Summary of Measured Noise Levels

in the

Town of Superior, Colorado

due to

Rocky Mountain Metropolitan Airport Operations

March 2024

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HANKARD ENVIRONMENTAL

ACOUSTICS AND VIBRATION CONSULTING

Monthly Summary – March 2024

The following summarizes the noise levels measured at the Water Bladder measurement location located off S. Torreys Peak Dr. and aircraft operations detected over the Town of Superior for the month of March 2024. Additional information regarding the measurements is attached.

- Over the entire month, a total of 10,074 aircraft operations[1] occurred within 1.25 miles of the measurement location (the distance within which aircraft are audible).
- Of these, 6,191 were touch and go (T&G) operations (61%).
- Over the entire month, aircraft operations were clearly noticeable (aircraft noise measured at approximately 5 dBA above the ambient sound level) for 9,099 minutes (152 hours).
- If T&G operations were not conducted at the airport, an analysis of the measurement data indicates that noticeable aircraft operations would decrease to 2,739 minutes (46 hours), which is a 70% reduction.
- The following summarizes the March 2024 noise survey.

Table 1 - Summary of Measured Noise Levels and Aircraft Operations in March 2024

Operations	Quantity	Audible aircraft operations	Aircraft noise above ambient (dBA)	Aircraft 5 dBA Above Ambient (minutes)	Aircraft 10 dBA Above Ambient (minutes)
All	Total for month	10,074	---	9,099	6,382
	Daily average	325	19	303	213
Touch and Go Removed	Total for month	4,789	---	2,739	1,756
	Daily average	154	13	91	59

- Figure 1 shows the flight paths on March 23, a day with total operations close to the median for the month. Note the concentration of T&G operations over the Town of Superior and Boulder County.
- Figure 2 shows the measured noise levels and concurrent aircraft activity for this day. Maximum noise levels generated by individual aircraft operations exceeded the ambient sound level by the following levels for the durations noted:
  - 5 dBA (clearly noticeable), 412 minutes.
  - 10 dBA (significant increase), 349 minutes.
  - 20 dBA (much louder), 80 minutes.
- Table 2 shows the hourly average noise levels and operation counts for this day.
- Figure 3 shows an hour on this day, during which time the measured level rarely reached ambient conditions (38 dBA), meaning that aircraft noise was almost constantly present.
- Figure 4 shows the flight paths for the entire month of March 2024.

[1] This report counts each touch-and-go operation as a single operation. The Federal Aviation Administration counts each touch-and-go operation as two operations.

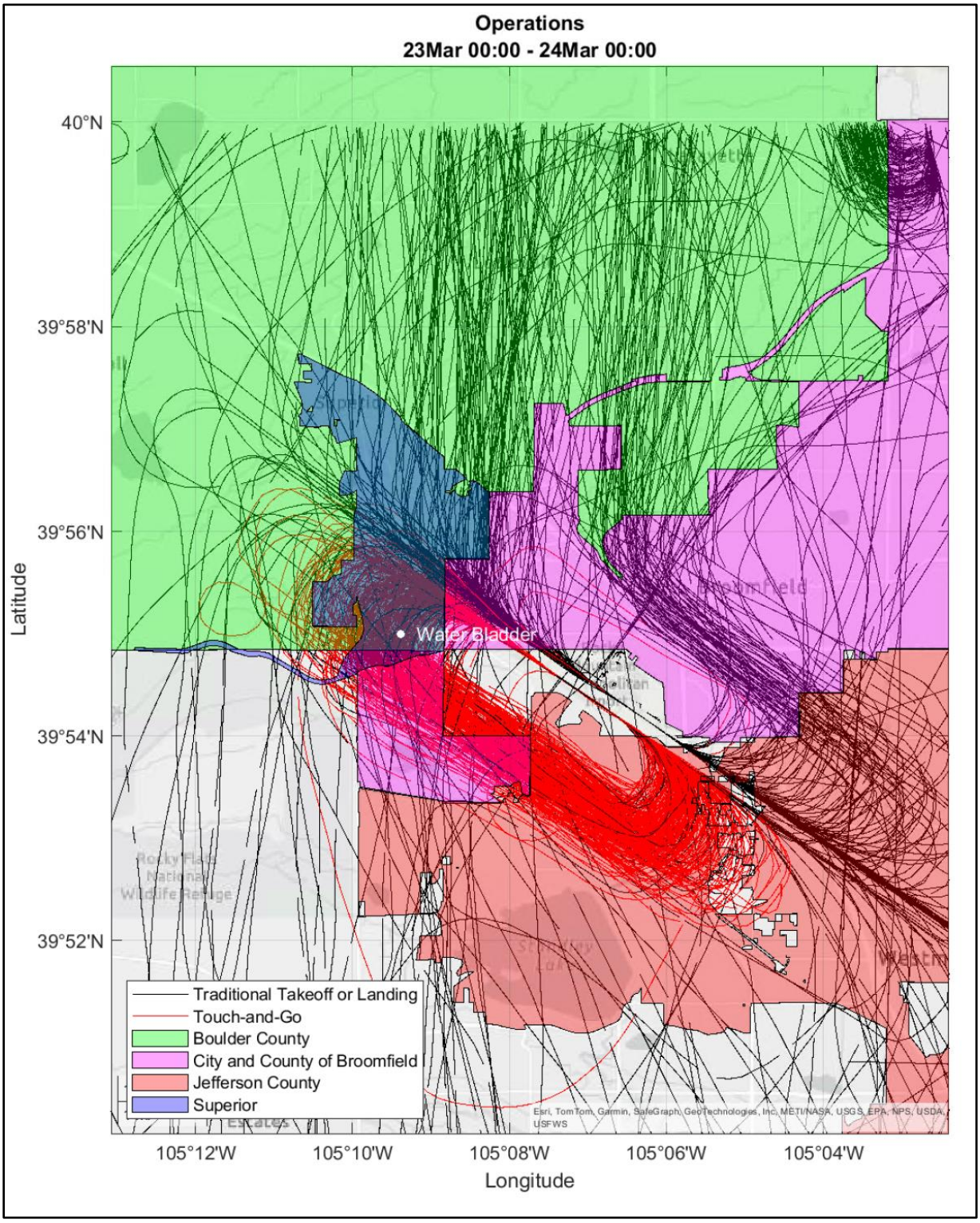

Figure 1 – Flight Paths on Median Day in March 2024 (523 Operations, 250 T&G)

