, bird calls	40	Very quiet to quiet
Light auto traffic (50 ft)	50	Quiet
Typical office	60	Quiet
Vacuum cleaner (10 ft)	70	Quiet to moderately loud
Garbage disposal (3 ft)	80	Moderately loud
Heavy truck / motorcycle (50 mph at 50 ft)	90	Moderately loud to very loud
Jet takeoff (2,000 ft)	100	Very loud
Float plane takeoff (100 ft)	110	Very loud to uncomfortably loud

Sources:

Beranek, Leo L. 1988. Noise and Vibration Control. Revised edition. Cambridge, Massachusetts: Institute of Noise Control Engineering.

U.S. Environmental Protection Agency, Office of Noise Abatement and Control. 1971. Transportation Noise and Noise from Equipment by Internal Combustion Engines. Washington DC. December.



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Pedro Bay power plant as viewed from the school-ground play area.



Noise monitoring site in a Newhalen residential area.