

**JOHN WAYNE AIRPORT
ORANGE COUNTY**



NOISE ABATEMENT PROGRAM QUARTERLY REPORT

**For the period:
October 1, 2021 through December 31, 2021**

Prepared in accordance with:

**AIRPORT NOISE STANDARD
STATE OF CALIFORNIA**

**California Code of Regulations
Airport Noise Standards
Title 21: Public Works
Division of Aeronautics (Department of Transportation)
Chapter 6. Noise Standards**

Submitted by:

A handwritten signature in black ink, appearing to read "Rick Francis".

**Rick Francis
Interim Airport Director
John Wayne Airport, Orange County**

INTRODUCTION

This is the 196th Quarterly Report submitted by the County of Orange in accordance with the requirements of the California Airport Noise Standards (California Code of Regulations, Title 21: Public Works, Division 2.5, Division of Aeronautics (Department of Transportation), Chapter 6. Noise Standards). Effective January 1, 1986, the criteria for defining "Noise Impact Area" was changed from 70 dB to 65 dB Community Noise Equivalent Level (CNEL). Under this criteria, John Wayne Airport currently has a "Noise Impact Area."

NOISE IMPACT SUMMARY

Caltrans' Aeronautics Program has established guidelines in the California State Noise Standard to control residential area noise levels produced by aircraft operations using the State's airports. Under those guidelines, residential noise sensitive areas exposed to an average Community Noise Equivalent Level (CNEL) of more than 65 dB define the "Noise Impact Area." John Wayne Airport uses ten permanent remote noise monitoring stations (NMS) located in Newport Beach, Santa Ana, Tustin and Irvine to measure noise levels, at the following locations:

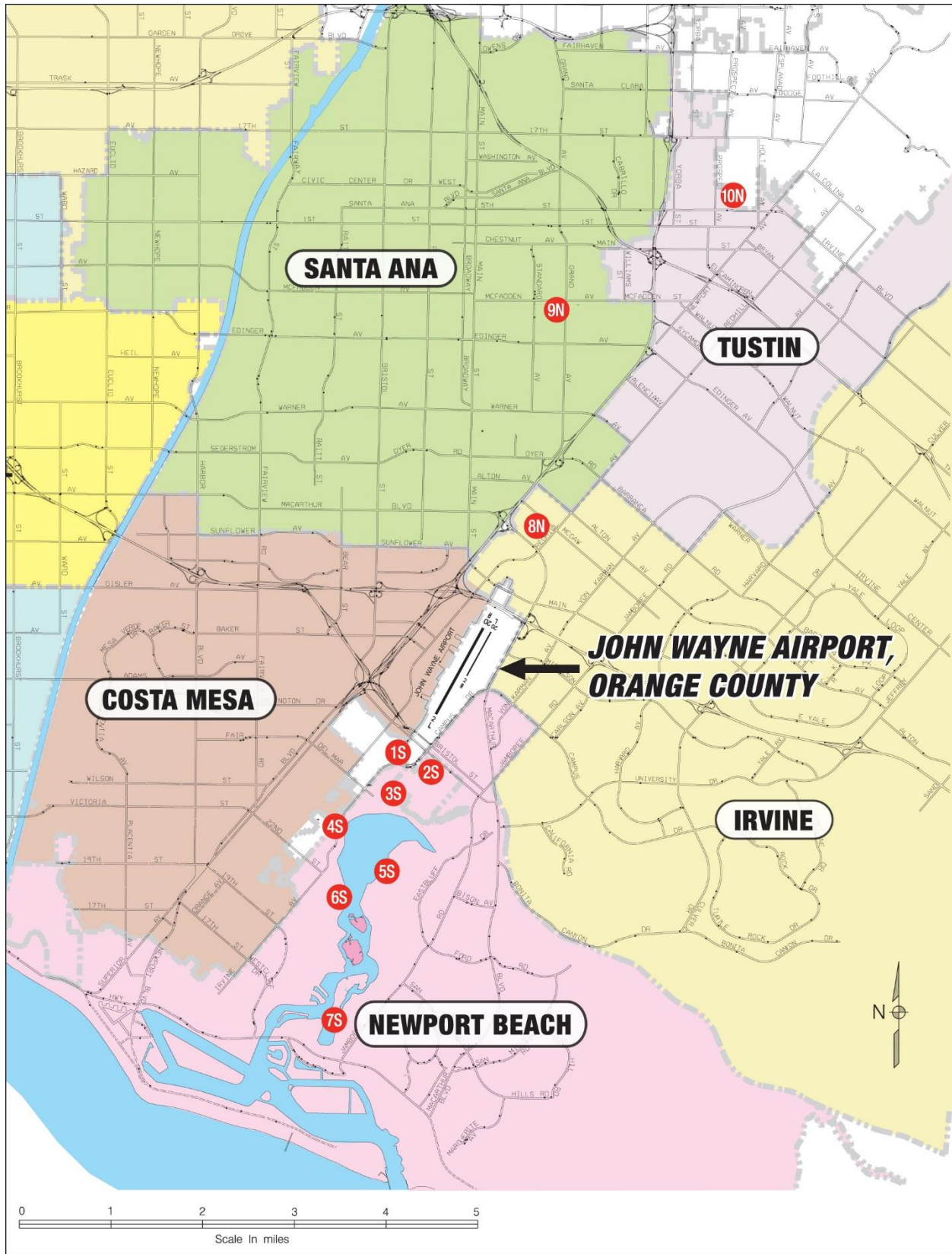
MONITOR STATIONS

NMS-1S: Golf Course, 3100 Irvine Ave., Newport Beach
NMS-2S: 20162 S.W. Birch St., Newport Beach
NMS-3S: 2139 Anniversary Lane, Newport Beach
NMS-4S: 2338 Tustin Ave., Newport Beach
NMS-5S: 324 ½ Vista Madera, Newport Beach
NMS-6S: 1912 Santiago, Newport Beach
NMS-7S: 1131 Back Bay Drive, Newport Beach
NMS-8N: 17372 Eastman Street, Irvine
NMS-9N: 1300 S. Grand Avenue, Santa Ana
NMS-10N: 17952 Beneta Way, Tustin