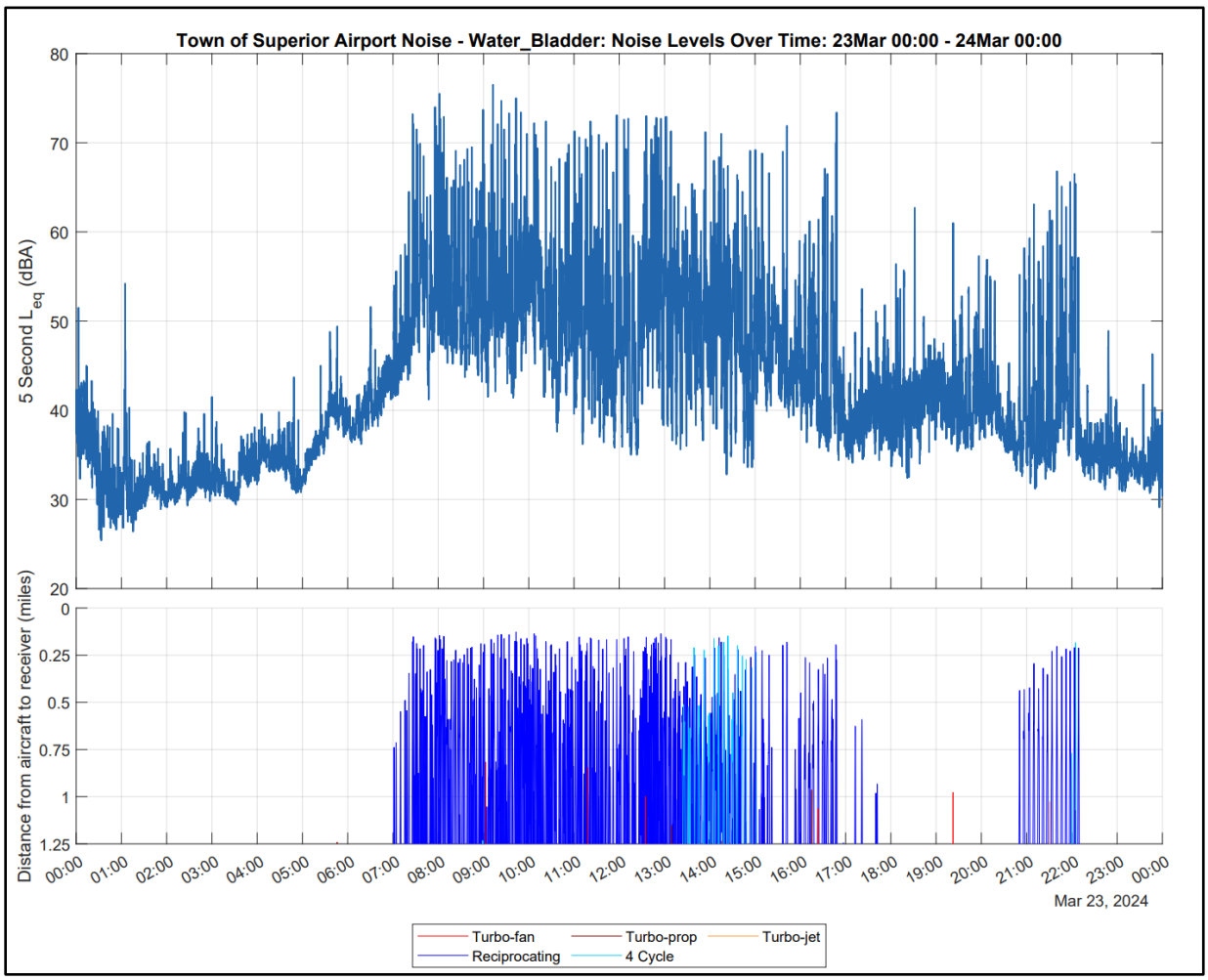

Figure 2 – Noise Levels and Aircraft Operations on Median Day

Table 2 – Hourly Noise Levels and Aircraft Operations on Median Day

Time	7 am	8 am	9 am	10 am	11 am	12 pm	1 pm	2 pm	3 pm	4 pm	5 pm	6 pm	7 pm	8 pm	9 pm
Average Noise Level (dBA)	57	58	59	57	57	58	56	55	53	52	41	44	44	44	50
Number of Operations	36	43	63	62	55	57	60	54	33	20	6	4	3	3	14

