



Pre-Permitting Environmental / Socio-Economic Data Report Series

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# Report Series K- Noise

## Report K-2 Measured Noise Levels 2004-2007

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*Preliminary data. Do not cite or quote.*

The Pebble Partnership is providing environmental and socio-economic baseline data collected to inform the development of the Pebble Project to state and federal agencies, project stakeholders and the general public prior to project permitting as part of its commitment to full and open disclosure.

A comprehensive Environmental Baseline Document (EBD) will subsequently be prepared and appended to future project permit applications. The EBD will also be made publicly available when complete.

Collected for the Pebble Partnership by:



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TABLE K-2  
M1 North Newhalen River Road, Measured Noise Levels (in dBA)

	Daytime Levels <sup>1</sup>				Evening Levels <sup>2</sup>				Nighttime Levels <sup>3</sup>			
	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>
<b>Summer</b>	41	45	63	24	42	48	78	— <sup>(4)</sup>	43	50	81	— <sup>(4)</sup>
<b>Winter</b>	38	41	65	— <sup>(4)</sup>	36	38	56	— <sup>(4)</sup>	34	38	69	— <sup>(4)</sup>

Notes:

1. Daytime is 7:00 a.m. to 7:00 p.m.
2. Evening is 7:00 p.m. to 10:00 p.m.
3. Nighttime is 10:00 p.m. to 7:00 a.m.
4. Minimum short-term noise level of 30 dBA or less

TABLE K-3  
M2 Central Newhalen River Road, Measured Noise Levels (in dBA)

	Daytime Levels <sup>1</sup>				Evening Levels <sup>2</sup>				Nighttime Levels <sup>3</sup>			
	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>
Summer	54	58	77	29	40	43	61	23	42	45	58	— <sup>(4)</sup>
Winter	45	50	73	— <sup>(4)</sup>	37	41	70	— <sup>(4)</sup>	39	44	70	— <sup>(4)</sup>

Notes:

1. Daytime is 7:00 a.m. to 7:00 p.m.
2. Evening is 7:00 p.m. to 10:00 p.m.
3. Nighttime is 10:00 p.m. to 7:00 a.m.
4. Minimum short-term noise level of 30 dBA or less

TABLE K-4  
M3 Iliamna Airport near Iliamna Air Taxi Terminal, Measured Noise Levels (in dBA)

	Daytime Levels <sup>1</sup>				Evening Levels <sup>2</sup>				Nighttime Levels <sup>3</sup>			
	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>
<b>Summer</b>	57	62	97	39	47	55	67	— <sup>(4)</sup>	37	44	70	29
<b>Winter</b>	61	66	88	35	56	60	80	— <sup>(4)</sup>	52	57	69	— <sup>(4)</sup>

Notes:

1. Daytime is 7:00 a.m. to 7:00 p.m.
2. Evening is 7:00 p.m. to 10:00 p.m.
3. Nighttime is 10:00 p.m. to 7:00 a.m.
4. Minimum short-term noise level of 20 dBA or less

TABLE K-5  
M4 Iliamna Post Office and Community Medical Clinic, Measured Noise Levels (in dBA)

	Daytime Levels <sup>2</sup>				Evening Levels <sup>3</sup>				Nighttime Levels <sup>4</sup>			
	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>
<b>Summer</b> <sup>1</sup>	44- 60	48- 62	65- 84	21-22	46- 52	51- 56	70- 78	21	27- 51	25- 53	52- 79	— <sup>(5)</sup>
<b>Winter</b> <sup>1</sup>	48- 60	50- 58	70- 91	— <sup>(5)</sup> -37	46	45- 50	66- 74	— <sup>(5)</sup>	32- 46	32- 49	53- 68	— <sup>(5)</sup>

Notes:

1. Range of noise levels from 23- and 25-hour monitoring sessions plotted on Figures 12-7 and 12-8, respectively
2. Daytime is 7:00 a.m. to 7:00 p.m.
3. Evening is 7:00 p.m. to 10:00 p.m.
4. Nighttime is 10:00 p.m. to 7:00 a.m.
5. Minimum noise level of 20 dBA or less

TABLE K-6  
M5 North Newhalen, Measured Noise Levels (in dBA)

	Daytime Levels <sup>1</sup>				Evening Levels <sup>2</sup>				Nighttime Levels <sup>3</sup>			
	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>
<b>Summer</b>	48	52	70	— <sup>(4)</sup>	41	53	27	— <sup>(4)</sup>	37	43	66	29
<b>Winter</b>	42	46	70	29	42	46	68	32	33	36	57	— <sup>(4)</sup>