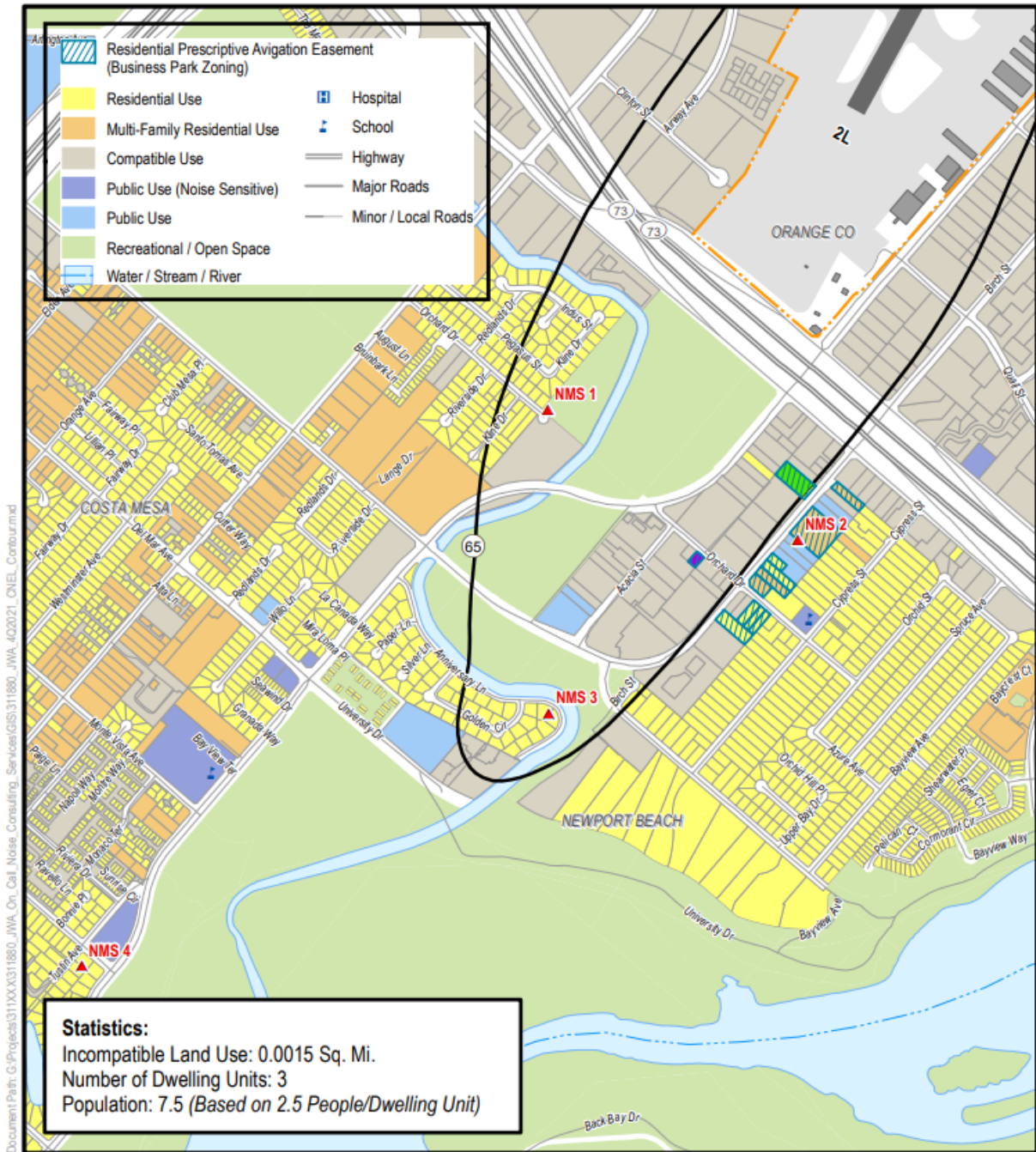
The map in Figure 1 shows the general location of each permanent remote monitor station.

Figure 2 shows the Airport's "Noise Impact Area" for the previous year (January 1, 2021 - December 31, 2021). The Figure 2 information was developed by Harris Miller Miller and Hanson Inc., in consultation with John Wayne Airport. CNEL values measured for the period and current digitized land use information were utilized to calculate the land area acreages, number of residences and estimated number of people within the "Noise Impact Area".

**FIGURE 1
NOISE MONITORING STATIONS (NMS)
LOCATION MAP**



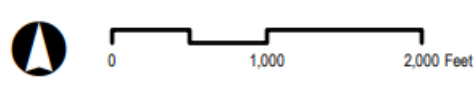
**FIGURE 2
2021 FOURTH QUARTER**



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Statistics:
 Incompatible Land Use: 0.0015 Sq. Mi.
 Number of Dwelling Units: 3
 Population: 7.5 (Based on 2.5 People/Dwelling Unit)

- ▲ RMT Location
- 2021 Fourth Quarter 65 dB CNEL Contour
- Incompatible Single Family Residential
- Incompatible Multi-Family Residential
- Airport Property (Approx.)
- Runways / Taxiways
- Airport Buildings



**JOHN WAYNE AIRPORT
ORANGE COUNTY**

2021 Fourth Quarter 65 dB
Community Noise Equivalent Level
(CNEL) Contour

AIRCRAFT TRAFFIC SUMMARY

The Airport traffic summary for this quarter is shown in Table 1 below. Air Carrier operational count histories and average daily departure counts are illustrated in Tables 9 & 11.

TABLE 1
LANDING AND TAKEOFF OPERATIONS
October - December 2021

Period	Air Carriers		GA Jet (1)	Total Operations (2)	Average Daily Jet Operations
	Jet	Prop			
October	7,865	0	4,607	26,160	402
November	7,748	0	4,169	24,643	397
December	7,678	0	4,070	22,410	379
Fourth Quarter	23,291	0	12,846	73,213	393
Twelve Months 01/01/21 - 12/31/21	79,622	0	46,799	311,684	346

NOTE: (1) GA Jet figures include a 5% factor for operations not identified by the JWA noise monitor stations.
(2) Counts in this column are based upon records provided by the local FAA representatives.

COMMUNITY NOISE EQUIVALENT LEVELS

The monthly, quarterly and twelve month Community Noise Equivalent Level (CNEL) average values for each monitor station are shown in Table 2, while daily CNEL values are shown in Tables 3 through 5. Insufficient data is indicated by “#N/A” entries in each table. Also, “*#N/A” entries in each table indicate there were no aircraft related noise events.

Average Single Event Noise Exposure Level (SENEL) values for Air Carrier and General Aviation Jet aircraft are shown in Tables 6 through 8.

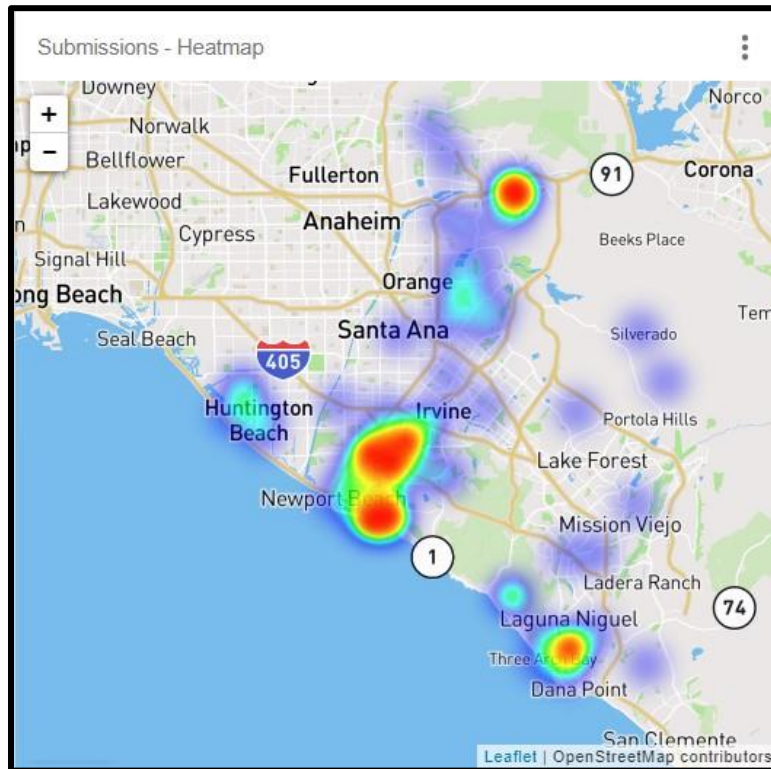
ACOUSTICAL INSULATION PROGRAM

Four hundred eighteen residences in the Santa Ana Heights area have been sound attenuated and an avigation easement reserved through the County’s Acoustical Insulation Program, which closed in December 2009. The County has also acquired 46 residences as part of the Purchase Assurance Program, many of which were acoustically insulated, an avigation easement reserved and then resold. Among these County acquired homes, those located within areas designated for Business Park uses were razed, avigation easements were reserved, and the land resold for compatible Business Park uses. A total of 464 residences in the Santa Ana Heights area have been purchased or otherwise made compatible through the County’s Purchase Assurance and Acoustical Insulation Programs. Three dwelling units in Santa Ana Heights remain in the “Noise Impacted Area” (within 65 dB CNEL contour).