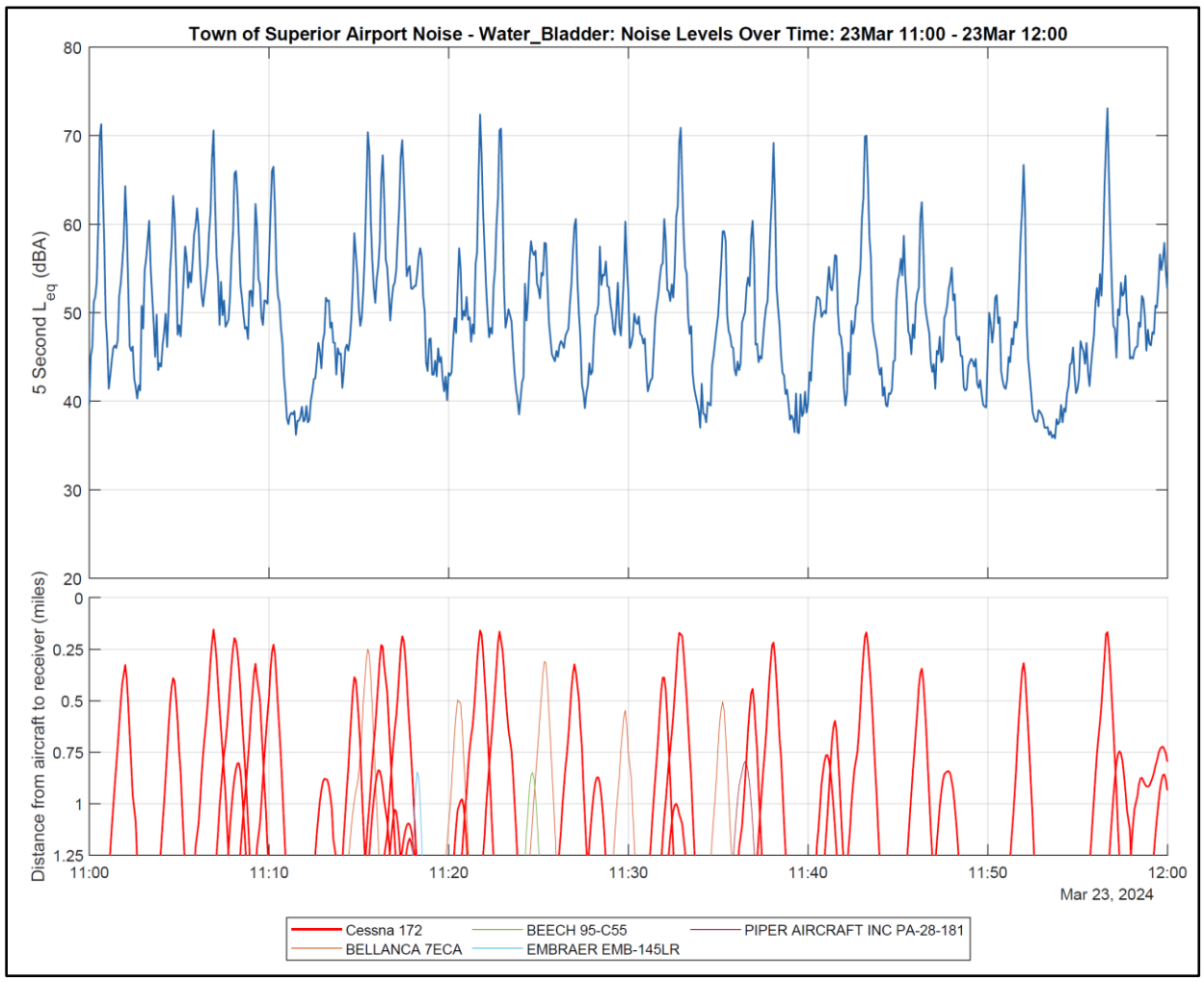

Figure 3 – Noise Levels and Aircraft Operations during a Representative Hour on Median Day

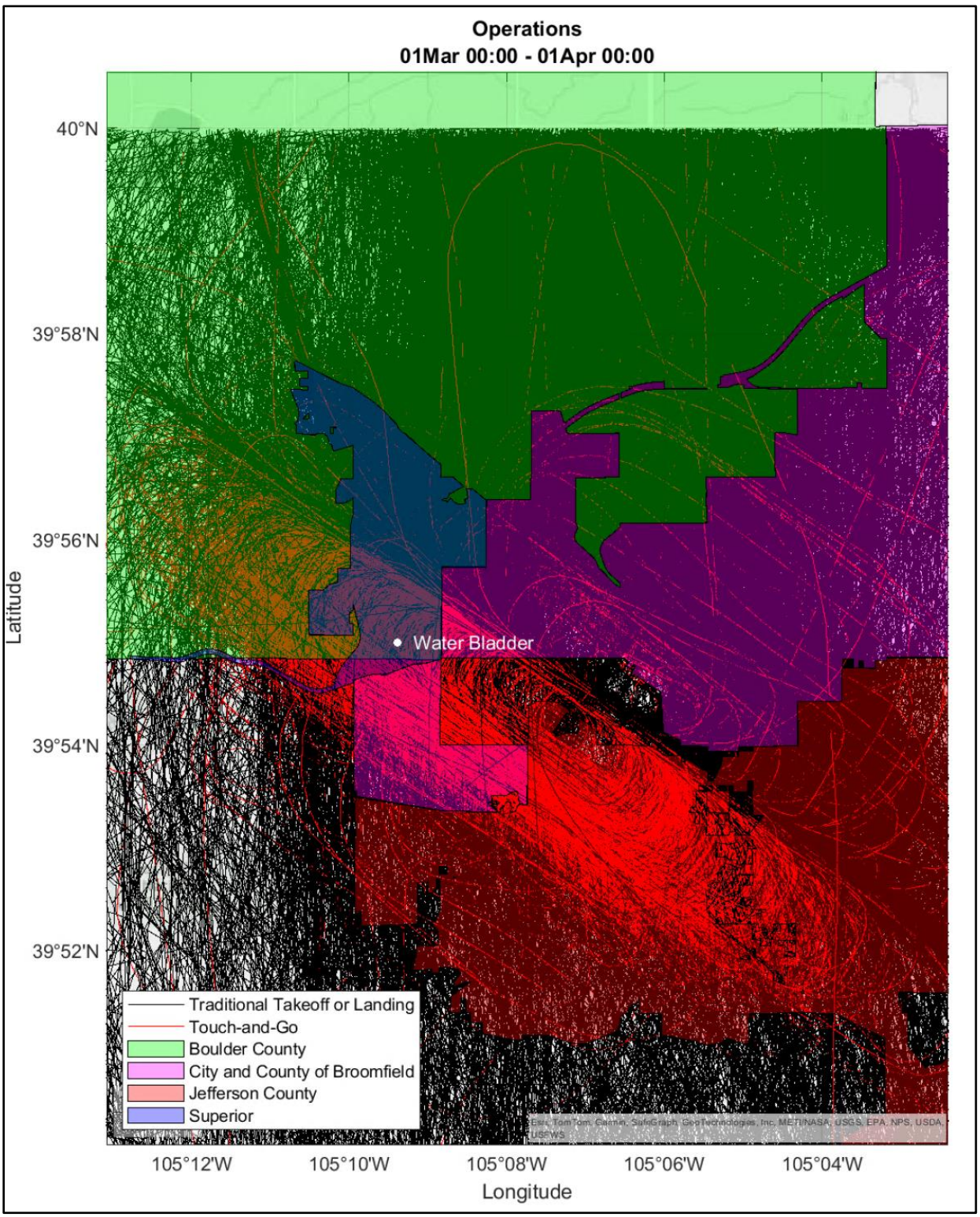

Figure 4 – All Flight Paths in March 2024 (14,946 Operations; 6,418 T&G)

Detailed Results

1. Measurement Locations and Flight Paths

Noise level monitors were placed at the three locations shown in Figure 1-1 and configured to continually measure noise levels. The meters were in service for the entirety of March 2024. The selection of measurement locations considered proximity of Town of Superior residences, aircraft flight paths, and availability of public land. The Water Bladder location was chosen as it is removed from busy roads and in the flight path of touch and go operations. The Community Center location was chosen as it is directly in the flight path of the runway 12 L. The North Pool location was chosen to represent the northern portion of the town.

Aircraft flight paths are limited due to Denver International Airport airspace to the east and mountains to the west. This, along with prevailing wind patterns, pushes a majority of operations over the town, as shown in Figures 1 and 4 (above).