Notes:

1. Daytime is 7:00 a.m. to 7:00 p.m.
2. Evening is 7:00 p.m. to 10:00 p.m.
3. Nighttime is 10:00 p.m. to 7:00 a.m.
4. Minimum short-term noise level of 30 dBA or less

TABLE K-7  
M6 Newhalen School, Measured Noise Levels (in dBA)

	Daytime Levels <sup>2</sup>				Evening Levels <sup>3</sup>				Nighttime Levels <sup>4</sup>			
	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>
<b>Summer</b> <sup>1</sup>	40- 59	44- 65	63- 88	26- 29	50- 59	55- 63	78- 88	27- 28	40- 57	36- 60	65- 85	26- 29
<b>Winter</b> <sup>1</sup>	53- 59	53- 63	73- 89	30- 36	55- 61	57- 64	78- 87	33- 39	51- 63	54- 65	69- 91	31- 46

Notes:

1. Range of noise levels from 23-hour (summer) and 31-hour (winter) monitoring sessions plotted on Figures 12-10 and 12-9, respectively
2. Daytime is 7:00 a.m. to 7:00 p.m.
3. Evening is 7:00 p.m. to 10:00 p.m.
4. Nighttime is 10:00 p.m. to 7:00 a.m.

TABLE K-8  
M7 Roadhouse Bed and Breakfast, Measured Noise Levels (in dBA)

	Daytime Levels <sup>2</sup>				Evening Levels <sup>3</sup>				Nighttime Levels <sup>4</sup>			
	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>
<b>Summer</b>	48	54	84	21	40	42	73	24	36	39	66	— <sup>(5)</sup>
<b>Winter<sup>1</sup></b>	30- 42	34- 43	43- 66	— <sup>(5)</sup>	32- 42	32- 35	55- 66	— <sup>(5)</sup>	30- 39	— <sup>(5)</sup>	43- 64	— <sup>(5)</sup>

Notes:

1. Winter data are the range of noise levels from 15-hour monitoring session plotted on Figure K-11
2. Daytime is 7:00 a.m. to 7:00 p.m.
3. Evening is 7:00 p.m. to 10:00 p.m.
4. Nighttime is 10:00 p.m. to 7:00 a.m.
5. Minimum noise level of 30 dBA or less

TABLE K-9  
M8 Iliamna General Store and Vicinity, Measured Noise Levels (in dBA)

	Daytime Levels <sup>1</sup>				Evening Levels <sup>2</sup>				Nighttime Levels <sup>3</sup>			
	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>
<b>Summer</b>	55	60	76	27	56	60	81	33	38	43	67	31
<b>Winter</b>	62	66	81	33	54	57	77	— <sup>(4)</sup>	32	34	52	— <sup>(4)</sup>

Notes:

1. Daytime is 7:00 a.m. to 7:00 p.m.
2. Evening is 7:00 p.m. to 10:00 p.m.
3. Nighttime is 10:00 p.m. to 7:00 a.m.
4. Minimum short-term noise level of 30 dBA or less

TABLE K-10  
M9 Iliamna Lake, Measured Noise Levels (in dBA)

	Daytime Levels <sup>1</sup>				Evening Levels <sup>2</sup>				Nighttime Levels <sup>3</sup>			
	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>
<b>Summer</b>	61	63	88	32	57	61	78	31	41	43	103 <sup>5</sup>	37
<b>Winter</b>	42	45	77	— <sup>(4)</sup>	36	39	68	— <sup>(4)</sup>	41	43	72	— <sup>(4)</sup>

Notes:

1. Daytime is 7:00 a.m. to 7:00 p.m.
2. Evening is 7:00 p.m. to 10:00 p.m.
3. Nighttime is 10:00 p.m. to 7:00 a.m.
4. Minimum short-term noise level of 30 dBA or less
5. L<sub>max</sub> of 103 dBA was during a floatplane takeoff at approximately 6:30 a.m.