COMPLAINT TOTALS (October 1, 2021 - December 31, 2021)

The Airport's Access and Noise Office receives and investigates noise complaints from local citizens and all other sources. During the October 1, 2021 through December 31, 2021, the Office received 139,590 complaints from local citizens. This is a 121.1% increase from the 63,128 complaints received last quarter. It is a 786.8% increase from the 15,740 complaints received during the same quarter last year. Figure 3 shows the distribution of the quarterly complaints from local communities.

FIGURE 3
REPORTED NOISE EVENTS BY COMMUNITY



Notes:

- Anaheim – 103,627 submissions from 29 different points of contact.
- Newport Beach – 30,537 submissions from 40 different points of contact.
- Costa Mesa – 1,898 submissions from 15 different points of contact.
- Laguna Niguel – 1,393 submissions from 4 different points of contact.
- Laguna Beach – 974 submissions from 2 different points of contact.
- Other – 404 submissions from 47 different points of contact.
- Huntington Beach – 283 submissions from 6 different points of contact.
- Santa Ana – 206 submissions from 4 different points of contact.
- Aliso Viejo – 155 submissions from 1 point of contact.
- Dana Point – 113 submissions from 2 different points of contact.
- 7% of submissions were from a complaint subscription service.

TABLE 2
LONG TERM MEASURED LEVELS
 Aircraft CNEL from 01/01/21 through 12/31/21
 Values in dB at Each Site

Period	NMS Site									
	1S	2S	3S	4S	5S	6S	7S	8N	9N	10N
Jan 2021	62.6	62.3	62.0	55.7	54.7	56.3	52.3	63.4	42.2	52.2
# Days	31	31	31	31	31	31	30	24	15	31
Feb 2021	62.9	60.0	62.3	55.9	55.1	56.4	51.9	63.3	42.3	52.5
# Days	28	28	28	28	28	28	28	28	22	27
Mar 2021	64.8	61.7	63.7	57.8	57.1	57.9	54.4	65.8	43.5	55.4
# Days	31	31	31	31	31	31	31	31	23	31
Q-1 2021	63.6	61.5	62.7	56.6	55.8	56.9	53.1	64.4	42.8	53.7
# Days	90	90	90	90	90	90	89	83	60	89
Apr 2021	65.7	62.2	64.5	58.4	57.4	58.0	54.5	66.0	41.1	55.7
# Days	30	30	30	30	30	30	30	30	25	30
May 2021	66.2	62.7	65.1	59.0	57.7	58.8	54.8	66.7	41.7	56.3
# Days	31	31	31	31	31	31	31	31	27	31
Jun 2021	67.1	63.6	66.0	59.3	58.4	59.7	55.3	67.5	44.6	57.2
# Days	30	30	30	30	30	30	30	30	22	30
Q-2 2021	66.4	62.9	65.2	58.9	57.9	58.9	54.9	66.8	42.6	56.4
# Days	91	91	91	91	91	91	91	91	74	91
Jul 2021	67.9	64.4	67.0	60.0	59.1	60.3	55.5	67.9	39.4	57.2
# Days	31	31	31	31	31	31	31	31	24	31
Aug 2021	67.7	66.1	66.7	59.8	58.9	60.1	55.5	67.7	38.4	57.1
# Days	31	31	31	31	31	31	31	31	23	31
Sep 2021	67.8	66.8	66.8	59.8	59.2	60.1	55.8	67.5	41.9	57.0
# Days	30	30	30	30	30	30	30	30	23	30
Q-3 2021	67.8	65.9	66.8	59.9	59.1	60.1	55.6	67.7	40.1	57.1
# Days	92	92	92	92	92	92	92	92	70	92
Oct 2021	67.7	66.5	67.0	59.9	59.4	60.4	56.8	67.7	42.3	57.1
# Days	31	31	31	31	31	31	31	30	25	31
Nov 2021	67.3	66.0	66.9	59.1	58.6	60.4	55.9	67.1	41.8	56.8
# Days	30	30	30	30	30	30	29	30	21	17
Dec 2021	67.9	66.2	66.8	60.2	59.8	60.5	57.3	67.9	43.1	57.9
# Days	31	31	31	31	31	31	31	31	28	31
Q-4 2021	67.7	66.2	66.9	59.8	59.3	60.4	56.7	67.6	42.5	57.4
# Days	92	92	92	92	92	92	91	91	74	79
Q-1 2021 thru Q-4 2021										
Total	66.7	64.6	65.7	59.0	58.2	59.3	55.3	66.8	42.1	56.4
# Days	365	365	365	365	365	365	363	357	278	351
Q-4 2020 thru Q-3 2021 (Previous 4 Quarters)										
Total	65.7	63.6	64.8	58.1	57.2	58.3	54.2	66.0	42.2	55.3
# Days	365	365	363	365	365	365	363	356	275	364
Change from Previous 4 Quarters										
	1.0	1.0	0.9	0.9	1.0	1.0	1.1	0.8	-0.1	1.1