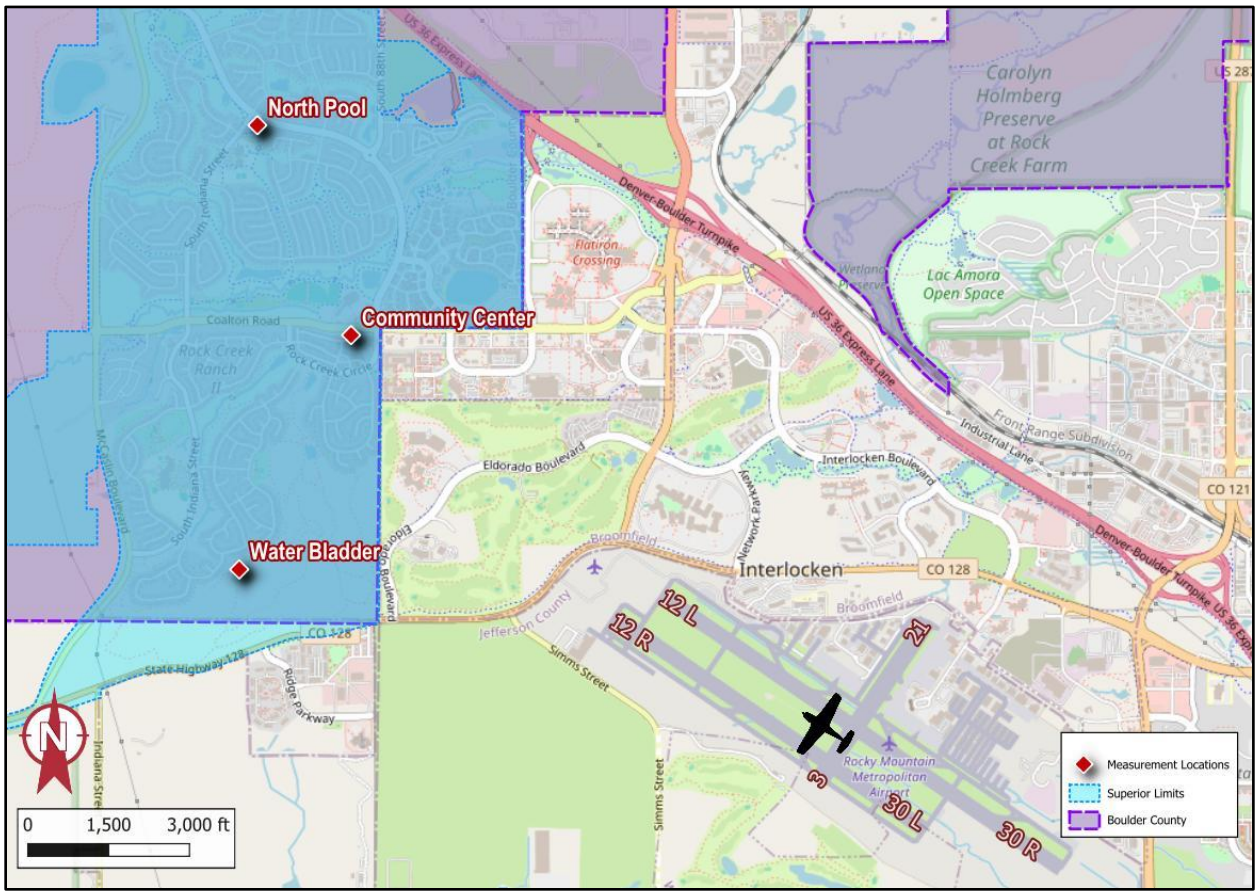

Figure 1-1. Measurement Locations and Airport

2. Noise and Aircraft Operations Measurement Procedures

Noise levels were measured in accordance with applicable acoustical standards as well as the author's experience in this specialized field. The following sections describe the acoustical standards followed, measurement equipment specifications and settings, measurement duration, ground wind measurement equipment, and aircraft operations data integration.

2.1 Applicable Noise Measurement and Analysis Standards

The measurements were executed in accordance with the relevant aspects of the following standards:

1. Noise measurement equipment meets the Type 1 specifications of American National Standards Institute (ANSI) standard S1.4-2014 (R2024) American National Standard Specification for Sound Level Meters.
2. ANSI S1.11-2004 (R2009), Electroacoustics - Octave-band and Fractional-octave-band Filters - Part 1: Specifications.
3. ANSI S1.40-2006 (R2016), American National Standard Specifications and Verification Procedures for Sound Calibrators.
4. The measurement and analysis procedures followed the applicable portions of ANSI S12.9-2013 Part 3 (R2018) Quantities and Procedures for Description and Measurement of Environmental Sound - Part 3: Short-Term Measurements with an Observer Present.
5. ANSI S12.18-1994 (R2019) Outdoor Measurement of Sound Pressure Level.
6. ANSI S1.13-2020 American National Standard Measurement of Sound Pressure Level in Air.

2.2 Noise Measurement Equipment

Noise levels were measured using Larson Davis Model 831 sound level meters with associated preamplifiers and ½ inch free-field precision microphones. All measurement and field calibration equipment were certified by a traceable laboratory within 18 months prior to the measurements. Field calibrations were conducted on March 27, 2024, and the drift in the measured noise level was well within tolerance (Water Bladder -0.3 dB, Community Center -0.1 dB, and North Pool +0.1 dB). Calibration certificates and records are available upon request. The microphones were mounted on steel poles and positioned five feet above the ground (per ANSI S12.9). The microphones were covered with hydrophobically treated 7-inch diameter, 80-pores-per-inch density windscreens (ACO Pacific Model WS7-80T). Audio from each sound level meter was recorded using Tascam DR-05X digital recorders. The sound level meters were configured to continuously measure and record 5-second and 1-hour averages of the following metrics: overall L_{eq}, L_{10}, L_{50}, and L_{90}, as well as one-third octave band L_{eq} levels (6.3 Hz to 20 kHz).

2.3 Aircraft Position Measurement Equipment

Aircraft position data is being collected at the North Pool measurement location with an Automatic Dependent Surveillance-Broadcast (ADS-B) monitoring system that receives real-time data from each aircraft in the area, including location, speed, and a unique identifier (hex code).

Aircraft position data is being logged on 5-second intervals and is combined with the Federal Aviation Administration (FAA) aircraft registration database to get additional information for each aircraft, including make/model, engine type, and owner. Aircraft from flight schools were identified based on the owner and listed registration numbers from the flight school websites. Altitude data from the aircraft is based on barometric pressure on the aircraft and is not corrected for barometric pressure on the ground. During data processing, the altitude data is corrected based on barometric pressure from the airport. Aircraft above 11,000 feet are filtered out of the database to eliminate from the analysis aircraft that are passing overhead.

2.4 Meteorological Data

Wind speeds and direction are being measured continuously at each long-term monitoring site using Vaisala WXT530 series sonic anemometers, mounted on steel poles approximately 6.5 feet above the ground (per ANSI S12.18) and placed within approximately 10 feet of the microphones. Barometric pressure data was obtained from the airport's weather station.