TABLE K-11  
M10 Pedro Bay on Iliamna Lake, Measured Noise Levels (in dBA)

	Daytime Levels <sup>1</sup>				Evening Levels <sup>2</sup>				Nighttime Levels <sup>3</sup>			
	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>
<b>Summer</b>	49	51	76	30	42	46	68	— <sup>(4)</sup>	36	39	50	— <sup>(4)</sup>
<b>Winter</b>	42	45	77	28	38	41	68	— <sup>(4)</sup>	32	35	50	— <sup>(4)</sup>

Notes:

1. Daytime is 7:00 a.m. to 7:00 p.m.
2. Evening is 7:00 p.m. to 10:00 p.m.
3. Nighttime noise levels derived from daytime/evening levels and noise levels from similar areas between 10:00 p.m. & 7:00 a.m.
4. Minimum short-term noise level of 30 dBA or less

TABLE K-12  
M11 Pedro Bay Tribal Center, Measured Noise Levels (in dBA)

	Daytime Levels <sup>1</sup>				Evening Levels <sup>2</sup>				Nighttime Levels <sup>3</sup>			
	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>
<b>Summer</b>	49	51	76	26	42	44	69	27	36	39	50	— <sup>(4)</sup>
<b>Winter</b>	38	40	68	— <sup>(4)</sup>	36	38	68	— <sup>(4)</sup>	32	35	50	— <sup>(4)</sup>

Notes:

1. Daytime is 7:00 a.m. to 7:00 p.m.
2. Evening is 7:00 p.m. to 10:00 p.m.
3. Nighttime noise levels derived from daytime/evening levels and noise levels from similar areas between 10:00 p.m. & 7:00 a.m.
4. Minimum short-term noise level of 30 dBA or less

TABLE K-13  
M12 Pedro Bay School-grounds, Measured Noise Levels (in dBA)

	Daytime Levels <sup>1</sup>				Evening Levels <sup>2</sup>				Nighttime Levels <sup>3</sup>			
	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>
<b>Summer</b>	36	40	65	33	49	53	84	34	36	39	50	32
<b>Winter</b>	46	51	77	35	36	38	68	32	32	35	50	32

Notes:

1. Daytime is 7:00 a.m. to 7:00 p.m.
2. Evening is 7:00 p.m. to 10:00 p.m.
3. Nighttime noise levels derived from daytime/evening levels and noise levels from similar areas between 10:00 p.m. & 7:00 a.m.

TABLE K-14  
M13 Southern Pedro Bay, Measured Noise Levels (in dBA)

	Daytime Levels <sup>1</sup>				Evening Levels <sup>2</sup>				Nighttime Levels <sup>3</sup>			
	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>
Summer	49	53	79	21	49	57	74	23	36	39	50	— <sup>(4)</sup>
Winter	32	34	59	— <sup>(4)</sup>	36	38	68	— <sup>(4)</sup>	32	35	50	— <sup>(4)</sup>

Notes:

1. Daytime is 7:00 a.m. to 7:00 p.m.
2. Evening is 7:00 p.m. to 10:00 p.m.
3. Nighttime noise levels derived from daytime/evening levels and noise levels from similar areas between 10:00 p.m. and 7:00 a.m.
4. Minimum short-term noise level of 30 dBA or less

TABLE K-15  
M14 Nondalton at June Tracy's Bed and Breakfast, Measured Noise Levels (in dBA)

	Daytime Levels <sup>1</sup>				Evening Levels <sup>2</sup>				Nighttime Levels <sup>3</sup>			
	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>
Summer <sup>4</sup>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Winter	— <sup>(5)</sup> - 38	35- 41	61- 66	— <sup>(5)</sup> -25	40	39	69	26	33- 37	29- 35	63- 58	20- 23

Notes:

1. Daytime is 7:00 a.m. to 7:00 p.m.
2. Evening is 7:00 p.m. to 10:00 p.m.
3. Nighttime is 10:00 p.m. to 7:00 a.m.
4. Summer monitoring was not performed in Nondalton
5. Minimum short-term noise level of 30 dBA or less

TABLE K-16  
M15 Central Nondalton, Main Street (Lower Road), Measured Noise Levels (in dBA)

	Daytime Levels <sup>1</sup>				Evening Levels <sup>2</sup>				Nighttime Levels <sup>3</sup>			
	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>max</sub>	L <sub>min</sub>
Summer <sup>4</sup>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Winter	48- 51	51-58	70-72	34	46	50	69	20	45-46	42-45	67-74	22-24

Notes:

1. Daytime is 7:00 a.m. to 7:00 p.m.
2. Evening is 7:00 p.m. to 10:00 p.m.
3. Nighttime is 10:00 p.m. to 7:00 a.m.
4. Summer monitoring was not performed in Nondalton