TABLE 3
DAILY CNEL VALUES AT EACH MONITOR STATION
 October 2021

Date	NMS Site									
	1S	2S	3S	4S	5S	6S	7S	8N	9N	10N
1	67.9	66.3	66.3	58.9	57.9	58.6	54.6	67.8	40.9	56.5
2	65.6	64.6	64.3	56.5	55.9	56.8	53.4	65.4	39.2	53.3
3	67.9	66.9	66.8	58.3	58.0	58.8	55.5	67.6	37.4	56.1
4	68.4	66.6	67.3	60.4	59.6	59.9	56.9	67.7	46.0	57.3
5	67.4	66.4	66.4	60.2	59.6	60.3	57.0	67.3	42.5	57.0
6	67.9	67.1	67.3	60.6	60.4	61.1	58.0	67.5	44.5	57.3
7	68.6	67.3	67.8	61.1	60.4	61.3	58.1	68.9	*#N/A	58.3
8	68.5	67.5	67.5	61.0	61.0	61.7	58.6	69.0	43.2	58.8
9	67.0	65.9	66.2	59.6	59.3	59.9	56.6	66.5	33.5	55.7
10	68.3	67.5	67.6	59.8	59.9	60.6	57.1	68.6	39.1	57.5
11	67.2	65.3	68.4	59.5	59.2	63.9	56.2	65.7	33.2	55.0
12	64.9	63.9	64.8	55.8	56.3	59.2	53.4	67.1	42.3	56.0
13	67.5	66.6	67.0	59.3	58.7	59.1	55.7	#N/A	37.3	55.6
14	68.1	66.9	67.6	60.0	59.4	60.3	56.8	69.3	36.2	56.5
15	67.2	65.3	66.5	59.0	57.9	59.6	55.8	66.7	*#N/A	53.2
16	65.8	64.6	64.9	56.8	56.2	56.8	53.2	64.4	*#N/A	52.1
17	68.0	67.0	67.2	60.2	59.7	60.5	57.1	68.6	36.4	58.4
18	68.1	67.0	66.9	60.8	60.5	61.1	58.2	66.7	40.1	58.5
19	67.4	66.0	66.6	60.5	59.7	60.5	57.2	68.0	43.4	57.6
20	67.6	66.7	66.7	60.1	59.8	60.4	57.1	67.1	38.1	57.0
21	68.5	67.4	67.9	60.8	60.0	61.1	57.4	68.2	35.4	58.3
22	68.3	67.1	67.5	59.9	59.9	60.6	56.5	68.5	30.5	58.4
23	67.2	65.6	66.3	59.8	58.7	60.0	56.5	67.1	43.9	57.1
24	69.1	68.0	68.5	61.2	61.0	62.3	58.8	68.8	*#N/A	58.8
25	69.0	67.5	67.8	61.3	61.0	61.7	58.1	68.8	37.9	59.2
26	67.9	66.5	67.0	60.6	60.2	60.6	57.6	67.3	42.9	57.6
27	67.2	66.3	66.6	59.4	59.3	60.2	56.5	66.9	48.7	56.1
28	67.6	66.2	67.3	59.7	59.3	60.0	56.9	67.2	48.7	56.1
29	68.0	66.9	67.2	60.0	59.4	60.3	56.6	68.2	*#N/A	58.2
30	67.1	65.6	65.9	59.0	57.7	58.9	55.1	66.5	35.0	56.0
31	68.0	66.8	67.0	60.6	60.0	60.9	57.4	68.2	*#N/A	58.4
Days	31	31	31	31	31	31	31	30	25	31
En. Avg	67.7	66.5	67.0	59.9	59.4	60.4	56.8	67.7	42.3	57.1

#N/A indicates insufficient data.

*#N/A indicates no aircraft-related noise events.

TABLE 4
DAILY CNEL VALUES AT EACH MONITOR STATION
 November 2021

Date	NMS Site									
	1S	2S	3S	4S	5S	6S	7S	8N	9N	10N
1	68.7	67.3	67.8	60.9	60.9	61.6	58.3	68.0	46.8	58.0
2	67.2	66.1	66.3	59.3	58.9	59.7	56.3	67.2	*#N/A	56.7
3	67.6	66.6	67.0	59.9	59.7	60.6	55.7	67.7	41.8	58.1
4	67.7	66.4	66.8	59.4	59.0	60.2	56.1	68.2	*#N/A	57.7
5	67.5	66.1	66.8	59.0	58.7	60.0	55.9	68.7	37.2	57.1
6	66.8	65.5	65.8	58.7	58.1	59.4	55.2	66.3	38.1	55.9
7	68.8	67.0	67.7	61.0	60.3	61.3	57.7	69.0	43.7	58.9
8	68.7	66.9	67.6	61.5	60.2	61.4	57.4	68.1	39.6	58.1
9	67.2	65.8	66.3	59.1	59.4	59.6	56.1	66.7	*#N/A	56.4
10	68.4	67.2	67.8	60.2	59.9	60.8	57.1	67.5	40.2	56.9
11	64.5	62.8	67.3	55.3	55.3	62.6	52.3	65.4	42.3	51.7
12	65.5	64.8	65.5	56.0	55.6	59.8	53.1	65.9	44.7	53.7
13	66.5	64.9	65.2	58.0	57.0	58.2	54.9	64.7	32.0	53.1
14	68.3	67.2	67.2	58.8	58.5	59.7	56.1	67.7	44.7	#N/A
15	68.1	66.3	66.9	59.5	59.0	60.0	56.3	67.7	*#N/A	#N/A
16	67.8	66.2	66.7	60.4	59.0	60.0	56.4	67.4	41.7	#N/A
17	68.0	66.3	67.2	60.5	59.6	60.8	56.9	67.5	41.7	#N/A
18	68.8	67.4	68.0	61.1	60.6	61.5	57.7	68.1	*#N/A	58.6
19	69.0	67.7	68.3	61.3	60.5	61.6	57.7	68.7	35.1	57.5
20	67.8	66.5	67.2	59.7	59.3	60.2	56.7	67.6	45.6	56.2
21	57.8	54.8	67.3	42.1	50.0	64.0	35.3	63.1	44.5	#N/A
22	65.7	65.0	65.0	57.0	56.8	58.4	54.1	66.3	*#N/A	#N/A
23	68.6	67.0	67.0	60.9	59.2	60.4	57.0	68.5	36.4	54.1
24	67.1	65.9	69.0	59.5	58.8	62.6	56.2	64.0	41.1	#N/A
25	51.0	43.9	62.8	28.0	28.2	58.4	#N/A	58.6	33.4	#N/A
26	61.5	61.6	62.7	51.6	51.3	56.7	47.4	64.3	*#N/A	#N/A
27	67.2	65.9	65.9	58.0	57.1	57.7	53.7	66.4	30.9	#N/A
28	68.1	66.9	67.3	58.8	58.2	59.0	54.7	67.5	37.7	#N/A
29	68.4	66.8	67.4	59.1	58.7	59.4	55.4	67.9	*#N/A	#N/A
30	67.7	66.3	67.0	59.2	58.9	59.8	56.2	67.5	*#N/A	#N/A
Days	30	30	30	30	30	30	29	30	21	17
En. Avg	67.3	66.0	66.9	59.1	58.6	60.4	55.9	67.1	41.8	56.8

#N/A indicates insufficient data.
 *#N/A indicates no aircraft-related noise events.

TABLE 5
DAILY CNEL VALUES AT EACH MONITOR STATION
 December 2021

Date	NMS Site									
	1S	2S	3S	4S	5S	6S	7S	8N	9N	10N
1	66.8	65.7	66.0	58.2	57.7	58.6	54.6	64.4	36.7	55.4
2	67.9	66.6	67.1	59.9	59.2	60.2	56.2	68.3	38.4	57.3
3	68.7	67.5	68.0	61.0	61.0	61.7	58.1	68.3	*#N/A	58.8
4	66.5	65.4	65.6	58.5	58.6	59.5	55.3	66.2	40.8	56.0
5	68.4	66.9	67.5	59.9	59.7	60.6	56.7	68.3	40.3	57.7
6	67.9	66.0	66.9	60.3	59.0	60.3	55.9	67.8	43.3	58.1
7	67.7	65.8	66.7	60.5	59.5	60.9	57.5	67.6	41.2	57.7
8	67.5	66.1	66.8	59.8	60.0	60.7	57.3	67.5	38.9	57.5
9	68.2	67.1	67.2	60.5	61.3	61.5	58.5	67.8	41.2	58.8
10	68.6	66.7	67.4	61.2	60.4	61.5	58.5	67.4	40.2	57.1
11	65.7	63.7	65.1	57.7	57.7	58.2	54.1	65.2	35.1	53.9
12	68.2	66.8	66.7	60.2	59.8	60.7	57.3	67.9	44.0	58.0
13	67.8	65.3	66.9	61.0	59.8	60.8	57.7	67.5	32.6	58.5
14	66.8	65.6	65.5	59.4	60.6	59.9	57.3	67.5	34.9	58.7
15	67.8	66.3	67.0	59.8	60.1	60.4	57.5	67.5	44.4	57.9
16	69.2	67.1	68.4	61.4	61.2	62.2	58.6	67.7	45.7	58.5
17	67.2	64.5	67.5	57.9	58.3	61.0	54.3	64.7	41.0	52.6
18	66.9	65.3	66.1	58.3	57.6	58.0	54.3	66.9	37.3	54.9
19	67.9	66.4	66.7	60.1	59.1	59.8	56.1	68.3	46.5	57.8
20	68.5	67.1	67.6	60.3	59.4	59.8	55.3	67.7	*#N/A	56.9
21	67.9	66.2	67.0	59.8	58.6	59.2	55.9	67.0	44.4	56.9
22	68.1	66.8	67.2	59.9	59.5	59.9	56.4	67.6	40.6	56.6
23	68.6	66.2	66.8	61.4	60.1	60.7	58.9	70.2	48.3	61.0
24	67.0	65.9	65.6	59.6	59.9	59.8	57.5	67.4	30.8	57.6
25	66.0	64.1	64.6	58.6	58.4	58.6	56.1	67.3	46.2	57.8
26	68.0	66.4	67.1	60.8	60.6	61.0	58.7	68.8	*#N/A	58.9
27	68.1	67.0	67.3	61.0	61.5	61.5	59.4	69.1	39.9	59.0
28	67.9	66.4	67.0	60.6	60.8	61.2	58.8	69.2	42.2	59.3
29	69.1	66.5	67.5	62.2	60.6	61.4	59.6	70.1	42.5	60.7
30	69.1	66.4	67.0	61.5	60.2	61.1	58.9	69.5	48.8	59.2
31	67.3	65.6	66.0	59.7	59.8	59.8	57.4	67.3	45.6	57.4
Days	31	31	31	31	31	31	31	31	28	31
En. Avg	67.9	66.2	66.8	60.2	59.8	60.5	57.3	67.9	43.1	57.9