2.5 Resulting Measurement Database

This report presents the results of measurements conducted throughout the month of March 2024. A total of 744 hours of continuous noise, aircraft, and ground wind data were collected. All data was organized into a single database, and data was time synchronized through the cellular network.

Figure 2-1 shows noise levels versus time (top graph) and distance to the nearest aircraft over time (bottom graph) for a representative one-hour period at the Water Bladder. This example shows a single aircraft doing touch and go exercises (and a few other aircraft passing by), which involves landing the airplane and immediately taking off again, and results in the airplane circling over the microphone every 5 to 10 minutes. Note the ambient sound level, the level occurring with no aircraft present, is approximately 35 dBA during this example hour. With aircraft present levels are as high as 70 dBA, which is 35 dBA increase over the ambient sound level.

Figure 2-2 shows the measured noise levels and aircraft operations for a representative hour with frequent aircraft operations. During this hour the daily ambient sound level of 38 dBA is reached only for a few minutes, because there was very little time when aircraft noise was not audible.

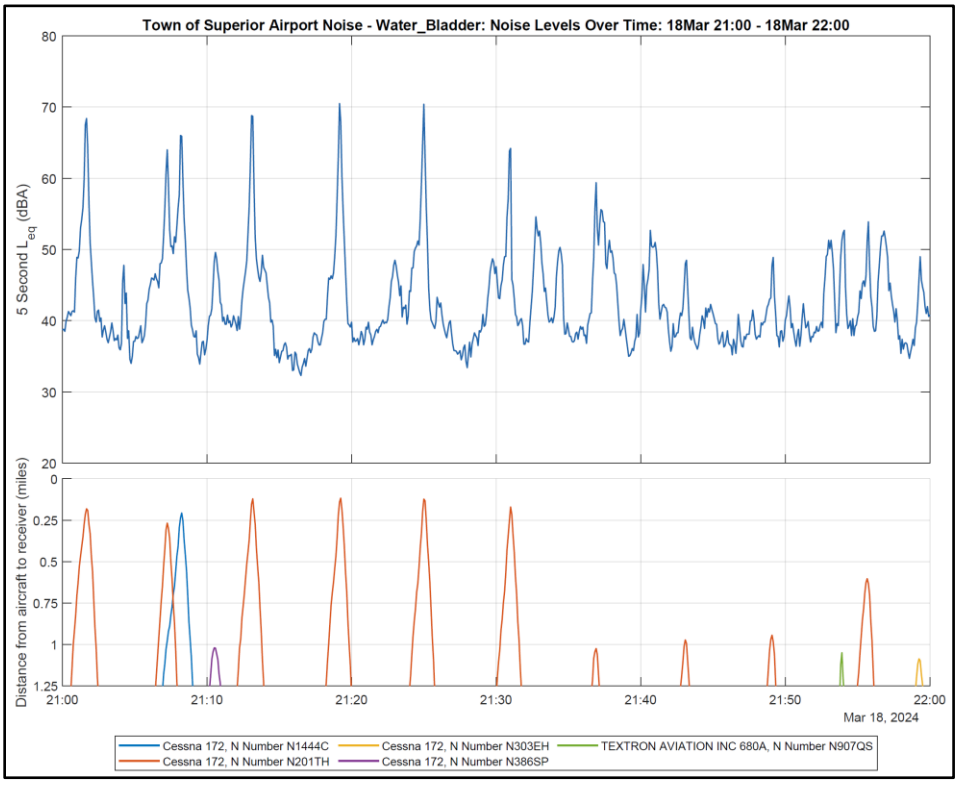

Figure 2-1. Example Time Plot of Measured Noise Levels - Touch and Go Operations

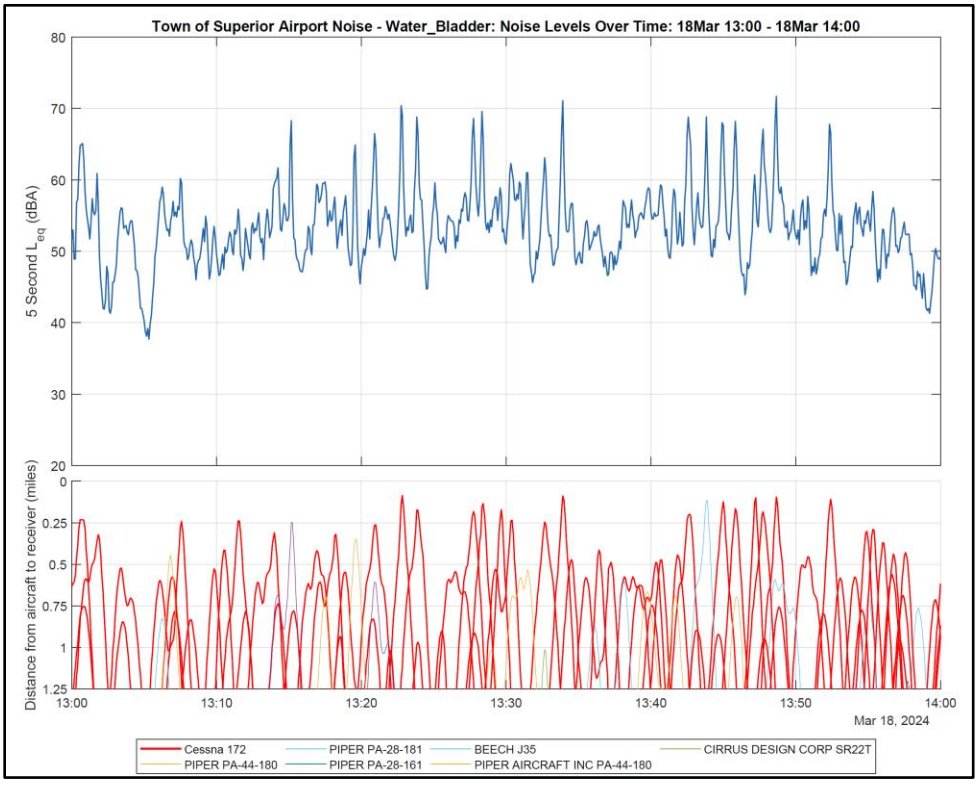

Figure 2-2. Example Time Plot During an Hour with Frequent Aircraft Operations

3. Data Analysis Procedures

The measured noise level and aircraft operations data was analyzed as follows. Note the explanation differs from the February report, but this is only for clarity. The underlying methodology remains the same.