#N/A indicates insufficient data.

*#N/A indicates no aircraft-related noise events.

TABLE 6
MEASURED AVERAGE SINGLE EVENT NOISE EXPOSURE LEVELS
Commercial Class A
October - December 2021

Carrier	AC Type	# Deps		NMS Site									
				1S	2S	3S	4S	5S	6S	7S	8N	9N	10N
Alaska	A320	279	Average Count	95.8 (261)	94.5 (246)	95.1 (260)	88.0 (255)	86.4 (256)	87.4 (255)	85.1 (253)	89.8 (16)	#N/A (0)	80.3 (1)
	B737	6	Average Count	95.3 (6)	94.0 (6)	94.2 (6)	89.0 (6)	88.3 (6)	89.3 (6)	84.9 (6)	#N/A (0)	#N/A (0)	#N/A (0)
	B738	423	Average Count	98.0 (392)	96.3 (370)	95.7 (396)	89.2 (394)	89.2 (394)	89.9 (393)	86.9 (393)	91.8 (19)	89.1 (2)	80.3 (6)
Allegiant	A319	150	Average Count	93.1 (140)	91.6 (134)	92.3 (140)	86.8 (133)	85.4 (139)	86.3 (139)	81.8 (128)	87.6 (7)	#N/A (0)	#N/A (0)
	A320	108	Average Count	94.5 (100)	93.2 (99)	92.6 (100)	87.0 (97)	86.1 (97)	86.9 (98)	82.7 (98)	88.2 (5)	#N/A (0)	#N/A (0)
American	A21N	5	Average Count	91.2 (5)	89.1 (5)	90.5 (5)	83.2 (5)	81.2 (5)	82.7 (5)	79.8 (3)	#N/A (0)	#N/A (0)	#N/A (0)
	A319	3	Average Count	93.3 (3)	92.9 (3)	92.6 (3)	86.3 (3)	86.2 (2)	85.7 (3)	81.5 (2)	#N/A (0)	#N/A (0)	#N/A (0)
	A320	147	Average Count	94.9 (137)	94.0 (133)	93.9 (135)	86.2 (133)	85.3 (134)	85.3 (130)	81.6 (124)	86.9 (9)	#N/A (0)	#N/A (0)
	A321	124	Average Count	99.1 (114)	97.8 (110)	98.6 (113)	90.6 (110)	88.8 (115)	88.4 (115)	84.7 (112)	95.0 (6)	86.2 (3)	#N/A (0)
	B38M	2	Average Count	92.9 (2)	91.1 (1)	92.1 (2)	85.4 (2)	84.2 (2)	86.1 (2)	82.7 (2)	#N/A (0)	#N/A (0)	#N/A (0)
	B738	1192	Average Count	98.6 (1067)	97.2 (1018)	97.4 (1090)	89.9 (1075)	89.6 (1099)	90.2 (1068)	87.3 (1046)	92.8 (71)	88.1 (12)	81.9 (17)
Delta	A220	556	Average Count	88.3 (524)	87.8 (504)	87.7 (522)	80.3 (439)	79.6 (335)	80.3 (383)	78.2 (25)	81.9 (21)	#N/A (0)	#N/A (0)
	A319	186	Average Count	95.8 (152)	94.5 (146)	95.4 (152)	88.9 (144)	87.6 (148)	87.7 (148)	83.4 (150)	93.1 (23)	85.7 (16)	81.9 (4)
	A320	1	Average Count	95.3 (1)	93.3 (1)	94.5 (1)	87.9 (1)	87.3 (1)	87.6 (1)	84.1 (1)	#N/A (0)	#N/A (0)	#N/A (0)
	B738	5	Average Count	97.4 (4)	95.9 (5)	97.0 (5)	89.0 (5)	87.4 (5)	87.5 (5)	84.3 (5)	#N/A (0)	#N/A (0)	#N/A (0)
	B752	233	Average Count	96.1 (200)	95.0 (193)	95.8 (204)	88.4 (200)	87.6 (205)	87.8 (197)	83.9 (193)	92.3 (24)	85.9 (11)	80.9 (4)
FedEx	A306	63	Average Count	96.5 (59)	95.5 (59)	94.4 (58)	88.4 (60)	88.2 (61)	89.2 (61)	85.8 (61)	87.8 (1)	#N/A (0)	78.6 (1)
Frontier	A20N	206	Average Count	87.7 (200)	87.0 (192)	87.2 (199)	81.2 (160)	79.8 (130)	81.7 (148)	78.8 (49)	81.5 (5)	#N/A (0)	#N/A (0)
	A320	62	Average Count	94.4 (56)	93.3 (52)	92.2 (55)	86.0 (55)	85.0 (56)	86.3 (56)	84.1 (56)	88.6 (5)	#N/A (0)	#N/A (0)
Horizon	E175	271	Average Count	93.4 (254)	92.0 (247)	90.7 (254)	84.8 (251)	84.9 (255)	86.7 (254)	83.6 (250)	88.7 (15)	#N/A (0)	#N/A (0)
Southwest	B38M	55	Average Count	89.2 (48)	88.0 (49)	87.5 (51)	80.6 (39)	81.1 (48)	82.8 (48)	79.7 (34)	86.3 (2)	#N/A (0)	#N/A (0)
	B737	1356	Average Count	93.4 (1234)	92.3 (1195)	91.1 (1246)	85.5 (1237)	85.7 (1250)	86.4 (1234)	84.1 (1201)	90.1 (81)	79.1 (2)	79.1 (4)
	B738	326	Average Count	93.6 (317)	92.7 (309)	90.7 (319)	84.7 (314)	85.2 (318)	85.9 (312)	83.7 (314)	90.3 (5)	#N/A (0)	#N/A (0)
Spirit	A20N	280	Average Count	88.2 (266)	87.5 (260)	87.7 (264)	82.0 (251)	81.1 (235)	82.4 (258)	79.6 (153)	82.8 (12)	#N/A (0)	#N/A (0)
	A319	125	Average Count	91.6 (118)	91.2 (119)	90.0 (122)	84.5 (117)	83.7 (119)	84.5 (120)	80.6 (98)	84.3 (2)	#N/A (0)	#N/A (0)
	A320	39	Average Count	92.4 (36)	91.7 (33)	90.1 (36)	84.5 (36)	83.4 (36)	84.2 (36)	81.0 (31)	82.3 (3)	#N/A (0)	#N/A (0)
Sun Country	B737	41	Average Count	95.2 (39)	93.7 (38)	95.1 (39)	89.2 (39)	89.2 (39)	89.4 (39)	85.2 (39)	89.5 (2)	#N/A (0)	#N/A (0)
	B738	11	Average Count	96.4 (10)	94.5 (9)	96.4 (10)	90.1 (10)	89.6 (9)	90.2 (9)	86.8 (10)	93.5 (1)	#N/A (0)	#N/A (0)

United	A319	122	Average Count	94.1 (116)	92.8 (108)	93.0 (116)	86.6 (110)	85.4 (114)	86.1 (113)	81.9 (108)	87.0 (6)	#N/A (0)	#N/A (0)
	A320	227	Average Count	94.9 (212)	94.0 (205)	93.8 (212)	86.4 (202)	85.5 (209)	85.9 (205)	82.5 (195)	88.6 (11)	84.3 (1)	79.8 (1)
	B737	459	Average Count	96.9 (413)	94.8 (391)	96.8 (417)	90.5 (415)	90.2 (411)	90.7 (410)	86.9 (401)	93.2 (34)	88.3 (11)	81.6 (4)
	B738	575	Average Count	98.4 (520)	96.6 (490)	97.8 (526)	90.2 (519)	89.8 (526)	90.2 (506)	87.4 (500)	92.4 (38)	89.6 (6)	81.2 (7)
	B752	1	Average Count	93.7 (1)	93.4 (1)	93.1 (1)	85.4 (1)	84.9 (1)	85.3 (1)	80.2 (1)	#N/A (0)	#N/A (0)	#N/A (0)
UPS	A306	9	Average Count	97.9 (9)	96.8 (9)	97.8 (9)	90.6 (9)	90.0 (9)	90.0 (9)	86.3 (8)	#N/A (0)	#N/A (0)	#N/A (0)
	B752	45	Average Count	95.0 (43)	94.0 (42)	94.0 (43)	86.8 (42)	86.5 (43)	87.6 (43)	83.4 (43)	86.2 (2)	#N/A (0)	#N/A (0)
WestJet	B737	56	Average Count	94.9 (51)	93.4 (48)	94.5 (52)	89.0 (52)	89.1 (52)	90.2 (52)	85.1 (50)	90.0 (3)	#N/A (0)	#N/A (0)

TABLE 7
MEASURED AVERAGE SINGLE EVENT NOISE EXPOSURE LEVELS
Commercial Class E
October - December 2021

Carrier	AC Type	# Deps		NMS Site									
				1S	2S	3S	4S	5S	6S	7S	8N	9N	10N
Delta	A220	120	Average Count	88.2 (111)	87.9 (104)	87.7 (114)	80.5 (95)	79.5 (69)	80.2 (84)	77.0 (2)	80.6 (4)	#N/A (0)	#N/A (0)
SkyWest Coml.	E175	426	Average Count	90.9 (397)	90.0 (380)	89.4 (397)	84.6 (391)	84.4 (396)	85.7 (391)	83.0 (380)	88.7 (22)	#N/A (0)	#N/A (0)
Southwest	B38M	11	Average Count	88.7 (11)	88.0 (11)	87.0 (11)	81.5 (7)	80.9 (10)	82.6 (10)	80.1 (5)	#N/A (0)	#N/A (0)	#N/A (0)
	B737	2321	Average Count	92.0 (2154)	91.2 (2081)	90.0 (2147)	85.0 (2133)	84.8 (2168)	85.5 (2132)	83.4 (2092)	89.5 (124)	#N/A (0)	78.7 (2)

TABLE 8
MEASURED AVERAGE SINGLE EVENT NOISE EXPOSURE LEVELS
Commuter
October - December 2021

Carrier	AC Type	# Deps		NMS Site									
				1S	2S	3S	4S	5S	6S	7S	8N	9N	10N
Delux Public Charters	E135	596	Average Count	85.4 (560)	85.0 (543)	86.3 (561)	79.5 (406)	78.8 (188)	80.0 (402)	77.6 (9)	82.3 (25)	#N/A (0)	#N/A (0)
	E145	87	Average Count	85.8 (84)	85.7 (79)	86.6 (85)	79.1 (53)	78.6 (28)	79.9 (64)	#N/A (0)	82.9 (2)	#N/A (0)	#N/A (0)
SkyWest	CRJ7	82	Average Count	87.2 (80)	86.4 (77)	86.4 (80)	79.8 (46)	80.8 (59)	81.4 (77)	80.3 (61)	88.6 (2)	#N/A (0)	#N/A (0)
	E175	1	Average Count	90.2 (1)	89.9 (1)	88.1 (1)	83.0 (1)	85.4 (1)	84.7 (1)	82.2 (1)	#N/A (0)	#N/A (0)	#N/A (0)

TABLE 8-GA
MEASURED AVERAGE SINGLE EVENT NOISE EXPOSURE LEVELS
General Aviation
October - December 2021

Carrier	AC Type	# Deps		NMS Site									
				1S	2S	3S	4S	5S	6S	7S	8N	9N	10N
General Aviation	Jet	6117	Average Count	88.0 (5543)	87.1 (5258)	89.1 (5489)	82.5 (3139)	82.4 (2598)	83.5 (3468)	81.7 (1388)	85.2 (261)	83.6 (9)	80.0 (7)

**TABLE 9
AIR CARRIER OPERATIONAL HISTORY**

Carrier	AC Type	Year					
		2017	2018	2019	2020	2021	
Air Canada	AC	A223					102
		B38M					6
Alaska	AS	A319		64	244	314	
		A320		262	3,403	1,733	4,038
		B734	24				
		B737	1,233	384	160	14	24
		B738	6,420	8,260	5,247	767	1,327
Allegiant	G4	A319					1,076
		A320					488
American	AA	A21N			2	2	88
		A319	332	722	432	474	220
		A320	266	78	634	488	783
		A321	56	4	214	571	1,035
		B38M					17
		B738	11,556	11,457	10,972	5,201	8,144
Compass	CP	B752	4	4	36		
		E170	78				
Delta	DL	E175	2,726	3,188	3,150	656	
		A220			851	1,954	4,036
Delta	DL	A223					4
		A319	2,053	1,979	1,987	828	952
		A320	94	12	11	8	3
		B712	3,267	3,379	2,495		
		B737	146	188	8	24	
		B738	40	18	40	2	12
		B739		2			
		B752	2,137	2,889	2,889	1,065	1,423
		MD90		2			
FedEx	FM	A306	506	508	510	512	502
Frontier	F9	A20N*		600	900	550	1,363
		A319	356	190	100	2	88
		A320	628	654	428	392	361
		A32N*	438				
Horizon	QX	DH8D	1,456	728	12		
		E175	339	2,716	4,257	2,986	3,293
SkyWest Coml.	SC	CRJ9	1,440	6		2	
		E175	4,761	6,960	7,686	3,535	3,711
Southwest	WN	B38M	2	14	10		683
		B737	35,971	32,380	29,360	14,268	22,212
		B738	58	64	134	3,780	7,738
Spirit	NK	A20N*				180	1,735
		A319					250
		A320				19	346
Sun Country	SY	B737					238
		B738					24
United	UA	A319	1,470	999	1,216	590	819
		A320	3,957	3,927	3,151	1,227	1,020
		B737	4,044	2,987	2,816	999	2,622
		B738	3,302	5,154	5,627	2,645	2,946
		B752	2	4			2
UPS	5X	A306	45	22	12	18	18
		B752	369	394	404	404	392
WestJet	WS	B736	30	10	58	34	
		B737	644	666	618	126	112
Total			90,250	91,875	90,074	46,370	74,253

*In 2018, the code for the Airbus A320neo was changed from A32N to A20N.