3.1 Duration of Analysis Intervals

The measured data was recorded and analyzed in 5-second intervals. This interval was chosen because it provides sufficient resolution to capture changes in noise levels against aircraft proximity over time. Results are summarized and presented herein in terms of daily averages of noise levels when aircraft are present versus ambient noise levels in the area (noise generated by non-aircraft sources, such as distant roadway traffic).

3.2 Aircraft Types and Operations

Each 5-second ADS-B sample was classified into one of five operational types: (1) on-the-ground, (2) flyover, (3) touch and go (T&G), (4) takeoff, and (5) landing. The number of operations per day for each operational type is shown in Table 3-1. Samples classified as on-the-ground were excluded from further analysis as planes would not be audible during these times, and samples above 11,000 feet or classified as flyovers were excluded from further analysis as these operations are not generated by this airport.

Each aircraft that is detected in the month is analyzed separately. Each 5-second sample when the individual aircraft's signal was detected is arranged into a table in chronological order. Each sample is labeled as on the ground (known from the positional information) or airborne. Airborne samples are then grouped into events, which include taking off, landing, touch and go operation, and flyover. Starting with the first sample in time where the aircraft was detected as being airborne, the following logic is applied. This is also shown in the table below.

- If the previous sample was on the ground, and a sample within the next 20 minutes is on the ground, the entire window of samples when the aircraft was airborne is classified as touch and go.
- If the previous sample was on the ground, and no samples within the next 20 minutes are on the ground, the entire 20-minute window of samples is classified as takeoff.
- If the previous sample was not on the ground, and a sample within the next 20 minutes is on the ground, the entire window of samples when the aircraft was airborne is classified as landing.
- If the previous sample was not on the ground, and no samples within the next 20 minutes are on the ground, the entire 20-minute window of samples is classified as flyover.

	Is on the ground within the next 20 minutes	**Is not on the ground within the next 20 minutes**
Previous sample is on the ground	Touch and Go	Take-off
Previous sample is not on the ground	Landing	Flyover

Additionally, T&G operations were further classified as initial (the initial take off) or subsequent (subsequent touch and go landings and takeoffs) depending on whether or not the last operation of the aircraft was classified as a T&G operation. As described in more detail below, this was done to allow for the estimation of noise levels for a scenario where T&G operations occurred at another distant airfield.

Each ADS-B sample was also classified by aircraft engine type, as shown in Table 3-2. Aircraft engine type is identified from the aircraft registration "N Number" broadcast by the aircraft, and the FAA aircraft registration database, which provides details about each registered aircraft. Flight schools are identified based on the aircraft registered owner, a list of planes and N Numbers on each flight school's website, and observations of aircraft at the airport. Most aircraft are identified as piston engine (reciprocating or 4-cycle) and the majority of them are registered to flight schools.

3.3 Ambient Sound Levels

For the purposes of this analysis, the ambient daytime noise levels for each day are defined as the L_{90} dBA noise level measured during daytime hours. This is calculated by ordering all 5 second L_{eq} dBA noise level samples measured between 7:00 am and 10:00 PM and taking the 90^{th} percentile, which is the noise level exceeded 90 percent of the time. Noise level contributions from aircraft operations are effectively removed with the L_{90} metric.

3.4 Aircraft Noise Levels

Aircraft noise levels represent the 5-second measurement samples when any aircraft operations were audible. Noise levels are plotted against the concurrently measured distance from each aircraft to quantify the relationship between these two variables. The data indicates that at distances of 1 to 1.25 miles, aircraft begin to have an effect on noise levels and, at distances of 1 mile or less from the measurement location aircraft have a significant influence on the measured noise levels. For the purposes of this analysis operations were considered audible if the aircraft came within 1.25 miles of a measurement site at any time during the operation.

3.5 Aircraft Noise Levels without T&G Operations

Aircraft noise levels without T&G operations represent the average of all 5-second samples taken when aircraft operations were audible, but with noise level during all times when the aircraft operation was classified as a subsequent T&G set to the ambient sound level for that day. This simulates what the average noise level would be if T&G operations took place elsewhere, i.e., a distant airfield. Initial T&G operations were not removed from the analysis because an aircraft would need to takeoff from the airport even if T&G operations were located elsewhere. This initial T&G operation represents the takeoff.

Table 3-1. Aircraft Operations by Type

Day	Operation Type			Total Operations	Percentage T&G (%)	Total Number of Unique Aircraft
	T&G	Takeoff	Landing			
1-Mar-24	91	104	100	295	31	104
2-Mar-24	113	111	87	311	36	97
3-Mar-24	112	65	59	236	47	71
4-Mar-24	311	198	190	699	44	126
5-Mar-24	259	212	189	660	39	124
6-Mar-24	126	163	140	429	29	130
7-Mar-24	39	47	33	119	33	57
8-Mar-24	69	36	44	149	46	55
9-Mar-24	308	240	205	753	41	156
10-Mar-24	314	224	216	754	42	150
11-Mar-24	315	236	213	764	41	141
12-Mar-24	216	215	190	621	35	129
13-Mar-24	86	64	54	204	42	73
14-Mar-24	0	4	3	7	0	5
15-Mar-24	5	25	37	67	7	39
16-Mar-24	170	143	146	459	37	100
17-Mar-24	297	153	156	606	49	120
18-Mar-24	404	216	222	842	48	141
19-Mar-24	273	255	239	767	36	148
20-Mar-24	389	219	222	830	47	138
21-Mar-24	324	194	182	700	46	138
22-Mar-24	304	220	197	721	42	141
23-Mar-24	250	152	117	519	48	113
24-Mar-24	82	41	31	154	53	62
25-Mar-24	72	48	39	159	45	52
26-Mar-24	360	147	99	606	59	98
27-Mar-24	277	212	189	678	41	134
28-Mar-24	263	204	201	668	39	133
29-Mar-24	282	94	93	469	60	97
30-Mar-24	189	158	119	466	41	109
31-Mar-24	118	59	57	234	50	76
Month Total	6,418	4,459	4,069	14,946	43	-