TABLE 10
AIRCRAFT OPERATIONAL HISTORY

Aircraft	Year				
	2017	2018	2019	2020	2021
A20N*		600	900	730	3,098
A21N			2	2	88
A220			851	1,954	4,036
A223					106
A306	551	530	522	530	520
A319	4,211	3,954	3,979	2,208	3,405
A320	4,945	4,933	7,627	3,867	7,039
A321	56	4	214	571	1,035
A32N*	438				
B38M	2	14	10		706
B712	3,267	3,379	2,495		
B734	24				
B736	30	10	58	34	
B737	42,038	36,605	32,962	15,431	25,208
B738	21,376	24,953	22,020	12,395	20,191
B739		2			
B752	2,512	3,291	3,329	1,469	1,817
CRJ9	1,440	6		2	
DH8D	1,456	728	12		
E170	78				
E175	7,826	12,864	15,093	7,177	7,004
MD90		2			
Total	90,250	91,875	90,074	46,370	74,253

*In 2018, the code for the Airbus A320neo was changed from A32N to A20N.

TABLE 11
AIR CARRIER AVERAGE DAILY DEPARTURE HISTORY

Carrier	AC Type	Year					
		2017	2018	2019	2020	2021	
Air Canada	AC	A223					.140
		B38M					.008
Alaska	AS	A319		.088	.334	.432	
		A320		.359	4.660	2.363	5.534
		B734	.033				
		B737	1.693	.526	.219	.022	.033
		B738	8.789	11.315	7.189	1.046	1.816
Allegiant	G4	A319					1.474
		A320					.668
American	AA	A21N			.003	.003	.121
		A319	.455	.989	.592	.648	.296
		A320	.364	.107	.868	.664	1.082
		A321	.077	.005	.293	.779	1.414
		B38M					.022
		B738	15.827	15.696	15.030	7.107	11.156
		B752	.005	.005	.049		
Compass	CP	E170	.107				
		E175	3.734	4.367	4.315	.896	
Delta	DL	A220			1.164	2.667	5.529
		A223					.005
		A319	2.811	2.712	2.723	1.131	1.304
		A320	.129	.016	.014	.014	.003
		B712	4.471	4.627	3.419		
		B737	.200	.258	.011	.033	
		B738	.055	.025	.055	.003	.016
		B739		.003			
		B752	2.926	3.959	3.956	1.454	1.948
MD90		.003					
FedEx	FM	A306	.693	.696	.699	.699	.688
Frontier	F9	A20N*		.822	1.233	.751	1.866
		A319	.488	.260	.137	.003	.121
		A320	.860	.896	.586	.536	.496
		A32N*	.600				
Horizon	QX	DH8D	1.995	.997	.016		
		E175	.466	3.721	5.830	4.079	4.512
SkyWest Coml.	SC	CRJ9	1.975	.008		.003	
		E175	6.523	9.534	10.529	4.833	5.085
Southwest	WN	B38M	.003	.019	.014		.937
		B737	49.274	44.351	40.216	19.497	30.416
		B738	.079	.088	.184	5.161	10.605
Spirit	NK	A20N*				.246	2.381
		A319					.342
		A320				.025	.471
Sun Country	SY	B737					.326
		B738					.033
United	UA	A319	2.014	1.373	1.666	.806	1.123
		A320	5.422	5.375	4.315	1.675	1.397
		B737	5.534	4.093	3.855	1.366	3.589
		B738	4.526	7.058	7.712	3.612	4.036
		B752	.003	.005			.003
UPS	5X	A306	.060	.030	.016	.025	.025
		B752	.507	.540	.553	.552	.537
WestJet	WS	B736	.041	.014	.079	.046	
		B737	.882	.912	.847	.172	.153
Total			123.622	125.852	123.384	63.347	101.712

*In 2018, the code for the Airbus A320neo was changed from A32N to A20N.

TABLE 12
AIRCRAFT Glossary

AC Type	Make	Model/Series
A20N*	Airbus	320-200 Neo
A220	Airbus	220-100
A223	Airbus	220-300
A306	Airbus	300-600
A319	Airbus	319
A320	Airbus	320
A32N*	Airbus	320-200 Neo
B38M	Boeing	737-800 Max
A321	Airbus	321
A21N	Airbus	321 Neo
B712	Boeing	717-200
B734	Boeing	737-400
B736	Boeing	737-600
B737	Boeing	737-700
B738	Boeing	737-800
B739	Boeing	737-900
B752	Boeing	757-200
CRJ7	Canadair Regional Jet	700
CRJ9	Canadair Regional Jet	900
DH8D	Bombardier	Dash 8
E135	Embraer	135
E145	Embraer	145
E170	Embraer	170
E175	Embraer	175
MD90	McDonnell Douglas	90

*In 2018, the code for the Airbus A320neo was changed from A32N to A20N.

QUARTERLY NOISE MEETING

Date: December 21, 2022

Time: 2:00 PM

Place: Airport Commission Room

ITEMS DISCUSSED

Nikolas Gaskins, Access and Noise Manager, provided an update regarding a system-wide technical issue with Envirosuite's (EVS) WebTrak public flight tracking system, involving all airport clients when displaying one-second Leq noise values. Mr. Gaskins stated that the technical issue has since been resolved.

Newport Beach resident Dr. Jim Mosher asked questions about the flight matching presentation held at the Newport Beach Aviation Committee meeting the previous night. Dr. Mosher asked for a copy of the presentation. Mr. Gaskins stated a copy of the presentation will be sent.

Dr. Mosher had questions regarding contaminated noise events in EVS's Airport Noise and Operations Management System (ANOMS). He asked whether EVS removes contaminated noise events from aircraft noise events, while keeping the aircraft noise events correlated to an aircraft operation. Mr. Gaskins informed Dr. Mosher that EVS has a system called ANEEMS, but the Airport, under Title 21, cannot utilize ANEEMS being this software system does not incorporate a set threshold for aircraft noise events. Mr. Gaskins mentioned that the Fly Friendly software, developed by BridgeNet International, will utilize some of the key ANEEMS features.

Dr. Mosher suggested that the quarterly report have a graph to show the "number above" threshold. Mr. Gaskins informed him that the Airport has discussed including this information for future reports. Mr. Gaskins asked Dr. Mosher to submit an email with his suggestions for quarterly report data and tables that he felt would be helpful for the community.

Mr. Gaskins asked Dr. Mosher about his comments submitted to the City of Newport Beach regarding aircraft speed. Mr. Gaskins advised him that the data being independently analyzed by two Newport Beach residents is representative of ground speed. Mr. Gaskins stated aircraft speed requirements are based on indicated airspeed, not ground. Mr. Gaskins stated that the Airport does not have control over aircraft speed, and that this authority falls under the jurisdiction of the Federal Aviation Administration (FAA). Cassandra Linares, Access/Noise Specialist, provided an explanation of how aircraft speed is calculated. Mr. Gaskins informed Dr. Mosher that the Airport intends to provide a presentation addressing aircraft speed at a future quarterly meeting.

Dr. Mosher asked about the complaint heat map in the quarterly report. He stated the scale does not explain what the heat map colors represent. Mr. Gaskins informed him that the Access and Noise Office (ANO) will research and identify a solution to this issue, but noted that the number of complaints by community are provided in the quarterly report in the notes sections beneath the heat map.

Dr. Mosher had a question regarding aircraft gross takeoff weight which is submitted by the carriers to the ANO. Anthony Cangey, Access/Noise Specialist, informed him that it consists of aircraft weight, fuel, baggage, and the average of the passenger weight.

Dr. Mosher asked about WebTrak historical playback, which provides 90 days for the Airport. He stated some airports show an entire year of historical data. Mr. Gaskins informed him that he would inquire about extending the historical playback period.

QUARTERLY NOISE MEETING ROSTER

December 21, 2021

NAME

ORGANIZATION

Dr. Jim Mosher

Resident - Newport Beach

Anthony Cangey

John Wayne Airport – Access and Noise Specialist

Cassandra Linares

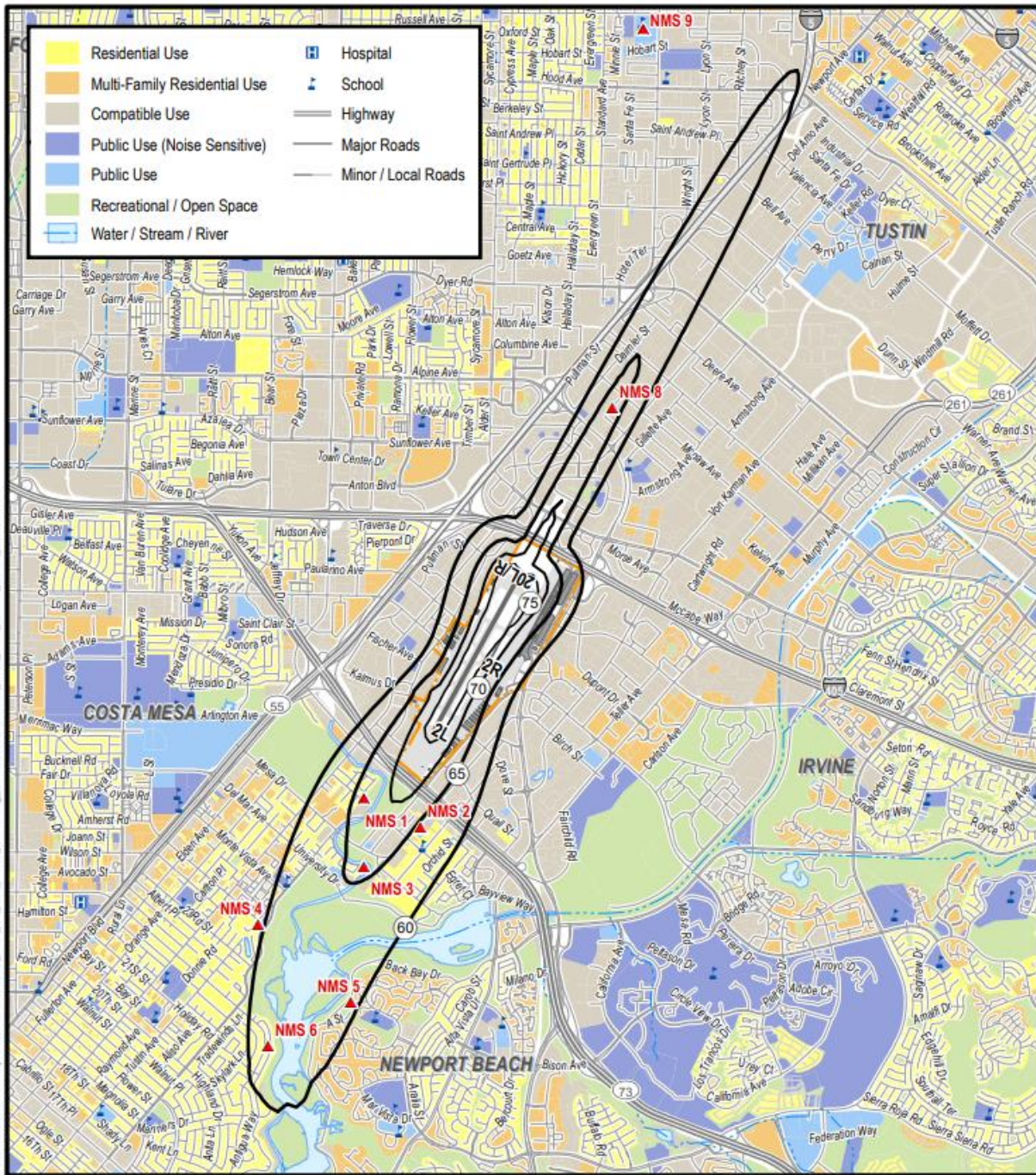
John Wayne Airport – Access and Noise Specialist

Cristina Magaña

John Wayne Airport – Access and Noise Specialist

Nikolas Gaskins

John Wayne Airport – Access and Noise Manager



Document Path: G:\Projects\311980_IWA_Or_Cnt_Noise_Consulting_Services\GIS\311980_IWA_2021_Annual_CNEL_ConTour.mxd

- ▲ RMT Location
- 2021 Annual CNEL Contours (60-75 dB)
- Airport Property (Approx.)
- Runways / Taxiways
- Airport Buildings



JOHN WAYNE AIRPORT ORANGE COUNTY

2021 Annual
Community Noise Equivalent Level
(CNEL) Contours



SUMMARY OF STATISTICAL INFORMATION
FOR
CALIFORNIA DEPARTMENT OF TRANSPORTATION

1. Size of Noise Impact Area as defined in the Noise Standards (California Code of Regulations, Title 21, chapter 2.5, Subchapter 6):
0.0015 Sq. Mi.
2. Estimated Number of dwelling units included in the Noise Impact Area as defined in the Noise Standards:
3
3. Estimated number of people residing within the Noise Impact Area as defined in the Noise Standards:
7.5 (Based on 2.5 People/Dwelling Unit)
4. Identification of aircraft of type having highest takeoff noise level operating at this airport together with estimated number of operations by this aircraft type during the calendar quarter reporting period:
B737-800 – 5,068 (Arrivals + Departures)
5. Total number of aircraft operations during the calendar quarter:
73,213
6. Number of Air Carrier operations during the calendar quarter:
(Not mandatory)
23,291
7. Percentage of Air Carrier operations by aircraft certified under Federal Aviation Regulation (FAR) Part 36, Stage III:
(Not mandatory)
100%
8. Estimated number of operations by General Aviation aircraft during the calendar quarter:
(Not mandatory)
49,821
9. Estimated number of operations by Military aircraft during the calendar quarter:
(Not mandatory)
101