Table 3-2. Aircraft Operations by Aircraft Engine Type

	Engine Type					
Day	**Piston**	**Turboprop**	**Turboshaft**	**Turbojet**	**Turbofan**	**Unknown**
1-Mar-24	226	9	4	0	53	3
2-Mar-24	259	8	0	0	44	0
3-Mar-24	189	7	0	0	39	1
4-Mar-24	632	13	5	0	49	0
5-Mar-24	563	16	14	0	53	14
6-Mar-24	359	9	5	0	54	2
7-Mar-24	43	13	0	0	58	5
8-Mar-24	52	5	1	2	63	26
9-Mar-24	712	11	2	0	26	2
10-Mar-24	699	10	2	0	42	1
11-Mar-24	681	19	12	0	52	0
12-Mar-24	552	16	6	0	42	5
13-Mar-24	140	8	6	0	44	6
14-Mar-24	0	3	0	0	4	0
15-Mar-24	8	12	5	0	36	6
16-Mar-24	408	7	5	0	35	4
17-Mar-24	534	13	2	0	56	1
18-Mar-24	766	20	7	0	40	9
19-Mar-24	677	19	10	0	59	2
20-Mar-24	761	13	8	0	38	10
21-Mar-24	625	7	6	0	56	6
22-Mar-24	596	16	7	0	54	48
23-Mar-24	484	7	0	2	26	0
24-Mar-24	119	2	0	0	31	2
25-Mar-24	99	12	1	0	44	3
26-Mar-24	564	13	5	0	22	2
27-Mar-24	616	16	7	0	35	4
28-Mar-24	601	17	5	0	36	9
29-Mar-24	414	10	4	0	37	4
30-Mar-24	415	10	6	0	25	10
31-Mar-24	179	7	0	0	46	2
Month Total	12,973	348	135	4	1,299	187

4. Noise Measurement and Analysis Results

Tables 4-1 through 4-3 provide a summary of the noise levels and aircraft operations measured during each day of March 2024 at each of the three measurement locations, respectively. Note that on March 19, the sound level meter at the Community Center location ran out of storage and did not record. It was resolved before the following day. Additionally, on March 28 there was loud equipment running at the North Pool, causing the noise level data at that site to not be usable. The tables provide the following information:

- The daily measured ambient (background) sound level (L_{90}).
- The number of audible aircraft operations each day. For the purposes of this analysis operations were considered audible if aircraft came within 1.25 miles of a measurement site, based on an analysis of measured noise level and aircraft distance data. This will exclude any takeoffs and landings to and from runways 30 L and 30 R.
- The average measured noise level with aircraft from the airport present (within 1.25 miles).
- The number of decibels that aircraft noise is above the daily ambient sound level.
- The number of minutes each day that aircraft were present, and the noise level they generated that exceeded the ambient sound level by 5, 10, and 20 dBA, respectively.
- This information is then repeated with T&G operations excluded from the analysis.

Table 4-1. Summary of Measured Noise Levels and Aircraft Operations – Water Bladder

Date	Ambient Noise Level (dBA)	Daytime - All Operations						Daytime - T&G Operation Removed					
		Number of Audible Operations	Average Noise Level with Aircraft (dBA)	Aircraft Noise Level Increase Above Ambient (dBA)	Duration of Aircraft Noise Levels Above Ambient (Minutes)			Number of Audible Operations	Average Noise Level with Aircraft (dBA)	Aircraft Noise Level Increase Above Ambient (dBA)	Duration of Aircraft Noise Levels Above Ambient (Minutes)		
					> 5 dBA	> 10 dBA	> 20 dBA				> 5dBA	> 10 dBA	> 20 dBA
1-Mar-24	37	181	56	20	185	132	26	107	51	15	83	52	9
2-Mar-24	36	221	54	18	190	137	26	135	50	14	77	50	9
3-Mar-24	34	161	55	21	163	117	34	62	47	13	43	30	7
4-Mar-24	39	496	53	14	356	181	22	239	47	8	122	52	5
5-Mar-24	39	411	54	15	350	185	24	211	48	10	130	61	5
6-Mar-24	38	239	53	15	193	112	13	141	51	13	98	60	8
7-Mar-24	34	63	57	23	47	35	11	34	49	15	11	9	3
8-Mar-24	36	76	59	23	71	61	19	30	48	12	9	8	3
9-Mar-24	34	544	55	21	457	308	84	289	49	15	152	92	22
10-Mar-24	33	514	53	19	416	271	59	254	47	13	137	85	13
11-Mar-24	36	518	52	17	418	247	39	254	46	10	133	72	9
12-Mar-24	37	387	55	18	320	230	43	218	49	12	108	69	9
13-Mar-24	39	138	60	21	144	109	25	67	54	15	43	29	4
14-Mar-24	34	0	-	-	-	-	-	0	-	-	-	-	-
15-Mar-24	33	15	52	19	7	6	2	14	52	19	7	6	1
16-Mar-24	37	288	55	18	261	194	29	147	51	14	91	63	9
17-Mar-24	35	414	57	21	446	376	106	158	48	13	96	78	15
18-Mar-24	40	587	58	17	527	359	55	248	50	10	125	71	9
19-Mar-24	38	500	57	18	451	320	55	281	50	12	160	104	13
20-Mar-24	40	569	58	19	516	386	71	251	51	11	124	82	12
21-Mar-24	39	455	57	17	402	273	45	179	48	9	85	49	4
22-Mar-24	38	474	56	18	409	268	48	253	50	12	140	92	11
23-Mar-24	38	384	58	21	412	349	80	166	51	13	107	87	15
24-Mar-24	35	117	59	24	200	186	64	44	54	19	91	81	24
25-Mar-24	33	100	58	25	110	96	39	37	47	14	21	19	7
26-Mar-24	40	485	58	17	506	357	49	167	50	9	95	63	7
27-Mar-24	39	417	57	18	342	226	41	193	50	11	99	61	8
28-Mar-24	38	462	53	15	333	188	19	256	48	10	127	68	6
29-Mar-24	35	375	54	19	393	308	75	133	45	11	78	63	12
30-Mar-24	39	320	59	20	308	235	50	160	52	13	104	72	12
31-Mar-24	38	163	59	21	166	133	39	61	50	12	43	30	6
Monthly Average	**37**	**325**	**56**	**19**	**303**	**213**	**43**	**154**	**49**	**13**	**91**	**59**	**9**
Monthly Total	**-**	**10,074**	**-**	**-**	**9,099**	**6,382**	**1,288**	**4,789**	**-**	**-**	**2,739**	**1,756**	**273**

Table 4-2. Summary of Measured Noise Levels and Aircraft Operations – Community Center

Date	Ambient Noise Level (dBA)	Daytime - All Operations						Daytime - T&G Operation Removed					
		Number of Audible Operations	Average Noise Level with Aircraft (dBA)	Aircraft Noise Level Increase Above Ambient (dBA)	Duration of Aircraft Noise Levels Above Ambient (Minutes)			Number of Audible Operations	Average Noise Level with Aircraft (dBA)	Aircraft Noise Level Increase Above Ambient (dBA)	Duration of Aircraft Noise Levels Above Ambient (Minutes)		
					> 5 dBA	> 10 dBA	> 20 dBA				> 5dBA	> 10 dBA	> 20 dBA
1-Mar-24	43	201	56	13	128	59	8	127	55	12	85	43	8
2-Mar-24	41	229	56	15	176	90	17	142	55	14	110	58	13
3-Mar-24	41	173	54	14	119	55	7	74	53	12	57	30	5
4-Mar-24	45	498	56	11	222	82	9	244	55	10	128	52	8
5-Mar-24	44	423	55	12	232	84	10	223	54	10	130	53	9
6-Mar-24	44	266	56	12	145	55	6	168	55	11	102	42	5
7-Mar-24	45	74	62	17	30	16	4	45	62	16	19	12	4
8-Mar-24	45	82	60	15	49	25	5	36	59	14	16	12	4
9-Mar-24	42	567	56	15	339	155	24	309	55	13	187	88	18
10-Mar-24	41	521	55	14	301	135	24	264	54	13	173	88	20
11-Mar-24	43	542	55	12	295	115	18	278	54	11	162	68	13
12-Mar-24	43	419	57	14	282	139	18	247	55	12	168	82	12
13-Mar-24	46	150	59	13	88	44	5	79	58	12	49	27	5
14-Mar-24	39	4	55	17	2	1	0	4	55	17	2	1	0
15-Mar-24	37	23	60	23	15	13	6	21	59	23	14	12	6
16-Mar-24	44	314	56	12	146	79	7	175	54	11	85	44	4
17-Mar-24	42	449	56	14	257	132	19	192	52	11	108	56	9
18-Mar-24	44	623	58	14	263	149	20	283	55	11	105	61	9
19-Mar-24	-	529	-	-	-	-	-	307	-	-	-	-	-
20-Mar-24	46	599	59	13	265	151	18	277	56	10	126	72	10
21-Mar-24	44	491	57	14	272	144	19	215	54	11	114	64	11
22-Mar-24	43	488	57	14	289	130	21	268	54	11	150	68	12
23-Mar-24	45	400	60	15	212	125	22	182	57	12	92	53	12
24-Mar-24	43	125	62	19	114	66	13	52	59	16	70	40	8
25-Mar-24	38	116	53	15	69	37	6	53	50	12	27	16	2
26-Mar-24	44	510	58	15	294	178	29	192	54	10	109	67	12
27-Mar-24	42	466	56	14	107	51	10	243	54	12	50	27	6
28-Mar-24	42	476	55	13	283	113	15	271	53	11	169	70	9
29-Mar-24	45	384	57	12	192	66	10	142	53	8	68	24	4
30-Mar-24	44	335	60	16	207	111	21	175	58	14	118	67	15
31-Mar-24	42	174	57	15	115	58	9	73	54	12	51	25	4
Monthly Average	**43**	**344**	**57**	**14**	**184**	**89**	**13**	**173**	**55**	**12**	**95**	**47**	**8**
Monthly Total	**-**	**10,651**	**-**	**-**	**5,506**	**2,659**	**399**	**5,361**	**-**	**-**	**2,847**	**1,423**	**254**

Table 4-3. Summary of Measured Noise Levels and Aircraft Operations – North Pool

Date	Ambient Noise Level (dBA)	Daytime - All Operations						Daytime - T&G Operation Removed					
		Number of Audible Operations	Average Noise Level with Aircraft (dBA)	Aircraft Noise Level Increase Above Ambient (dBA)	Duration of Aircraft Noise Levels Above Ambient (Minutes)			Number of Audible Operations	Average Noise Level with Aircraft (dBA)	Aircraft Noise Level Increase Above Ambient (dBA)	Duration of Aircraft Noise Levels Above Ambient (Minutes)		
					> 5 dBA	> 10 dBA	> 20 dBA				> 5dBA	> 10 dBA	> 20 dBA
1-Mar-24	44	107	55	11	57	22	1	86	55	11	53	21	1
2-Mar-24	41	178	54	13	99	47	4	122	53	12	77	38	4
3-Mar-24	40	69	54	14	41	23	2	54	54	14	37	21	2
4-Mar-24	44	322	55	11	154	53	4	200	54	10	123	45	4
5-Mar-24	44	285	54	10	140	46	4	180	53	10	109	39	3
6-Mar-24	45	146	57	12	72	31	2	117	56	11	66	29	2
7-Mar-24	44	39	62	18	15	11	3	33	61	17	14	10	2
8-Mar-24	45	45	59	14	16	9	1	34	59	14	13	8	1
9-Mar-24	41	428	54	13	250	124	9	262	53	13	192	101	9
10-Mar-24	39	330	52	12	200	96	6	226	51	12	161	82	6
11-Mar-24	43	402	53	10	191	58	3	231	52	9	146	47	3
12-Mar-24	44	290	54	11	155	55	3	186	54	10	120	46	3
13-Mar-24	47	87	58	12	37	15	1	62	58	12	35	14	1
14-Mar-24	34	3	54	20	1	1	0	3	54	20	1	1	0
15-Mar-24	36	18	56	21	11	10	4	17	56	21	11	10	4
16-Mar-24	43	176	55	12	93	37	2	128	55	12	77	32	2
17-Mar-24	41	288	55	14	156	90	6	146	54	14	110	71	6
18-Mar-24	44	489	56	11	226	80	5	244	55	11	153	66	5
19-Mar-24	44	410	55	12	233	94	6	256	54	11	170	76	5
20-Mar-24	46	421	56	11	189	65	4	220	56	10	132	55	4
21-Mar-24	44	292	55	11	138	55	3	155	55	11	101	46	3
22-Mar-24	44	396	56	12	192	72	7	233	56	11	144	60	6
23-Mar-24	45	306	57	12	151	57	4	144	56	11	102	47	4
24-Mar-24	42	85	58	16	70	44	6	42	58	16	56	38	6
25-Mar-24	36	62	56	20	28	24	6	42	56	19	22	19	6
26-Mar-24	43	348	55	12	192	84	6	149	54	11	103	57	6
27-Mar-24	42	254	56	14	142	77	8	163	56	14	109	63	8
28-Mar-24	-	338	-	-	-	-	-	235	-	-	-	-	-
29-Mar-24	44	311	55	10	151	45	4	129	54	9	86	29	3
30-Mar-24	43	210	59	16	130	75	6	130	58	15	100	62	6
31-Mar-24	41	88	58	17	49	34	5	51	58	17	38	28	5
Monthly Average	**42**	**233**	**56**	**13**	**119**	**51**	**4**	**138**	**55**	**13**	**89**	**42**	**4**
Monthly Total	**-**	**7,223**	**-**	**-**	**3,580**	**1,531**	**124**	**4,280**	**1,658**	**-**	**2,657**	**1,260**	**118**